University of Minnesota

CLASS SCHEDULE

Fall Quarter

1959

Minneapolis and St. Paul Campuses

including

- Registration instructions, page 2
- Final examination schedule, page 120
- Courses tallied in college offices, page 124
- Course fees, page 126
- Calendar, page 123

Every Student Is Held Accountable for Information Contained Herein and Should Save This Bulletin for Future Reference.

Courses Are Listed Under the Departments Which Offer Them. Consult Index on Page 127.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office.
Registration dates for each college are listed on the back cover.

Step 2—Get class reservation cards for courses tallied in the college offices.
Courses which are tallied in college offices are listed on page 124.

Step 3—New students (who have not already done so) go to the University Health Service and make an appointment for your physical examination. Required of all undergraduate students taking 6 credits or more and of all graduate students except "teachers in service" taking less than 6 credits.

Step 4—Turn in your registration permit, class reservation cards, approved registration blank, student address book card, University Relations mailing slips, Dean of Students information card, and religious census card at your record window in the Office of Admissions and Records to obtain statement of fees. New students, in addition, must present physical examination appointment slip (if required).

Step 5—Pay your fees to the bursar. Except for graduate students, registration and payment of fees must be completed by September 25. Fees for students registered through September 11 are due September 17. Graduate students must complete registration and payment of fees by October 2.

Change of registration—Have your "cancel-add" blank approved by your college office, get necessary class reservation cards for courses you are adding as in step 2 above, and present to your college window in the Office of Admissions and Records. You will get a supplementary fee statement or fee refund statement as necessary.

Withdrawal from the University—Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. All-University property such as library books, military, athletic or band equipment, laboratory material, locker keys or locks, athletic tickets, etc., must be turned in before you leave. P.L. 346, 16, and 894 veterans must also notify 102 Administration Building.

If You Are Graduating This Year

For the December Commencement, you must file a form called "Application for Degree" at the appropriate window in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), preferably with your fall quarter registration material. A graduation fee of $10 is due November 9 for fall quarter graduation.

If you expect to graduate any time during the coming year (through August 1960), file your formal Application for Degree now. Shortly thereafter you will receive a balance sheet which shows whatever requirements for the degree you still must complete.

Veterans and War Orphans

P.L. 550 veterans and P.L. 634 war orphans—You must register and pay fees like every other student. Your business with the Veterans Administration is separate, and you must attend to it on your own responsibility. The University assists you by certifying that your claims for payment are justified. You initiate this business at window 18 on the first floor of the Administration Building (or room 220 Coffey Hall, St. Paul Campus). Do the following:

Make application to the Veterans Administration for benefits on or before your first day of classes. You don't get paid unless you do apply. A Certificate of Education and Training comes to you from the Veterans Administration about a month after you apply. Turn this in as soon as you complete your registration at one of the above addresses.

If you are returning for another session, your previous training period under either law having been officially interrupted, you have to make out a re-entrance form to notify the Veterans Administration that you wish to return to training status. Do this at one of the above addresses.

Make a report of your attendance every month. During the first five days of each month, fill out the Certification of Attendance Form and turn it in at one of the above addresses. The Admissions and Records Office adds to this form a certification of the amount of work you are doing and sends it on to the Veterans Administration, which in turn sends you a check at your home address. If you want full benefits, take 14 credits per quarter as an undergraduate or 12 credits in the Graduate School.

P.L. 16, 346, and 894 veterans—Have your fee statement approved at window 18 in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), and then receipted by the bursar. Present the receipted statement and your course list to room 102 Administration Building to obtain an order for books and supplies. (The $5 matriculation fee is not chargeable to the Veterans Administration.)

Additional information and assistance with problems concerning any of the above laws may be obtained at room 102 Administration Building.

Foreign Students

Your first action upon arriving at the University should be to show your passport at the Foreign Student Adviser's Office, 302 Eddy Hall. There you will be given full information about federal, state, and local regulations, and about housing, finance, health and personal problems. Following this, you register in the same manner as all other students.

Important Note to *STUDENTS*—

Accurate registration is your personal responsibility. You will receive credit in only those courses for which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel it on a regular cancellation form.

Colleges of the University reserve the right to cancel courses in which enrollment is not sufficient to warrant giving the course.

Do not register from the *Class Schedule* alone. Your college bulletin contains full course descriptions, college rules and requirements, and other information necessary for sound program planning.

HOW TO USE THIS BULLETIN

Bold face titles—You must obtain a class reservation card to enroll in courses which appear with **bold face** titles. Instructions on where to get these class reservation cards precede the index at the back of this bulletin.

Prerequisites—Before you can enroll in some courses, you must have completed or be concurrently enrolled in certain other courses or possess some particular qualification or class standing. These requirements are known as prerequisites. If no prerequisites are listed, there are none, except insofar as the course number indicates a class standing requirement.

Class standing requirements, unless otherwise noted, are indicated by the course number:

1-49 for freshmen and sophomores
50-99 for juniors, seniors, and fifth-year students
100-199 for juniors, seniors, fifth-year students, and graduate students
200 and over for graduate students only

A minimum of prerequisite information is shown. For example, when courses which must be taken in sequence are prerequisites, only the last course of the sequence is listed. A comma always means "and"; while a semi-colon indicates that there are alternative prerequisites.

Example: prereq 2 or 5, Psy 1 (you must have had Psychology 1 plus either course 2 or 5)
Example: prereq C; or Comp 6 or Comm 3, 5 addtl cr; or 5 cr in 21-22-23 (you must have had either course C; or 5 credits in the same department plus either Composition 6 or Communication 3; or 5 credits from either course 21, course 22, or course 23)

When no departmental designation precedes the course number listed as a prerequisite, that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.

Work equivalent to a prerequisite course (having the same content) is ordinarily accepted in lieu of that prerequisite. You will also note that the instructor may, in some instances, waive prerequisites at his discretion. See your college bulletin for further information.

Symbols—The following symbols are used throughout this bulletin:

† To receive credit, all courses listed after the dagger must be completed.
‡ Students may enter any quarter.
§ No credit if credit received for equivalent course after the symbol.
¶ Means "concurrent registration in."
⁂ Means "consent of instructor."
△ Means "consent of department or school offering the course."

Hours and days—Class hours are identified by Roman numerals, and continue for fifty minutes after the beginning time shown below:

Hour	I	II	III	IV	V	VI	VII	VIII
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00

A class listed I-III TTh meets the first through the third hours Tuesdays and Thursdays, the hyphen always indicating "through." Days of the week are abbreviated M, T, W, Th, F, and S.

Building name abbreviations—Refer to the index for page reference.

Choice of classes—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll. Many courses have a choice of laboratory or recitation periods, but only a single lecture period for all students taking the course. Occasionally there will be a choice of both lecture and laboratory or recitation periods. The choice of the laboratory or recitation section will determine the lecture section whenever the lecture sections have no identifying section number.

Examples:

—1, I TThS	Lect III MWF	Lect II T	—1, Lect II T
—2, II MWF	—1, Lab V-VI M	—1, Lab III-IV T	—2, Lect II Th
—3, IV TThS	—2, Lab V-VI W	—2, Lab III-IV Th	—1, Lab III-IV T
		Lect II Th	—2, Lab III-IV Th
		—3, Lab VI-VII T	—3, Lab VI-VII T
		—4, Lab VI-VII Th	—4, Lab VI-VII Th

Missing information—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

Changes—Changes made subsequent to publication of the *Class Schedule* are published in the Official Daily Bulletin, which appears in the *Minnesota Daily*. Room changes are posted on classroom doors.

Winter and Spring Courses

Winter and spring courses are listed so you can plan your program for the entire year when registering for the fall quarter. The quarter is identified by "w" or "s" attached to the course number.

Whenever a course is repeated or continued into the winter or spring quarters, you are referred back to the fall quarter listing for information about title, credits, prerequisites, and time the course is offered. Any deviation from the fall quarter information is indicated.

A hyphen (-) preceding the course number indicates that there is a continuity between it and the course immediately preceding it in numerical order. These must be taken in the order shown unless the prerequisite (or double dagger symbol) indicates that they can be taken out of sequence.

Credits listed for winter and spring quarter classes are for one quarter only.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

AGRICULTURAL BIOCHEMISTRY (AgBi)

Fall Quarter

1A Biochemistry (5 cr; prereq InCh 5)
Lect II MTThF, HH 100, Kirkwood
—1, II W, HE 201
—2, II W, SnH 116
—3, II W, SnH 310
—4, II W, HE 48
—5, II W, HE 125

2 Quantitative Methods (5 cr; prereq 8 cr inorg chem)
VI-IX MWF, SnH 116, Nelson

3 Introduction (3 cr; prereq OrCh 42 or 62)
I TThS, SnH 113, Liener

118 Lab Probs: Biochemistry (3-5 cr; prereq ‡)

119 Physical Biochemistry (3 cr; prereq 3...Phys 9 rec)
III MWF, SnH 113, Briggs

124 Vitamins (3 cr; prereq 6, 119...123 rec)
I TThS, SnH 116, Schultze

129 Physical Biochemistry Lab (2 cr; prereq 2, ¶119)
VI-VIII TTh, SnH 202, Briggs

202 Biochemical Methods (3 cr; prereq 6 cr from 129-133 or cons adv)
VI-IX MW, SnH 208, Glass

203 Research Probs (2-5 cr; prereq ‡)

205 Topics: Literature (1-3 cr; prereq ‡)

208 Seminar: Cereal Chemistry (1 cr; prereq 108 or ‡) Geddes, Glass

213 Seminar: Dairy Chemistry (1 cr; prereq 103, ‡) Jenness

216 Seminar: Nutrition, Enzymes (1 cr; prereq 116, 123, ‡) Schultze, Liener, Kirkwood

219 Seminar: Colloids (1 cr; prereq 119, ‡) Briggs

220 Seminar: Proteins (1 cr; prereq 120, ‡) Briggs, Jenness

221 Seminar: Carbohydrates (1 cr; prereq 121, ‡) Smith

222 Seminar: Lipides (1 cr; prereq 122, ‡) Lundberg

224 Seminar (1 cr)
IX F, SnH 113, Geddes

Winter and Spring Quarters

1As See 1Af

2w See 2f

3w See 3f

5s Plant Biochemistry (3 cr; prereq 3) I MWF

6s Animal Biochemistry (3 cr; prereq 3) II MWF

10w Dairy Chemistry (5 cr; prereq 3) Lect IV MWF, lab VI-VIII TTh

103s Adv Dairy Chemistry (5 cr; prereq 10) Lect VI MWF, lab VII-IX WF

105s Plant Biochemistry (3 cr; prereq 3) I MWF

106s Animal Biochemistry (3 cr; prereq 3) II MWF

108s Wheat, Wheat Products (3 cr; prereq 5) IV MWF

110s Flour Lab Methods (3-5 cr; prereq 2, 108 or ¶) VI-IX MWF

116w Adv Animal Nutrition (3 cr; prereq 6... 120 rec) III TThS

117s Lab Probs: Animal Nutrition (3 cr; prereq 116, ‡)

118w,s See 118f

120w Proteins (3 cr; prereq 119 or ‡) III MWF

121w Carbohydrates (3 cr; prereq 119 or ‡) II MWF

122s Lipides (3 cr; prereq 119 or ‡) II WF, VI W

123s Enzymes (3 cr; prereq 120 or ¶120 or ‡... PCh 107, 108 rec) III MWF

130w Proteins Lab (2 cr; prereq 2, ¶120) VI-VIII TTh

131w Carbohydrates Lab (2 cr; prereq 2, ¶121) VI-VIII MW

132s Lipides Lab (2 cr; prereq 2, ¶122) VI-VIII MW

133s Enzymes Lab (2 cr; prereq 2, ¶123) VI-VIII TTh

203w,s See 203f

205w,s See 205f

208w,s See 208f

213w,s See 213f

216w,s See 216f

219w,s See 219f

220w,s See 220f

221w,s See 221f

222w,s See 222f

224w,s See 224f

AGRICULTURAL ECONOMICS (AgEc)

Fall Quarter

1 Introduction (3 cr)
—1, Lect II MW, Dairy 15, Hess
—2, Lect IV MW, Dairy 15, Hess
—1, Rec VII W, AgEng 105, Hess
—2, Rec II Th, AgEng 105
—3, Rec IV Th, AgEng 105
—4, Rec II F, AgEng 105, Hess

—5, Rec II F, AgEng 315
—6, Rec IV F, AgEng 105, Hess
—7, Rec IV F, AgEng 315

2 **Principles** (3 cr; prereq 1)
Lect III MW, HH 100, Thompson
—1, Rec VI W, AgEng 105, Thompson
—2, Rec I Th, TSH 220, Thompson
—3, Rec II Th, TSH 220, Thompson
—4, Rec III F, AgEng 105, Thompson

12 **Farm Management I** (3 cr; prereq 2)
I MWF, HH 100, Nodland

25 **Accounting** (4 cr; prereq soph, regis AFHE)
Lect VII MWF, HH 109, Dahl
Lab VIII-IX W, HH 210

40 Marketing Organization (3 cr; prereq soph, 2)
II MWF, HH 109, Fienup

50 Farm Finance (5 cr; prereq soph with ‡, 2, Ag or For students only)
III MTWThF, HH 210, Koller

82 Farm Mgt II (3 cr; prereq 12)
9:00-10:15 TTh, HH 109, Jensen

110 Production (3 cr; prereq 2)
I MWF, HH 109, Engene

126 Consumption (3 cr; prereq 2)
VI MWF, HH 109

127 Food Needs, Uses, Supplies (3 cr; prereq 2 or ‡)
VIII MWF, HH 109, Cochrane

140 Grain Marketing (3 cr; prereq 40)
II MWF, HH 210, Dahl

183 Farm Planning (3 cr; prereq grad or ‡)
1:30-2:45 TTh, HH 210, Jensen

241 Seminar: Marketing (3 cr)
3:00-4:15 TTh, HH 210, Fienup

Winter and Spring Quarters

1w,s See 1f: Lect II MW(w,s); IV MW(w), rec VI W(w); I Th(w); II Th(w,s); III Th(s); IV Th(w); I F(w); II F(w,s); III F(s); IV F(w)

2w,s See 2f: Lect II or IV TTh, rec IV Th(s); V Th(s); VI Th(w); VII Th(s); VIII Th (w); IX Th(w,s); I F(w,s); II F(w,s); IV F(w,s); V F(w)

8s Agricultural Economics (3 cr; prereq 2) II MWF

12s See 12f: III MWF

25w See 25f

30s Agricultural Prices (3 cr; prereq soph, 2) II MWF

40w See 40f

80w Farm Accounting (3 cr, §180; prereq soph with ‡) I MWF

82s See 82f

101w Statistical Methods for Social Sciences (4 cr; prereq Biom 100) III MWF, 2 hrs ar

107s Farm Work Simplification (3 cr; prereq 2) VIII-IX MWF

131w Market Prices (3 cr; prereq 30) 10:00-11:15 TTh

141w Dairy Marketing (3 cr; prereq 40) II MWF

143w Livestock, Poultry Marketing (3 cr; prereq 40) IV MWF

147s Marketing Accounting (4 cr; prereq 25) IV MWF

150s Adv Farm Finance (3 cr; prereq 50) 1:30-2:45 TTh

170w Land Economics (3 cr; prereq 110 or ‡) VII MWF

172s World Agriculture (3 cr) 1:30-2:45 WF

180w Farm Accounting (3 cr, §80; prereq grad or ‡)

206w Seminar: Agricultural Policy (3 cr) 4:00-5:15 MW

221w Farm Mgt Research Methods (3 cr) 1:30-2:45 TTh

226s Seminar: Farm Management (3 cr) 3:00-4:15 TTh

235s Methods of Price Analysis (3 cr; prereq 191) 10:00-11:15 TTh

270w Seminar: Land Tenure (3 cr) 4:00-5:15 TTh

AGRICULTURAL ENGINEERING

Mechanized Agriculture (MeAg)

Fall Quarter

3 **Technical Drawing** (3 cr, §2)
—1, III-IV MWF, AgEng 303, Christopherson
—2, III-IV TTh, AgEng 303, 2 hrs ar, Christopherson

4 **Mechanical Training** (4 cr)
Lab VIII-IX MWF, AgEng 20, Olson
—1, Lect VI-VII M, AgEng 108, Olson
—2, Lect VI-VII W, AgEng 108, Olson
—3, Lect VI-VII F, AgEng 108, Olson

12 **Machinery** (3 cr)
Lect VI MW, AgEng 109, Solstad
—1, Dem VI F, AgEng 37, Solstad
—2, Dem VII F, AgEng 37, Solstad

12A **Machinery Lab** (1 cr; prereq 12 or ¶)
—1, Lab VIII-IX F, AgEng 49, Solstad
—2, Lab VIII-IX M, AgEng 49, Solstad

24 **Agricultural Physics I** (4 cr; prereq Math T, 10)
Lect III MWF, AgEng 101, Culmer
—1, Lab VI-VII M, AgEng 102, Culmer
—2, Lab VI-VII F, AgEng 102, Culmer
—3, Lab VII-VIII Th, AgEng 102, Culmer
—4, Lab IX-X T, AgEng 102, Culmer
—5, Lab IV-V Th, AgEng 102, Culmer

42 Surveying (4 cr; prereq 3, Math T)
Lect VI TTh, AgEng 103, Machmeier
—1, Lab II-IV TTh, AgEng 305, Machmeier
—2, Lab VII-IX TTh, AgEng 305, Machmeier

70 Dairy Engineering (3 cr; prereq 25)
I MWF, AgEng 105, Strait

106 Hydrology, Erosion Control (3 cr; prereq Soil 1 or 3 or 19, Math H)
III MWF, AgEng 109, Larson

114 Probs: Farm Buildings (2-4 cr; prereq 3, 7, 14) Otis, Christopherson

130 **Farm Shop Mgt** (3 cr; prereq AgEd maj, 4, 3 addtl cr, AgEd 91)
Lect VII TTh, AgEng 35, Marvin
Lab VIII-IX TTh, AgEng 20, Marvin

Winter and Spring Quarters

2w Technical Drawing Probs (1 cr, §3; prereq 1 yr HS mech draw) III-IV T

3w,s See 3f: III-IV MWF

4w See 4f

4s See 4f: Lect VI-VII M; VI-VII W; VI-VII F, lab VIII-IX MWF; VI-VIII TTh

7w,s Farm Building Construction (3 cr) Lect VI TTh, lab VII-IX T or Th

12s See 12f: V TTh, dem III or IV Th

12As See 12Af: VII-VIII Th

14s Farm Buildings (3 cr) I MWF

23w General Physics (5 cr; prereq Math H) Lect II MTWF, lab I-II Th; III-IV Th

24w See 24f: Lect I MWF, lab VI-VII Th; IX-X Th

25w,s Agricultural Physics II (4 cr; prereq 24) Lect I TThS(w); I MWF(s), lab VI-VII M(s); II-III T(w); VI-VII T(w,s); IX-X T (w); II-III S(w)

35s Household Physics (5 cr) Lect II MWF, lab VIII-IX MW; I-II TTh; VIII-IX TTh

39w Rural Sanitation, Water Supply (3 cr; prereq 23, Math H) IV MWF

42s See 42f: Lect VI TTh, lab VII-IX TTh

45w,s Engines, Tractors (3 cr; prereq 23) Lect VI MW, dem VI or VII F

45Aw,s Engines, Tractors Lab (1 cr; prereq 45 or ¶) VIII-X M(s); VIII-X F(w,s)

55w Electricity (2 cr; prereq 23, Math H) VI TTh

107w Drainage, Irrigation (3 cr; prereq Math H, Soil 1 or 3 or 19) II MWF

108s Probs: Soil, Water Conservation (4 cr; prereq 106 or 107) VI-IX MW

114w,s See 114f

124s Machinery, Mechanical Power Mgt (3 cr; prereq 9 cr incl 12, 23)

125s Topics: Agricultural Physics (3 cr; prereq EE 37 or inte calc, 25)

130s See 130f

AGRONOMY AND PLANT GENETICS (Agro)

Fall Quarter

1 Introduction (3 cr)
Lect IV MWF, Agr 202, Smith

2 **Introduction to Laboratory** (1 cr; prereq ¶1)
—1, III-IV T, Agr 104, Smith
—2, III-IV Th, Agr 104, Smith

27 Forage Crops (4 cr; prereq 1)
Lect VI MWF, Agr 202, Schmid
Lab VII MWF, Agr 104, Schmid

50 Crop Judging (4 cr; prereq 22, 24)
Lab VI-IX TTh, Agr 104, Schmid

127 Forage Crops (4 cr; prereq 1)
Lect VI MWF, Agr 202, Schmid
Lab VII MWF, Agr 104, Schmid

131 **Genetics** (4 cr; prereq 30)
Lect I MWF, Agr 202, Lambert
—1, Lab II-III M, Agr 104, Lambert
—2, Lab III-IV Th, Agr 104, Lambert

135 Weed Control (3 cr; prereq 1, PlPa 3)
VI TTh, VII T, Agr 202, Behrens

201 Research: Farm Crops (ar cr; prereq 121, 123) Behrens, Robinson, Schmid, Smith

202 Seminar: Farm Crops (1 cr; prereq 9 cr farm crops)
IX W, Agr 408

241 Research: Plant Genetics (ar cr) Burnham, Rinke, Ausemus, Thomas, Lambert

242 Seminar: Plant Breeding (1 cr)
VIII-IX F, Agr 408

244 Lab Methods in Plant Breeding (ar cr; prereq 132)

251 Probs: Application of Statistics (ar cr; prereq 136) Thomas

252 Cytogenetics (4 cr; prereq 240)
Lect I MWF, Agr 408, lab ar, Burnham

Winter and Spring Quarters

1w,s See 1f

2w,s See 2f: III-IV T; VI-VII T

21w Grain, Oil Seed Crops (4 cr; prereq 1) Lect VI MWF, lab VII MF; VII-VIII W

22s Grain, Hay Grading (3 cr; prereq 1) I-II MWF

24s Identification, Judging (1 cr; prereq soph, 1) VIII-IX Th

121w Grain, Oilseed Crops (4 cr; prereq 1) Lect VI MWF, lab VII MF; VII-VIII W

122s Grain, Hay Grading (3 cr; prereq 1) I-II MWF

132w Farm Crops Plant Breeding (4 cr; prereq 30) VI-VIII TTh

134s Adv Forage Crops (4 cr; prereq 27) Lect VI MWF, lab VII MWF

201w,s See 201f

202w See 202f

203w Adv Agronomy (3 cr; prereq 21, 23) VIII-IX W

240w Adv Genetics (3 cr; prereq 131) II MWF

241w,s See 241f

242s See 242f

243s Methods in Plant Breeding (3 cr; prereq 132, 240) II MWF

246w Seminar: Genetics (1 cr) VIII-IX F

248w Applied Statistics (3 cr; prereq Biom 101 or PubH 110) V MWF

251w See 251f

253s Methods: Plant Genetics (3 cr; prereq 252) I MWF

30w Intro. to Genetics
I MWF (3 cr.; prereq.
Sophomore Biol 3 or equiv.)

255s Topics: Genetics (2 cr; prereq 252 or △)
261w Quantitative Inheritance (3 cr; prereq 131 or 248) IV MWF

ANIMAL HUSBANDRY (AnHu)

Fall Quarter

1 **Introduction** (4 cr)
II MTWThF, LsPav 100, Meiske, Jordan
36 Livestock Feeding I (3 cr; prereq 1...AgBi 3 rec)
III MWF, PetH 110, Meade
36A **Livestock Feeding I Lab** (1 cr; prereq 36 or ¶)
—1, VIII-IX T, LsPav 203, Meade
—2, VIII-IX Th, LsPav 203, Meade
53 Adv Meats (3 cr; prereq 31)
VI-VII TTh, MSh 102, Aunan
58 Market Classes, Grades of Livestock (3 cr; prereq 1)
II T, II-IV Th, PetH 200, Harvey
60 Current Topics (1 cr; prereq sr)
IX F, PetH 108, Hanson
63 Swine Production (3 cr, §163; prereq 37, 37A, 62 or ♯)
I TTh, III-IV T, LsPav 203, Meade, Prouty
70 Feeds, Feeding Practices (3 cr, §DyHu 70; prereq Vet Med students)
VII MWF, LsPav 203, Hanson
101 Livestock Selection (3 cr; prereq 9 or ♯)
VI-VII MWF, LsPav 100, Jordan
163 Swine Production (3 cr, §63; prereq 37, 37A, 62 or ♯)
I TTh, III-IV T, LsPav 203, Meade, Prouty
201 Adv Animal Breeding I (3 cr; prereq 162, Agro 136, Zool 171)
Lect III MWF, PetH 108, Rempel
Lab VI-VII Th, PetH 108
208 Seminar: Animal Husbandry (2 cr)
VIII-IX M, PetH 108, Hanson
211 Experimental Methods (3 cr; prereq Agro 248)
IV MWF, PetH 108, Comstock
213 Research: Animal Husbandry (3-9 cr)

Winter and Spring Quarters

1w,s See 1f
8w Breeds of Livestock (4 cr; prereq soph, 1) II-IV TTh
9s Livestock Judging (3 cr; prereq 8) II-IV MWF
30w Meat Selection, Utilization (3 cr; prereq soph) VI-VII MW
31s Meats (3 cr; prereq 1, 30) VI-VIII TTh
37w Livestock Feeding II (3 cr; prereq 36) III MWF
37Aw Livestock Feeding II Lab (1 cr; prereq 37 or ¶) VIII-IX T or Th
-61w‡ See 60f
62w Animal Breeding (3 cr, §162; prereq Agro 30) IV MWF
64w Sheep Production (3 cr, §164; prereq 37, 37A, 62 or ♯) VI-VII TTh
65s Beef Cattle Production (3 cr, §165; prereq 37, 37A, 62 or ♯) Lect I TTh, lab II-IV T or Th
107s Meat Probs (3 cr; prereq 53)
162w Animal Breeding (3 cr, §62; prereq Agro 30) IV MWF
164w Sheep Production (3 cr, §64; prereq 37, 37A, 62 or ♯) VI-VII TTh
165s Beef Cattle Production (3 cr, §65; prereq 37, 37A, 62 or ♯) Lect I TTh, lab II-IV T or Th
204s Adv Animal Breeding III (3 cr; prereq 162, Agro 261) VI T, VI-IX Th
206w Adv Livestock Feeding I (3 cr; prereq 37, AgBi 6) VI MWF
207s Adv Livestock Feeding II (3 cr; prereq 37, AgBi 6) VI MWF
-209w-210s‡ See 208f
213w,s See 213f

DAIRY HUSBANDRY (DyHu)

Fall Quarter

1 **Dairying** (3 cr, §DInd 1)
III MWF, Dairy 15, Morris, Williams
11 Milk Production (5 cr)
IV MTWThF, HH 100, Cole
19 Dairy Cattle Management (1 cr; prereq ¶11)
VI-VIII Th, HH 9, Cole, Williams
49 **Reproduction, Artificial Insemination** (3 cr; prereq 1)
VI-VIII TTh, HH 1, Graham
105 Seminar: Dairy Literature (2 cr; prereq sr, 3 courses)
II TTh, HH 9, Petersen
121 Dairy Production I (4 cr; prereq...AnHu 36, 37 rec)
VI-VII TTh, HH 109, Donker, Petersen
202 Research: Dairy Production (ar cr)
217 Dairy Cattle Inheritance (3 cr; prereq ♯)
VI-VII TTh, HH 6, Clifton
219 Dairy Cattle Reproduction (3 cr; prereq ♯) Graham

Winter and Spring Quarters

1w,s See 1f
5s Practice (3 cr; prereq soph, △)
9s Dairy Cattle Judging (1 cr; prereq soph) VI-VIII T or F
19w,s See 19f
51s Classification, Evaluation of Dairy Cattle (2 cr; prereq 9) VI-VIII TF
122w Dairy Production II (4 cr; prereq 49, Agro 30) VI-VII TTh

123s Dairy Production III (4 cr; prereq 19, 49) VI-VIII TTh
149s Reproduction, Artificial Insemination (3 cr, §49; prereq grad or ‡) II-IV TTh
-203w-204s‡ See 202f
218w Nutrition, Feeding of Dairy Cattle (3 cr; prereq ‡) II TThS
220s Lactation (3 cr) VI-VII TTh
221s Dairy Cattle Management (3 cr; prereq ‡) II MWF

DAIRY INDUSTRIES (DInd)

Fall Quarter

1 **Dairying** (3 cr, §DyHu 1)
III MWF, Dairy 15, Morris, Williams
2 Dairying Lab (2 cr, §old DyHu 2; prereq 1) VII-VIII TTh, Dairy 10, 15, Thomas
101 Condensed Milk Products (3 cr, §old DyHu 107; prereq 2, 50, AgBi 10)
I TTh, Dairy 255, VI-VIII Th, Dairy 151, Morris
105 Butter (3 cr, §old DyHu 111; prereq 2, 50, AgBi 10)
VI MW, Dairy 255, VI-VIII F, Dairy 150, 155, Coulter
151 Adv Dairy Bacteriology (3 cr, §old DyHu 151; prereq sr, 105 or 106)
II-III MWF, Dairy 218, Jezeski
205 Research: Dairy Mfg (ar cr)
212 Research: Dairy Bacteriology (ar cr)

Winter and Spring Quarters

1w,s See 1f
2s See 2f: VI-IX T
3w Dairy Products Judging (1 cr, §old DyHu 10; prereq soph) IX-X Th
20s Household Microbiology (4 cr, §old DyHu 20; prereq 3rd qtr fr, ‡) VI MF, VI-VII W
100w Seminar: Literature (2 cr; prereq sr, 3 courses) V TTh
102w Dry Milk Products (3 cr, §old DyHu 108; prereq 101) I TTh, VI-VIII Th
103s Market Milk (3 cr, §old DyHu 109; prereq 2, 50, AgBi 10) IV MW, VI-VIII Th
104w Ice Cream, Frozen Dairy Foods (3 cr, §old DyHu 110; prereq 2, 50, AgBi 10) IV TS, VI-VIII T
106s Cheese (3 cr, §old DyHu 112; prereq 2, 50, AgBi 10) IV TS, VI-VIII T
107s Technical Control of Dairy Products (3 cr, §old DyHu 113; prereq sr, 105 or 106, AgBi 10) I-III TTh
130s Adv Dairy Products Judging (1 cr; prereq 10) IX-X Th
151w,s See 151f
-206w-207s‡ See 205f
-213w-214s‡ See 212f

ENTOMOLOGY AND ECONOMIC ZOOLOGY (Ent)

Fall Quarter

1 Insect Life (3 cr)
V MWF, PetH 110, Holdaway
1A **Insect Life Lab** (1 cr; prereq 1 or ‡)
VII-IX T, CofH 302, Holdaway
2 Fishery, Wildlife Mgt (1 cr)
II T, CofH 307, Beer, Marshall, Smith, Waters
51 **Animal Parasitology** (5 cr; prereq Biol 3)
Lect VI MWF, Z 313 (**Mpls Campus**), Wallace
—1, Lab III-IV MWF, Z 208 (**Mpls Campus**)
—2, Lab VII-VIII MWF, Z 208 (**Mpls Campus**)
55 Entomological Techniques (1-3 cr; prereq 52) Cook
117 **Animal Ecology** (3 cr; prereq 15 cr ent or zool incl Biol 3)
Lect VI-VII TTh, Z 211 (**Mpls Campus**), Underhill
Lab VIII TTh, Z 211 (**Mpls Campus**)
121 **Ichthyology** (3 cr; prereq 15 cr zool incl Biol 3)
Lect III MWF, Z 211 (**Mpls Campus**), Eddy
Lab IV MWF, Z 53 (**Mpls Campus**)
141 Insects in Relation to Plant Diseases (3 cr; §PlPa 141; prereq 5 cr, 5 cr pl path or ‡)
I-II MWF, CofH 302, Peterson, Wilcoxson
144 **Medical Entomology** (3 cr, §Zool 144; prereq 15 cr ent or zool incl 52, ‡)
Lect VI TTh, Z 208 (**Mpls Campus**), Price
Lab VII-VIII TTh, Z 208 (**Mpls Campus**)
197 Introd Research (ar cr; prereq sr, △)
200 Seminar (1 cr)
242 **Insect Physiology** (4 cr, §Zool 242; prereq 15 cr zool or ent, ‡...Zool 50 rec)
Lect VI WF, CofH 8, Richards
Lab VII-IX WF, CofH 8
248 Fishery Biology, Mgt (5 cr, †248-249; prereq 171, Zool 53, 118, 119, 121, Biom 100, or ‡)
Lect VI MWF, CofH 307, Smith
Lab VII-VIII MWF, CofH 20
251 Fishery Habitats, Development (3 cr; prereq 118, 171, PubH 110, 111 or ‡)
Lect VI TTh, CofH 307, Waters
Lab VII-VIII TTh, CofH 20
254 **Adv Entomology** (3 cr, §Zool 254; prereq 15 cr incl 52 or ‡)
Lect I TTh, Z 211 (**Mpls Campus**), Mickel
Lab II-III TTh, Z 402 (**Mpls Campus**)

Winter and Spring Quarters

1s See 1f
1As See 1Af
21s Beekeeping (3-5 cr) VI-VIII MWF
50s Economic Entomology (5 cr; prereq 1 or Biol 3) Lect VI MWF, lab VII-VIII MWF

52w Entomology (5 cr; prereq ‡ for soph, Biol 3) Lect VII MWF, lab V-VI MWF; VIII-IX MWF

56w Forest Entomology (4 cr; prereq Biol 3). Lect VIII MWF, lab VI-VII MWF; IX-X MWF

63w Mammalogy (4 cr; prereq Zool 22) Lect II MWF, lab I-II ThS; IV-V ThS

64w Fishery, Wildlife Populations (3 cr; prereq Biol 3, Bot 50 or For 5) III MWF

65w Fishery, Wildlife Mgt (3 cr; prereq 64) III TThS

67s Forest Wildlife Mgt (2 cr; prereq 64)

114s Apiculture (3 cr; prereq 9 cr) I MW

118w Animal Ecology (3 cr; prereq 15 cr ent or zool, 3 cr animal or plant ecology, ‡) Lect VI T, VI-VII Th

140s Biological Microscopy (4 cr; prereq sr, 15 cr ent or bot or zool, ‡) Lect VI WF, lab VII-IX WF

145w Parasitic Protozoa (3 cr; prereq 15 cr zool incl Biol 3, ‡) Lect VI TTh, lab VII-VIII TTh

146s Helminthology (3 cr; prereq 15 cr zool incl Biol 3, ‡) Lect VI TTh, lab VII-VIII TTh

156w Adv Forest Entomology (3 cr; prereq 9 cr, ‡)

166s Wildlife Mgt (3 cr; prereq 63, 65, Bot 50, Zool 58 or ‡) Lect V TTh, lab ar

171s Techniques in Fishery Biology, Mgt (3 cr; prereq 65, 119, 121 or ‡) Lect VI TTh, lab VII-VIII TTh

197w,s See 197f

200w See 200f

236s Gen Ecology of Insects (3 cr; prereq 118) Lect VI TTh, lab VII-VIII TTh

241w Insect Embryology, Histology (4 cr; prereq 254, ‡...Zool 59 rec) Lect I MW, lab II-IV MW

-243w See 242f

244s Insect Microbiology (4 cr; prereq ‡...242-, 243 rec) Lect I TTh, lab II-IV TTh

-249w See 248f

250s Fisheries Resources (3 cr; prereq 249 or ‡) I-II MW

-255w-256s See 254f: Lect I TTh, lab II-III TTh(w); I-III S(s)

257s Insecticides, Their Action (3 cr; prereq 15 cr incl 50 or ‡, inorg chem, org chem) IV MWF

258s Insecticides Lab (2 cr; prereq 257 or ¶) I-III MW

259w Experimental Ecology Lab (2 cr; prereq 118 or ¶)

274s Wildlife Mgt: Upland Game (3 cr; prereq 65, Zool 58, 118, Bot 50 or ‡) Lect I TTh, lab ar

276w Wildlife Mgt: Big Game (3 cr; prereq 63, 65, Zool 118, Bot 131 or ‡) I TThS

FORESTRY (For)

Fall Quarter

1 Introduction (1 cr)
II TTh, GH 120, Kaufert, Hallgren

7 **Forest Measurements** (3 cr; prereq Math T)
Lect IV MW, GH 120, R Brown
—1, Lab VI-VIII M, GH 206
—2, Lab VI-VIII W, GH 206

10 **Farm Forestry** (3 cr; prereq not open to forestry majors)
Lect IV TTh, GH 120, Scholten
—1, Lab VI-VIII M, GH 203
—2, Lab VI-VIII T, GH 203

59 **Forest Aerial Photogrammetry** (3 cr; prereq Biol 3, Math T, Geol 1 or Soil 3)
—1, I-III TTh, GH 206, Meyer
—2, VI-VIII TTh, GH 206

75 **Wood Structure, Identification** (2 cr, §old 53; prereq 4)
—1, VI-VII TTh, GH 211, Rees
—2, VI-VII MW, GH 211

77 Forest Products (3 cr, §old 56)
I MWF, GH 120, Kaufert

78 Forest Products Quality Standards (2 cr, §old 58; prereq 76 or ¶)
Lect III T, FP 204, Wallin
Lab III-IV TTh, FP 204

79 Strength of Wood Materials (3 cr, §old 114; prereq 76, Math 10)
I TThS, FP 204, Rees

81 Wood Drying (3 cr, §old 52; prereq 76)
Lect II TTh, FP 204, Wallin
Lab VII-VIII Th, GH 201

83 Wood Finishing (3 cr, §old 121; prereq org chem)
IV MWF, FP 204, Hossfeld

123 Production, Marketing (4 cr; prereq 47 or 147)
IV MTWF, GH 203, Skok

126 Forest Ecology (3 cr; prereq 4)
II MWF, GH 203, Hansen

141 Silvics (3 cr; prereq sr, 127)
III MWF, GH 202, Hansen

143 Forest Recreation (3 cr)
II MWF, GH 201, Duncan

150 Forest Genetics (3 cr; prereq Agro 30 or 131 or ‡) Pauley

156 Introd to Research (3 cr; prereq sr, ‡)
III TTh, V F, GH 201, Hossfeld, Duncan, Shiue

181 Moisture Relations in Wood (3 cr; prereq 81, 177)

199 Seminar (1 cr) 202
VIII-IX W, GH ~~201~~, Kaufert, Winsness

200 Research Probs: Silviculture (ar cr) Hansen, Duncan, Schantz-Hansen, B Brown

203 Research Probs: Forest Mgt (ar cr) Duncan, Irving, Schantz-Hansen, B Brown

205 Research Probs: Forest Economics (ar cr) Kaufert, Skok

207 Research Probs: Forest Products Engineering (ar cr) Hossfeld, Rees, Wallin
213 Research Probs: Forest Utilization (ar cr) Kaufert, Hossfeld, Rees, Wallin
218 Research Probs: Forest Measurements, Photogrammetry (ar cr) Brown, Meyer, Shiue
220 Probs: Forest-Tree Genetics (ar cr) Pauley
221 Probs: Forest Influences (ar cr) Duncan
222 Probs: Forest Policy (ar cr) Irving, Kaufert
223 Seminar (1 cr)
VIII-IX Th, GH 202

Winter and Spring Quarters

1Aw Conservation of Natural Resources (3 cr) III MWF
4s Dendrology (4 cr; prereq Biol 3 or ¶ or bot) Lect IV MWF, lab ar
8s Timber Estimating, Forest Surveys (3 cr; prereq 7) Lect IV TTh, lab VI-VIII T; VI-VIII W
10s See 10f
47s Forest Economy (2 cr; prereq AgEc 2 or ♯) III TTh
51w Logging (2 cr) II TTh
55s Fire Protection (2 cr) II TTh
60s Forest Engineering (2 cr; prereq MeAg 42)
61s Forest Recreation (1 cr)
62s Forest Policy (1 cr; prereq 124)
-76w See 75f
80w Timber Testing Lab (2 cr, §old 115; prereq 79) I-II TTh
82s Wood Preservation (3 cr, §old 125; prereq 76, org chem) Lect III TTh, lab ar
85w Glued Wood Products (3 cr, §old 57; prereq 76 or ¶) Lect IV TTh, lab VIII-IX Th
86s Wood Fiber, Particle Prod (3 cr, §old 57; prereq 85 or ¶) Lect IV TTh, lab VIII-IX Th
87w Building Materials Merchandising (3 cr, §old 58; prereq 123, 18 cr BA) Lect II-III T, lab II-III Th
88s Building Cost Estimating (3 cr, §old 120; prereq 78, MeAg 7, Ind 9) VII-IX W
101w Adv Dendrology (3 cr; prereq 4)
104w Watershed, Range Mgt (4 cr; prereq 5 or ♯) IV MTWF
111w Application of Statistical Methods (3 cr; prereq 8 or ♯) VI-VIII WF; VI-VIII TTh
124w Forest Mgt (3 cr; prereq 123) II MWF
127w Silviculture (2 cr; prereq 4, 5) III TTh
128s Silviculture (6 cr, §128-129; prereq 127)
131s Forest Policy (3 cr; prereq sr) I MWF
133s Forest Mgt, Utilization (2 cr; prereq 124)
134s Forest Inventory, Photographic Interpretation (3 cr; prereq 59, 111 or Biom 90)
136w Forest Economics (3 cr; prereq sr, 123, ♯) VIII-IX T; VII Th
137s Forest Tree Seed (2 cr; prereq Biol 3 or bot) Lect III TTh, lab ar
140w Adv Forest Mgt (3 cr; prereq sr, 124) I-II TTh
145w Adv Silviculture (3 cr; prereq sr, 128) III MWF
146w Adv Forest Aerial Photogrammetry (3 cr; prereq sr, 59 or ♯)
147s Forest Economy (2 cr; prereq AgEc 2 or ♯) III TTh
149s Adv Forest Measurements (3 cr, §old 112; prereq 111 or ♯)
154w Adv Watershed Mgt (3 cr; prereq 104 or ♯) II TTh, VI-VII T
175w Wood Pulp, Paper (3 cr, §old 113; prereq 76, org chem) IX MWF
176s Timber Engineering (4 cr, §old 116; prereq 79) VI MWF; VII-VIII MF
177s Wood Chemistry (3 cr, §old 142; prereq 76, org chem) II MWF
178s Woody Tissue Microtechnique (4 cr, §old 119; prereq 76 or ♯) Lect IX T, lab VI-VIII TTh
182s Adv Wood Preservation (3 cr; prereq 82)
184s Adv Wood Chemistry (2 cr; prereq 177, AgBi 2)
187w Adv Building Materials Merchandising (3 cr; prereq 87, BA 97)
199w See 199f
200w,s See 200f
203w,s See 203f
205w,s See 205f
207w,s See 207f
213w,s See 213f
218w,s See 218f
220w,s See 220f
221w,s See 221f
222w,s See 222f
-224w-225s See 223f
226w-227s Seminar: Statistical Methods in Forestry Research (1 cr; prereq 6 cr in stat or ♯)

HOME ECONOMICS (HE)

Fall Quarter

1 **Choice, Care of Clothing** (3 cr, §GC 3C; not open to men, sr)
—1, IV MWF, HE 350, Baumgartner
—2, V MWF, HE 350, Baumgartner
3 **Clothing Construction A** (3 cr; prereq 3rd qtr fr, 1)
—1, III-IV MWF, HE 327, Carlson
—2, VI-VII MWF, HE 327, Carlson
4 **Clothing Construction B** (3 cr; prereq soph, 3)
—1, II-IV TTh, HE 327, Carlson
—2, VI-VIII TTh, HE 328, Gorham
10 **Introduction** (1 cr; prereq fr only)
—1, II Th, HE 227, Stedman, others
—2, III Th, HE 227, Stedman, others
17 **Personal, Family Living** (3 cr, not open to sr)
—1, II MWF, HE 227, Bellinger
—2, VI T, VI-VII Th, HE 227, Bellinger

20 **Related Art** (4 cr)
—1, II MTWF, HE 350, Myren
—2, III MTWF, HE 350, Myren

21 **Color, Design** (3 cr; prereq 20)
VI-VII MWF, HE 359, Abell

22 **Bgn Costume Design** (3 cr; prereq 1, 20...21 rec)
III-IV MWF, HE 342, Esteros

23 **Probs: Design** (3 cr; prereq 21, Art 20)
VI-VIII TTh, HE 433, Forsyth

24 **Probs: Home Planning, Furnishing** (5 cr, §GC 3D, FL 15; prereq soph, 20...21, 49 rec)
—1, III-IV MWF, HE 360, Abell
—2, VI-VII MWF, HE 360, Forsyth

25 **Design Applied to Crafts** (3 cr; prereq 20...21 rec)
III-V TTh, HE 433, Abell

28 **Construction, Refinishing of Home Furnishing** (3 cr; prereq ♯)
VI-VII MWF, HE 433, Myren

30 **Nutrition** (2 cr, §31 or GC 3B or PNurs 14; prereq ♯ for HE maj; others, none)
II TTh, FolH 5 **(Mpls Campus)**, Gormican

31 **Nutrition** (3 cr, §30 or GC 3B or PNurs 14, not open to HE sr)
—1, III MWF, HE 125, Higgins
—2, VI MWF, HE 125, Higgins

33 **Nutrition I** (4 cr; prereq soph, AgBi 1A or OrCh 42, Phsl 4 or ¶)
Lect III MWF, HE 48
Lab VI-VIII T, HE 254

40 **Food Preparation** (5 cr; prereq 3rd qtr fr, 2 qtrs chem)
—1, Lect III TTh, HE 48
Lab III-IV MWF, HE 157
—2, Lect VII TTh, HE 48
Lab VI-VII MWF, HE 157

41 **Food Mgt, Marketing** (5 cr; prereq soph, 31, 40)
—1, Lect III TTh, HE 150, Trammell
Lab III-IV M, III-V W, HE 150, 152, 156
Conf V M, HE 48
—2, Lect IV TTh, HE 150, Cassilly
Lab III-IV M, III-V F, HE 150, 152, 156
Conf V M, HE 150

49 **Household Equipment** (3 cr; prereq soph, MeAg 35 or ♯)
—1, Lect VI MF, HE 124, 128, Ehrenkranz
Lab VI-VII W, HE 124, 128
—2, Lect VI TTh, HE 124, 128, Ehrenkranz
Lab VII-VIII T, HE 124, 128

50 **Textiles** (4 cr; prereq 3rd qtr soph, 1, InCh 5 or GC 7C)
III-IV MWF, HE 303, Gorham

53 **Adv Clothing** (3 cr; prereq 4, 50 or ¶)
VI-VII MWF, HE 328, Gorham

58 **Supervised Retail Training** (4 cr; prereq 21, 22, 50 or ¶, Psy 2, ♯)
II TTh, all day S, HE 342, Ludwig

63 **Quantity Food Purchasing, Production** (5 cr; prereq 41, 3rd qtr soph)
Lect V TTh, HE 201, Hitchcock
Lab I-IV TTh, Cafeteria

64 **Food Service Equipment** (4 cr; prereq 63)
Lect VI M, VI-VII F, HE 44, Hitchcock
Field Trips VI-VIII W

66 **Administrative Food Service Experience** (5 cr; prereq 65) Hitchcock

70 **Adv Food Preparation** (3 cr; prereq 40, AgBi 1A)
VI MW, HE 48, Cassilly
VII-VIII MW, HE 56

76 **Nutrition of the Family** (4 cr, §170, 171; prereq 31, 40, phsl or hum biol)
IV MTWF, HE 48, Higgins

85 **Home Mgt** (3 cr; prereq 40...41 rec)
VII MWF, HE 201, Jeary

86 **Home Mgt Lab** (4 cr; prereq 85 or ¶...41 rec)
—1, I MTWThFS, Home Mgt House, Jeary, Nielsen
—2, I MTWThFS, Home Mgt House, Jeary, Nielsen

89 **Probs: Household Equipment** (2-4 cr; prereq 49 with B, MeAg 35, ♯) Ehrenkranz

102 **Adv Textiles** (3 cr; prereq 50, AgBi 1A or OrCh 42, AgEc 2 or ¶)
VI-VIII TTh, HE 303, 304, Davison

120 **Art History** (3 cr)
VIII MWF, HE 350, Esteros

127 **Purchasing Home Furnishings** (3 cr; prereq 24, 50)
VI-VIII TTh, HE 360, Ludwig

140 New Developments in Food Preparation (3 cr; prereq sr, 40...70 rec)
9:00-10:15 TTh, HE 44, Gordon

142 **Experimental Cookery** (3 cr; prereq 40, AgBi 1A)
VI TTh, HE 48, VII-VIII TTh, HE 56, Trammell

170 **Nutrition Principles** (3 cr; prereq 31, 40, AgBi 1A, Phsl 4)
II MWF, HE 44

178 **Clinical Probs: Nutrition** (2 cr; prereq 35 or ¶, 170)
Lect V M, HE 44, Gormican
—1, Lab VI-VIII T, U Hosp **(Mpls Campus)**, Gormican
—2, Lab VI-VIII Th, U Hosp **(Mpls Campus)**, Gormican

185 **Family Relationships** (3 cr; prereq 17, HEEd 90 or ♯)
V MWF, HE 227, Bellinger

209 Seminar: Textiles, Clothing (1 cr; prereq ♯) Davison

220 Readings: Related Art (1-3 cr; prereq ♯) Esteros

227 Probs: Home Planning, Furnishing (1-3 cr; prereq 130 or ♯...122B rec) Esteros, Ludwig

229 Seminar: Related Art (1 cr)
IX-X T, HE 342, Esteros

249 Seminar: Foods (1 or 2 cr; prereq ♯) Noble

271 Human Nutrition (3 cr; prereq 270) Leichsenring
295 Probs: Home Economics (1-5 cr; prereq ‡) Bellinger, Davison, Ehrenkranz, Esteros, Ford, Leichsenring, Noble
296 Probs: Home Economics (1-5 cr; prereq 295) Bellinger, Davison, Ehrenkranz, Esteros, Ford, Leichsenring, Noble

Winter and Spring Quarters

1w,s See 1f: IV MWF(w); II MWF(s)
3w,s See 3f: III-IV MWF(w,s); VI-VII MWF (s); VI-VII TTh(w)
4w,s See 4f: II-IV TTh
17w,s See 17f: III MWF(w); IV MWF(w); V MWF(s)
20w,s See 20f: II MTWF(w); III MTWF(w); IV MTWF(s)
21w,s See 21f: III-IV MWF(s); VI-VII MWF (w,s); VI-VIII TTh(w,s)
22w See 22f: VI-VIII TTh
24w,s See 24f: III-IV MWF(s); V-VI MWF(w); VI-VII MWF(s); VII-VIII MWF(w)
25w,s See 25f: II-IV TTh(w); III-V TTh(s)
28s See 28f: VI-VIII TTh
30s See 30f: VII MW
31w,s See 31f: II MWF or 10:00-11:15 TTh(w); III MWF(s)
35w Nutrition II (4 cr; prereq soph, 33) Lect II MWF, lab VI-VIII T
40w,s See 40f
41w,s See 41f
49w,s See 49f
50w,s See 50f: III-IV MWF(w,s); VI-VII MWF (w)
53w,s See 53f
63w,s See 63f: lab I-IV TTh(w); I-IV WF(s)
65s Food Service Organization, Mgt (3 cr; prereq 63) 9:00-10:15 TTh
66w,s See 66f
70w See 70f: VI-VIII TTh
71s Demonstrations (1 cr; prereq 3rd qtr jr, 41) VI-VIII F
76s See 76f: II MTWTh
79s Probs for Dietitians (3 cr; prereq regis HE, 170) II MWF
85w,s See 85f
86w,s See 86f
88s Food Quality Evaluation (3 cr; prereq 70) Lect VI TTh, lab VII-VIII T
89w,s See 89f
107w Textile Analysis (3 cr; prereq 50, AgBi 1A, AgBi 2 or OrCh 42) VI-VIII MWF
116w Probs: Family Clothing (3 cr; prereq 3, 50) IX-X T
120w,s See 120f
121w Textile Design (3 cr; prereq 23, 50 or ‡) VI-VII MWF
122Aw Interior Design Presentation (2 cr; prereq 24, Art 20) III-IV TTh
122Bw Interior Design Probs (3 cr; prereq 120, 122A, 123 or ‡...180 rec) II-IV TTh
123w History of Home Furnishings (2 cr; 120 rec) II TTh
125s Adv Costume Design (3 cr; prereq 3, 22 or ‡) VI-VIII TTh
126w,s Special Problems in Crafts (1-3 cr; prereq 25 or ‡) II-IV TTh(w); III-V TTh(s)
127s See 127f
141w Current Literature in Foods (3 cr; prereq sr, 40) 9:00-10:15 TTh
146s Probs: Food (3 cr; prereq sr, 142) Lect VI MW, lab VII-VIII MW
170w See 170f: III MWF
171w,s Maternal, Child Nutrition (3 cr; prereq 170, HEEd 90) III MWF, 2 hrs ar
173s Diet Therapy (4 cr; prereq 170...35 rec) Lect 10:30-11:45 TTh, lab VI-VII F
174w Topics: Nutrition (1 cr; prereq 170) V W; V F
175w Nutrition (4 cr; prereq sr, 33, AgBi 2) Lect II MWF, lab VI-VIII T
177s Digestion, Metabolism (3 cr; prereq 35) VI-VIII MW
178w,s See 178f: Lect IV T(w); V M(s), lab VI-VIII T or Th
179w Readings: Nutrition (2 cr; prereq 170)
180w Adv Home Planning, Furnishing (3 cr; prereq 24, 49...120 rec) VI-VIII TTh
185w,s See 185f: II-III T, II Th
186w Probs: Income Mgt (3 cr; prereq 76 or ‡) 3:30-5:30 T
188s Evaluation of Food Quality (3 cr; prereq 142, AgBi 2, Biom 90 or 100) Lect VI TTh, lab VII-VIII T
190s Colloquium: Family Relationships (1 cr; prereq 185 or 15 cr child dev or psy or soc) IX Th
202s Animal Fibers (2 cr; prereq adv textiles, ‡)
204s Plant, Other Cellulosic Fibers (2 cr; prereq bot, adv textiles, ‡)
208s Microanalysis of Textile Fibers (ar cr; prereq bot, zool, adv textiles, ‡) VI-VII TTh
209s See 209f
220w,s See 220f
221w,s Probs: Textile Design (1-3 cr; prereq 121 or ‡) VI-VII MWF(w) Ar(s)
227w,s See 227f
247w Probs: Food (3 cr; prereq 142, ‡)
279w,s Seminar: Nutrition (1 cr; prereq ‡)
295w,s See 295f
296w,s See 296f

HORTICULTURE (Hort)

Fall Quarter

1 Gen Horticulture (3 cr)
II MWF, Hr 102, Snyder
21 Plant Materials: Fall, Winter Aspects (3 cr; prereq Biol 3 or 6 cr bot)
VI-VIII MW, Hr 8, Johnson
41 Crop Judging (2 cr; prereq 1, 6 or 32)
VI-VIII M, Hr 106, Turnquist

60 Landscape Design (3 cr; prereq 21, 22 or ‡) VI-VIII MF, Hr 303, Phillips
62 Probs: Landscape Design, Composition (2-4 cr; prereq sr, 61 or ‡) Phillips
105 Frozen Food Probs (2-4 cr, §FTec 105; prereq 104 or ‡) Winter
111 Systematic Pomology (3 cr; prereq 6, hort maj or min or ‡) Andersen
135 Potatoes (2 cr; prereq 32)
I TTh, Hr 302, Lauer
152 Commercial Floriculture: Fall Crops (3 cr; prereq 16)
Lect III TTh, Hr 8, Widmer
Lab VI-VIII T
190 Problems (2-4 cr; prereq ‡)
242 Seminar (1 cr; prereq 9 cr)
IX W, Hr 301
243 Adv Topics (2 cr) Snyder
247 Report: Special Topics (1-9 cr)
249 Research: Crop Breeding (ar cr) Currence, Hutchins, Wilcox

Winter and Spring Quarters

1s See 1f: III MWF
6w Fruit Growing (3 cr; prereq Biol 3 or 3 cr bot) III MWF
10s Ornamental Horticulture (3 cr) III MWF, 1 hr ar
16s Greenhouse Mgt (3 cr; prereq Biol 3 or 6 cr bot) Lect IV TTh, lab VI-VIII F
22s Plant Materials: Spring, Summer Aspects (3 cr; prereq Biol 3 or 6 cr bot) VI-VIII MW
32s Vegetable Growing (3 cr; prereq Biol 3 or 6 cr bot) II MWF
36w Plant Propagation (3 cr; prereq soph, Biol 3 or 6 cr bot) Lect III TTh, lab VI-VIII T
40s Horticultural Practices (2 cr; prereq soph, 6 or ‡) VI-IX WF
51s Garden Flowers (3 cr; prereq Biol 3 or 6 cr bot)
61s Planting Composition (3 cr; prereq 60 or ‡) VI-VIII MF
62w,s See 62f
104w Frozen Food Processing, Storage (3 cr, §FTec 104; prereq AgBi 5 or 6 or 10, Bact 53 or ‡) IV MWF
105w,s See 105f
110w Crop Breeding (3 cr; prereq Agro 30) III TThS
121w Small Fruit Culture (3 cr; prereq 6, hort maj or min or ‡) II MWF
154s Commercial Floriculture: Spring Crops (3 cr; prereq 16) Lect III TTh, lab VI-VIII T
-191w-192s‡ See 190f
241w Organization of Research (2 cr)
242w See 242f
-244w See 243f
247w,s See 247f
249w,s See 249f

PLANT PATHOLOGY AND BOTANY (PlPa)

Fall Quarter

1 **Plant Pathology** (5 cr, §51; prereq soph, 9 cr pl sci incl 6 cr bot or Biol 3)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105
—2, Lab VI-VII MWF, PP 105
4 Grasses, Sedges (3 cr; prereq soph, 9 cr bot)
Lect III TThS, AgBot 107, Kommedahl
Lab IV TS, AgBot 106, Kommedahl
53 Food Plants of Game Animals (3 cr; prereq 1 yr bot, 1 yr zool)
I TTh, AgBot 107, Kommedahl
II TTh, AgBot 106, Kommedahl
56 Study of Fungi (3 cr; prereq 9 cr bot or Biol 3 or ‡)
Lect II MW, PP 103, C Christensen, Anderson
Lab II-IV F, PP 105, C Christensen, Anderson
103 Physiology of Economic Plants (3 cr; prereq Bot 51 or 140)
II MWF, AgBot 107, Linck
105 Mycology (3 cr; prereq 1 or 51 or 56)
VI-VIII TTh, PP 105, C Christensen, Anderson
117 Virus Diseases of Plants (3 cr; prereq 1 or 51 or 120)
III-IV MWF, PP 103, King
120 **Plant Pathology for Adv Students** (3 cr, §1 or 51; prereq 14 cr pl sci or ‡)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105, Moore
—2, Lab VI-VII MWF, PP 105, Moore
141 Insects in Relation to Plant Diseases (3 cr, §Ent 141; prereq 5 cr, 5 cr ent or ‡)
I-II MWF, CofH 302, Wilcoxson, Peterson
156 Adv Fungi (3 cr, §56, 105, 106, 107; prereq 9 cr bot or Biol 3 or ‡)
Lect II MW, PP 103, C Christensen, Anderson
Lab II-IV F, PP 105, C Christensen, Anderson
203 Research (ar cr) J Christensen, others
207 Probs: Mycology (ar cr; prereq 105, 106, 107) J Christensen, others
213 Seminar (1 cr)
IX-X T, PP 401, J Christensen, others
215 Genetics of Plant Pathogens (3 cr; prereq 1 or 51, 156, Agro 131)
Lect IV MF, PP 401, J Christensen
Lab III-IV W, PP 105, J Christensen
216 Physiology of Plant Pathogens (3 cr)
VI-VII MWF, PP 103, Eide, Durbin
251 Seminar: Agricultural Botany (1 cr)
IX Th, AgBot 302, J Christensen, others
254 Research Probs: Applied Plant Physiology (ar cr)
AgBot 204, Landon, Rowell

260 Research Probs: Agricultural Botany (ar cr), J Christensen, others

Winter and Spring Quarters

1s See 1f
3s Weeds, Seed (3 cr; prereq 6 cr bot or Biol 3) III-IV TThS
51s Forest Pathology (4 cr, §1, old 10; prereq 6 cr bot or Biol 3) Lect I WF, lab I-II TThS; III-IV TThS
101w Nematodes in Relation to Plant Diseases (3 cr; prereq 1, 51 or 120, 6 cr zool or Biol 3 or ‡) II TThS
102w Biology of Seeds (3 cr; prereq 15 cr pl sci or ‡) VI-VII TTh
-106w-107s‡ See 105f
108w Physiology of Economic Plants Lab (2 cr; prereq Bot 140 with lab, quant anal) VIII-IX M, VIII W, 3 hrs ar
111w Diseases of Field Crops (4 cr; prereq 1 or 51 or 120) III-IV TThS
114w Adv Forest Pathology (3 cr; prereq 1 or 51 or 120) VI-VIII T, VII-VIII Th
115s Diseases of Vegetable Crops (3 cr; prereq 1 or 51 or 120) Lect II MF, lab II-IV W
119s Plant Disease Control (3 cr; prereq 1 or 51 or 120) III-V TTh
120s See 120f: Lect I WF, lab I-II TThS; Lect VIII MWF, lab IX-X MWF; VI-VIII MWF
136w Physiology, Ecology of Weeds (3 cr; prereq 3) I TThS
137s Animal Diseases, Poisonous Plants (3 cr, §VMC 137; prereq ‡) Lect VII M, lab VIII-IX M
143w Methods (3 cr; prereq 1 or 51) III-IV TThS
161s Technology of Fruits, Vegetables (3 cr; prereq 15 cr pl sci or ‡)
162w Temperature Relations of Crop Plants (3 cr; prereq 15 cr pl sci or ‡)
-204w-205s‡ See 203f
-208w-209s‡ See 207f
213w,s See 213f
217s Ecology of Plant Pathogens (3 cr; prereq 1 or 51 or 120, 156) Lect III-IV W, lab II-IV F
218w Principles (3 cr; prereq 1 or 51, 156, Bact 53, 6 addtl cr pl path) III-IV MWF
251w,s See 251f
254w,s See 254f
260w,s See 260f

POULTRY HUSBANDRY (PoHu)

Fall Quarter

1 Poultry Production (3 cr)
II MWF, PetH 110, Snetsinger
52 **Poultry Selection** (3 cr; prereq 1)
VI-VII TTh, PetH 15, Kinney
55 Problems (1-3 cr; prereq 6 cr, ‡)
154 **Poultry Products** (3 cr; prereq 1)
VIII-IX TTh, PetH 15, Swanson
214 Research: Poultry Husbandry (ar cr; prereq ‡)
215 Research: Poultry Nutrition (ar cr; prereq 9 cr agr biochem) Waibel, Johnson
216 Research: Poultry Breeding (ar cr; prereq 9 cr genetics) Shoffner
217 Seminar (1 cr; prereq ‡) Burger
218 Research: Poultry Products (ar cr; prereq ‡) Swanson

Winter and Spring Quarters

1w,s See 1f
51s Hatchery Mgt (3 cr; prereq 1, Biol 3) VI-VII TTh
53w Poultry Feeding (2 cr; prereq 1) VI TTh
55w,s See 55f
102w Poultry Breeding (4 cr; prereq 1, Agro 30) I MWF
153s Adv Poultry Nutrition (3 cr; prereq 1, AgBi 3) IV MWF
214w,s See 214f
215w,s See 215f
216w,s See 216f
217w,s See 217f
218w,s See 218f

RHETORIC (Rhet)

Fall Quarter

1-2-3 Communications I, II, III (3 cr per qtr)
Three days assigned from I MTWThF. All entering freshmen and students transferring with fewer than nine credits of freshman English meet in Peters Hall Auditorium the first period MTW for the first week for diagnostic tests and sectioning. Students already tested during freshman week and students who have taken Rhetoric 1 or 2 will find section assignments posted on 2nd floor AgEng Bldg September 28.
22 **Public Speaking** (3 cr; prereq rhet comm req)
—1, II MWF, AgEng 307, Richer
—2, III MWF, AgEng 307, Nichols
—3, III MWF, AgEng 317, Richer
—4, IV MWF, AgEng 307, Cashman
—5, V MWF, AgEng 307, Cashman
—6, VI MWF, AgEng 307, Gill
—7, VII MWF, AgEng 307, Whipp
—8, III TThS, AgEng 307, Richer
32 Novel, Short Story (3 cr; prereq rhet comm req)
V MWF, AgEng 306, Price
33 American Life in American Literature (3 cr; prereq rhet comm req)
II MWF, AgEng 306, Mondale

47 **Efficient Reading** (3 cr, SLA students see SLA bul)
—1, VI MWF, AgEng 315, Brown
—2, VI MWF, ForH 15 (**Mpls Campus**), Seymour

51 **Exposition** (3 cr; prereq rhet comm req)
—1, IV MWF, AgEng 306, Mixon
—2, V MWF, AgEng 317, Mondale
—3, VI MWF, AgEng 306, Mixon
—4, VII MWF, AgEng 306, Wright
—5, III TThS, AgEng 315, Brown

52 **Technical Writing** (3 cr; prereq 51)
III MWF, AgEng 315, Thurston

54 **Adv Public Speaking** (3 cr; prereq 22)
II MWF, TSH 220, Drake

56 **Discussion Methods** (3 cr, §old 12; prereq rhet comm req)
—1, IV MWF, AgEng 109, Drake
—2, VII MWF, AgEng 109

60 Contemporary Life, Literature (3 cr; prereq rhet comm req)
IV MWF, AgEng 317, Wright

91 **American Speech for Foreign Students** (no cr)
IX MWF, AgEng 317, Gill

151 **Report, Thesis Writing** (3 cr; prereq 51 or ♯)
IX M, IX-X W, AgEng 306, Thurston

251 Seminar: Listening Comprehension (2 cr, §Spch 251)
VIII-IX W, AgEng 221, Nichols

Winter and Spring Quarters

1w,s-2w,s-3w,s See 1f-2f-3f
22w See 22f
22s See 22f: II MWF; III MWF; IV MWF; V MWF; VII MWF; III TThS
26s Original Writing (3 cr; prereq rhet comm req) IV MWF
28s Play Production (3 cr; prereq rhet comm req) VIII MWF
32w,s See 32f
33w,s See 33f
47w,s See 47f
51w,s See 51f
52w,s See 52f
54w,s See 54f
56w,s See 56f: IV MWF
60w See 60f
91w See 91f
151w,s See 151f
251w,s See 251f

SOILS (Soil)

Fall Quarter

1 **Soils, Soil Mgt** (4 cr)
Lect III MWF, GH 120, Burson
—1, Lab VI-VIII M, So 126
—2, Lab VI-VIII T, So 126
—3, Lab VI-VIII W, So 126

125 Soil Development, Classification (3 cr; prereq 21 or 121 or ♯)
8:00-9:30 TTh, So 115, Rust

126 **Soil Physics** (4 cr; prereq 3 or 19, Math 10, MeAg 23)
Lect II MWF, So 115, Blake
Lab VI-VIII T, So 132

130 Problems (2-4 cr; prereq 1 or 3 or 19 or 119)

203 Seminar (1 cr)
IX T, So 215

Winter and Spring Quarters

1w See 1f: Lab VI-VIII W; VI-VIII Th; VI-VIII F
3s Forest Soils (3 cr; prereq soph, InCh 5) III MWF
3As Field Forest Soils (1 cr) VI-VIII M; VI-VIII T
19s Interm Soils (4 cr; prereq InCh 5) Lect IV MWF, lab VI-VIII M; VI-VIII T
20w Interpretation of Soil Information (3 cr; prereq 1 or 3 or 19) Lect IV TTh, lab VI-VIII M; VI-VIII T
21s Soils of Minnesota (3 cr; prereq 1 or 3 or 19) Lect I TTh, lab VI-VIII Th
22s Soil Conservation (3 cr; prereq 1 or 3 or 19) Lect II TTh, lab VI-IX T
52w Topics (1 cr; prereq 1 or 3 or 19) VIII-IX F
53w Topics (1 cr; prereq 52) VIII-IX F
119s Interm Soils (4 cr, §19; prereq InCh 5) Lect IV MWF, lab VI-VIII M; VI-VIII T
121s Soils of Minnesota (3 cr, §21; prereq 1 or 3 or 19) Lect I TTh, lab VI-VIII Th
123w Fertilizers (3 cr; prereq 3 or 19 or 119 or ♯) II MWF
127s Soil Microbiology (4 cr, §Bact 103; prereq Bact 53, 8 cr org chem, ♯) Lect I MWF, lab II-III MF
128w Soil Chemistry (3 cr; prereq 3 or 19 or 119) 8:00-9:30 TTh
129w Chemical Analysis of Soils (3 cr; prereq AgBi 2) Lect VI MWF, lab VII-VIII MWF
130w,s See 130f
131s Physical Chemistry of Soils (3 cr; prereq phys chem or ♯) Lect VI TTh, lab VII-VIII TTh
132w Soil Fertility (3 cr; prereq 3 or 19 or 119) IV MWF
203w,s See 203f

UNATTACHED COURSES

Agricultural Journalism (AgJo)

Fall Quarter

54 Editing Bulletins (3 cr; prereq Jour 51, 11 or 15, 69 or 73 or ♯) Swanson, Brigham

Winter and Spring Quarters

53w,s, Publicity (3 cr; prereq rhet comm req) I TTh, 1 hr ar(w); I MWF(s)

Biometrics (Biom)

Fall Quarter

100 Statistical Analysis I (4 cr; prereq col alg, 90 or grad)
Lect IV MWF, PetH 200, Gates, lab ar

Winter and Spring Quarters

90s Statistics (3 cr; prereq col alg or ‡) II MWF
101w Statistical Analysis II (4 cr; prereq 100) Lect IV MWF, lab ar
201s Experimental Design (3 cr; prereq 101)

Food Technology (FTec)

Fall Quarter

51 Food Analysis (2 cr; prereq AgBi 2, 3) VI-VIII TTh, SnH 102, Geddes, Glass
101 Food Technology (3 cr; prereq AgBi 5, 6 or ‡, Bact 53, phys)
II TThS, SnH 116, Liener, Geddes
105 Frozen Food Probs (2-4 cr, §Hort 105; prereq 104 or ‡) Winter

Winter and Spring Quarters

-52w‡ See 51f
-102w‡ See 101f
104w Frozen Food Processing, Storage (3 cr, §Hort 104; prereq AgBi 5 or 6 or 10, Bact 53 or ‡) IV MWF
105w,s See 105f

Orientation (Orie)

Fall Quarter

1 **College Orientation Lectures** (1 cr)
—1, I T, CofH 225, McFarland
—2, I W, CofH 225, McFarland

Winter and Spring Quarters

1w,s See 1f: I T(w,s); I W(w)

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

Fall Quarter

1 **Business, American Economy** (3 cr; prereq no previous BA or econ)
I MWF, ScH 108, Gaumnitz
5 **Statistics** (4 cr, §151 or Soc 45, §old Econ 5A or 5B; prereq Math 10)
—1, I MTWF, ForH 15, Hastings
—2, II MTWF, Z 211
—3, III MTWF, MurH 420
—4, IV MTWF, JacH 104
—5, V MTWF, VH 1
—6, VI MTWF, MurH 420
24 **Accounting** (3 cr, §55A, §old Econ 24; prereq 3rd qtr fr)
—1, I MWF, ForH 130, Bentley
—2, I MWF, ForH 185
—3, II MWF, Ph 145
—4, III MWF, MurH 311
—5, IV MWF, EE 238
—6, IV MWF, MurH 420
—7, V MWF, VH 307
—8, V MWF, VH 2
—9, VI MWF, VH 307
—10, VI MWF, FraH B25
—11, VII MWF, VH 1
25 **Accounting** (3 cr, §55B, §old Econ 25; prereq 24)
—1, VI MWF, VH 306, Bentley
—2, VII MWF, VH 2
26 **Accounting** (3 cr, §55B, §old Econ 26; prereq 25)
—1, VI MWF, VH 6, Bentley
—2, VII MWF, VH 6
28 **Business Law** (3 cr, §58, §old Econ 28; prereq soph or jr with 6 cr, regis AFHE or IT or Pharm, cons adv)
9:00-10:30 TTh, VH 205, Eastlund
32 Typewriting (1 cr, §old Econ 32)
II MTWThF, VH 209, Peterson
33 Interm Typewriting (1 cr, §old Econ 33; prereq 30 words a min, 32 or 1 yr HS type)
I MWF, VH 209, 2 hrs ar, Stanley
34 Typewriting Procedures (2 cr, §old Econ 34; prereq soph, 33, 45 words a min or 2 yrs HS type)
III MWF, VH 209, 2 hrs ar, Stanley
36 Office Procedures (3 cr, §old Econ 36; prereq soph, 34 or ‡)
V MWF, VH 211, Stanley
37 Shorthand (3 cr, †37-38-39, §old Econ 37; prereq soph, 33)
V MWF, VH 209, 2 hrs ar, Donaldson

50 Production Mgt (3 cr, §150, §old 89 or 187; prereq Econ 2)
III MWF, VH 1, Wickesberg

51 Business Statistics (3 cr, §161, §old 74; prereq 5, soph with ‡)
—1, III MWF, VH 207, Hastings
—2, 9:00-10:30 TTh, VH 6, Willis
—3, 10:30-12:00 TTh, VH 113, Willis

52 Modern Industrial Relations: Labor Marketing (3 cr, §152, §old Econ 73 or 161; prereq Econ 2)
Lect II TTh, C 100, Heneman
—1, III T, VH 211
—2, III T, VH 307
—3, III Th, VH 211
—4, III Th, VH 307
—5, IV T, VH 211
—6, IV T, VH 307
—7, IV Th, VH 211
—8, IV Th, VH 307
—9, V T, VH 307
—10, V Th, VH 307

53 Insurance (3 cr, §153, §old Econ 50 or 107; prereq Econ 2)
—1, I MWF, VH 4, Williams
—2, II MWF, VH 2, Fleischer
—3, III MWF, VH 2, Fleischer
—4, 10:30-12:00 TTh, Z 313, Fleischer

54 Transportation I: Principles (3 cr, §154, §old 71 or Econ 172; prereq Econ 2)
—1, II MWF, VH 1, Nightingale
—2, III MWF, VH 4, Harper

55A Accounting (4 cr, §24, §old 54)
—1, IV MTWF, VH 306, Luneski
—2, VI MTWF, VH 113, K Heller

55C Managerial Costs (3 cr, §115A or 115B, or §265A, §old 66; prereq 26)
VI MWF, VH 1, Bentley

56 Corporation Finance (3 cr, §156, §old Econ 75 or 175; prereq 1)
—1, 9:00-10:30 TTh, VH 1, Sutton
—2, II MWF, VH 6, Stevenson
—3, 10:30-12:00 TTh, VH 207, Nilsen

57 Marketing (3 cr, §157, §old 77 or Econ 185; prereq Econ 2)
II MWF, ForH 155, Holloway

58 Business Law: Contracts (3 cr, §158, §old 51; prereq Econ 2)
Lect III Th, Ph 150, Wright
—1, I TTh, VH 4, Wright
—2, II TTh, VH 4, Wright
—3, III T, IV Th, Z 211, Eastlund
—4, III T, IV Th, VH 306, Neville
—5, IV TTh, VH 6, Wright

60 Business Policy, Mgt Control (3 cr, §160, §old 182G; prereq 3 qtr sr)
III MWF, VH 301, Glaskowsky

70 History of Mgt Thought (3 cr, §270, §old 184; prereq sr)
I MWF, VH 301, Basil

72 Modern Industrial Relations: Manpower Mgt (3 cr, §172, §old 167; prereq 52 or 152)
VI MWF, VH 4

73 Life, Accidental Injury, Sickness Insurance (3 cr, §203, §old 115; prereq 53)
IV MWF, VH 1, Williams

75A Accounting Lab (1 cr, §old 93; prereq 26)
—1, VI-VII T, VH 306, Etnier
—2, VI-VII Th, VH 306
—3, VII-VIII W, VH 306

76 Finance Mgt (3 cr, §276, §old 156; prereq 56 or 156)
I MWF, VH 2, Stevenson

79A Admin Secretarial Studies (3 cr, §old Econ 40; prereq 34, 39)
IV MWF, VH 209, Peterson

89B Tabulating Equipment Lab (2 cr, §old 91; prereq 5, 26)
Lect III T, VH 4, Hammond
—1, IV-V Th, VH 4, Hammond
—2, V-VI T, VH 4, Hammond

97 Market Analysis, Research I (3 cr, §217, §old 173; prereq 51, 57)
IV MWF, VH 113, Holloway

98 Business Law: Property Rights, Obligations (3 cr, §198, §old 56; prereq 58)
9:00-10:30 TTh, JacH 104, Neville

99 Survey of Office Mgt (3 cr, §old 86; prereq Econ 2)
IV MWF, VH 301, Donaldson

100 Probs: Production Mgt (3 cr, §old 180G; prereq 50)
—1, 2:30-4:00 MF, VH 301, Basil
—2, 4:00-5:30 MF, VH 301, Basil

102 Human Relations in Industry (3 cr; prereq 52)
IV MWF, VH 211, Heneman

105A Interm Accounting I (3 cr, §old 150A; prereq 26)
—1, I MWF, VH 6, Birnberg
—2, IV MWF, VH 6, Birnberg
—3, VI MWF, EE 238, Meyers

105C Interm Accounting III (3 cr, §55D, §old 150C; prereq 105A)
II MWF, VH 307, K Heller

107 Retail Mgt I (3 cr, §227, §old 114; prereq 57)
II MWF, VH 207, Hancock

107A Retail Mgt for Pharmacy Students (3 cr, §old 67; prereq 25) Werner
II MWF, ForH 120

107C Retail Mgt II (3 cr, §227C, §old 182C; prereq sr, 107)
2:30-4:00 MF, VH 113, Hancock

115A Cost Accounting (3 cr, §55C, §old 152; prereq 26)
—1, 8:30-10:00 TTh, VH 307, Gibson
—2, II MWF, VH 306, Bentley

119 Office Mgt, Business Communications, Correspondence Control (3 cr, §old 180E; prereq 99)
2:00-3:30 TTh, VH 211, Donaldson

125 Auditing Principles, Procedures (4 cr, §old 118; prereq 105B, 105C or ¶)
Lect VI TTh, VH 301, Lund
—1, Lab I-II TTh, VH 306, Lund
—2, Lab VII-VIII TTh, VH 307, Lund

135 **Income Tax Accounting** (4 cr, §old 134; prereq 55D or 105A)
I MWF, VH 306, I T, VH 211, Kraftenberg

146 **Real Estate** (3 cr, §old 141; prereq 1)
2:00-3:30 TTh, VH 207, Sutton

150 **Admin of Production** (3 cr, §50, §old 187; prereq grad)
VI MWF, VH 211, Gaumnitz

152 **Principles of Industrial Relations: Labor Marketing** (3 cr, §52, §old Econ 161; prereq grad, Econ 2)
Lect II TTh, C 100, Heneman
Rec V T, VH 211

153 **Insurable Risks, Insurance** (3 cr, §53, §old 107; prereq grad, Econ 2)
II MWF, VH 210, Williams

154 **Transportation I: Principles** (3 cr, §54, §Econ 172; prereq grad, Econ 2)
III MWF, VH 210, Nightingale

155A **Managerial Accounting** (3 cr, §24 or 55A, §old Econ 24)
I MWF, VH 307, Meyers

157 **Marketing Mgt** (3 cr, §57, §old Econ 185; prereq grad, Econ 2)
IV MWF, ForH 50, Hancock

158 **Business Law: Contracts** (3 cr, §58, §old 51; prereq grad)
Lect III Th, Ph 150, Wright
Rec IV TTh, VH 6, Wright

160 **Mgt Organization, Business Policy** (3 cr, §60, §old 182G; prereq grad)
IV MWF, VH 307, Glaskowsky

170 **Top Mgt Organization, Control** (3 cr, §old 157; prereq sr)
I MWF, VH 210, Glaskowsky (for grads)

172 **Principles of Industrial Relations: Manpower Mgt** (3 cr, §72, §old 167; prereq grad, 52 or 152)
III MWF, VH 306, Turnbull

176 **Investments** (3 cr, §old 146; prereq 56 or 156)
10:30-12:00 TTh, VH 1, Sutton

182A **Interm Labor Marketing** (3 cr, §old 165; prereq 52 or 152)
10:30-12:00 TTh, VH 205, Seltzer

184A **Highway Transportation** (3 cr, §old 129; prereq 54 or 154)
VI MWF, VH 2, Harper

185A **Adv Accounting** (3 cr, §old 159; prereq 105C or ¶)
IV MWF, VH 2, K Heller

187 **Price Policy** (3 cr, §old Econ 110; prereq 57)
I MWF, VH 113, Harper

192 **Industrial Relations Practices, Techniques** (3 cr; prereq 72 or 172)
I MWF, VH 205, England

194A **Adv Traffic Mgt I** (3 cr, §old 180I; prereq sr, 174 or ♯)
IV MWF, VH 210, Nightingale

195B **Internship: Internal Accounting** (ar cr, §old 199; prereq 115B, ♯) Meyers

198 **Business Law: Property Rights, Obligations** (3 cr, §98, §old 56; prereq grad, 158)
9:00-10:30 TTh, JacH 104, Neville

203 Life, Accidental Injury, Sickness Insurance (3 cr, §73, §old 115; prereq 153)
IV MWF, VH 1, Williams

251 Research: Methods, Techniques (3 cr; prereq 51 or 161 or old 74 or 78)
VI MWF, VH 210, Hastings

262 Topics: Industrial Relations (3 cr, §old 180D, 181D, 182D; prereq 72 or 172)
2:00-3:30 TTh, VH 210, Seltzer

265A Managerial Cost Accounting (3 cr, §55C or 115A or 115B, §old 130; prereq 26)
VI MWF, VH 1, Bentley

270 Evolution, Development of Managerial Thought (3 cr, §70, §old 184; prereq 2nd yr grad)
VI MWF, VH 205, Wickesberg

290A Readings: Industrial Mgt, Admin (ar cr, §old 160; prereq cons adv, instr)

290B Research: Industrial Mgt, Admin (ar cr, §old 299)

305B Seminar: Accounting Theory—Income Determination, Statement Presentation (3 cr, §old 264)
VIII-IX MW, VH 307, Boddy

306 Seminar: Business Finance (3 cr, §old 236)
3:00-5:00 M, VH 205, Stevenson

372 Seminar: Industrial Relations Research Methods (3 cr, §old Econ 251)
VIII-IX M, VH 210

Winter and Spring Quarters

1s See 1f

5w,s See 5f

24w,s See 24f: I MWF(s); II MWF(s); III MWF(s); IV MWF(s); V MWF(w,s) VI MWF(w); VII MWF(w)

25w-26s See 24f: I MWF(w,s); II MWF(w,s); III MWF(w,s); IV MWF(w,s); V MWF(w); VI MWF(w,s); VII MWF(w)

25s See 25f: V MWF; VI MWF; VII MWF

26w See 26f

28s See 28f: I MWF

32w,s See 32f: I MTWThF(s); II MTWThF(w)

33w,s See 33f

34w,s See 34f: II MWF, 2 hrs ar(s); III MWF, 2 hrs ar(w)

36s See 36f

38w Shorthand (3 cr, †37-38-39, §old Econ 38; prereq 37 or 1 yr HS shorthand) V MWF, 2 hrs ar

39s Shorthand (3 cr, †37-38-39, §old Econ 39; prereq 38, 34 or ¶ or 2 yrs HS shorthand) V MWF, 2 hrs ar

50w,s See 50f

51w,s See 51f

52w,s See 52f: Lect II TTh, rec III T(w,s); III Th(w,s); IV T(w,s); IV Th(w,s); V T(s); V Th(w,s)

53w,s See 53f: II MWF; III MWF; 10:30-12:00 TTh
54w,s See 54f
55Aw-55Bs See 55Af: VI MTWF
-55Bw See 55Af: IV MTWF
55Cw,s See 55Cf: IV MWF(s); VI MWF(w)
55Dw,s Analysis of Financial Statements (3 cr, §105C, 265B, §old 65; prereq 26) I MWF
56w,s See 56f
57w,s See 57f: I MWF(w); II MWF (w,s)
58w,s See 58f: Lect III T, rec I or II TTh
60w,s See 60f: II MWF(s); III MWF(s); VI MWF(w,s)
72w,s See 72f
75Aw,s See 75Af: VI-VII T(w); VI-VII Th(s); VII-VIII W(s)
75Bw,s Cost Accounting Lab (1 cr, §old 94; prereq 115A) VI-VII T(s); VII-VIII W(w); VI-VII Th(w)
76w,s See 76f
77w,s Advertising (3 cr, §207, §old 188; prereq 57, Psy 156) IV MWF(s); VI MWF(w)
78w Business Law: Agency, Partnership, Corporation (3 cr, §178, §old 52; prereq 58) Lect III Th, rec I TTh; II TTh; III T, IV Th; IV TTh
-79Bw See 79Af
80w Administrative Practices (3 cr, §old 181G; prereq sr) III or VI MWF
82w Modern Labor Relations (3 cr; prereq 52) IV MWF
83w Group Insurance (3 cr, §213, §old 131; prereq 53) I MWF
87w Credits, Collections (3 cr, §old 76; prereq 57) II MWF
88s Business Law: Sales, Negotiable Instruments (3 cr, §188, §old 53; prereq 58) Lect III Th, rec I TTh; II TTh; III T; IV Th
89As Calculating Equipment Applied to Business Data (1 cr, §old 96; prereq 26, bus ed or office mgt maj) III-IV F
89Bw,s See 89Bf: Lect IV Th, rec III-IV or V-VI T(w); Lect III T, rec IV-V Th or V-VI T(s)
92s Industrial Relations Employment Security (3 cr; prereq 52) IV MWF
93w Property, Liability Insurance I (3 cr, §223, §old 116; prereq 53) IV MWF
97w See 97f: III MWF
97Cs Marketing Research II (3 cr, §217C, §old 181C; prereq sr, 97) 10:30-12:00 TTh
99w,s See 99f
103s Property, Liability Insurance II (3 cr, §243, §old 117; prereq 53...93 rec) IV MWF
105Aw See 105Af: IV MWF
105Bw,s Interm Accounting II (3 cr, §old 150B; prereq 105A) IV MWF(w,s); VI MWF(w)
105Cs See 105Cf: 1:00-2:30 MW, 2:30-4:00 MW
107w,s See 107f: I MWF(s); III MWF(w)
110w Systems, Procedures Analysis: Work Measurement (3 cr, §old 170; prereq 50) 1:30-3:00 TTh
113w Actuarial Science Principles: Personal Insurance (3 cr, §Math 21; prereq 53 or 153 or Math 20 or Math 40 or ♯) II MWF
115Aw-115Bs See 115Af: 8:30-10:00 TTh
-115Bw See 115Af: II or III MWF
117w,s Sales Mgt I (3 cr, §237, §old 113; prereq 57) II MWF(s); IV MWF(w)
117Cw Sales Mgt II (3 cr, §237C, §old 180C; prereq sr, 57) 2:30-4:00 MF
125s See 125f
129w Office Mgt, Records Admin (3 cr, §old 181E; prereq 36, 99 or ♯) 2:30-4:00 MF
135w,s See 135f: III MTWF
139s Office Mgt, Analysis of Office Functions (3 cr, §old 182E; prereq 99) 2:00-3:30 TTh
147s Adv Advertising Procedure (3 cr, §old 194; prereq 77 or 207) III MWF
149s Practice Course (ar cr, §old 183E)
150w See 150f: I MWF
151w Statistics (3 cr, §5 or Soc 45, prereq grad, Math 10) II MWF
152w,s See 152f
155Bw Managerial Accounting (3 cr, §25-26 or 55B, §old Econ 25-26; prereq grad, 155A) I MWF
156w The Modern Corporation (3 cr, §56, §old 155; prereq grad) IV MWF
158w,s See 158f: Lect III T, rec II TTh
160s See 160f: VI MWF
161s Business Statistics (3 cr, §51, §old 112; prereq grad, 151) II MWF
170s See 170f (for undergrads)
172s See 172f: VI MWF
173s Senior Topics: Insurance (3 cr, §old 182H; prereq 6 cr insur, jr with ♯) III MWF
174w,s Transportation II: Traffic Mgt (3 cr, §old 174; prereq 54 or 154) I MWF
175As Adv Cost Accounting (3 cr, §old 133; prereq 115B) II MWF
175Bw Data Processing (2 cr, §old 119; prereq 115B) II MWF
177w Foreign Trade (3 cr, §old 177; prereq 57) I MWF
178w Business Law: Agency, Partnership, Corporation (3 cr, §78, §old 52; prereq grad, 158) Lect III Th, rec IV TTh
182Bw Interm Manpower Mgt (3 cr, §old 168; prereq 72 or 172) I MWF
184Bs Intl Transportation: Water, Air (3 cr, §old 147; prereq 54 or 154) I MWF
185Bs Auditing, Public Accounting (3 cr, §old 135; prereq 125) 1:30-3:00 TTh
186w The Securities Market (3 cr, §old 148; prereq sr, 56 or 156) 2:00-3:30 TTh
188s Business Law: Sales, Negotiable Instruments (3 cr, §88, §old 53; prereq grad, 158) Lect III Th, rec II TTh
191Aw-191Bs Statistical Methods (3 cr; prereq 51 or 161 or Econ 121A or ♯) 1:30-3:00 TTh
194Bw Adv Traffic Mgt II (3 cr; prereq sr, 174 or ♯) IV MWF
194Cs Gen Transportation Mgt (3 cr, §264; prereq sr, 194B, ♯) IV MWF

195Aw Internship: Public Accounting (ar cr, §old 198; prereq 125, ♯)
196Aw-196Bs Topics: Finance (3 cr, §old 181B; prereq sr) 9:00-10:30 TTh
197w Purchasing (3 cr, §old 111; prereq 57) I or II MWF
202s Organization, Staffing (3 cr, §old 180D, 181D, 182D; prereq 72 or 172) I MWF
207w,s Advertising (3 cr, §77, §old 188; prereq 57, Psy 156) IV MWF(s); VI MWF(w)
213w Group Insurance (3 cr, §83, §old 131; prereq 153) I MWF
217s Market Analysis, Research (3 cr, §97, §old 173; prereq 51 or 151, 57 or 157) 2:00-3:30 TTh
217Cs Marketing Research II (3 cr, §97C, §old 181C; prereq 97 or 217) 10:30-12:00 TTh
222s Wage, Salary Admin (3 cr, §old 180D, 181D, 182D; prereq 72 or 172) 10:30-12:00 TTh
223w Property, Liability Insurance I (3 cr, §93, §old 116; prereq 153) IV MWF
227w Retail Mgt (3 cr, §107, §old 114; prereq 57) 2:30-4:00 MF
237s Sales Mgt (3 cr, §117, §old 113; prereq 57) 2:30-4:00 MF
237Cw Sales Mgt II (3 cr, §117C, §old 180C; prereq 57) 2:30-4:00 MF
243s Property, Liability Insurance II (3 cr, §103, §old 117; prereq 153...93 rec) IV MWF
250w Executive Leadership (3 cr; prereq 2nd yr grad) 2:30-4:00 MF
256w Govt, Business Enterprise I (3 cr; prereq Econ 69 or 169) 10:30-12:00 TTh
257s Govt, Business Enterprise II (3 cr; prereq 256) 2:00-3:30 TTh
260s Policy Formulation, Admin (3 cr; prereq 2nd yr grad) 2:30-4:00 MF
265Aw,s See 265Af: IV MWF(s); VI MWF(w)
265Bw,s Corporate Statements (3 cr, §55D or 105C, §old 139; prereq 26) I MWF
272w Topics: Industrial Relations (3 cr, §old 180D, 181D, 182D; prereq 262) 1:30-3:00 MW
276s Finance Mgt (3 cr, §76, §old 156; prereq 56 or 156, 55D or 105A, 105C) 2:00-3:30 TTh
290Aw,s See 290Af
290Bw,s See 290Bf
305As Seminar: Accounting Theory-Valuation and Principles (3 cr, §old 263) VIII-IX T
315w Seminar: Cost Accounting (3 cr, §old 258) VIII-IX TTh
317s Seminar: Marketing Mgt (3 cr; prereq 57 or 157) 3:00-5:00 M
350s Seminar: Production (3 cr; prereq 100) 4:00-5:30 MF
352w Seminar: Labor Marketing (3 cr, §old Econ 253; prereq 182A) VIII-IX M
360s Seminar: Mgt (3 cr, §old 281; prereq 260) III MWF
382s Seminar: Current Industrial Relations Research (3 cr, §old Econ 252) VIII-IX M

ECONOMICS (Econ)

Fall Quarter

1 Principles (3 cr, §C or 1T or 50A, §old 6; prereq 3rd qtr fr)
—1, I MWF, Z 313
—2, I MWF, Bu 211
—3, I MWF, MurH 420
—4, I MWF, Pt 202
—5, II MWF, Mines 116 (honors section: HPR of 3.5 or above)
—6, III MWF, Mines 116
—7, IV MWF, EE 237
—8, IV MWF, Psy 115
—9, IV MWF, E 305
—10, V MWF, VH 4
—11, V MWF, VH 301
—12, V MWF, VH 306
—13, V MWF, VH 205
—14, VI MWF, ForH 120
—15, VII MWF, ForH 120

1T Principles (3 cr, §1, or C or 50A, §old 8; prereq regis IT)
—1, I MWF, EE 237
—2, IV MWF, Mines 116 (honors section: HPR of 3.5 or above)
—3, V MWF, ForH 120
—4, VI MWF, MurH 308
—5, VI MWF, ForH 85

2 Principles (3 cr, §C or 2T or 50B, §old 7; prereq 1)
—1, I MWF, ForH 85
—2, I MWF, Z 211
—3, II MWF, ForH 85
—4, III MWF, VH 307 (honors section: grade of B or above in Econ 1 or ♯)
—5, IV MWF, ForH 85
—6, V MWF, MurH 308
—7, VI MWF, ForH 20
—8, VII MWF, VH 207

65 Interm Economic Analysis: The Firm (3 cr, §165, §old 81 or 144; prereq 2)
—1, 8:30-10:00 TTh, VH 207, Richter
—2, II MWF, VH 301, Coen
—3, III MWF, FraH B25, Coen
—4, IV MWF, VH 4, Richter (for students with calc)
—5, VI MWF, VH 301, Maynes

66 Interm Economic Analysis: Income, Employment (3 cr, §166, §old 80 or 143; prereq 2 or ♯)
—1, 8:30-10:00 TTh, VH 301, Merrill
—2, II MWF, VH 113, Maynes
—3, III MWF, ForH 85, Maynes

67 Money, Banking (3 cr, §old 3, 57; prereq 2)
—1, I MWF, VH 1, Borak
—2, 10:30-12:00 TTh, VH 301, Smith

68 Public Finance (3 cr, §168 or 178A, §old BA 58; prereq 2)
—1, III MWF, VH 113, Borak
—2, IV MWF, VH 207, Borak
—3, V MWF, VH 207, Hady

69 **Govt Regulation of Business** (3 cr, §169, §old 85 or 175; prereq 65 or 165 for maj, law or pol sci or ‡ for others)
—1, II MWF, VH 4, Simler
—2, VI MWF, VH 207, Simler

80 **Economic Ideas** (3 cr, §old 79; prereq 2)
III MWF, VH 211, Buttrick

90 Honors Course (3 cr, §old 97 or 98 or 99; prereq cons adv)

101A **Foundations of Mathematics for Social Scientists** (3 cr, §old 100; prereq Math 10 or ‡)
2:00-3:30 TTh, VH 205, Hurwicz

104 **International Economics** (3 cr, §old 176; prereq 2)
IV MWF, Z 313, Krueger

110 City Planning (3 cr, §Arch 104 or Pol 123 or Soc 106, §old 108; prereq sr)
III MWF, E 305

121A **Theory of Statistics** (3 cr, §old 121; prereq Math 7 or 10 or ‡)
10:30-12:00 TTh, VH 2, Savage

152 **Labor Movements** (3 cr, §old 162; prereq BA 52 or 152)
I MWF, VH 207, Simler (for undergrads)

165 **Economic Analysis: The Firm** (3 cr, §85, §old 81 or 144; prereq grad, 2)
IV MWF, VH 205, Boddy

166 **Economic Analysis: Income, Employment** (3 cr, §66, §old 80 or 143; prereq grad, 2 or ‡)
I MWF, VH 211, Bronfenbrenner

172 **Public Policy: Labor Relations** (3 cr, §old 164; prereq BA 52 or 152)
VI-VII F, TSMb 211, Turnbull (for grads)

177 **Interm Money, Banking** (3 cr, §old 142; prereq grad 66, 67)
8:30-10:00 TTh, VH 2, Smith

178A **Public Finance** (3 cr, §68 or 168, §old 191; prereq 2)
9:30-11:00 MW, VH 205, Heller

182 **Economic Security** (3 cr, §old 169; prereq BA 52 or 152)
II MWF, VH 211, Turnbull (for undergrads)

195A **Analytical Methods in Business Decision Making: A** (3 cr, §old 137; prereq 65, Math 40 or ‡)
7:30-9:30 pm W, VH 205, Brownlee

201A Econometrics: A (3 cr; prereq 65 or 165, 101B, Math 40, or ¶121C or ¶Math 123 or ‡)
2:30-5:00 M, VH 306, Nerlove

215A Welfare Economics: A (3 cr, §old 215; prereq 185B)
VII-VIII W, VH 210, Hurwicz

257 Business Cycles, Structure of Production (3 cr, §old 197; prereq 157)
11:00-12:30 MW, ForH 244, Bronfenbrenner

281A Adv Topics: Statistics (3 cr)
7:30-9:30 pm M, VH 2, Savage

290 Research (ar cr, §old 299)

385 Seminar: Micro-Economics (1 cr, §old 214)
III-IV every 3rd T, VH 210, Boddy

Winter and Spring Quarters

Bw Scope, Methods, Application (3 cr) IV MWF

Cs Economic Analysis (3 cr, §1-2 or 1T-2T; prereq B or 50A, 50B) IV MWF

1w,s See 1f

1Tw See 1Tf

2w,s See 2f: I MWF(w,s); II MWF(w,s); III MWF(w,s); IV MWF(w,s); V MWF(w,s); VI MWF(w,s); VIII MWF(w)

2Tw,s Principles (3 cr, §2, or C or 50B, §old 9; prereq IT) I MWF(w,s); IV MWF(w,s); V MWF(w); VI MWF(w,s)

40w Decision Making, Scientific Inference (3 cr; prereq Phil 40 or ‡) VI MWF

65w,s See 65f: 8:30-10:00 TTh(w,s); II MWF(w,s); III MWF(w,s); 10:30-12:00 TTh(w)

66w,s See 66f: 8:30-10:00 TTh(w); II MWF(w,s); III MWF(w,s)

67w,s See 67f: I MWF(w,s); III MWF(w); IV MWF(w,s)

68w,s See 68f: I MWF(w,s); II MWF(s); IV MWF(s); VII MWF(w)

69w,s See 69f: I MWF(s); III MWF(w); IV MWF(w,s); VI MWF(s)

75w,s Interm Economic Analysis: Household, Policy (3 cr, §175, §old 82; prereq 65) I MWF(w); II MWF(s)

90w,s See 90f

101Bw Decision Theory (3 cr, §old 101; prereq BA 5, 101A or ‡...Math 40 rec) 11:00-12:30 MW

103s Economic Development (3 cr, §old 120; prereq 65, 66 or ‡) III MWF

104s See 104f: VI MWF

114w Balance of Payments Theory (3 cr, §old 145; prereq 66 or 67) 1:30-3:00 TTh

120s Consumption (3 cr, §old 178; prereq 2) VI MWF

121Bw Theory of Statistics I (3 cr, §old 122; prereq 121A, ¶Math 53 or ‡) 10:30-12:00 TTh

121Cs Theory of Statistics II (3 cr, §old 123; prereq 121B, Math 53 or ‡) 10:30-12:00 TTh

152w See 152f (for grads)

157s Business Cycles (3 cr, §old 149; prereq 66, 67) II MWF

160w Comparative Economic Systems (3 cr, §old 84; prereq 2) 10:30-12:00 TTh

162w,s Union Govt, Policies (3 cr, §old 163; prereq BA 52 or 152) 2:00-3:30 TTh(w) (for undergrads); 10:00-11:30 MW(s) (for grads)

164s Economy of USSR (3 cr, §old 127; prereq 2) 10:30-12:00 TTh

165s See 165f

166w See 166f: 2:30-4:00 MW

169w Govt Regulation of Market Behavior (3 cr, §69, §old 85 or 175; prereq grad, 65 or 165 for maj, law or pol sci or ‡ for others) VIII-IX T

172w See 172f: IV MWF (for undergrads)

175w,s Economic Analysis: Household, Policy (3 cr, §75; prereq grad, 65 or 165) I MWF(s); II MWF(w)
176Aw Theory of Employment, Natl Income, Price Level I (3 cr, §old 124; prereq 66 or 166) VIII-IX Th
176Bs Theory of Employment, Natl Income, Price Level II (3 cr, §old 125; prereq 176A) VIII-IX Th
-178Bw See 178Af
181Cs Topics: Statistics (3 cr, §old BA 182F; prereq 181B)
182w See 182f: VI-VII F (for grads)
184w Probs of the Far East (3 cr, §old 179; prereq 2) 9:00-10:30 TTh
185Aw Price Theory (3 cr, §old 103; prereq 65 or 165) 1:30-3:00 TTh
185Bs Market Structure (3 cr, §old 104; prereq 185A or ♯) 2:00-3:30 TTh
185Cs Income Distribution (3 cr; prereq 65, 66) 9:00-10:30 TTh
195Bw Analytical Methods in Business Decision Making: B (3 cr, §old 138; prereq 195A or ♯) 7:30-9:30 pm W
198s Fiscal Policy (3 cr, §old 195; prereq 20 cr soc sci incl pub finan, 66, 67) VII-VIII M
201Bw Econometrics B (3 cr; prereq 201A) VIII-IX F
201Cs Econometrics C (3 cr; prereq 201B) 9:30-11:30 MF
215Bw Welfare Economics: B (3 cr, §old 215; prereq 215A)
224s Intl Trade, Economic Welfare (3 cr, §old 196; prereq 104, 165 or 185A...114 rec) 11:00-12:30 MW
235s Mathematical Economics (3 cr, §old 216; prereq 101A, Math 40, 53, or ♯) 2:00-3:30 TTh
277Aw-277Bs Development of Monetary Theory (3 cr, §old 243; prereq 177) VII-VIII M(w); VIII-IX F(s)
-281Bw‡ See 281Af
290w,s See 290f
368As Seminar: Public Finance (3 cr, §old 233) VIII-IX T
385w,s See 385f: Ar

SCHOOL OF DENTISTRY

Dental Assisting (DA)

Fall Quarter

1 Dental Anatomy (2 cr; prereq regis GC) 2:00-5:00 M, Owre 104, Wakely
2 Chairside Assisting (3 cr; prereq regis GC) 8:00-9:00 M, Owre 104, Thorson, 9:30-11:30 M, Owre 104, Tuckner
3 Clinic I (3 cr; prereq regis GC) 2:30-5:00 TTh, Owre 111, 2:00-5:00 W, Owre 104, Tuckner

Dental Hygiene (DH)

Fall Quarter

7 Dental Anatomy (2 cr)
Lect VI T, MMA 100, Hall
Lab VII-IX T, Owre 104, Hall
40 Dental Health Education (2 cr)
Lect I T, Owre 104, lab ar, Aker
45 Dental Assisting (2 cr)
Lect I Th, Owre 104, lab ar, Jackson, Aker
53 Dental Prophylaxis (2 cr; prereq 22)
—1, VII-IX M, Clinic, Jackson
—2, II-IV T, Clinic, Aker
—3, VI-VIII T, Clinic, Aker
—4, VII-VIII W, Clinic, Jackson
—5, II-IV Th, Clinic, Aker
—6, VII-VIII F, Clinic, Jackson
56 Pathology (1 cr)
VI F, Owre 104, Gorlin
57 Prosthetic Dentistry, Dental Lab (2 cr; prereq 9)
Lect VI Th, Owre 104, Hall
Lab VII-IX Th, Owre 104, Hall

Dentistry (Dent)

Fall Quarter

50 Dental Anatomy (2 cr; prereq regis Dent)
Lect I Th, Owre 12, Hall
Lab II-IV Th, Owre 1
60 Dental Prosthetics (4 cr; prereq regis Dent)
Lect I T, Owre 12, Hall
Lab II-IV T, VII-IX WF, Owre 1
70 Dental Prosthetics (3 cr; prereq 62)
Lect I W, Owre 12, Hall
Lab II-IV W, I-III F, Owre 1
75 Crown and Bridge Technic (4 cr; prereq regis Dent)
Lect I M, Owre 12, Serr
Lab II-IV M, VII-IX TTh, Owre 1
105 Orthodontics (3 cr; prereq 55)
8:00-9:00 MWF, Owre 113, Nelson
110 Dental Prosthetics (1 cr)
1:00-2:00 T, Owre 111, Morstad
110C Dental Prosthetics Clinic (3 cr; prereq 72C) Morstad

115C Dental Prosthetics Clinic (2 cr; prereq 112C) Morstad
120 Crown and Bridge (1 cr; prereq 77)
I W, Owre 111, Yock
120C Crown and Bridge Clinic (2 cr; prereq ¶120) Yock
125C Crown and Bridge Clinic (2 cr; prereq 122C) Yock
128 Seminar: Restorative Dentistry (1 cr; prereq regis Dent)
1:00-2:00 W, Owre 113, Yock
140 Operative Dentistry (1 cr; prereq 86)
I F, Owre 111, Jensen
140C Operative Clinic (3 cr; prereq ¶140) Jensen
144 Endodontics (1 cr; prereq 86)
1:00-2:00 F, Owre 111, Jensen
145C Clinical Operative Dentistry (2 cr; prereq 142C) Jensen
155 Oral Surgery (2 cr; prereq 150)
1:00-2:00 MTh, Owre 113, Clark
160 Oral Pathology and Histology (4 cr; prereq regis Dent)
Lect 1:00-2:00 MWTh, Owre 111, Gorlin
Lab II-IV TTh, Owre 104, Gorlin
170 Pedodontics (1 cr; prereq regis Dent)
I M, Owre 111, Wittich
185 Periodontics (1 cr; prereq 181)
1:00-2:00 T, Owre 113, Schaffer
185C Periodontics Clinic (1 cr; prereq ¶185) Schaffer
195 Dental Jurisprudence (2 cr; prereq regis Dent)
8:00-9:00 TTh, Owre 113, Brand
200 Adv Orthodontic Technics (ar cr) Steadman, Nelson
201 Treatment Procedures in Orthodontics (ar cr) Steadman
202 Case Analysis (ar cr) Steadman
203 Treatment Planning (ar cr) Steadman
204 Adv Clinical Orthodontics (ar cr) Steadman
205 Osteology, Myology of the Head (ar cr) Steadman
206 Growth of the Head (ar cr) Steadman
207 Comparative Odontology (ar cr) Steadman
208 Seminar: Orthodontics (ar cr) Steadman
209 Probs, Research: Orthodontics (ar cr) Steadman
220 Adv Dental Anatomy (ar cr) Hall
230 Adv Oral Diagnosis (ar cr) Bartholdi
231 Adv Clinical Oral Diagnosis (ar cr) Bartholdi
232 Research: Oral Medicine (ar cr) Bartholdi
240 Adv Technical Restorative Dentistry (ar cr) Jensen, Yock, Wittich
243 Adv Clinical Restorative Dentistry (ar cr) Jensen, Yock, Wittich
247 Research Probs: Restorative Dentistry (ar cr) Jensen, Yock, Wittich
250 Adv Oral Surgery (ar cr) Clark, Holland
251 Seminar: Oral Surgery (1 cr) Clark, Holland
252 Research: Oral Surgery (ar cr) Clark, Holland
253 Probs: Oral Surgery (ar cr) Clark, Holland
261 Adv Dental Radiographic Technique (ar cr) Peterson
262 Research: Oral Pathology (ar cr) Gorlin, Chaudhry
263 Seminar: Dental Research (1 cr) Gorlin, Chaudhry
264 Clinical Oral Pathology Conference (1 cr) Bartholdi, Clark, Gorlin, Chaudhry
280 Adv Periodontics Clinic (ar cr) Schaffer
281 Adv Periodontics Lectures (3 cr) Schaffer
282 Research: Periodontics (ar cr) Schaffer
283 Seminar: Periodontics (1 cr) Schaffer
284 Supporting Structures of the Teeth (3 cr) Schaffer

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AgEd)

Fall Quarter

1 Introduction (2 cr)
IV TTh, Hr 102, Swanson
81 Teaching in Secondary School (4 cr; prereq Ed 55B or ¶)
Lect III MWF, Hr 301, Kitts
Lab VII-VIII Th, Hr 301, Kitts
91 Supervised Teaching Experience (6 cr; prereq sr, 82, ♯) Kitts
103 Young Farmer, Adult Education (4 cr; prereq 81)
Lect II MWF, Hr 302, Peterson
Lab VII-VIII Th, Hr 302, Peterson
104 Planning Programs (2 cr; prereq 3rd qtr sr or ♯)
IV TTh, Hr 301, Peterson
141 Supervised Farm Practice in Vocational Agriculture (3 cr; prereq ♯ or grad, 10 cr educ) Peterson, Kitts, Swanson
221 Field Probs (3 cr) Peterson, Kitts, Swanson
232 Research (ar cr; prereq 15 cr educ) Peterson, Kitts, Swanson
291 Seminar (ar cr) Peterson, Kitts, Swanson

Winter and Spring Quarters

1w See 1f: III TTh
20w Rural Education, Community Leadership (3 cr) IV TTh

56s Rural Education Through Extension Methods (3 cr; prereq soph) IV MWF
81w-82s See 81f: IV MWF, lab VII-VIII T
-82w See 81f
91w,s Supervised Teaching Experience (6 cr; prereq ar, 82, ‡)
103w See 103f
104w,s See 104f
120w Rural Education, Community Leadership (3 cr; prereq grad or ‡) IV TTh
156s Rural Education Through Extension Methods (3 cr, §56; prereq grad or ‡) IV MWF
221w,s See 221f
232w,s See 232f
286w Current Issues (ar cr; prereq ‡)
291s See 291f

ART EDUCATION (ArEd)

Fall Quarter

17 **Pictorial Expression for Elem Education** (3 cr)
—1, I-II MWF, TSF 259, Hegg
—2, III-IV MWF, TSF 259, Hegg
—3, VI-VII MWF, TSF 259, Cherry
—4, VIII-IX MWF, TSF 259, Cherry
18 **Design Activities for Elem Education** (3 cr)
—1, I-II MWF, TSF 256, Wold
—2, VIII-IX MWF, TSF 256, Wold
19 **Functional Arts, Crafts in Elem Education** (3 cr)
—1, III-IV MWF, TSF 256, Wold
—2, VI-VII MWF, TSF 256, Wold
53 **Introduction to Weaving** (3 cr)
VI-VII MWF, TSF 203, Smits
56 Principles, Experiences (5 cr; prereq 14)
III-IV MTWThF, J 109, Hastie, Cherry
84 **Teaching in Elem School** (3 cr; prereq 6 cr from 17, 18, 19)
Lect VII TTh, P 210, Gayne
—1, Lab VI TTh, J 109, Gayne
—2, Lab VIII TTh, J 109, Hegg
86 Student Teaching, Supervision (3 cr, †86-87-88; prereq sr, 56, 57, Ed 55A, 55B, ¶86A) Hastie, Cherry
86A Teaching, Supervision (2 cr, †86A-87A-88A; prereq sr, 56, 57, Ed 55A, 55B, ¶86) IX-X T, J 109, Gayne
189 Application of Aesthetic Theory in Education (3 cr)
III-IV S, J 109, Hastie
284 Research (3 cr)
I-II S, J 109, Gayne
295 Problems (ar cr; prereq cons maj adv) Gayne, Hastie

Winter and Spring Quarters

14w Introduction (2 cr) VII MW
17w,s See 17f: I-II MWF(w,s); III-IV MWF (w,s); VI-VII MWF(w); VIII-IX MWF (w,s)
18w,s See 18f: III-IV MWF; VI-VII MWF; VIII-IX MWF
19w,s See 19f: I-II MWF(w,s); VI-VII MWF(s)
53w See 53f
54s Adv Weaving (3 cr) VI-VII MWF
-57w-58s‡ See 56f
81w Puppetry in Education (3 cr) I-IV S
84w,s See 84f
84As Teaching in Elem School (3 cr) I-IV S
-87w-88s‡ See 86f
-87Aw-88As‡ See 86Af
151w Curriculum Building (3 cr) I-II S
158w Art Education in Europe (3 cr) III-IV S
295s See 295f
296s Seminar (1 cr) IX-X Th

CHILD DEVELOPMENT AND WELFARE (CD)

Fall Quarter

40 Child Training (3 cr, §HEEd 90; prereq soph, Psy 2)
VI TTh and ar, CW 222, Robinson
80 **Child Psychology** (3 cr; prereq Psy 2)
—1, IV MWF, Bu 120, Palermo
—2, VII MWF, CW 218, Palermo
83 Development, Guidance of Children's Activities (3 cr; prereq 80)
I-II TTh, CW 222, Robinson
95 Probs: Child Development (1-3 cr; prereq 18 cr with B avg incl 80, Soc 45, Psy 70, ‡) Templin
100 Observation, Experimental Study of Children (1-2 cr; prereq sr, 80, 3 cr stat, ‡)
VIII M and ar, CW 206, Hurst
130 Development of Skill, Language, Thought in the Child (3 cr; prereq sr, 12 cr psy)
III MWF, CW 206, Templin
143 Probs: Mental Deficiency (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
I MWF, CW 222, Blodgett
166 Maturity, Old Age (2 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
III TTh, CW 222, Anderson
172 Prin Parent Interviewing (2 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
4:00-5:30 M, CW 222, Wahlstedt
210 Cognitive, Motor, Intellectual Development (3 cr; prereq 20 grad cr or 20 grad cr in educ psy or psy)
III MWF, CW 222, Anderson
220 Seminar: Current Research (ar cr)
VIII-IX alt W, CW 206
223 Seminar: Developmental Theory (1 cr; prereq ‡) Anderson
230 Seminar: Recent Literature (1 cr)
VIII-IX alt W, CW 206, Palermo
240 Practicum: Behavior Probs (ar cr; prereq 140, ‡) Grams

247 Clinical Child Psychology (3 cr, †247-248, §140, Psy 171; prereq 12 cr educ psy or psy or soc, ♯)
IX-X MF, Wirt
250 Internship: Professional Work (ar cr; prereq △)
260 Forecasting, Predicting Development (2 cr; prereq ♯)
VII M, CW 202, Roff
270 Readings, Research: Child Development (ar cr; prereq MA plan B students or ♯)
290 Psychometric Clerkship with Young Children (ar cr; prereq ♯) Hurst

Winter and Spring Quarters

40w See 40f: V MW and ar; VI Th and ar
40s See 40f: VI TTh
80w,s See 80f: IV MWF(w,s); VII MWF(s)
90s Psychology of Parent-Child Relationships (2 cr; prereq 80) IV TTh
95w,s See 95f
125s Experimental Child Psychology (3 cr; prereq sr, 80, Psy 5, 12 cr educ psy or psy or soc) I-II TTh
131w Development of Personality, Social Behavior in the Child (3 cr; prereq sr, 12 cr psy) III MWF
132s Adolescent Development (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) II MWF
140w,s Behavior Probs (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) I MWF (s); VIII-IX TTh(w)
142s Psychology of Atypical Children (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) I-II TTh
144s Psychology of the Gifted Child (3 cr; prereq 80, 9 cr educ psy or psy or soc or HE) III MWF
155s History (2 cr; prereq 130, 131) III TTh
160w Physical Growth, Development (2 cr; prereq sr, 12 cr educ psy or psy or soc or HE) III TTh
170w Parent Education (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) V MWF
185w Children in a Changing World (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) VI MWF
190w Use, Interpretation of Tests (2 cr; prereq sr, 12 cr educ psy or psy or soc or HE) II TTh
191w Lab: Use, Interpretation of Mental Tests (2 cr; prereq ¶190, ♯) I TTh
211w Emotional, Social, Personality Development (3 cr; prereq 20 grad cr or 20 grad cr in educ psy or psy) III MWF
-221w-222s‡ See 220f
-224w-225s See 223f
227s Multiple Factor Analysis (2 cr; prereq 3 qtrs stat, ment meas) VIII-IX M
-231w-232s‡ See 230f
233w-234s Research Methods (2 cr; prereq 12 cr educ psy or psy incl stat) VII-VIII TTh
237w-238s Seminar: Human Development (2 cr; prereq 30 grad cr or 30 grad cr in educ psy or psy or soc) IX-X T
-241w-242s‡ See 240f
-248w See 247f
249s Treatment of Disturbed Children (3 cr; prereq 248) IX-X MF
250w,s See 250f
-271w-272s‡ See 270f
274w-275s Technique, Field Work: Parent Education (ar cr; prereq 170, ♯)
-291w-292s See 290f
295s Projective Methods with Children, Adolescents (3 cr; prereq ♯) VII-VIII M and ar

GENERAL EDUCATION

Curriculum and Instruction (EdCI)

Fall Quarter

55 Early Childhood Education (3 cr; prereq CD 80 or ¶)
VII TTh and ar, CW 218
56 Methods, Observation in Kindergarten (3 cr; prereq 55 or ¶)
VIII TTh, CW 218, Headly
58 Core Curriculum Foundations (1 cr; prereq ♯)
VII-VIII M, Bu 103, Bossing
60 Teaching Reading in Elem School (3 cr; prereq Ed 75A)
—1, II MWF, Bu 120, Clymer
—2, VI MWF, Bu 120, Bond
61 Teaching Social Studies in Elem School (3 cr; prereq Ed 75B)
—1, III MWF, CW 218, Mullins
—2, VI MWF, CW 218, Capps
—3, VII MWF, CW 222, Mullins
62 Teaching Arithmetic in Elem Schools (3 cr; prereq Ed 75A)
—1, III MWF, Pt 202, Stochl
—2, VI MWF, Pt 202, Stochl
63 Children's Literature (2 cr)
—1, VII MW, Bu 120, Odland
—2, IX-X W, Bu, 120, Odland
—3, IV TTh, Bu 120, Odland
64 Teaching English in Elem School (3 cr; prereq Ed 75A)
—1, VI MWF, Bu 211, Barrett
—2, VI-VII T, VII Th, FraH B25, Chase
65 Teaching Science in Elem School (3 cr; prereq Ed 75A, 10 cr nat sci)
—1, VII-VIII M, VII W, Bu 211, Goossen
—2, VII-VIII T, VII Th, Bu 211, Goossen
66 Treatment of Learning Difficulties (3 cr; prereq 60, 62A, ¶student tchg)
IX-X W, Pt 202, Balow
102 Teaching Social Studies in Elem School (3 cr; prereq Ed 75B)
I-II S, CW 218, Mullins

105 Audio-Visual Materials in Education (3 cr; prereq sr)
I-II S, NH 211, 1 hr ar, Pearson

106 Coordinating an Audio-Visual Education Program (3 cr; prereq 105 or ‡)
IX-X M, WeH 206, Pearson

110 **Practicum: Laboratory School Teaching, K-6** (ar cr; prereq cons adv)

113 High School Curriculum (3 cr; prereq Ed 55B)
IX-X T, Bu 120, Bossing

115 Introd to Educ of Visually Handicapped Children (3 cr)
IX-X M, Psy 109, Kenmore

116 Braille I (3 cr)
4:30-6:00 TTh, JohH 122, Kenmore

119 Elem School Curriculum (3 cr; prereq Ed 75B)
IX-X W, JohH 114, Goossen

125 **Occupational Information Lab** (3 cr; prereq ‡)
3:45-5:15 T, 3:45-6:15 Th, Bu 125, Tennyson

133 Consumer Education in Schools (3 cr)
I-II S, Bu 103, Price

136 Organization, Admin of Distributive Education (3 cr)
4:00-6:20 W, Bu 103, Meyer

143 Teaching, Supervision of Reading in Elem School (3 cr; prereq 9 cr educ)
IX-X W, Bu 211, 1 hr ar, Bond

145 Reading Difficulties (3 cr; prereq 143 or 144)
III-IV S, Bu 120, 1 hr ar, Bond

149 Teaching, Supervision of Arithmetic in Elem School (3 cr; prereq 9 cr educ)
III-IV S, Pt 202, Stochl

150 Supervision, Improvement of Instruction (3 cr; prereq 9 cr educ)
IX-X M, Pt 202, Curtin

153 Supervision, Teaching of English in Elem Schools (3 cr; prereq Ed 75B)
III T, III-IV Th, Bu 211, Archer

160 Materials Lab, Occupational Relations (3 cr; prereq 137A, EdT 90C or ‡)
4:00-6:20 T, Bu 103, Meyer

161 Curriculum Construction in Business Education (3 cr; prereq 113)
IX-X Th, Bu 103, Price

171 Curriculum Lab Practice (0-3 cr; prereq 170A or 170B, ‡) Bossing, Goossen

174 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 164; prereq Spch 163) Bryngelson

175 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 165; prereq 174) Bryngelson

176 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 166; prereq 175) Bryngelson

184 Supervision of Student Teaching (3 cr; prereq 15 cr educ or ‡)
III-IV S, PeikH 175, Davies

193A High School Mathematics: Content, Teaching Techniques (4 cr; prereq Natl Sci Found students)
I MW, JohH 106, D Johnson

199E Internship (ar cr)

201 Probs: Teaching Social Studies (3 cr; prereq 155 or 168, 204 or ‡) Morse, McCune, West, Stovall

204 Social Studies Curriculum (3 cr)
IX-X W, PeikH 165, West

205 Probs: Audio-Visual Education (ar cr; prereq ‡) Pearson

215 Probs: School Health Education Program (ar cr; prereq ‡) Grout

222 Seminar: Current Probs in Techniques of High School Instruction (ar cr; prereq Ed 55B, sr methods)
IX-X W, PeikH 225, Bossing, Keller, Winter

225 Probs: Secondary School Supervision (ar cr; prereq ‡) Keller, Lane, Popper

226 Seminar: Elem School Probs (2 cr)
IX-X Th, PeikH 165

227 Probs: Rural Education (ar cr; prereq EdAd 117) Archer

228 Probs: Higher Education, Teacher Education (ar cr; prereq ‡) Eckert

238 Probs: Distributive Education (ar cr; prereq ‡) Meyer

239 Probs: Business Education (ar cr; prereq ‡) Price

250 Higher Education in the United States (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II T, I Th, Bu 123, Eckert

254 Directed Experience in College Instruction (ar cr; prereq ‡) Eckert

261 Probs: Improvement of Instruction (ar cr; prereq ‡) Archer, Goossen, Curtin, Mullins

271 Probs: Curriculum Construction (3-6 cr; prereq ‡)

273 Probs: Reading (ar cr; prereq 143 or 144 or ‡) Bond, Clymer, Chase, Odland, Reynolds, Balow

284 Probs: Student Teaching (3-9 cr; prereq ‡) Davies

287 Adv Teaching of Science (3 cr)
III-IV S, Bu 123, 1 hr ar, P Johnson

294 Adv Curriculum, Methods in Secondary School English (2 cr; prereq EdT 75C)
IX-X M, JohH 126, Kegler

296 Probs: Teaching English (ar cr) Kegler

Winter and Spring Quarters

45w Business, Distributive Education (2 cr)
IV MW

56s See 56f: VII TTh

57w Nursery School-Kindergarten Lab: Art, Literature, Music, Social Studies, Science (6 cr; prereq 55 or ¶) VIII MTWThF and ar

58w,s See 58f

59s Nursery School Observation, Participation (5 cr) 8:00-12:30 MTWThF; 10:00-3:30 MW, 11:00-3:30 F

60w,s See 60f

61w See 61f: III MWF; VI MWF

61s See 61f: II MWF; VI MWF; VII MWF; VI-VII T, VI Th

62w See 62f: III MWF; VI MWF; VII MWF

62s See 62f: IV MWF; VI MWF

63w See 63f: VII MW; IX-X W

63s See 63f: VI TTh; VII MW; IX-X T

64w,s See 64f: VI MWF(w,s); VII MWF (w,s); VI T, VI-VII Th(w)

65w,s See 65f: VII-VIII M, VII W(w,s); VI-VII T, VI Th(w); IX-X T, IX Th(s)

66w See 66f: IX-X T or Th

66s See 66f

102w See 102f: IX-X T

103w,s Teaching Science in Elem School (3 cr; prereq sr, Ed 75B or tchg exper) III-IV S(s); IX-X T(w)

104w Adult Education (3 cr) VIII-IX Th

105w,s See 105f: I-II Th, 1 hr ar(s); IX-X M, 1 hr ar(w)

109w,s Audio-Visual Materials, Equipment Lab (3 cr; prereq 105 or ¶ or ♯) Lect IX-X T, rec VI-VII W; IX-X Th(w); Lect VI-VII T, rec VI-VII Th; VIII-IX T(s)

110w,s See 110f

113s High School Curriculum (3 cr; prereq Ed 55B) III-IV S

114s Development of Core Curriculum (3 cr) IX-X T

117w Braille II (3 cr; prereq 116) 4:30-6:00 MW

118w Education of Blind Children in the Elem Grades (3 cr; prereq ♯) IX-X T

119w See 119f: III-IV S

120s Education of Blind Children in the Secondary Schools (3 cr) IX-X M

121w Literature for Elem School (3 cr) I-II S

122s Literature for Adolescents (2 cr; prereq Ed 55B or jr-sr HS tchg exper) I-II S

125s See 125f

131s Adv Teaching Technical Business Subjects (3 cr) IX-X Th

132w Teaching Basic Business Subjects (3 cr) IX-X Th

135w,s Group Procedures in Guidance (3 cr; prereq EPsy 133 or ♯, 9 cr educ) I-II S, 1 hr ar(w); II MWF(s)

138s Training Store, Office Supervisors (3 cr) 4:00-6:20 T

139w Coordination Techniques (3 cr) 4:00-6:20 W

141s Co-operative Part-Time Work Experience Programs (3 cr) 4:00-6:20 W

142s Business, Distributive Programs for Adults (3 cr) IX-X W

143s See 143f: I-II S

144s Teaching Reading in Secondary Schools (3 cr; prereq 9 cr educ) IX-X M, 1 hr ar

145w,s See 145f: VII-VIII T, VII Th(w); IX-X W, 1 hr ar(s)

149w,s See 149f: IX-X M(w); 4:00-5:30 TTh(s)

150s See 150f: III-IV S

151w,s Diagnosis, Treatment of Learning Difficulties (3 cr) I-II S(w); IX-X M(s)

153w,s See 153f: IX-X W, 1 hr ar(w); III-IV S, 1 hr ar(s)

155s Materials Lab for Social Studies Teachers (3 cr; prereq ♯) IX-X W

156s Trends in Business Education (3 cr) III-IV S

168w Current Developments in Social Studies (3 cr; prereq grad or ♯) I-II S

170Bw Curriculum, Course of Study Construction (3 cr; prereq 113 or 119 or ♯) IX-X T

171w,s See 171f

174w,s-175w,s-176w,s See 174f-175f-176f

178w Educational, Social Implications of Visual Impairment (3 cr; prereq ♯) III-IV S

191w Adv Teaching, Supervision of Secondary Mathematics (3 cr) IX-X Th

192s Mathematics Lab (3 cr; prereq grad or tchg exper) IX-X Th

-193Bw-193Cs See 193Af

199Ew,s See 199Ef

201w,s See 201f

205w,s See 205f

215w,s See 215f

217w Seminar: School Health Education Program (ar cr; prereq ♯) III-IV W, 1 hr ar

222w,s See 222f

225w,s See 225f

226w,s See 226f

227w,s See 227f

228w,s See 228f

238w,s See 238f

239w,s See 239f

243w Recent Research: Reading (3 cr; prereq ♯) IX-X W

250w See 250f: I-II S

251w Curriculum Trends in American Colleges (3 cr; prereq 18 cr educ or 1 yr grad study in any field) I-II T, I Th

252s Effective College Teaching (3 cr; prereq 18 cr educ or 1 yr grad study in any field) I-II T, I Th; I-II S

253w,s Seminar: Improvement of College Instruction (ar cr; prereq ♯) 7:30-9:30 pm (w); Ar(s)

253Aw Seminar: Materials, Methods in Marriage Education (4 cr) VI-VII TTh

254w,s See 254f

261w,s See 261f

264w Research: Educational Diagnosis (3 cr) IV MWF

266s Supervision of High School Instruction (3 cr; prereq EPsy 193 or 293 or ♯) I-II S, 1 hr ar

271w,s See 271f

273w,s See 273f

284w,s See 284f

285w-286s Professional Education of Teachers (3 cr; prereq 15 cr educ incl 184, 250 or HEd 182 or EPsy 250 or ‡) III-IV S
294w See 294f
296w,s See 296f

Education (Ed)

Fall Quarter

55A Introd Secondary School Teaching (5 cr; prereq Psy 2)
Lect I MWF, NH 45, Mork
—1, II TTh, PeikH 175, Gardner
—2, II TTh, Bu 211, Neale
—3, II TTh, PeikH 350, Bicak
—4, III TTh, PeikH 175, Gardner
—5, III TTh, CW 218, Davies
—6, III TTh, PeikH 350, Bicak
—7, VI TTh, Pt 202, Olstad
—8, VI TTh, PeikH 315, Jackson
—9, VII TTh, Pt 202, Olstad
—10, VII TTh, PeikH 315, Jackson

55N Introd Teaching Nursing (5 cr; prereq Psy 2)
VI-VII TTh, VIII T, ForH 20, Lantz

75A Introd Elem School Teaching (5 cr, §old 71B; prereq Psy 2)
Lect IV MWF, ScH 108, Clymer
—1, II-III MW, Bu 211, Barrett
—2, I-II TTh, Psy 115, Dykstra
—3, I-II TTh, CW 218, Lambert
—4, VI-VII MW, Bu 123, Balzer
—5, III-IV TTh, Bu 123, Balzer
—6, III-IV TTh, Psy 115, Ekman
—7, VI-VII TTh, Bu 123, Dykstra
—8, VI-VII TTh, Psy 115, Balzer

81 Education for Public Health Nurses (3 cr, not open to educ degree cand; prereq PubH 62, 100, 133)
IV MWF, Mayo 1210, Grout

Winter and Spring Quarters

55Aw-55Bs See 55Af: Lect I TThS(w); I MWF (s), rec II TTh; III TTh; VI TTh; VII TTh
-55Bw See 55Af
55Ns See 55Nf
75As See 75Af: Lect VI MWF, rec III-IV TTh; VI-VII TTh
-75Bw See 75Af: Lect VII MWF, rec I-II TTh; II-III MW; III-IV TTh; VI-VII MW; VI-VII TTh
81w,s See 81f: I-II T, II Th(w); II MWF(s)

Educational Administration (EdAd)

Fall Quarter

101 Public School Admin (3 cr; prereq sr, 9 cr educ, non EdAd maj)
III-IV S, Bu 211, 1 hr ar, Popper

118 The Community School (3 cr; prereq sr)
IX-X T, Bu 211, 1 hr ar, Archer
200 Seminar: Elem School Admin (3 cr)
IX-X W, Bu 123, 1 hr ar, Archer
201 Foundations (3 cr)
4:30-6:00 TTh, CW 218, Hooker, Lane
215 Elem School Principalship (3 cr)
I-II S, Pt 202, 1 hr ar, Curtin
218 Recent Literature in Secondary Education (ar cr)
IX-X W, PeikH 225, Bossing, Keller, Winter
225 Pupil Personnel Admin (3 cr)
III-IV S, CW 222, 1 hr ar, Hooker
228 Probs: Educational Admin (1-3 cr; prereq 225) Domian, Hooker, Lane, Popper
230 Public Relations for Schools (3 cr; prereq 225)
4:00-6:00 M, JohH 113, 1 hr ar, Popper
235 Seminar: Educational Admin (no cr)
IX-X M, JohH 114, Bossing, Domian, Keller, Hooker, Lane, Popper
236 Field Study (0-10 cr; prereq ‡) Domian, Hooker, Lane, Popper
270A Probs: Elem Educ (ar cr; prereq ‡) Archer, Bond, Clymer, Curtin, Goossen, Mullins
270B Probs: Secondary Educ (ar cr; prereq ‡) Bossing, Domian, Keller, Hooker, Lane, Popper
274 The Junior College (3 cr)
I-II S, Bu 211, 1 hr ar, Keller

Winter and Spring Quarters

117w Schools in Rural Areas (3 cr) III-IV S, 1 hr ar
118s See 118f: IX-X W, 1 hr ar
167s Junior High School (3 cr; prereq sr, 9 cr educ) IX-X T, 1 hr ar
-202w See 201f
210s Financial Aspects of Public School Business Admin (3 cr; prereq 227) I-II S, 1 hr ar
215s See 215f: III-IV S, 1 hr ar
218w,s See 218f
226w School Plant Planning, Mgt (3 cr; prereq 227) I-II S, 1 hr ar
227w Teacher, Employee Admin (3 cr; prereq 225) III-IV S, 1 hr ar
228w,s Probs: Educational Admin (1-3 cr; prereq 225)
230s See 230f: III-IV S, 1 hr ar
235w,s See 235f
236w,s See 236f
253w Admin in Higher Education (3 cr) 3:00-5:00 M, 1 hr ar
264w Admin of Instructional Activities in Secondary School (3 cr) III-IV S, 1 hr ar
265s Admin of Noninstructional Activities in Secondary School (3 cr) 4:30-6:00 TTh
270Aw,s See 270Af
270Bw,s See 270Bf

290s Financing Higher Education (3 cr; prereq ‡) III-IV S, 1 hr ar

Educational Psychology (EPsy)

Fall Quarter

110 Measurement in the Classroom (3 cr)
VIII MWF, JohH 115, Kellogg

116 Statistical Methods (3 cr; prereq ¶116A or ‡)
III MWF, Bu 123, Collier

116A **Statistical Methods Lab** (2 cr; prereq ¶116)
VI-VII TTh, Bu 251, Collier

125 **Group Dynamics** (3 cr)
VI-VII TTh, Bu 125, Flanders

133 **Procedures in Student Personnel Work** (3 cr; prereq 9 cr educ)
—1, 3:45-5:15 W, Bu 125, 1 hr ar, Dugan
—2, I-II S, Bu 125, 1 hr ar, Tennyson

142 **Individual Mental Testing** (3 cr; prereq sr, 110 or 117 or ¶117 with ‡)
VIII MWF, Pt 202, Reynolds

150 **Clinical Practice in Remedial Teaching** (3 cr; prereq EdCI 145 or 151, ‡) Balow

151 **Clinical Practice in Educational Diagnosis** (3 cr; prereq 142, EdCI 145, ‡)
VI-VIII MWF, Pt 108, Reynolds, Balow, Capobianco, Force, Hodges

152 Introd to School Psychological Services (3 cr)
VI MWF, Bu 125, Hodges

159 Personality Development, Mental Hygiene (3 cr; prereq sr)
4:00-6:00 M, Bu 125, Torrance

182 Education of Exceptional Children (3 cr; prereq Ed 55B or 75B)
III-IV S, CW 218, Capobianco

184 Education of Mentally Retarded Children in the Elem Schools (3 cr; prereq 182 or ‡)
IX-X W, CW 222, Capobianco

187 Education of the Crippled Child (3 cr; prereq 182)
IX-X Th, CW 222, Force

193 Psychology of Human Learning (3 cr; prereq sr)
4:00-5:30 TTh, JohH 114, Mork

216 **Statistical Methods** (3 cr)
II MWF, Bu 123, P Johnson

216A **Statistical Methods Lab** (2 cr)
—1, I-II TTh, Bu 251, Collier
—2, III-IV TTh, Bu 251, Collier

220 Adv Theory of Measurement (2 cr; prereq 117, 217 or ‡)
III TTh, Bu 125, Hoyt

233 **Probs: Guidance, Personnel Work** (1-9 cr)
—1, VIII-IX M, Bu 123, Dugan, Tennyson
—2, Ar, Edson, Hagenah, Snoke

240 Probs: Measurement (3 cr) P Johnson

243 Probs: Statistics for Students in Education, Psychology (3 cr) P Johnson

250 College Student Personnel Work: Development, Admin (3 cr; prereq 1 course higher educ or ¶ or ‡)
IV MWF, Bu 125, Snoke

253 **Research Probs** (sec 1, 1-3 cr; sec 2, 1 cr; sec 3, 1 cr; sec 4, ar cr; prereq ‡)
—1, VIII-IX M, Bu 123, Dugan
—2, Ar, Hoyt
—3, I T, Pt 104, Hodges
—4, Ar

260 Seminar (no cr)

280 Practicum in Group Leadership (3 cr; prereq ‡) Flanders

281 **Practice in Personnel Work** (sec 1, 3 cr; sec 2-3, ar cr; prereq 226 or ‡)
—1, VI-VII Th and ar, EdH 204, Hagenah
—2, Ar, Snoke
—3, I-IV T, Dugan, Soldahl

282 Practice in High School Personnel Work (3 cr; prereq ‡) Dugan, Tennyson, Soldahl

292 Recent Literature (3 cr; prereq ‡) Hoyt

Winter and Spring Quarters

110w See 110f

116w See 116f: VI MWF

116Aw See 116Af

117w,s Measurement (3 cr; prereq 116 or 216 or Psy 70) VII MWF(w); VIII MWF(s)

125w See 125f

133w,s See 133f: I-II S(s); VIII-IX W(w)

134w School Counseling Procedures (3 cr; prereq 110 or 117, 133, ‡) 3:45-5:15 TTh

140s Instruments, Techniques of Measurement (3 cr; prereq sr, 110 or 117) VIII MW, VIII-IX F

142w See 142f: III-IV S

143s Adv Individual Mental Testing (3 cr; prereq 142, ‡) VIII MWF

148s Clinical Diagnosis of Reading Difficulties (3 cr; prereq EdCI 145) I-II S

150w,s See 150f

151w,s See 151f

152s See 152f: 4:00-5:30 TTh

159w See 159f: II MWF

182w,s See 182f: I-II S(s); VII MWF(w)

183w Education of Gifted Children (3 cr; prereq Ed 55B or 75B) IX-X T

184s See 184f: III-IV S

190w Educational Problems of Cerebral Palsy (3 cr; prereq 182 or ‡) IX-X M

191s Education of the Mentally Retarded in Secondary Schools (3 cr; prereq 182 or ‡) IX-X W

208w Methods in Educational Research (3 cr) VII MWF

-217w-218s‡ See 216f

-217Aw-218As‡ See 216Af

219s Design, Analysis of Statistical Investigations (3 cr; prereq 218, ‡) III MWF

219As Design, Analysis of Statistical Investigations Lab (2 cr; prereq 218, ‡) VI-VII TTh

-221w See 220f
225w Diagnosis as a Phase of Counseling (3 cr; prereq 140 or ¶, 133 or 250 or Psy 130) IV MWF
226s Interviewing Procedures in Counseling (3 cr; prereq 225) IV MWF
233w,s See 233f: VI-VII M or ar(s); VIII-IX M or ar(w)
240w,s See 240f
243w,s See 243f
244w Research: Special Education (3 cr; prereq 116, 117 or equiv, ‡) IX-X Th
251s College Student Personnel Work (1-3 cr; prereq 250 or 1 course higher educ) V-VI W
253w,s See 253f
254s Measurement, Evaluation in Higher Education (3 cr) III-IV S, 1 hr ar
259s Personality Theory in Mental Hygiene (3 cr) I-II S
260w,s See 260f
280w,s See 280f
281w,s See 281f
282w,s See 282f: I-IV T(w); I-VIII T(s)
289s Survey of Special Education Probs (3 cr; prereq 182, ‡) IX-X W
292w,s See 292f
293w Psychology of Learning (3 cr; prereq 12 cr educ psy, psy) III MWF
294s Recent Theory, Research: Human Learning (3 cr; prereq ‡) III MWF

History and Philosophy of Education (HEd)

Fall Quarter

141 Critical Issues in Contemporary Education (3 cr)
IX-X M, Bu 120, R Beck
180 **The School, Society** (3 cr; prereq sr)
—1, VII-VIII T, VII Th, Bu 120, R Beck
—2, III MWF, MMA 100, C Beck
—3, IV MWF, CW 222, C Beck
—4, VIII M, VIII-IX W, CW 218, C Beck
241 Problems (ar cr; prereq ‡) R Beck

Winter and Spring Quarters

131w Comparative Education (3 cr) IX-X M
180w,s See 180f
182s Comparative Philosophies of Education (3 cr) IX-X M
241w,s See 241f

Methods and Student Teaching (EdT)

Fall Quarter

50 Junior Practicum in Special Education (3 or 6 cr; prereq jr, ‡) Reynolds, others
51A Teaching: Nursing (4 cr; prereq Ed 55N)
I MWF, MH 128, Dunning, Weise
51B Teaching: Nursing (6 cr; prereq 51A)
I TTh, VIII-IX Th, MH 128, Dunning, Weise
52 Student Teaching (ar cr; prereq spec methods course or tchg exper) Davies, others
53A Teaching Handicapped Children (6 cr, †53A-53B; prereq ‡)
IX M and ar, Chase, others
54A Student Teaching: Elem School (6 cr, †54A-54B)
IX M and ar, Chase, others
54B Student Teaching: Elem School (6 cr, †54A-54B; prereq 54A)
IX M and ar, Chase, others
60 Student Teaching: Library Science (2 cr; prereq sr, Ed 55B, Lib 53, 62, 74, 171, 172) Callahan
67 Student Teaching: Mathematics (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶67A, Math 60 or ¶)
4:00-5:40 F and ar (for off-campus), D Johnson, Goralski, others
67A Teaching Secondary School Mathematics (3 cr, †67A-67B-67C)
4:00-5:40 MW, JohH 122, D Johnson (for majors only)
67M Teaching Secondary School Mathematics (3 cr; prereq minor only)
4:00-5:40 TTh, PeikH 315
68 Student Teaching: Science (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶68A)
4:00-5:40 F and ar (for off-campus), Boeck, Goralski, others
68A Teaching Secondary School Science (3 cr, †68A-68B-68C)
4:00-5:40 MW, PeikH 175, Boeck (for majors only)
69 Student Teaching: Social Studies (1 or 2 cr, UHS; 6 cr, off-campus, †9 cr; prereq jr, ¶Ed 55A...or sr, ¶69A)
VIII Th and ar, West(jr), 4:00-5:40 F and ar (off-campus), VIII Th and ar(sr)
69A Teaching Social Studies in Secondary School (3 cr, †69A-69B-69C)
4:00-5:40 MW, PeikH 165, West (for majors only)
70 Student Teaching: Modern Languages (3 cr, UHS; 6 cr, off-campus, †9 cr, prereq sr, ¶70A)
4:00-5:40 TTh and ar (off-campus), Birkmaier, Goralski, others
70A Teaching Modern Languages (3 cr, †70A-70B-70C; prereq sr)
4:00-5:40 TTh, PeikH 225, Birkmaier (for majors only)
70M Teaching Modern Languages (3 cr; prereq minor only)
4:00-5:40 TTh, PeikH 225, Birkmaier
71 Student Teaching: Latin (3 or 6 cr, †9; prereq sr, ¶71A)
4:00-5:40 F and ar (off-campus), Birkmaier, Goralski, others

71A Teaching Latin (3 cr, †71A-71B-71C)
4:00-5:40 TTh, PeikH 225, Birkmaier (for majors only)

71M Teaching Latin (3 cr; prereq minor only)
4:00-5:40 TTh, PeikH 225, Birkmaier

72A Student Teaching: Distributive Education Subjects (2 cr, †72A-72B-72C; prereq Ed 55B, ‡) Meyer

72B Student Teaching: Distributive Education Subjects (2 cr, †72A-72B-72C; prereq 72A) Meyer

72C Student Teaching: Distributive Education Subjects (2 cr, †72A-72B-72C; prereq 72B) Meyer

73A Student Teaching: Business Subjects (2 cr, †73A-73B-73C; prereq Ed 55B, ‡) Price

73B Student Teaching: Business Subjects (2 cr, †73A-73B-73C; prereq 73A) Price

73C Student Teaching: Business Subjects (2 cr, †73A-73B-73C; prereq 73B) Price

75 Student Teaching: Language Arts (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶75A)
4:00-5:40 F and ar (off-campus), Kegler, Goralski, others

75A Teaching Language Arts in Secondary Schools (3 cr, †75A-75B-75C)
4:00-5:40 MW, JohH 205, Kegler (for majors only)

76 The Teacher, The Parent (3 cr; prereq 55 or ‡)
VIII-IX F, CW 218, 1 hr ar, Hurst

77 Student Teaching: Nursery School (6 cr; prereq cons maj adv)
IX M and ar, CW 12

78 Student Teaching: Kindergarten (6 cr; prereq cons maj adv)
IX M and ar, CW 218

79 Student Teaching: Primary Grades (6 cr; prereq cons maj adv)
IX M and ar, CW 218

82 Teaching Basic Business Subjects (2 cr; prereq Ed 55B or ¶)
IX-X M, Bu 103, Price

84A Practice, Field Work in Recreation Leadership (2 cr; prereq recr maj)
V T, CH 215, 6 hrs ar, Giles

84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
V T, CH 215, 6 hrs ar, Giles

84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
V T, CH 215, 6 hrs ar, Giles

85A Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq sr, recr maj or min)
V W, CH 215, 6 hrs ar maj, 3 hrs ar min, Giles

85B Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85A)
V W, CH 215, 6 hrs ar maj, 3 hrs ar min, Giles

85C Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85B)
V W, CH 215, 6 hrs ar maj, 3 hrs ar min, Giles

90A Teaching Distributive Education Subjects (2 cr, †90A-90B-90C; prereq ‡)
V TTh, Bu 103, Meyer

93A Methods of Teaching for Core Majors (3 cr; prereq sr)
4:00-5:40 Th, Psy 109, Bossing (for majors only)

Winter and Spring Quarters

50w,s See 50f
51Aw See 51Af
51Bw,s See 51Bf
52w,s See 52f
53Aw,s See 53Af
54Aw,s See 54Af
54Bw,s See 54Bf
67w,s See 67f
-67Bw-67Cs See 67Af
67Ms See 67Mf
68w,s See 68f
-68Bw-68Cs See 68Af
68Ms Teaching Secondary School Science (3 cr; prereq minor only) 4:00-5:40 TTh
69w,s See 69f: VIII M and ar (jr,sr); 4:00-5:40 M and ar (off-campus) (w); VIII W and ar (jr,sr); 4:00-5:40 M and ar (off-campus) (s)
-69Bw-69Cs See 69Af
69Mw Teaching Social Studies in Secondary School (3 cr; prereq minor only)
70w,s See 70f
-70Bw-70Cs See 70Af
71w,s See 71f
-71Bw-71Cs See 71Af
72Aw,s-72Bw,s-72Cw,s See 72Af-72Bf-72Cf
73Aw,s-73Bw,s-73Cw,s See 73Af-73Bf-73Cf
74w Teaching Journalism (3 cr; prereq Ed 55B, Jour 41 or 51, ‡) VII MWF
75w,s See 75f
-75Bw-75Cs See 75Af
75Ds Teaching Language Arts in Secondary Schools (1 cr; prereq sr) 4:00-5:40 W
75Ms Teaching Language Arts in Secondary Schools (3 cr; prereq Engl, Lang Arts min, maj other than Spch)
76Ms Teaching Language Arts in Secondary Schools (3 cr; prereq Spch min, maj other than Engl) 4:00-5:40 TTh
77w,s See 77f
78w,s See 78f
79w,s See 79f
80s Teaching Typewriting, Bookkeeping (2 cr; prereq Ed 55B or ¶) IX-X M
81w Teaching Shorthand (2 cr; prereq Ed 55B or ¶) IX-X M
84Aw,s-84Bw,s-84Cw,s See 84Af-84Bf-84Cf
85Aw,s-85Bw,s-85Cw,s See 85Af-85Bf-85Cf
-90Bw-90Cs See 90Af

93w Student Teaching: Core Curriculum (9 cr; prereq Ed 55B, C+ avg maj) IX, M and ar

93Bw Methods of Teaching for Core Majors (2 cr; prereq 93A) 4:00-5:40 Th

HOME ECONOMICS EDUCATION (HEEd)

Fall Quarter

90 Child Training (3 cr; prereq soph, Psy 2) IV MW, HE 201, 1 hr ar, Helgerson

91 Observation, Materials, Teaching (5 cr; prereq HE 4, 21, 41, Ed 55B, ¶93) VIII MWF, IX W, HE 103, Kafka

92 Teaching Probs (2 cr; prereq sr, 91, 93, ¶94, ¶192, ¶194A) II MTWTh, HE 103

93 Supervised Teaching (3 cr; prereq HE 4, 21, 41, Ed 55B)

94 Supervised Teaching (6 cr; prereq 93)

95 Field Experience for Home Agents (6 cr; prereq 91, 93, △, cons dir agric ext) Ford

190 Readings (1-3 cr; prereq ‡) Ford

192 Evaluation in Home Economics (2-3 cr; prereq sr, 91, 93, Ed 55B) III-IV TTh, HE 129

194A Adult Education (3 cr; prereq 91, 93) III-IV MWF, HE 129, Ford

243 Trends (3 cr; prereq ‡) II-III S, HE 103, 1 hr ar, Holmblade

293 Problems (1-9 cr; prereq ‡...294 rec) Esteros, Ford, Holmblade

294 Research Methods (3-6 cr; prereq 192, ‡) IX-X W, HE 102

295 Seminar (1 cr) IX-X Th, HE 102

Winter and Spring Quarters

90s See 90f

91w,s See 91f

92w,s See 92f

93w,s See 93f

94w,s See 94f

95w,s See 95f

190w,s See 190f

192w,s See 192f

193As Curriculum: Secondary Level (3 cr; prereq 94 or ‡) IX-X T

193Bw Curriculum: College Level (3 cr; prereq ‡) IX-X Th

194Aw,s See 194Af

194Bs Adult Education (3 cr; prereq sr, ‡) IX-X W, 1 hr ar

197s Organization, Methods of Related Art Teaching (1-3 cr; prereq sr, 91, HE 180)

293w,s See 293f

295w See 295f: IX-X T

INDUSTRIAL EDUCATION (Ind)

Fall Quarter

1 **Handcrafts** (3 cr) I-III TTh, TNCW 218, Miletich

2 **Wood Processing I** (3 cr) II-IV TTh, TNCW 1, Flug (OT students only)

3 **Wood Processing II** (3 cr) I-II MWF, TNCW 1, Miletich

4 Wood Processing III (3 cr)

5 Wood Processing IV (3 cr)

6 **Industrial Arts Teaching** (5 cr) VII-IX TTh, VII W, Randleman

7 **Drafting** (3 cr) I-III TTh, TNCW 201

15 **Graphic Arts I** (3 cr) III-IV MWF, TNCW 14

20 **Electricity, Electronics** (3 cr) VI-VII MWF, TNCW 15, Kavanaugh

23 Applied Electronics I (3 cr)

24 Applied Electronics II (3 cr)

25 Metal Processing I (3 cr)

26 Metal Processing II (3 cr)

27 Metal Processing III (3 cr)

28 Metal Processing IV (3 cr)

29 Metal Processing V (3 cr)

30 Small Gas Engines (3 cr)

35 Fundamentals of Vocational Education (3 cr) IX-X M, TNCW 113, Widdowson

40 Analysis, Course Organization (5 cr) IX-X WF, TNCW 113, Kavanaugh

60A Student Teaching (3 cr, †60A-60B-60C; prereq 5, 55 or 100, 2.5 HPR) Randleman

60B Student Teaching (3 cr, †60A-60B-60C; prereq 60A) Randleman

60C Student Teaching (3 cr, †60A-60B-60C; prereq 60B) Randleman

90 Independent Study (3 cr; prereq sr coll or ‡) VIII W, TNCW 103

100 Industrial Instruction (3 cr, §70; prereq 40, Ed 55B, ‡) IX-X Th, TNCW 113

109 Conference Leading for Industry (3 cr; prereq ‡) IX-X T, TNCW 113, Widdowson

200 Research Probs (3, 6 or 9 cr) III-IV M, TNCW 103, Nelson, Kavanaugh

250 Literature (3 cr; prereq ‡) IX-X W, TNCW 116

Winter and Spring Quarters

1w,s See 1f

2w See 2f: I-II MWF

3s See 3f

4w,s See 4f

5w,s See 5f

6s See 6f

8w Design I (3 cr; prereq 7) VI-VIII TTh

9s Building Construction Drafting (3 cr; prereq 7) I-II MWF
12w,s Craftwork (3 cr) II-IV TTh open to OT registrants only(w); III-IV MWF(s)
15s See 15f: II-IV TTh open to OT registrants only
16w Graphic Arts II (3 cr) III-IV MWF
20s See 20f
21w Communication Electronics (3 cr; prereq 20) VI-VII MWF
23w,s See 23f
24w,s See 24f
25w,s See 25f
26w,s See 26f
27w,s See 27f
28w,s See 28f
29w,s See 29f
30w,s See 30f
50w,s Industrial Practices, Processes (3 cr; prereq 35) VI-VIII T
55w Teaching Industrial Arts (5 cr; prereq Ed 55A) VI-VIII TTh
60Aw,s See 60Af
60Bw,s See 60Bf
60Cw,s See 60Cf
90w,s See 90f
-91w,s See 90f
-92w,s See 90f
101w Tests in Industrial Subjects (3 cr; prereq Ed 55B) IX-X W
105w Administration (3 cr; prereq 35) IX-X T
107w Coordination (3 cr; prereq 35 or 125 or ♯) IX-X M
110s Vocational Guidance (3 cr; prereq Ed 55B) IX-X Th
115s Supervision (3 cr; prereq 35 or 105) IX-X M
135s Course Construction (3 cr, §40) IX-X W
200w,s See 200f
251w Research (3 cr; prereq ♯) IX-X Th

MUSIC EDUCATION (MuEd)

Fall Quarter

4 **Applied Instrumental Technique** (2 cr; prereq mus educ maj)
VI MTWTh, MusEd 200, Fitzsimmons
5 **Applied Instrumental Technique** (2 cr; prereq 4)
V MTWTh, NMA 4, Prescott
6 **Applied Instrumental Technique** (2 cr; prereq 5)
VII MTWTh, NMA 4, Prescott
51 **Teaching Music** (2 cr; prereq Mus 1)
—1, I MWF, NMA 5, Peck
—2, V MWF, ScH 104, Peck
—3, VIII MWF, ScH 4, Peck
52 **Teaching Music** (2 cr; prereq 51 or ♯)
—1, III MWF, ScH 4, Abelson
—2, VI MWF, ScH 104, Ellefson
53 Teaching Music in Secondary School (3 cr; prereq Mus 2T, ♯)
III MWF, NMA 4, Caswell
60 Supervision, Teaching (3 cr; prereq sr, 50B, 53, Ed 55B, ♯)
IX-X W, 5 hrs ar, ScH 4, Caswell, Ivory
61 Supervision, Teaching (3 cr; prereq 60)
IX-X W, 5 hrs ar, ScH 4, Caswell, Ivory
62 Supervision, Teaching (3 cr; prereq 61)
IX-X W, 5 hrs ar, ScH 4, Caswell, Ivory
63 Conducting I (2 cr; prereq 6 or ♯)
VI TTh, NMA 5, Prescott
65 Instrumentation (3 cr; prereq sr, Mus 6T)
III MWF, ScH 104, Ivory
100 Principles (3 cr)
IX-X T, ScH 104, Ivory
104 Adv Topics: Vocal Music (3 cr; prereq sr, ♯)
IX-X M, ScH 4, Ivory
224 Research Probs (3-9 cr; prereq elem stat)
VIII W, ScH 214, Caswell, Ivory

Winter and Spring Quarters

4w,s See 4f
-5w,s See 5f
-6w,s See 6f
50As Teaching in Primary Grades (2 cr; prereq ♯) V WF, 1 hr ar
50Bw Teaching in Interm Grades (2 cr; prereq ♯) V WF, 1 hr ar
51w,s See 51f: I MWF(w,s); IV MWF(w); V MWF(s); VIII MWF(w,s)
52w,s See 52f: III MWF(s); IV MWF(w); VI MWF(w,s)
59w,s Choral Literature, Conducting (2 cr sr, 1 cr others) V MTTh
60w,s-61w,s-62w,s See 60f-61f-62f
64w,s Band Organization (3 cr; prereq 6, ♯) VI MWF
65w See 65f
67s Teaching Instrumental Music in Elem Schools (2 cr; prereq ♯) III MWF
68s Teaching Instrumental Music in Secondary Schools (2 cr; prereq sr, 65) III TTh
103s Psychological Foundations (3 cr; prereq sr, ♯) IX-X M
105w Adv Topics: Instrumental Music (3 cr; prereq sr, ♯) IV MWF
124w Selection, Conducting of Choral Materials (3 cr; prereq sr) V MWF
224w,s See 224f: Ar

PHYSICAL EDUCATION

Undergraduate Courses for Men (PE M)

Fall Quarter

4B Basketball Fundamentals (1 cr)
V-VI TTh, CH Gym, Kundla, Reed
5A Touch Football, Calisthenics, Tactics (1 cr)
III-IV TTh, CH Gym, Piper
5B Gymnastics (1 cr)
III MWF, CH Gym, Ostrander

5C Stunts, Contests, Softball, Baseball (1 cr)
II-III TTh, App Gym, Ostrander
6A Intramural Sports (1 cr)
IV-V TTh, CH Gym
6C Aquatics (1 cr)
IV MWF, CH Pool, Thorpe
7A Games, Relays (1 cr)
II-III TTh, CH Gym, Piper
8 Tennis, Golf (1 cr)
V-VI TTh, CH, Anderson
11A Survey of Recreation Activities (1 cr)
V T, CH 206, Starr
23A Recreation Leadership (1 cr)
VI T, CH 206, Starr
32 Introduction (3 cr)
III MWF, CH 215, Heusner, Piper
43 Camp Aquatics (2 cr)
V MWF, CH 214, Ostrander
49 Social Aspects of Leisure (3 cr)
IV MWF, CH 206, Finlayson, Fitzgerald
51 Mechanics of Movement (3 cr; prereq 50 or Anat 57)
II MWF, CH 206, Osell
55 Methods, Materials (4 cr; prereq 5A-B-C, 6A-B-C, 7A-B-C)
III MWF and ar, CH 206, Stish
60B Athletic Training Lab (1 cr; prereq 60A)
CH Trg Rm, Stein
66 Officiating Football, Basketball (3 cr; prereq 4A-B)
V-VI T, V Th, CH 214, 1 hr ar, Mueller
68 Basketball Coaching (2 cr; prereq 4B)
I MWF, CH 215, Kundla
72 Baseball Coaching (2 cr)
V MWF, CH 215, Siebert
73 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander, Piper
74 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander, Piper
75 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander, Piper
76 Directed Teaching-Block Plan (9 cr, not open to students who have taken 73, 74, 75; prereq 55, Ed 55B) Ostrander, Piper
97 Testing in Physical Education (2 cr; prereq 55B)
VI MWF, CH 214, Heusner

Winter and Spring Quarters

4Aw Football Fundamentals (1 cr) VI-VII TTh; VIII MWF
4Cs Track Fundamentals (1 cr) VI-VII TTh
5Bw See 5Bf: III-IV TTh
5Cs See 5Cf: III-IV TTh
-6Bw See 6Af
6Cw,s See 6Cf: IV MWF(w); V MWF(s)
7Bw,s Boxing, Wrestling (1 cr) II-III TTh(w); III-IV TTh(s)
7Cs Recreational Games (1 cr) II-III TTh
8s See 8f: IV-V TTh
9Aw Fundamental Rhythms (1 cr) V TTh, 1 hr ar
9Bs Square, Ballroom Dancing (1 cr) V TTh, 1 hr ar
-11Bw-11Cs See 11Af
-23Bw-23Cs See 23Af
45s Camp Craft (2 cr) V-VII Th
46s Camp Leadership (2 cr) VII MW
52w Leadership in Social Activities (3 cr) VI-VII TTh
55w See 55f
58s Leadership in Community Recreation (3 cr; prereq 57) IV MWF
59w Instructor's Course in First Aid (3 cr; prereq age 20, PEW 25) II MWF
60As Prevention, Care of Injuries (3 cr; prereq 51) IV MWF
60Bw,s See 60Bf
61s History of Physical Education (3 cr) I MWF
63s Organization, Admin (3 cr; prereq 32 or 101, 55) III MWF
64Aw-64Bs Leadership in Nature Recreation (2 cr; prereq 15 cr nat sci) III-IV T(w); V-VII T(s)
65s Adapted Physical Education (3 cr; prereq 51, Anat 57) II MWF
67s Football Coaching (2 cr; prereq 4A or 1 yr squad exper) I MWF
69w Track Coaching (2 cr; prereq 4C) VI MWF
73w,s-74w,s-75w,s See 73f-74f-75f
76w,s See 76f
78w Scout Leadership (2 cr) VII MW
81w Hockey Coaching (2 cr; prereq 6B or ♯) VII MWF
96s Admin of Intramural Sports (2 cr) V MWF

Undergraduate Courses for Women (PEW)

Fall Quarter

A Nonprofessional Physical Education
Aquatics (activity rating 1)
Swimming, Bgn
—1, V TTh, Gy Pool (StP Campus) (1 cr)
—2, III MWF, NGW 51 (1½ cr)
—3, IV MWF, NGW 51 (1½ cr)
—4, VIII MWF, NGW 51 (1½ cr)
Swimming, Adv Bgn
—5, IV TTh, NGW 51 (1 cr)
—6, VI TTh, NGW 51 (1 cr)
Swimming, Interm
—7, III TTh, NGW 58, 201 (1 cr)
—8, VII MWF, NGW 58, 201 (1½ cr)
Swimming, Adv
—9, VIII MWF, NGW 58, 201 (1½ cr)
ARC Sr Life Saving
—10, IV MWF, NGW 58, 201 (1½ cr)
Body Building (activity rating 1, 2, 3)
Posture, Individual Exercise
—11, IV TTh, Gy 100 (StP Campus) (1 cr)
—12, III MWF, NGW 153A (1½ cr)

—13, V MWF, NGW 153A (1½ cr)
—14, VIII MWF, NGW 153A (1½ cr)
—15, II TTh, NGW 153A (1 cr)
—16, IV TTh, NGW 153A (1 cr)
—17, V TTh, NGW 153A (1 cr)
Conditioning Exercises (activity rating 1, 2)
—18, VI TTh, NGW 153 (1 cr)

Individual Sports
Archery (activity rating 1, 2, 3)
—19, VII TTh, NGW 60 (1 cr)
—20, VI MWF, NGW 60 (1½ cr)
Badminton (activity rating 1, 2)
—21, III TTh, Gy 100 (StP Campus) (1 cr)
—22, I MWF, NGW 60 (1½ cr)
—23, III MWF, NGW 60 (1½ cr)
—24, V MWF, NGW 60 (1½ cr)
—25, II TTh, NGW 60 (1 cr)
—26, III TTh, NGW 60 (1 cr)
Bowling (activity rating 1, 2, 3)
—27, III MWF, NGW 201, CMU (1½ cr)
—28, IV MWF, NGW 201, CMU (1½ cr)
—29, II TTh, NGW 201, CMU (1 cr)
—30, III TTh, NGW 201, CMU (1 cr)
—31, II TTh, StCen (StP Campus) (1 cr)
Fencing (activity rating 1, 2)
—32, IV TTh, NGW 151 (1 cr)
Riflemarksmanship (activity rating 1, 2, 3)
—33, III TTh, NGW 201, Armory 20 (1 cr)
—34, IV TTh, NGW 201, Armory 20 (1 cr)
Social Games, Mixers (activity rating 1, 2, 3)
—35, V TTh, NGW 153, 201 (1 cr)
Skating (activity rating 1, 2, 3)
—36, II MWF, NGW 201, Arena (1½ cr)
—37, III MWF, NGW 201, Arena (1½ cr)
Skating, Figure (activity rating 1, 2)
—38, II MWF, NGW 201, Arena (1½ cr)
—39, III MWF, NGW 201, Arena (1½ cr)
Tumbling, Trampoline (activity rating 1, 2)
—40, V MWF, NGW 153 (1½ cr)

Rhythms
Ballroom Dance (activity rating 1, 2, 3)
—41, III TTh, NGW 153, 201 (1 cr)
—42, VIII TTh, NGW 153, 201 (1 cr)
Folk, Square Dance (activity rating 1, 2)
—43, VII TTh, NGW 151, 201 (1 cr)
Modern Dance (activity rating 1, 2)
—44, IV MWF, NGW 151, 201 (1½ cr)
—45, VI MWF, NGW 151, 201 (1½ cr)

Team Sports (activity rating 1, 2)
Volleyball
—46, I TTh, NGW 151 (1 cr)
—47, V TTh, NGW 151 (1 cr)

Professional Courses

20A **Badminton** (½ cr)
—1, V TTh, NGW 60, Tenney
—2, VI TTh, NGW 60, Tenney

20B Skills, Officiating of Fall Team Sports (1 cr)
II MWF, NGW 60, Hauptfuehrer

20C **Archery, Bowling** (1 cr)
—1, VII MWF, NGW 60, Tinker
—2, VIII MWF, NGW 60, CMU, Tinker

21D Posture, Functional Exercise (1 cr)
II MWF, NGW 153

25 **ARC First Aid: Standard, Adv** (2 cr; prereq phys educ maj)
—1, I MWF, NGW 151, 201
—2, V MWF, NGW 151, 201

40A Elem Modern Dance (½ cr)
II TTh, NGW 151, Houlton

40B Skills, Officiating of Softball, Volleyball (1 cr)
III MW, NGW 151, Hauptfuehrer

45 **Physical Education Activities for the Elem School** (2 cr; prereq elem educ maj only)
—1, IV MWF, NGW 153, 153A
—2, VII MWF, NGW 153, 153A

47 Teaching Dance, Rhythmic Activities (3 cr; prereq 21B, 22A, 40A)
VIII MTWThF, NGW 153, 201, Michel

51 Mechanics of Movement (3 cr; prereq Anat 57)
II MWF, NGW 3, Wilson

53 Role of Physical Educator in Recreation (3 cr; prereq phys educ maj)
IV MWF, NGW 60, 201, Tinker

62 Teaching Activities (3 cr; prereq phys educ min, recr maj)
I MTWThF, NGW 153, 153A, Hauptfuehrer

70 **Teaching Health, Physical Education in the Elem School** (3 cr; prereq 3rd qtr soph, elem educ maj)
—1, III TTh, IV T, NGW 153, 153A, 201, Slocum, Bockstruck
—2, VI MWF, NGW 153-153A, 201, Bockstruck, Slocum

82 Principles (3 cr; prereq sr)
III MWF, NGW 3, Wilson

86 Adv Physical Education (1 cr)
III MWF, NGW 4, 153, Bockstruck

90A Student Teaching (3 cr; prereq sr, Ed 55B, phys educ maj)
II TTh and ar, NGW 3, Jaeger

90B Student Teaching (3 cr; prereq 90A)
III TTh, NGW 3, Jaeger

90D Orientation to Student Teaching (2-3 cr; prereq 4th qtr student teachers) Jaeger

90E Student Teaching (2-3 cr; prereq 4th qtr student teachers) Jaeger

91 **Prin Play** (3 cr; prereq NKP maj)
III MWF, NGW 201, 151, Tinker

93 Student Teaching for Minors (2 cr; prereq Ed 55B, Phys educ min)
III TTh and ar, NGW 3, Hauptfuehrer

94 Student Teaching: School Health Education (2 cr; prereq sr, 83, ‡)
III Th and ar, NGW 4, Slocum

Winter and Spring Quarters

Bw,Cs See Af
ARC Sr Life Saving (1½ cr) V MWF(s); VI MWF(w)
Archery, Bgn (1 cr) VII TTh(w); (1½ cr) VI MWF(w)
Archery, Bgn-Interm (1 cr) VI or VII TTh(s)
Badminton, Bgn (1 cr) III TTh(w); (1½ cr) III or IV or V MWF(w)
Badminton, Interm (1 cr) IV TTh(w)
Basketball (1 cr) III TTh(w); (1½ cr) I MWF(w)
Bowling, Bgn (1 cr) II or III TTh(w); II TTh(StP)(w); (1½ cr) III or IV MWF
Conditioning Exercises (1 cr) II TTh(w); VIII TTh(s)
Dancing, Ballroom (1 cr) IV or VII TTh(w); I or VII TTh(s)
Dancing, Folk, Square (1 cr) II TTh(w); IV TTh(StP)(w); VIII TTh(s)
Dancing, Modern Bgn (1½ cr) IV MWF (w,s)
Dancing, Modern, Adv Bgn (1½ cr) VII MWF(w)
Dancing, Modern, Interm (1½ cr) VII MWF(s)
Fencing (1 cr) V TTh(w); VI TTh(s)
Golf, Bgn (1 cr) II TTh(StP)(s); III TTh (s); (1½ cr) III or IV or V or VI MWF(s)
Golf, Interm (1 cr) IV or V TTh(s)
Golf, Adv (ar cr) Ar(s)
Horseback Riding, Bgn (1 cr) VI or VII Th(s)
Posture, Individual Exercise (1 cr) III TTh (StP)(w); I or VI or VII TTh(w); II or IV TTh(s); IV TTh (StP) (s); (1½ cr) I or II or V MWF(w); IV MWF(s); II MWF(s)
Riflemarksmanship (1 cr) I or II TTh(w)
Skating, Bgn (1½ cr) II or III MWF(w)
Skating, Fig (1½ cr) II or III MWF(w)
Social Games, Mixers (1 cr) VI TTh(w)
Softball (1 cr) II TTh(s)
Swimming, Bgn (1½ cr) II MWF(s); VI MWF(w,s)
Swimming, Adv Bgn (1 cr) V TTh (StP)(w); VI TTh(s); VII TTh(w); (1½ cr) III or VIII MWF(s)
Swimming, Interm (1 cr) III or VII TTh(s); V TTh (StP)(s)
Swimming, Interm-Adv (1½ cr) VII MWF (w)
Swimming, Adv, Diving (1½ cr) IV MWF (s)
Swimming, Adv, Synchronized (1½ cr) VII MWF(s)
Tennis, Bgn (1 cr) II or III or VI TTh(s); III TTh (StP)(s); V TTh(w); (1½ cr) I or II or III MWF(s)
Tennis, Interm-Adv (1 cr) IV or V TTh(s)
Tumbling, Trampoline (1½ cr) V MWF(w)
Volleyball (1 cr) I or VI TTh(w)
Water Safety Instructor's Course (1½ cr) IV MWF(w); VIII MWF(s)

Professional Courses

21Aw Adv Basketball (½ cr) VIII MW
21Bw Rhythmic Fundamentals, Elem Folk Dance (1 cr) V TTh, 1 hr ar
21Ew Winter Sports (½ cr) III TTh
22As Folk, Ballroom Dance (1 cr) V TTh, 1 hr ar
22Bs Golf (1 cr) VII or VIII MWF
22Cs Tennis (1 cr) IV or V MWF
25w See 25f: IV or VII MWF
25s See 25f: III or V MWF
40Cs Stunts, Tumbling, Apparatus (1½ cr) VII MTWThF
40Dw Interm Modern Dance (1 cr) II MWF
41Aw Adv Aquatics (1 cr) II MWF
41B Officiating Basketball (½ cr; prereq 21A) IV MW
42As Senior Life Saving (1 cr; prereq 41A) VI MWF
45w,s See 45f: III or VIII MWF
48w Teaching Individual, Dual Sports (3 cr; prereq ‡) II MWThF, 1 hr ar
49s Teaching Team Sports (2 cr) I MTWTh
54s Camp Leadership (3 cr) IV MWF
70w,s See 70f
77s Teaching Aquatics (2 cr; prereq 42A) II MTWThF
80s History, Trends in Dance (3 cr; prereq ‡) I MWF
83w Methods, Materials of School Health Education (3 cr) III MWF
85w Teaching Posture, Self-Testing Activities (3 cr) VII MTWThF
90As See 90Af: III TTh and ar
-90Bw-90Cs See 90Af: I T, II Th and ar(w); III F and ar(s)
-90Cw See 90Bf: III Th
90Ew,s See 90Ef
91w See 91f: I MWF
93w,s See 93f
94w,s See 94f
95s Administration (3 cr; prereq sr) III MW

Advanced Courses for Men and Women (PE)

Fall Quarter

105 Conservation of Natural Resources (2 cr; prereq sr, PE M 64B)
III-IV Th, CH 214, Chapman
111 Recreation Areas, Facilities (3 cr; prereq PE M 58)
VI MWF, CH 215, Giles
118E Probs: Teacher Education in Health, Physical Education, Recreation (ar cr; prereq ‡) Baker, Jaeger, Slocum, Wilson

123 Adv Methods of Teaching (3 cr; prereq ‡) 4:00-5:30 TTh, NGW 3, Baker
125 Curriculum Trends in Professional Preparation of Teachers (3 cr; prereq sr, tchg exper or ‡)
III-IV S, NGW 3, 1 hr ar, Jaeger
135 Tests, Measurements (3 cr; prereq sr, EPsy 60)
4:00-5:30 MW, NGW 3, Wilson
141 Introd Hospital Recreation (3 cr; prereq ‡) III MWF, CH 214, Chapman
221 Seminar: Physical Education (no cr) Baker, Jaeger, Slocum, Wilson
224 Research Probs: School Health Education, Physical Education, Recreation (ar cr; prereq 236, 135 or EPsy 116 or ‡) Baker, Donnelly, Fitzgerald, Heusner, Jaeger, Piper, Slocum, Stish, Wilson
236 Research: Introd Physical Education, Recreation (3 cr)
II MWF, CH 214, Donnelly
238 Admin of Physical Education in Colleges, Universities (3 cr; prereq PE M 63 or ‡)
IV MWF, CH 214, Stish
240 Legal, Financial Aspects of Recreation (3 cr)
III-IV Th, CH 206, Fitzgerald
261B Seminar: Contemporary Probs (ar cr; prereq cons adv)
III-IV T, CH 206, Fitzgerald

Winter and Spring Quarters

101w Principles (3 cr; prereq PE M 55) I MWF
102w Program in Elementary, Secondary School (3 cr; prereq sr) III MWF
104s Teaching Physical Education for Handicapped Child (3 cr; prereq sr, ‡) III-IV S, 1 hr ar
107w Camp Admin (3 cr; prereq PE M 46, ‡) VIII-IX W, 1 hr ar
110w Recreation Surveys (3 cr; prereq PE M 58) VI MWF
112s Programming in Recreation (3 cr; prereq PE M 58) VI MWF
113w Physical Education in Elem School (3 cr; prereq elem sch exper or ‡) 4:00-5:30 TTh
114s Admin of School Health Education Program (3 cr; prereq sr, PE W 83, PubH 50 or ‡) 4:00-5:30 TTh
115w Adv Kinesiology (3 cr; prereq undergrad kinesiology or ‡) 4:00-5:30 MW
117Bw Adv Instruction in School Health for Secondary Schools (3 cr, §117A; prereq PE W 83 or ‡) III-IV S, 1 hr ar
118Ew,s See 118Ef
121s Recreation Methods (3 cr; prereq EdT 84C) II T, II-III Th
124s Supervision (3 cr; prereq ‡) 4:00-5:30 MW
135s See 135f: III MWF
142s Leadership in Hospital Recreation (3 cr; prereq 141) III MWF
143w Programming in Hospital Recreation (3 cr; prereq 142) III MWF
221w,s See 221f
224w,s See 224f
233w Admin of Physical Education Program in Secondary Schools (3 cr; prereq 63) II MWF
234s Curriculum in Physical Education (3 cr; prereq 63, 101) II MWF
241w Admin of Public Recreation (3 cr) IV MWF
242s Community Organization for Recreation (3 cr; prereq ‡) II-III T
261Aw Seminar: Contemporary Probs (3 cr; prereq 236, ‡) 4:00-5:30 MW
261Bw See 261Bf: III-IV Th

GENERAL COLLEGE (GC)

Fall Quarter

1A Individual Adjustment (4 cr)
II-III TTh, FolH 6, Lund
2A Psychology in Modern Society (5 cr)
—1, IV MTWThF, FraH 102, Whiteman
—2, V MTWThF, FraH 102, Burris
—3, VII MTWThF, FraH 102, Whiteman
2B Fields of Applied Psychology (5 cr; prereq 2A)
II MTWThF, FraH 102, Burris
2C Psychology of Human Development (3 cr)
II MWF, Owre 12, Whiteman
3A Home Life: Marriage, Family Living (5 cr)
—1, II MTWThF, Pt 202, Anderson
—2, IV MTWThF, Pt 202, Anderson
—3, VIII MTWThF, WeH 202, Sudia
3D Selecting, Furnishing a Home (3 cr)
I MWF, JohH 205, Forsyth
5A Functions, Problems of Philosophy (3 cr)
—1, I MWF, NH 111, Benson
—2, VIII MWF, P 110, Capitan
5B Functions, Problems of Logic (3 cr)
—1, II MWF, CW 218, Rice
—2, III MWF, JohH 115, Capitan
—3, VI MWF, FraH B1, Capitan
5C Probs of Ethics (3 cr)
V MWF, P 210, Benson
6A Related Physical Sciences (5 cr, §7A)
IV MTWThF, Ph 170, M Harris
7A Physical Science: Elements of Physics (5 cr, §6A)
IV MTWThF, Ph 133, Schwabacher

7B Physical Science: Elements of Light, Astronomy (5 cr, §6C)
V MTWThF, Ph 170, and ar, Policoff

7C Physical Science: Elements of Chemistry (5 cr, §6B)
—1, II MTWThF, Ph 170, Stoppel
—2, VI MTWThF, Ph 170, Stoppel

7D Physical Science: Elements of Geology (5 cr, §6C)
I MTWThF, P 2, M Harris

8A Applied Mathematics (5 cr)
—1, I MTWThF, NH 207, 1 hr ar, Policoff
—2, II MTWThF, NH 207, 1 hr ar, Baldwin
—3, III MTWThF, NH 207, 1 hr ar, Rassweiler
—4, IV MTWThF, NH 207, 1 hr ar, Mandeville
—5, V MTWThF, NH 207, 1 hr ar, Kehle
—6, VI MTWThF, NH 207, 1 hr ar, Schwabacher
—7, VII MTWThF, NH 207, 1 hr ar, Rassweiler
—8, VIII MTWThF, NH 207, 1 hr ar, Baldwin

9A Statistics (5 cr)
—1, II MTWThF, NH 122, McCutcheon
—2, IV MTWThF, NH 122, Giese
—3, VII MTWThF, NH 122, Giese

10A Human Biology: Fundamental Similarities in Living World (3 cr)
—1, I MWF, NH 211, Jefferson, lab ar
—2, III MWF, NH 211, Jefferson, lab ar
—3, V MWF, NH 211, Jefferson, lab ar

10B Human Biology: Living Machinery in Man (3 cr; prereq 10A)
II MWF, NH 211, Dearden

10C Human Biology: Healthful Living (3 cr)
—1, V MWF, Ph 166, Dearden
—2, VII MWF, NH 211, Dearden

16A Bookkeeping, Accounting Lab (3 cr)
—1, II-III TTh, FraH B25, Donnelly
—2, IV-V TTh, FraH B25, Donnelly

17A Probs of Consumption Economics (3 cr)
VII MWF, FraH 101, Nilsen

18A Retailing, Selling (5 cr; prereq soph, ‡)
—1, II M, II-III TTh, Bu 103, Crisp
—2, II M, II-III WF, Bu 103, Crisp

19A Probs of Business Transactions (5 cr)
—1, I MTWThF, NH 122, Wallace
—2, III MTWThF, NH 122, Larson
—3, V MTWThF, NH 122, McCutcheon
—4, VI MTWThF, NH 122

20A Practical Law (5 cr)
—1, I MTWThF, JohH 122, Donnelly
—2, V MTWThF, JohH 113, Newcomb
—3, VII MTWThF, JohH 205, Newcomb

21 Gen Arts (3 cr)
—1, III MWF, NH 111, Caswell
—2, VII MWF, NH 111, Gates

22A Art Today (3 cr)
IV MWF, NH 111, Safer

23A Art Lab (3 cr)
—1, I-II MW, NH 102, 1 hr ar, McInnes
—2, VI-VII MW, NH 102, 1 hr ar, Safer
—3, III-IV WF, NH 102, 1 hr ar, Gates
—4, VI-VII TTh, NH 102, 1 hr ar, McInnes

23B Commercial Art (3 cr)
II-III TTh, NH 102, Safer

24A Music Today: Basic Listening Skills (3 cr)
—1, I-II TTh, NH 111, Caswell
—2, III-IV TTh, NH 111, Seecamp
—3, VI-VII TTh, NH 111, Caswell

25A Music Lab: Choral Singing (2 cr; prereq ‡)
VI MWF, NH 111, Caswell

26A Photography (3 cr)
Lect VII T, J 2, Agar
—1, III-IV TTh, J 2, Agar
—2, V-VI TTh, J 2, Agar

29A World Literature I (5 cr)
—1, II MTWThF, Owre 113, Sheldon
—2, VIII MTWThF, NH 213, Burrows

29B World Literature II (5 cr)
V MTWThF, FraH 20, Rice

29C American Literature (3 cr)
VI MWF, NH 213, Rathburn

29D Contemporary Books, Periodicals (5 cr, §old 29D, old 29E)
I MTWThF, NH 213, Draxten

29G Literature of the Theater: Film, Drama (3 cr)
III T, III-IV Th, P 110, Finnberg

30A Reading, Vocabulary Development (5 cr, §old 30CX)
I MTWThF, NH 216, Kivits

30B Fundamentals of Usage, Style (3 cr)
—1, I MTWTh, FraH B1, Keeler
—2, I MTWTh, NH 209, McBride
—3, II MTWTh, NH 209, Finnberg
—4, V MTWTh, WeH 302, Stockdale

31A Writing Lab: Personal Writing (3 cr)
—1, I-II M, I WF, JohH 309, Rathburn
—2, I-II TTh, JohH 309, Stockdale
—3, I-II TTh, ForH 85, Sclarenco
—4, II-III WF, JohH 309, Stockdale (for DA students only)
—5, II-III WF, WeH 302, Kurak (for DA students only)
—6, III-IV TTh, JohH 309, Kivits
—7, III-IV TTh, FolH 5, Burrows
—8, III-IV M, IV WF, JohH 309, Keeler
—9, IV-V M, IV WF, NH 209, McBride
—10, IV-V M, V WF, NH 216, Kivits
—11, V-VI M, V WF, JohH 309, Finnberg
—12, V-VI TTh, NH 107, Kurak
—13, V-VI TTh, JohH 309, Trachtenberg
—14, V-VI WF, NH 209, Burrows
—15, V-VI F, VI MW, WeH 302, Draxten
—16, VI-VII M, VI WF, NH 216, Sheldon
—17, VI-VII TTh, WeH 302, Stockdale
—18, VI-VII WF, JohH 309, Keeler
—19, VI-VII M, VII WF, NH 209, Trachtenberg

—20, VII-VIII TTh, JohH 309, Sheldon
—21, VII-VIII TTh, NH 209, Rathburn

31B Writing Lab: Organizing Ideas (3 cr; prereq 31A)
—1, I-II M, I WF, WeH 302, Trachtenberg
—2, III-IV TTh, FolH 107, McBride
—3, IV-V TTh, NH 216, Sclarenco

31C Writing Lab: Communicating in Society (3 cr; prereq 31B)
—1, III-IV TTh, WeH 302, Bergstrom
—2, VI-VII TTh, NH 216, Finnberg

31D Writing Lab: Business Writing (3 cr; prereq 31A...31B rec)
—1, I-II TTh, WeH 302, Bergstrom
—2, I-II TTh, FolH 113, Kurak
—3, III-IV TTh, NH 209, Reisman

32A Oral Communication: Basic Prin (3 cr)
—1, I MWF, NH 107, Amram
—2, I MWF, JohH 126, Blue
—3, II MWF, JohH 126, Hagen
—4, IV MWF, ForH 175, Blue
—5, IV MWF, NH 107, Benson
—6, IV MWF, JohH 126, Hagen
—7, V MWF, NH 107, Manfull
—8, V MWF, JohH 126, Amram
—9, VI MWF, NH 107, Manfull
—10, VI MWF, JohH 126, Hagen
—11, VII MWF, NH 107, Blue
—12, VIII MWF, NH 107, Manfull

32B Oral Communication: Applications of Speech (3 cr; prereq 32A)
III MWF, JohH 105, Blue

32C Oral Communication: Speech Organization (3 cr; prereq 32A)
I-II TTh, NH 107, Hagen

32D Oral Communication: Group Discussion (3 cr; prereq 32A)
III-IV TTh, NH 107, Amram

36 Contemporary Education (3 cr)
VIII MWF, FolH 6, King

37 Social Trends, Probs (5 cr)
—1, III MTWThF, NH 213, Stovall
—2, VI MTWThF, NH 211, Stovall

38A Geography (5 cr)
—1, V MTWThF, NH 213, Steinhauser
—2, VII MTWThF, NH 213, Steinhauser

39 Anthropology (3 cr)
VI MWF, EE 335, Tefft

40 Problems of Contemporary Society (5 cr)
II MTWThF, NH 213, McCune

43A Background of Modern World (5 cr)
V MTWThF, P 2, Jones

43B Historical Biography (3 cr)
I MWF, FraH 102, Moen

43C The Far East (5 cr)
—1, III MTWThF, FraH 102, Matsumoto
—2, V MTWThF, FraH 101, Stout

44B Current History (2 cr)
—1, IV TTh, NH 213, Matsumoto
—2, VI TTh, NH 213, Matsumoto

45A Growth of American Democracy (5 cr)
II MTWThF, C 325, F Harris

45B Impact of Science, Technology on American History (5 cr)
IV MTWThF, NH 211, McCune

45C Minnesota, Upper Midwest (5 cr)
III MTWThF, P 2, Stout

46A Probs of Natl Govt (3 cr)
IV MWF, NH 213, F Harris

46D Probs of Intl Relations (5 cr)
VII MTWThF, P 2, Jones

Winter and Spring Quarters

1Aw,s See 1Af: Ar

1Bw,s Vocational Planning (5 cr; prereq 2nd qtr fr, # or cons couns)

2Aw,s See 2Af: Ar

2Bw,s See 2Bf: Ar

2Cw,s See 2Cf: Ar

3Aw,s See 3Af: Ar

3Bw Food Selection, Purchase (3 cr)

3Cs Clothing Selection, Purchase, Care (3 cr)

3Es Income Mgt: Individual, Household Buying (2 cr)

4w Leisure Today (3 cr)

5Aw,s See 5Af: Ar

5Bw,s See 5Bf: Ar

5Cw,s See 5Cf: Ar

-6Bw-6Cs See 6Af: Ar

7Aw,s See 7Af: Ar

7Bs See 7 Bf: Ar

7Cw,s See 7Cf: Ar

7Dw,s See 7Df: Ar

7Es Physical Science: Modern (3 cr; prereq HS phys and chem, 1 yr coll phys or chem)

8Aw,s See 8Af: Ar

-8Bw,s See 8 Af: Ar

9Aw,s See 9Af: Ar

10Aw,s See 10Af: Ar

10Bw,s See 10Bf: Ar

10Cw,s See 10Cf: Ar

12s Nature Study (3 cr)

16Aw,s See 16Af: Ar

-16Bw,s See 16Af: Ar

17Bw Probs of Finance, Credit (3 cr)

17Cs Small Business Operation (3 cr)

-18Bw-18Cs See 18Af: Ar

18Ds Salesmanship (3 cr)

19Aw,s See 19Af: Ar

19Bw,s Probs of Investment Transactions (5 cr; prereq 19A or #)

20Aw,s See 20Af: Ar

21w,s See 21f: Ar

-22Bw‡ See 22Af: Ar

22Cs Creative Personalities of Our Time (3 cr)

23Aw,s See 23Af: Ar

23Bw,s See 23Bf: Ar

24Bw Music Today: Background of Contemporary Music (3 cr)

24Cs Music Today: Contemporary American Developments (3 cr)

25Aw,s See 25Af: Ar

26Aw,s See 26Af: Ar

26Bs Photography (3 cr; prereq 26A; or exper, ♯)
28Aw-28Bs French Language, Civilization (5 cr)
29Aw,s See 29Af: Ar
29Bw,s See 29Bf: Ar
29Cw See 29Cf: Ar
29Ds See 29Df: Ar
29Ew Individual Reading in Literature (3 cr; prereq ♯)
29Fs Reading Poetry (3 cr)
29Hw Reading Short Stories (3 cr)
30Aw,s See 30Af: Ar
30Bs See 30Bf: Ar
31Aw,s See 31Af: Ar
31Bw,s See 31Bf: Ar
31Cw,s See 31Cf: Ar
31Dw,s See 31Df: Ar
31Ew,s Writing Lab: Individual Writing (3 cr; prereq 31A, ♯)
31Fs Writing Lab: Research Writing (3 cr; prereq 31B)
32Aw,s See 32Af: Ar
32Bw,s See 32Bf: Ar
32Cw See 32Cf: Ar
32Ds See 32Df: Ar
32Es Everyday Business Speech (3 cr; prereq 32A)
33Aw Oral Communication: Radio Today (3 cr)
33Bw,s Oral Communication: Creative Speech Activities (3 cr; prereq 32A, ♯)
36w,s See 36f: Ar
37w,s See 37f: Ar
38Aw,s See 38Af: Ar
38Bs Conservation, Utilization of Natural Resources (5 cr)
39w,s See 39f: Ar
40w See 40f: Ar
43Aw,s See 43Af: Ar
43Bw,s See 43Bf: Ar
43Cw,s See 43Cf: Ar
44Bw,s See 44Bf: Ar
45Aw,s See 45Af: Ar
45Bw,s See 45Bf: Ar
45Cw,s See 45Cf: Ar
45Dw,s Community Probs (3 cr; prereq ♯)
46Aw,s See 46Af: Ar
46Bw,s Probs of State Govt (3 cr)
46Cs Citizen, Local Government: Democracy in Action (5 cr)
46Dw,s See 46Df: Ar

LAW SCHOOL (Law)

Fall Quarter

101 Contracts (3 cr)
—1, VII MTW, FraH B1, Kinyon
—2, VII MTW, FraH 20, Hogg
—3, I MT, II W, FraH B25, Kinyon
102 Criminal Law (4 cr)
—1, II MTW, FraH 20, Pirsig
—2, II MTW, FraH B1, Kamisar
—3, IV MTW, FraH B1, Kamisar
104 Sources of Law (2 cr)
I WThF, FraH 101, Lockhart
106 Legal Research I (1 cr)
II F, FraH 101, Liddell
108 Torts (4 cr)
VI MTTh, FraH 101, McCoid
109 Procedure (3 cr)
—1, III WThF, FraH 20, Cound
—2, III WThF, FraH B1, Levy

First Semester

120 Banking, Negotiable Instruments (4½ cr)
IV MTW, FraH 20, Kinyon
122 Legal Research II (1½ cr)
IV F, FraH 20, McClure
123 Private Corporations (6 cr)
I TWThF, FraH 20, Gradwohl
124 Property II (3 cr)
II ThF, FraH 20, Bade
125 Remedies (6 cr)
VI MTWTh, FraH 20, Cound
129 Evidence (3 cr, §old 147)
VII ThF, FraH 20, Hetland
140 Administrative Law (6 cr)
IV MTWF, FraH 120, Davis
141 Seminar: Admin Law (3 cr)
VIII F, Davis
145 Estate Planning (4½ cr)
VI MTW, FraH 120, Waterbury
150 Insurance (4½ cr)
II MTW, FraH 120, Hogg
152 Judicial Admin (3 cr)
VI ThF, FraH 120, Pirsig
156 Labor Relations (4½ cr)
I WThF, FraH 120, McCoid
157 Standards of Legal Profession (½ cr)
III F, FraH 120, Pirsig
158 Legislation (3 cr)
VII MT, FraH 120, McClure
159 Local Govt (3 cr)
I MT, FraH 120, Bade
163 Practice (6 cr)
III MTWTh, FraH 120, Hetland
168 Seminar: Legislation (3 cr)
VIII F, McClure
173 Taxation II (3 cr)
II ThF, FraH 120, Waterbury
175 Intl Law (4½ cr)
VII WThF, FraH 120, Liddell
177 Seminar: Probs of Intl Business (3 cr)
Blake
182 Seminar: Security Transactions (3 cr)
VIII Th, McClure

COLLEGE OF MEDICAL SCIENCES

ANATOMY (Anat)

Fall Quarter

3 Elem Anatomy (4 cr; prereq 3 yr nurs, DH students)
Lect I TThS, Bo B6, Buckman
—1, Lab VIII-IX T, JacH 301, 303
—2, Lab VIII-IX Th, JacH 301, 303

58 Extremities (5 cr; prereq regis OT or PT, 4)
Lect VI MWF, MH 214
Lab VII-VIII MWF, JacH 301, 302

59 Systematic Anatomy (6 cr; prereq regis Dent)
Lect I MWF, JacH 304, Felts
Lab II-IV MWF, JacH 301, 303

100 Gross Human Anatomy (8 cr, †100-101; prereq regis Med or Grad)
Lect VI MWThF, JacH 102, Wells, Hartmann, Morgan
Review IX MWF, JacH 102
Lab VII-IX MWF, VII Th, JacH 306, 308, 312, 313

103 Human Histology (4 cr, †103-104; prereq regis Med or Grad)
Lect I TF, IV Th, JacH 102, Lazarow, Carpenter
Lab Preview II TWThF; JacH 102
—1, Lab II-III TTh, JacH 212, 215
—2, Lab II-III WF, JacH 212, 215

105 Microscopic Anatomy (8 cr; prereq 102)
Lect VI MWF, JacH 304, Davidson
Review VI TTh, JacH 304
Lab VII-IX MWF, JacH 212, 215

132 Experimental Study of Fetus (ar cr; prereq ♯) Wells

140 Skeletal Tissue Biology (2 cr; prereq med or dent hist) Felts

153 Adv Anatomy (ar cr; prereq ♯) Lazarow, Wells, Hartmann, Morgan, Sundberg

165 Hematology (4 cr; prereq 103 or Zool 54 or ♯)
Lect VII TTh, JacH 304, Sundberg
—1, Lab V-VI TTh, JacH 213
—2, Lab VIII-IX TTh, JacH 213

201 Research (ar cr; prereq ♯) Lazarow, Wells, Hartmann, Morgan, Sundberg

205 Seminar: Anatomy (1 cr; prereq ♯) Lazarow, others

Winter and Spring Quarters

4s Elem Anatomy (5 cr; prereq MedT, 5 yr nurs, OT, pharm, PT students, Zool 3 or Biol 3A) Lect I MTWF, lab VIII-IX TTh

57s Anatomy for Physical Education Students (4 cr) Lect III MWF, lab IV MWF

101w Gross Human Anatomy (7 cr, †100-101; prereq 100) Lect VI MWThF, lab VIII-IX MWF, VII Th

102s Head, Neck (6 cr; prereq 59) Lect VI MWF, lab VII-IX MWF

104s Human Histology (3 cr, †103-104; prereq 103) Lect I T, VI Th, dem II TW, lab II-IV T or W

107w Human Embryology (4 cr; prereq ♯) Lect I TF, VI Th, lab I-II M, II-III F; II-III T, I-II Th

111s Human Neurology (5 cr; prereq 104 or Zool 150) Lect II MTh, lab III-IV MF; VII-VIII M, III-IV Th

131w Biological Electron Microscopy (ar cr; prereq ♯)

-141w See 140f

-154w-155s‡ See 153f

166w Hematology (4 cr; prereq 165, ♯) VII TTh

167s Seminar: Hematology (1 cr; prereq 166)

-202w-203s‡ See 201f

-206w-207s‡ See 205f

ANESTHESIOLOGY (Anes)

Fall Quarter

165 Clinical Anesthesia (2 cr; prereq regis Med) VanBergen, others

265 Gen Anesthesia (12 cr)
IX M, MMA 100, VanBergen, others

266 Regional Anesthesia (4 cr)
X M, MMA 100, VanBergen, others

267 Preoperative, Postoperative Evaluation (2 cr)
X W, MMA 100, VanBergen, others

268 Seminar (2 cr)
IX W, MMA 100, VanBergen, others

269 Research (ar cr) VanBergen, others

BACTERIOLOGY AND IMMUNOLOGY (Bact)

Fall Quarter

53 Gen Bacteriology (5 cr; prereq soph with C avg in prereq courses, 10 cr chem, 4 cr biol sci or ♯)
Lect VII MWF, MMA 125, Johansson
Lab VIII-IX MWF, Mayo A205

105 Infectious Disease (6 cr; prereq regis Med or Grad, Anat 103, PhCh 100 or 101 or AgBi 120)
Lect I-II TTh, VI F, MMA 125, Syverton, Scherer, others
Lab II-IV TTh, Mayo A205

114 Medical Mycology (3 cr; prereq 102)
Lect I MW, MMA 125, Bradley
Lab II-III MW, Mayo A205

121 Physiology of Bacteria (3 cr; prereq 53, 8 cr org chem or biochem)
III TThS, MMA 100, Lichstein

124 Prin of Virology, Animal Cell Cultures (1 or 3 cr; prereq 102 or 105, 116)
VI MWF, MMA 100, McLaren, Ross
152 Problems (ar cr; prereq grad, ‡)
153 Gen Bacteriology (3 cr, §53; prereq grad, 10 cr chem, 4 cr biol sci or ‡) Johansson
201 Research (ar cr) Watson
202 Diagnostic Microbiology (ar cr; prereq bact maj, ‡) Syverton, Bridges
203 Seminar (1 cr)
V W, Mayo 1050, Bradley
204 Adv Bacteriology (ar cr; prereq 122 or ¶, ‡) Lichstein
205 Adv Bacteriology (ar cr; prereq 204) Lichstein
207 Research Techniques: Animal Cell Culture, Virology (3 cr; prereq ‡)
Lab II-IV MWF, Mayo A205, Ross, McLaren

Winter and Spring Quarters

1w,s Elem Bacteriology (4 cr, offered by Ext Div, open to DH, PT students without addtl fee winter qtr with △) Lect I MWF, lab II M, II-III F(w); Lect II MWF, lab III M, III-IV F(s)
53w,s See 53f
100s Bacteriology for Dental Students (6 cr; prereq regis Dent or Grad) Lect I TThS, lab II-IV TThS
102s Medical Bacteriology (4 cr; prereq 116, not open to med students) Lect VI TTh, lab VII-IX TTh
103s Soil Microbiology (4 cr, §Soil 127; prereq 53, 8 cr org chem, ‡) Lect I MWF, lab II-III MF
-106w See 105f (5 cr) Lect I-II TTh, VI T, lab II-IV TTh
112w Gen Mycology (3 cr; prereq 53 or ‡) III TThS
116w Immunology (4 cr; prereq 53) Lect VI MTTh, lab VII-VIII TTh
122w Physiology of Bacteria Lab (3 cr; prereq 121 or ‡) Lect IX T, lab VI-VIII TTh
123s Bacterial Metabolism (3 cr; prereq 122, biochem or ‡) III TThS
152w,s See 152f
153w,s See 153f
201w,s See 201f
202w,s See 202f
203w,s See 203f
204w,s-205w,s See 204f-205f

MEDICAL TECHNOLOGY (MedT)

Fall Quarter

10 Orientation (1 cr; prereq fr only)
VIII W, MMA 100, Hovde
30 Case Presentations (1 cr; prereq soph only)
V Th, Hosp EustisAmph, Hovde
70A Lab Methods in Clinical Chemistry A (10 cr) Clayson
70B Lab Methods in Clinical Chemistry B (5 cr) Freier
73 Electrocardiography, Basal Metabolism Testing (2 cr) Halsted
75 Clinical Hematology (5 cr) Gonyea
80 Clinical Microbiology (9 cr) Blanz
82 Blood Bank Techniques (4 cr) Ruspino
85 Histologic Techniques (4 cr) McMaster
90 Applied Lab Methods (2 cr) Rausch
98 Adv Lab Techniques (4 cr) Gonyea

Winter and Spring Quarters

-11w-12s See 10f
-32w-33s See 30f
51w Clinical Diagnosis by Lab Methods (1 cr) I MW
52s Clinical Diagnosis by Lab Methods (3 cr; prereq 51) I MW
60s Blood Grouping, Cross Matching (2 cr) VI-IX F
61s Clinical Microscopy (2 cr) VI-IX M
62s Clinical Chemistry (3 cr) VI W, II-IV TTh
70Aw,s See 70Af
70Bw,s See 70Bf
73w,s See 73f
75w,s See 75f
80w,s See 80f
82w,s See 82f
85w,s See 85f
90w,s See 90f
98w,s See 98f

MEDICINE (Med)

Fall Quarter

104 Internal Medicine (2 cr per qtr, †3 qtrs; prereq 101, 102)
8:00-8:50 TF, Hosp ToddAmph, Watson, others
111 Junior Clinical Clerkship (8 cr; prereq regis Med)
9:00-12:00, 1:00-3:00, MTWThFS
112 Senior Clerkship: Internal Medicine (6 cr; prereq regis Med)
9:00-12:00, 1:00-3:00, MTWThF
123 Dermatology, Syphilology (2 cr, †2 qtrs; prereq 101, 102)
4:00-4:50 MF, MMA 125, Lynch, others
124 Senior Clerkship: Dermatology (2 cr; prereq regis Med)
2:30-3:30 MWF, Hosp EustisAmph, Lynch, others
201 Clinical Medicine (ar cr) Watson, others
202 Diseases of Cardiovascular Apparatus (ar cr) Watson, others
203 Research: Medicine (ar cr) Watson, others
205 Diseases of Chest (ar cr) MacDonald
206 Clinical Conference (1 cr)
9:00-9:50 F, Hosp ToddAmph, Watson, others

207 Clinical Pathological Conference (1 cr) 11:00-11:50 W, Hosp ToddAmph, Dawson, others
208 Clinical Radiological Conference (1 cr) 9:00-9:50 M, Hosp ToddAmph, Peterson
210 Seminar: Infectious Disease (1 cr) Spink
212 Pigment Metabolism (1 cr) Schwartz
213 Seminar: Psychosomatic Medicine (1 cr, §NPsy 244) Magraw
225 Clinical Dermatology (ar cr) Lynch, others
226 Dermatology (ar cr) Lynch, others
227 Histopathology of Skin (ar cr) Lynch, others
228 Research: Dermatology, Syphilology (ar cr) Lynch, others
235 Adv Clinical Lab Medicine (ar cr; prereq Anat 166) Evans, others
236 Research: Clinical Lab Probs (ar cr) Evans, others

NURSING

Nursing (Nurs)

Fall Quarter

17 Clinical Nursing (8 cr)
Lect VI-VII M, III-IV MF, I F, PoH Amph, Ryden, others
—1, Lab II-IV T
—2, Lab VI-VIII T
—3, Lab VI-VIII W
—4, Lab II-IV Th
—5, Lab VI-VIII Th
—6, Lab VI-VIII F
50 Medical, Surgical Nursing (12 cr)
—1, I-IV T, II-IV Th, PoH Amph, Brennan
—2, VI-VIII T, V Th, PoH 2309, Peterson
52 Nurse-Patient Relationships (1½ cr; prereq regis Nurs)
—1, I-II Th, PoH 2309, Brennan
—2, I-II Th, PoH 1326
56 Operating Room Nursing (6 cr)
58 Orthopedic Nursing (2 cr) Kume
59 Gynecologic Nursing (4 cr) Stevens
60 Maternal, Child Nursing (12 cr) Whitney
61 Maternal, Child Nursing (12 cr; prereq 60) 2:00-5:00 MTWTh, Owre 113, Pecholt
66 Neuropsychiatric Nursing (4 cr) VI-VII TTh, PoH 2317, Lediger
67 Care of Neuropsychiatric Patients (8 cr) Lysaker
79 Tuberculosis Nursing (3 cr) Einerson
87 Field Experience in Public Health Nursing (10 cr)
88 Rural Nursing (5 cr) Lowe
95 Orientation to Nurs Mgt (5 cr; prereq regis Nurs) Titt
96 Out-Patient Nursing (5 cr)
98 The Nursing Profession (3 cr)
151A Medical Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, MH 116, Coe
Lab I-III TTh
152A Obstetric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, PoH 2317, Whitney
Lab I-III TTh
153A Operating Room Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, Owre 112
Lab I-III TTh, Owre 112
154A Pediatric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, PoH 2317, Cook
Lab I-III TTh, PoH 2317
155A Psychiatric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, ForH 75, Lediger
Lab I-III TTh, ForH 244
156A Rural Nursing (15 cr) Low
156B Rural Nursing (9 cr) Low
157A Surgical Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III M, JacH 304, III WF, Owre 111, Peterson
Lab I-III TTh
158 Tuberculosis Nursing (15 cr) Einerson
165 Work Simplification in Nursing (4 cr) VI-VII TTh, MH 128, Grainger
190 Foundations of Nursing (3 cr; prereq regis MEd or MNA prog)
VI-VII MWF, Z 211, Coe

Winter and Spring Quarters

18w Clinical Nursing (6 cr; prereq 17)
-51w See 50f
52w,s See 52f
54w Pathology (2 cr)
56w,s See 56f
58w,s See 58f
59w,s See 59f
60w,s See 60f
61w,s See 61f
66w,s See 66f
67w,s See 67f
79w,s See 79f
87w,s See 87f
88w,s See 88f
95w See 95f
96w,s See 96f
98s See 98f
-151Bw-151Cs‡ See 151Af
-152Bw-152Cs‡ See 152Af
-153Bw-153Cs‡ See 153Af
-154Bw-154Cs‡ See 154Af
-155Bw-155Cs‡ See 155Af
156Aw,s See 156Af
156Bw,s See 156Bf
-157Bw-157Cs‡ See 157Af
158w,s See 158f
165s See 165f
192s Psychiatric Nursing (3 cr; prereq ‡)

Nursing Administration (NuAd)

Fall Quarter

160 Ward Admin (3 cr)
VI MWF, TNM 160, Grainger

167B Studies, Experience in Ward Admin (3 cr; prereq 167A)
II TTh, MH 128, Grainger

170 Nursing Service Admin (3 cr, not open to students in MNA prog)
V MWF, ForH 170, Harris, others

177 Practicum (15 cr; prereq 175, ‡)
II-III, VI-VIII F, MH 128, Harris, others

191 Nursing Service Admin (6 cr; prereq regis MNA prog or ‡)
III-IV MWF, ForH 467, Harris, others

Winter and Spring Quarters

160w,s See 160f

167A Studies, Experience in Ward Admin (3 cr; prereq 160, Nurs 165, ‡) II TTh

170w,s See 170f

173w Fundamentals of Educ in Nursing (3 cr; prereq NuAd maj, 170 or ‡) V MWF

175w Nursing Admin (5 cr; prereq 170) VI-VII MW, VI F

176w Nursing Admin (5 cr; prereq 177) III-IV TTh, VII F

177s See 177f

-192w See 191f: I-II MWF

199Ds Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡) II-IV F, VI-VII F

199Ss Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡) II-IV F, VI-VII F

Nursing Education (NuEd)

Fall Quarter

69 Conditions, Trends in Nursing (3 cr)
IV MWF, Owre 113

168 Evaluation of Achievement in Nursing (3 cr; prereq sr, Ed 55N or NuAd 173, ‡)
II MWF, MH 116

171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51B or ‡)
VII MWF, MH 116, Harrington

190 Survey (3 cr; prereq ‡)
VIII-IX F, MH 116, 1 hr ar, Harrington

Winter and Spring Quarters

69s See 69f

162w Personnel Work in Nursing (3 cr) II MWF

168s See 168f

171w,s See 171f

175w Educational Admin in Nursing (3 cr; prereq sr or ‡) IV MWF

197Ew Adv Teaching (3 cr; prereq regis MEd prog or ‡) VII-IX Th

198Es Adv Teaching (6 cr; prereq regis MEd prog or ‡) IV F, VI-VIII F

Practical Nursing (PNurs)

Fall Quarter

1 Introd to Nursing Care (5 cr)
VI-VII TTh, PoH Amph, Hansen, Moncure, Taylor

14 Normal Diet, Its Modifications (2 cr)
VII MW, WeH 202, Gormican

Winter and Spring Quarters

2w-3s‡ Elements of Nursing Care (8 cr)

10w Care of Mothers, Infants (3 cr)

11s Child Care (3 cr)

OBSTETRICS AND GYNECOLOGY (Obst)

Fall Quarter

120 Obstetrics (2 cr; prereq regis Med)
8:00-8:50 TS, Hosp EustisAmph

135 Clinical Clerkship (6 cr; prereq regis Med)

201 Adv Obstetrics, Gynecology I (ar cr)

202 Adv Obstetrics, Gynecology I (ar cr; prereq 201)

203 Adv Obstetrics, Gynecology I (ar cr; prereq 202)

204 Adv Obstetrics, Gynecology I (ar cr; prereq 203)

205 Adv Obstetrics, Gynecology II (ar cr; prereq 204)

206 Adv Obstetrics, Gynecology II (ar cr; prereq 205)

207 Adv Obstetrics, Gynecology II (ar cr; prereq 206)

208 Adv Obstetrics, Gynecology II (ar cr; prereq 207)

209 Adv Obstetrics, Gynecology III (ar cr; prereq 208)

210 Adv Obstetrics, Gynecology III (ar cr; prereq 209)

211 Adv Obstetrics, Gynecology III (ar cr; prereq 210)

212 Adv Obstetrics, Gynecology III (ar cr; prereq 211)

OPHTHALMOLOGY (Opth)

Fall Quarter

100 Ophthalmology (1 cr, †3 qtrs; prereq regis Med)
8:00-8:50 M, Hosp EustisAmph, Harris, others

106 Clerkship: Diseases of Eye (2 cr; prereq regis Med)
9:00-12:00 MTWThF, Hosp OPD, Harris, others
201 Clinical Ophthalmology (6 cr)
9:00-5:00 MTWThF, Hosp OPD, Harris, others
204 Surgery of Eye (3 cr)
7:30-9:00 TWTh, Hosp OR, Harris, others
205 Pathology of Eye (2 cr)
7:30-9:30 F, Hosp ToddAmph, Monahan
207 Neuro-ophthalmology, Disease of the Fundus (1 cr)
7:30-8:30 M, Wendland
220 Basic, Applied Ophthalmology (2 cr)
8:30-12:00 S, Hosp OPD, Harris

OTOLARYNGOLOGY (Otol)

Fall Quarter

101 Otology (1 cr; prereq regis Med)
8:00-8:50 M, Hosp EustisAmph, Boies
104 Clinic, Conferences in Diseases of Ear, Nose, Throat (2 cr)
9:00-12:00 MWF, Clinic OR, Boies
230 Clinical Otology (3 cr)
9:00-12:00 MWF, ENT Clinic, Boies
231 Clinical Rhinology, Laryngology (3 cr)
9:00-12:00 MWF, ENT Clinic, Boies
232 Surgery of Ear, Nose, Throat (3 cr) Boies
237 Endoscopy (2 cr) Boies
238 Pathology of Ear, Nose, Throat (1 cr) Boies
241 Seminar (1 cr) Boies

PATHOLOGY (Path)

Fall Quarter

101 Gen Pathology (8 cr; prereq regis Med or Grad)
Lect VII MTWThF, JacH 102, Dawson, others
Dem I MWF, III MF, VIII MWF, JacH 104
—1, Lab I-II M, JacH 106, VIII-IX MW, JacH 107, III-IV F, JacH 108
—2, Lab III-IV M, JacH 106, I-II WF, JacH 107, VIII-IX F, JacH 108
104 Autopsies (ar cr; prereq 102) Dawson
110 Seminar (1 cr; prereq 102)
V-VI M, JacH 104, Dawson
111 Conference on Autopsies (1 cr; prereq 102)
V-VI T, JacH 104, Dawson, others
113 Surgical Pathology (ar cr; prereq 102)
JacH 112, Hebbel
201 Research (ar cr) Dawson

Winter and Spring Quarters

60s Pathology for Physical Therapists (3 cr; prereq regis PT) VII TWTh
100s Pathology for Dental Students (8 cr; prereq regis Dent) Lect I MTWThF, lab II-III MF, VII-VIII TTh
102w Special Pathology (8 cr; prereq 101) Lect VII MTWThF, lab I-II MF, III-IV WS; III-IV MF, I-II WS
104w,s See 104f
105w Diseases of Kidney (3 cr; prereq 102) VII-VIII MW
110w,s See 110f
111w,s See 111f
113w,s See 113f
114s Diseases of Liver (1 cr; prereq 102) VI-VII MW
201w,s See 201f

PEDIATRICS (Ped)

Fall Quarter

120 The Normal Child (1 cr; prereq regis Med)
8:00-8:50 W, Hosp EustisAmph, Anderson, others
124 Junior Clinical Clerkship (8 cr; prereq regis Med) Anderson, others
135 Senior Clinical Clerkship (3 cr; prereq regis Med) Anderson, others
200 Seminar (1½ cr)
3:45 T, Anderson, others
202 Clinic (ar cr; prereq ‡) Anderson, others
204 Residency (ar cr; prereq ‡) Anderson, others
206 Pediatric Special Interest (ar cr) Anderson, others
208 Research (ar cr; prereq ‡) Anderson, others

PHARMACOLOGY (Phcl)

Fall Quarter

9 Pharmacology for Nursing Students (2 cr, †9-10)
Lect IV TTh, Owre 113, Cranston
55 Pharmacology of Official Medicinal Agents (3 cr; prereq Phcg 3, Bact 53)
IV TWF, WuH 201, White
101 Introduction (2 cr; prereq Phsl 106-107)
Lect I TTh, Owre 15, Wright, Bieter, Cranston
109 Problems (ar cr; prereq ‡)
110 Toxicology (2 cr) Wright
113 Industrial Toxicology (2 cr) Wright
124 Special Systems (3 cr; prereq ‡)
203 Research (ar cr; prereq 101, 102 or ‡)
204 Adv Pharmacology (1 cr; prereq 101 or ‡)
205 Gen Discussions (1 cr; prereq 101 or 102, ‡)

Winter and Spring Quarters

9s See 9f
-10w See 9f: Lect VI Th, lab VII-VIII Th
101w See 101f: VI ThF, VIII T

102s-su Gen, Experimental Pharmacology (10 cr; prereq regis Med, 101) Lect II MTF, III Th, IV M, lab II-IV W, III T; VI-VIII W, III F

105w Gen, Experimental Pharmacology (6 cr; prereq 101) Lect I MWF, 1:00-2:00 T, lab II, IV MW; VI-VIII MW

106s Gen Pharmacology (2 cr; prereq 105) 1:00-2:00 TTh

108s Prescription Writing for Dental Students (1 cr; prereq 101, 106) 1:00-2:00 F

109w,s See 109f

112w Forensic Toxicology (6 cr; prereq 110)

124w,s See 124f

203w,s See 203f

204w,s See 204f

205w,s See 205f

PHYSICAL MEDICINE AND REHABILITATION (PMed)

Fall Quarter

3 Orientation to Occupational Therapy (2 cr; prereq regis OT)
VI TTh, MH 214, Lepley

50 Physics for Physical Therapy (2 cr; prereq regis PT)
I M, I-II W, Marvin, Loken

55 Process of Rehabilitation (2 cr; prereq regis OT)
VI MW, Hosp D138, Hansen

57 Ethics, Admin (1 cr; prereq regis PT)
III W, Mayo 825, Kottke, others

60A Thermo-, Photo-, Hydrotherapy (6 cr; prereq regis PT)
Lect II M, I-II F, Hosp D138, Kubicek, others
Lab I-III TTh, III-IV F, Mayo 825, Pohtilla, Allison

71 Theory of Occupational Therapy (3 cr; prereq regis OT)
II W, III MW, Hosp D138, Hansen

74 Techniques of Occupational Therapy (3 cr; prereq regis OT)
VI-VIII TTh, Hosp D138, Eliason, Esch

76 Techniques of Occupational Therapy (3 cr; prereq 75)
I-III TTh, Hosp D138, Lepley, Esch

78 Prin, Practice of Occupational Therapy (3 cr; prereq regis OT)
Hosp D138, Eliason

80B Therapeutic Exercises (5 cr; prereq 80A)
Lect I T, III W, Mayo 810, Kottke
Lab I-II MWF, Mayo 825, Mundale

82 Physiology of Muscles, Nerves, Circulation (3 cr; prereq regis PT)
III MTTh, Mayo 810, Kubicek

85 Rehabilitation Procedures (3 cr; prereq 84)
Lect VII T, Mayo 825, Stolov, others
Lab VIII-IX TTh, Mayo 825, Pohtilla

93 Orientation to Pre-Vocational Therapy (2 cr; prereq sr OT)
VII MW, Hosp D138, Hansen

95 Clinical Affiliation (18 cr; prereq 94) Eliason, Hansen

97 Introd Scientific Research (2 cr; prereq sr, regis OT or PT)
VI TTh, Mayo 825, Skowlund

122 Physical Medicine, Rehabilitation (1 cr; prereq regis Med)
I W, Hosp ToddAmph, Kottke, others

123 Senior Clerkship (1 cr; prereq regis Med)
Mayo 810, Kottke, others

125 Clinic: Physical Medicine, Rehabilitation (1 cr; prereq regis Med, ‡) Kottke, others

200 Service (ar cr) Kottke, others

203 Clinic: Poliomyelitis (ar cr) Kottke, others

204 Clinic: Peripheral Vascular Disease (ar cr) Kottke, others

205 Readings (1 cr) Kottke

210 Research (ar cr) Kottke, others

220 Seminar (ar cr)
IV M, Hosp EustisAmph, Kubicek

PHYSIOLOGICAL CHEMISTRY (PhCh)

Fall Quarter

30 Physiological Chemistry for Nurses (4 cr, §50)
II-III M, II WF, Owre 111, Caster

100 Physiological Chemistry (7 cr; prereq org chem, phys chem, phys)
Lect IV MTWFS, Owre 15
—1, Lab I-III MW, MH 201
—2, Lab I-III ThS, MH 201
—3, Lab I-III TF, MH 201

104 Physiological Chemistry for Dental Students (5 cr; prereq org chem)
VI MTWThF, Owre 12, Singer

153 Problems (ar cr; prereq 101, ‡)

200 Seminar: Physiological Chemistry (1 cr)
V T, MH 214

205 Research (ar cr)

206 Adv Endocrinology, Steroid Chemistry (3 cr; prereq 101)
VIII MWF, MH 214, Ungar

212 Quantitative Histochemistry Lab (ar cr; prereq 101, ‡) Glick

236 Seminar: Radio-Isotope (1 cr, §Rad 236)

Winter and Spring Quarters

50s Physiological Chemistry for Dental Hygiene, Nursing Students (4 cr, §30) VI MTWTh

-101w See 100f: Lect IV MTWFS, lab I-III MW; I-III ThS; VI-VIII WF

102w-103s Physiological Chemistry for Veterinary Medicine Students (6 cr; prereq org chem) Lect IV MT, VI-VII Th, lab VI-VIII M, I-III T(w); Lect IV TTh, VI-VII F, lab I-III TTh(s)

105w Physiological Chemistry for Dental Students (6 cr; prereq 104) Lect VI TWThF, lab VII-IX TTh

153w,s See 153f

200w,s See 200f

205w,s See 205f

208s Adv Lab Technique (3 cr; prereq 101, ♯) IX MWF

209w Quantitative Histochemistry (3 cr; prereq 101, histology or ♯) VIII MWF

212w,s See 212f

236w,s See 236f: V W

PHYSIOLOGY (Phsl)

Fall Quarter

4 Human Physiology (4 cr; prereq 1 qtr chem, 1 qtr zool)
III MWF, IV F, MH 214

112 Hemodynamic Measurements (3 cr; prereq ♯)

113 Probs: Physiology (ar cr; prereq 106-107)

202 Readings (ar cr)

203 Research (ar cr)

210 Topics: Permeability (ar cr; prereq 106-107, ♯)

211 Topics: Heart, Circulation (ar cr; prereq 106-107, ♯)

212 Topics: Respiration (ar cr; prereq 106-107, ♯)

214 Topics: Clinical Physiology (ar cr; prereq 106-107, ♯)

215 Topics: Intermediary Metabolism (ar cr; prereq 106-107, ♯)

221 Physiology of the Heart, Circulation (ar cr; prereq 106-107, ♯) Visscher, Cavert

222 Physiology of Respiration, Acid-Base Balance (ar cr; prereq 106-107, ♯) Brown, others

Winter and Spring Quarters

4s See 4f: VII-VIII TTh

51w Human Physiology for Nursing, Physical Therapy Students (6 cr; prereq 1 yr chem, zool) Lect I MWThF, lab II-IV T or W, conf II F

60w Human Physiology (6 cr; prereq physiol chem, human or mammalian anat) Lect I MWThF, lab II-IV Th, conf II F

101w Human Physiology for Dental Students (10 cr; prereq physiol chem, human or mammalian anat) Lect IV MTWThFS, lab I-III M, VI-VIII M or F, conf VI Th

106-107s-su Human Physiology for Medical Students (15 cr, †106-107; prereq regis Med or Grad, neuroanat, org chem, zool) Lect I MWThF, VI MT, VII Th, lab II-IV, VI-VIII W or F, conf VII T

112w,s See 112f

113w,s See 113f

202w,s See 202f

203w,s See 203f

210w,s See 210f

211w See 211f

212s See 212f

214w,s See 214f

215w,s See 215f

PSYCHIATRY AND NEUROLOGY (NPsy)

Fall Quarter

101 Neurology (1 cr, †3 qtrs; prereq regis Med or grad clin psy)
8:00-8:50 S, Hosp ToddAmph, Baker

102 Psychiatry (1 cr; prereq regis Med or grad clin psy)
4:00-4:50 W, Hosp ToddAmph

103 Junior Clinical Clerkship (8 cr; prereq regis Med)

120 Basic Behavioral Science (1 cr, †3 qtrs; prereq regis Med)
VI T, Hosp ToddAmph

121 Behavior Pathology, Psychiatric Methods (2 cr, †2 qtrs for Med; prereq regis Med or grad clin psy)
IV W, VII Th, Hosp EustisAmph

145 Readings: Psychiatry (ar cr; prereq regis Med)

145X Readings: Neurology (ar cr; prereq regis Med)

146 Psychiatric Probs: Gen Medical Practice (ar cr; prereq regis Med)

155 Therapeutics in Neurology (2 cr; prereq regis Med)

171A Descriptive Psychiatry (2 cr)
III-IV F, JacH 304, Rowe

171B Descriptive Neurology (2 cr)
8:00-10:00 Th, PoH Amph, Iannone

201 Clinical Seminar for Psychologists (1 cr; prereq ♯)

202 Case Conference (1 cr; prereq ♯)

203 Psychometric Clerkship (ar cr; prereq ♯)

204 Seminar: Interm (1 cr; prereq ♯) Hathaway

205 Seminar: Adv (1 cr; prereq ♯) Hathaway

208 Clinical Neurology (ar cr)

209 Research (ar cr)

212 Survey of Neuropathology (1 cr, §151 or Path 119)

214 Child Neurology (1 cr)

218 Neurological Language Disorders (1 cr) Schuell

220 Adv Clinical Neurology (1 cr)

225 Neuro-ophthalmology (2 cr)

226 Neurological-Neurosurgical Conference (1 cr, §Rad 163 or Surg 318)
228 Research: Neuropathology (ar cr)
230 Electroencephalography (1 cr)
231 Applied Electroencephalography, Myography (1 cr)
232 Applied Neuroroentgenology (1 cr)
233 Applied Neuropathology (1 cr)
238 Neurological Clinical Pathological Conference (1 cr)
240 Neuropathology Conference (1 cr)
241 Neuroradiology (1 cr, §Rad 163)
251 Clinical In-Patient Psychiatry (ar cr; prereq MD degree)
252 Clinical Out-Patient Psychiatry (ar cr; prereq MD degree)
253 Clinical Child Psychiatry (ar cr; prereq MD degree)
254 Adv Clinical In-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
255 Adv Clinical Out-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
256 Adv Clinical Child Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
257 Special Assignments (1 cr; prereq 251, 252, 253, MD degree)
258 Research (ar cr; prereq MD degree or ‡)
261 Readings (1 cr; prereq MD degree or ‡)
262 Clinical Observation, Evaluation (1 cr; prereq MD degree or ‡)
263 Psychophysiology for Psychiatrists (1 cr; prereq MD degree or ‡) Heistad
264 Descriptive Psychopathology (1 cr; prereq MD degree or ‡) Schiele
271 Readings: Psychoanalysis I (1 cr; prereq MD degree or ‡) Hambidge
272 Sector Psychotherapy (1 cr; prereq MD degree or ‡) Glueck
273 Survey of Psychosomatic Medicine (1 cr; prereq MD degree or ‡) Magraw
274 Group Therapy (1 cr; prereq MD degree or ‡) Guzie
276 Current Research (1 cr; prereq MD degree or ‡) Glueck
291 Seminar: Current Literature (1 cr; prereq MD degree or ‡) Simon
292 Special Supervision in Psychotherapy (1 cr; prereq MD degree or ‡)
293 Probs in Teaching Psychiatry (ar cr; prereq MD degree or ‡) Kiesler
294 Seminar: Adv Critical Examination of Systems, Theories (1 cr; prereq MD degree or ‡) Hathaway

PUBLIC HEALTH (PubH)

Fall Quarter

2 **Personal, Public Health** (2 cr, §3 or 3A or 3B or 50 or GC 10C)
VI TTh, Bo B6, Reiter
3 Personal Health (2 cr, §2 or 3A or 3B or 50 or GC 10C)
VI MW, NH 45, Thomson
50 Personal, Community Health (3 cr, §2 or 3 or 3A or 3B or 4 or 5 or 51 or 52 or 100 or GC 10C)
III MWF, C100, Thomson
51 Community Hygiene (3 cr, §4 or 5 or 50 or 100; prereq 3 or 3A or GC 10C)
IV MWF, MMA 125, Schuman
52 **Home Nursing, Family Care** (1 cr; prereq HE students, 3B or 50 or ‡)
—1, VIII-IX T, MeH 01
—2, VIII-IX Th, MeH 01
58 Maternal, Child Health (3 cr; prereq nurses, 53, 62, 62A or 100, 100A or ¶53)
VI-VII M, VI F, Mayo 1205, Stocking
62A Public Health Nursing I (3 cr; prereq PubH nurs, ¶53, 65, 133, Soc 50)
—1, II-III, VI-VII Th, Mayo 1203, Cline
—2, II-III, VI-VII F, Mayo 1260, E Anderson
62N Public Health Nursing (3 cr; prereq 100, regis Nurs)
—1, II-III, VI-VII Th, Mayo 1238, Pennebaker
—2, II-III, VI-VII F, Mayo 1238, Pennebaker
—3, II-III, VI-VII F, Mayo 1203, Cline
65 Field Practice in Public Health Nursing (12-15 cr; prereq 53 or 100A, 62 or 62A or 63, 133, Soc 50, C avg) Murphy
69 The Nurse in the School (3 cr; prereq 63, 63A, 53 or 100A or ‡)
VI-VII T, VI Th, Mayo 1205, Stocking
75 Environmental Sanitation (3 cr; prereq 3 cr)
I-II T, I Th, Mayo 1210, Bond
91 Physiological Hygiene (4 cr, †91-92; prereq 8 cr chem, 4 cr anat)
IV MWF, Owre 111, VI-VII Th, Taylor
95 Human Nutrition (3 cr; prereq chem, biol or ‡)
II MWF, MMA 125, J Anderson
100A Elements of Public Health I (3 cr; prereq 3, 3A or 50, bact)
Lect IV MWF, MMA 100, Anderson, Thomson, Schuman
—1, Rec IV TTh, MMA 100
—2, Rec IV TTh, MMA 125
—3, Rec IV TTh, Owre 111
101 Admin, Field Work (2 cr; prereq sr Med) Thomson
102 Environmental Sanitation (3 cr; prereq 100A or ¶, ‡)
III MWF, Mayo 1220, Bosch, Olson
103 Bacteriology (ar cr; prereq grad, Bact 102, 116, ‡)
I-II MWF, SBH Lab, Bauer
107 Maternal, Child Health (3 cr; prereq MD or DDS degree or nurses or ‡, ¶100A)
I-II MF, Mayo 1205
110 Biometric Principles (3 cr; prereq ¶111, Math 10 or ‡)
III MWF, ChE 240, Brown

111 **Biostatistics Lab** (2 cr; prereq ¶110)
Lect III TTh, Owre 15, Iversen
—1, Rec II MWF, AE 305
—2, Rec IV MWF, AE 305
—3, Rec VI MWF, AE 305
—4, Rec VI-VIII T, AE 305
—5, Rec VI-VIII Th, AE 305

114 Environmental Sanitation Programs (3 cr, §112 or 113 or 116; prereq 100A, ♯)
VI-IX T, VI-VII Th, Mayo 1220, Bosch

117 Sanitary Biology (3 cr; prereq 100A or ¶ or ♯)
Lect I-II MW, Mayo 1138, Olson
—1, Lab VI-IX M
—2, Lab VI-IX W

123 Topics (ar cr; prereq ♯)

125 Education (2 cr; prereq ♯)
III TTh, Mayo 1210, Grout

133 Mental Health (3 cr; prereq 62 or 62A or PubH nurs or ♯)
I MWF, Lib 4A, Cline

139 Adv Field Practice: Block Placement (ar cr; prereq mental health trainees only, ♯) Von Bergen

140 Vital Statistics (3 cr)
I-II TTh, Mayo 1220, VII F, Owre 113, Bearman

160 Admin in Hospitals (6 cr)
I-II, VI-VII TTh, II-III S, Mayo 1250, Hamilton, Stephan, Lentz

161 History, Development of Hospitals (3 cr)
II MWF, Mayo 1250, Hamilton, Stephan

162 Organization, Mgt of Hospitals (3 cr)
III MWF, Mayo 1250, Stephan, Hamilton

168 Orientation to Medical Sciences (3 cr)
I MWF, Mayo 1250, Thomson

169 Administrative Residency (ar cr) Stephan

171 Studies: Public Health Nursing (3 cr; prereq ♯)
I-II W, III Th, Mayo 1205, Murphy

175 Adv Practice in Public Health Nursing (3 cr; prereq ♯)
Lect VI-VII Th, Mayo 1210, Williams
—1, VI-VII M, Mayo 1238, Von Bergen
—2, VI-VII M, Mayo 1203, Cline
—3, VI-VII T, Mayo 1238, Von Bergen
—4, VI-VII T, Mayo 1203, Cline

181 Principles, Methods in Community Health Education (3 cr; prereq ♯)
VI-VII MW, Mayo 1210, Grout

190 Field Work: Health Education (ar cr; prereq 183, 227) Grout

191 Science of Human Nutrition (3 cr; prereq 8 cr biochem, 91, 92 or ♯)
VII-VIII MW, J Anderson

200 Research (ar cr)

201 Topics: Biometry (ar cr) Bearman, others

202 Seminar: Physiological Hygiene (1 cr)

203 Research Design in Biometry (3 cr; prereq 130)
II MWF, Mayo 1220, McHugh

204 Theory of Research Design in Biometry (2 cr; prereq calc, ¶203)
II TTh, Mayo 1205, McHugh

210 Seminar: Public Health (ar cr)
VIII-IX Th, MMA 100

211 Seminar: Biometry (ar cr) Bearman, McHugh, Johnson

212 Seminar: Public Health Engineering, Sanitation (ar cr; prereq ♯) Bosch

213 Seminar: Epidemiology (ar cr; prereq ♯) Schuman

216 Biomedical Measurement Problems, Assays (3 cr; prereq 120 or ♯)
I MWF, Mayo 1235, Johnson

217 Theory of Biomedical Measurement Problems, Assays (2 cr; prereq ¶216, ♯)
I TTh, Mayo 1235, Johnson

220 Readings: Probs of Physiological Hygiene (ar cr; prereq ♯) Keys, others

227 Probs: Community Health Education Program (ar cr; prereq ♯) Grout

250 Foundations of Biometry (2 cr; prereq 208, 219 or ♯)

290 Research: Physiological Hygiene, Related Areas (ar cr)

Winter and Spring Quarters

2w,s See 2f: VI MW(w); VI TTh(s)

3w,s See 3f: VI MW(s); VI TTh(w)

4s Health Probs of Community (2 cr; prereq 3 or 3A or GC 10C) I TTh

5s Individual, Public Health (3 cr, §2 or 3 or 3A or 3B or 4 or 50 or 51; prereq ¶59) I MWF

50w See 50f

51w See 51f

52w,s See 52f: VIII-IX T

53w,s Introduction (5 cr; prereq regis nurs or nurses, 3A or 50, bact) IV MTWThF(w); VI MTWThF(s)

57s Health of Infant, Child (2 cr; prereq 4 or 50 or 51 or 52 or 100A) VII TTh

58w,s See 58f: VI-VII M, VI F(w); VII-VIII M, VII F(s)

59s Health of School Child (2 cr; prereq 3A, 4 or 51...or GC 10C, 4 or 50 or 51 or 52 or 100 or ¶5)

62Aw,s See 62Af

62Nw,s See 62Nf

63Aw,s Public Health Nursing II (3 cr; prereq regis PubH nurs, 62A, 65) I MWF

65w,s See 65f

69w,s See 69f

75s See 75f: IV MWF

76s Public Health for Dental Students (1 cr; prereq regis Dent) I W

77w Dental Public Health (2 cr; prereq 76) I MTh

90s Medical Statistics I (2 cr; prereq regis Med or ♯) I WTh, VII-VIII MF

92w See 91f: Lect IV MWF, lab VII T

100s Preventive Medicine, Public Health (6 cr; prereq Med students) III M, IV TThF
100Bw Elements of Public Health II (1-6 cr; prereq 100A or ‡) IV-V T
100Cs Elements of Public Health III (1-5 cr; prereq 100B or ‡) IV-V M
101w,s See 101f
102Aw Environmental Sanitation (2 cr; prereq 100A or ¶, ‡) I TTh
103w,s See 103f
104w-105s Epidemiology (3 cr; prereq 100A, 140 or 111) II-III TTh, III S(w); II TThS(s)
106w Administration (3 cr; prereq 100A) I MWF
108w Biostatistics (2 cr) VI-VII TTh
109s Institutional Sanitation (3 cr; prereq hosp admin maj or ‡, 100A) I-II T, II Th
112Aw Public Health Engineering—Plan Examinations: Water Supplies (1 cr, §114; prereq engr degree, 102, ‡) IV F
112Cs Public Health Engineering—Plan Examinations: Swimming Pools, Plumbing (1 cr, §114; prereq engr degree, 102, ‡)
113Aw Public Health Engineering—Field Investigations: Water Supplies (2 cr, §114; prereq engr degree, 102, ‡) IV MW
113Cw Public Health Engineering—Field Investigations: Swimming Pools, Plumbing (2 cr, §114; prereq engr degree, 102, ‡) I TTh
115w Food Sanitation (3 cr; prereq 100A, ‡) VI-VIII F
116s Public Health Engineering Admin (2 cr, §114; prereq ‡) III TTh
-118w-119s See 117f: VI-IX MW(w); VI-IX TF (s)
120w Biostatistics II (3 cr; prereq 110 with grade C, ¶121) III MWF
121w Biostatistics Lab II (2 cr; prereq ¶120) Lect III TTh, rec II MWF; IV MWF; VI MWF; VI-VIII T
122s Admin Probs (3 cr; prereq 106) II MWF
123w,s See 123f
125s See 125f: VI-VII F
126s Occupational Health Program (3 cr; prereq 100A, InCh 5 or ‡) VI MWF
127s Occupational Health Program: Nursing Aspects (1 cr; prereq ¶126)
130s Biostatistics III (3 cr; prereq 120 with grade C, ¶131) III MWF
131s Biostatistics Lab III (2 cr; prereq ¶130) Lect III TTh, rec II MWF; IV MWF; VI MWF; VI-VIII T
133w See 133f: II MWF; VI-VIII F
135w Conservation of Hearing (1 cr; prereq 62 or 62A) II M
137w Dental Health (1 cr; prereq 62 or 62A) II F
141s Social, Economic Aspects of Medical Care (3 cr; prereq ‡) III MWF
142s Medical Economics (2 cr; prereq regis Med)
150s Life Table Techniques, Follow-up Studies (3 cr; prereq ‡) II MWF
152w Industrial Hygiene Engineering (3 cr; prereq ‡) II MW, II-III F
154s Control of Radiation Hazards (ar cr; prereq ‡) IV TTh, VI-VII W
155w Introd to Air Pollution Probs (2 cr; prereq ‡) III MW, I-II S
156s Air Pollution Surveys (2 cr; prereq 155, ‡) VI-IX M
163w-164s Organization, Mgt of Hospitals (6 cr; prereq 162) II-III MTWF, VI-VII F, I-II S(w); VI-VII MTWThF(s)
166w Hospital Clerkship (5 cr) VI-IX MW, I-IV Th
167s Mgt Probs in Hospital Admin (6 cr; prereq ¶164) II-III MWFS, III-IV TTh
169w,s See 169f
170w Seminar: Public Health Nursing (2 cr; prereq ‡) VI-VII Th
-172w See 171f: Ar
-176w-177s See 175f
178w,s Seminar: Mental Health (ar cr; prereq ‡)
-182w-183s See 181f
190w,s See 190f
192w Physiology of Exercise (4 cr; prereq 92 or Phsl 103, ‡)
195w Aspects of Cardiovascular Disease (3 cr; prereq ‡) VII-VIII MW
196w Nursing in Cardiovascular Disease (3 cr; prereq nurs degree)
200w,s See 200f
201w,s See 201f
202w,s See 202f
-205w-207s‡ See 203f
-206w-208s‡ See 204f
210w,s See 210f
211w,s See 211f
212w,s See 212f: VI-VII Th
213w,s See 213f: VI-VIII F
214w School Health Programs (2 cr; prereq 107 or ‡) IV MF
215s Maternal, Child Health (ar cr; prereq MD degree, ‡)
-218w‡ See 216f
-219w‡ See 217f
220w,s See 220f
227w,s See 227f
230w,s Field Practice: Environmental Sanitation (ar cr; prereq ‡)
241s Epidemiology of Noncommunicable Diseases (3 cr; prereq 104) III TThS
-251w-252s See 250f
290w,s See 290f

RADIOLOGY (Rad)

Fall Quarter

102 X-Ray Conference (1 cr; prereq ‡)
5:00-6:00 T, Hosp EustisAmph, Peterson others

104 Radiological Physics I (2 cr; prereq 1st yr res)
4:00-5:00 T, Hosp EustisAmph, Mosser, Marvin, Loken

111 Medical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 M, Hosp ToddAmph, Greenspan, others

124 Pediatric-Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 T, Hosp EustisAmph, Feinberg, Lester

127 Radiology Clerkship (1 cr; prereq regis Med)
1:00-3:00 MW, Mayo B239, Lester, others

135 Surgical Roentgenologic Conference for Graduate Students (1 cr)
9:00-9:50 S, Hosp ToddAmph, Carey, others

163 Neurosurgical-Roentgenologic Conference for Graduate Students (1 cr)
1:00-2:30 F, Hosp ToddAmph, Peterson, others

185 Interpretation of Roentgenograms (1 cr; prereq regis Med, 121)
2:00-4:00 TTh, Mayo B236, Peterson, others

188A Roentgen Diagnosis of Diseases of Bones, Joints (1 cr; prereq regis Med)
4:00-5:00 Th, Mayo B239, Olfelt

200 Research: Roentgenology (ar cr) Peterson, others

202 Cardiovascular Roentgenologic Conference (1 cr)
2:30-4:00 Th, Hosp EustisAmph, Lester

204 Tumor Clinic Conference (ar cr)
11:00-12:00 MF, Hosp ToddAmph, Mosser, others

205 Research: Radiation Therapy, Nuclear Medicine, Radiobiology (ar cr; prereq ‡) Mosser, others

206 Roentgenoscopy (3 cr) Peterson, others

207 Roentgen, Radium Therapy (ar cr) Mosser

209 Roentgen Diagnosis (3 cr) Peterson, others

210 Roentgen Technique (2 cr) Peterson, others

217 Roentgenologic Conference on Chest Diseases (1 cr)
4:00-5:30 F, Hosp ToddAmph, Greenspan

218 Seminar: Radiobiology (1 cr; prereq ‡) Mosser, others

220 Urologic-Roentgenologic Conference (1 cr)
5:00-6:00 M, Hosp EustisAmph, Baggenstoss

236 Seminar: Radioactive Isotope (1 cr; prereq †PhCh 236)
12:30-1:20 W, Mayo C239, Mosser, Marvin

237 Radiological Physics II (2 cr; prereq 104)
4:00-5:00 F, Mayo C239, Marvin, Loken

238 Roentgen-Surgical Pathology Conference (1 cr)
4:00-6:00 Th, Hosp ToddAmph, Peterson, Lober, others

240 Radiation Therapy Conference (1 cr)
4:00-5:00 M, Mayo C239, Mosser, others

SURGERY (Surg)

Fall Quarter

121B First Aid (2 cr; prereq regis Med)
VI MW, Hosp ToddAmph, Wangensteen

122 Principles of Diagnosis, Treatment, Prognosis of Fractures, Dislocations (1 cr; prereq regis Med)
I M, Hosp ToddAmph, Moe, others

129 Surgical Clinics for Juniors (1 cr, †3 qtrs; prereq regis Med)
VI T, Hosp ToddAmph, Wangensteen

135 Junior Clinical Clerkship (8 cr; prereq regis Med) Wangensteen

136 Surgical Specialties (6 cr; prereq regis Med) Peyton, Creevy, French, Aust, Reiser, Hitchcock, MacLean, Moe, Arnesen

137 Gen Surgery Conference (1 cr; prereq regis Med)
VIII M, Mayo SurgLib

138 Clerkship in Fractures, Dislocations (2 cr; prereq regis Med) Hitchcock, MacLean

139 Operative Surgery (ar cr; prereq regis Med)

145 Orthopedic Senior Clerkship (1 cr; prereq regis Med)

152 Probs: Clinical Investigations (ar cr; prereq regis Med)

163 Senior Neurosurgery Clerkship (1 cr; prereq regis Med)

167 Probs: Experimental Surgery (ar cr; prereq regis Med)

169 Diagnostic Bedside Surgical Clinic (ar cr; prereq regis Med) Wangensteen

170 Clinical Clerkship in Urology (1 cr; prereq regis Med)

200 Out-Patient Clinic in Surgery (1 cr) Wangensteen

202 Applied Surgical Anatomy on Cadaver (1 cr) Wangensteen

203 Proctoscopy, Sigmoidoscopy (1 cr)

204 Tumor Clinic (1 cr)

205 Surgical Diagnosis (1 cr)

208 Surgical Service (1 cr)

211 Operative Surgery (1 cr)

214 Surgical Ward Conference (1 cr)

215 Roentgenological-Surgical Conference (1 cr)

216 Research: Surgery (1 cr)

217 Seminar: Surgery (1 cr)

218 Medical, Surgical Pathological Conference (1 cr)

219 Surgical Literature Conference (1 cr)

220 Peripheral Vascular Surgery (1 cr)

221 Seminar: Surgery-Physiology (1 cr)
VIII-IX T, MMA 100

250 Urological Surgery (4 cr)

251 Cystoscopy, Urological Diagnosis (4 cr)

252 Urological Conference (4 cr)

253 Research: Urology (4 cr)

254 Urological Seminar (3 cr)

255 Urological Radiological Conference (3 cr)

256 Urological Pathological Conference (3 cr)

305 Neurosurgical Diagnosis (3 cr)

308 Neurosurgical Service (4 cr)
316 Neurosurgical Research (3 cr)
318 Neurosurgical Conference (1 cr)
VI-IX F, Hosp ToddAmph
405 Orthopedic Diagnosis (ar cr)
408 Orthopedic Service (ar cr)
411 Orthopedic Operative Surgery (ar cr)
416 Orthopedic Research (ar cr)

UNATTACHED COURSES

Biophysics (BPhy)

Fall Quarter

138 Seminar: Gen Physiology, Biophysics (ar cr)
170 Radiation (3 cr; prereq ♯)
204 Research: Biophysics, Physiology of Radiation (ar cr)
221 Research: Biophysics (ar cr)
222 Research: Biophysics (ar cr)
223 Research: Biophysics (ar cr)

Cancer Biology (Biol)

Fall Quarter

140 Seminar (1 cr)
12:30-1:30 Th, LyonL 271, Halberg
141 Problems (ar cr) Bittner
207 Research (ar cr) Bittner

COLLEGE OF PHARMACY

Pharmaceutical Chemistry (PhmC)

Fall Quarter

53 Pharmaceutical Biochemistry (5 cr; prereq OrCh 62)
Lect III MWF, WuH 202, DiGangi
Lab VI-VIII TF, WuH 1, DiGangi
161 Organic Medicinal Agents (3 cr; prereq OrCh 62)
10:00-11:20 TTh, WuH 202, Gisvold
164 Analytical Methods (3 cr; prereq 55)
Lect IV W, DiGangi
Lab II-IV TTh, WuH 301, DiGangi
201 Seminar (1 cr) Gisvold
205 Adv Medicinal Chemistry (3-6 cr; prereq 163 or ♯) Gisvold, Soine

Pharmacognosy (Phcg)

Fall Quarter

1 Drug Collection, Medicinal Plant Study (3 cr; prereq soph, Bot 2)
Lect VI MW, WuH 104, Fischer, Jonas
Lab VI-VIII Th, WuH 104, Fischer, Jonas
60 Pharmacognosy, Pharmaco-Histology (3 cr; prereq sr, 3)
Lect IV W, Fischer
Lab II-IV TTh, WuH 104, Fischer
201 Adv Pharmacognosy (3-5 cr; prereq 61 or ♯) Fischer
204 Research (ar cr) Fischer

Pharmaceutical Technology (PhmT

Fall Quarter

1A Orientation: History, Minnesota Pharmac Law (2 cr)
I TTh, WuH 202, Hager, Miller
3 Pharmaceutical Calculations (3 cr)
II MWF, WuH 202, Netz
54 Fundamental Principles, Processes (4 cr prereq 3, Phys 3A, PhmC 2, OrCh 62)
Lect II WF, WuH 201, Hadley
Lab VI-VIII MW, WuH 302, Hadley
58 Prescription Compounding (5 cr; prereq s 56, PhmC 55, PhmC 163, Phcl 57)
Lect III MWF, WuH 201, Netz, Miller
Lab VI-VIII TTh, WuH 205, Netz, Miller
64 Pharmaceutical Jurisprudence (3 cr; prere sr)
I MWF, WuH 201, Bachelder
68 Hospital Pharmacy (3 cr; prereq sr, 5 PhmC 163)
Lect IV W, Mayo A355, Bruce
Lab II-IV TTh, Mayo D189, Bruce
70 First Aid (2 cr; prereq sr)
VI MWF, WuH 201, White
73 Problems (ar cr; prereq sr, 56, PhmC 163)
166 Pharmaceutical Manufacturing (3 cr; prer 56 or ♯)
Lect IV W, WuH 104, Miller
Lab II-IV TTh, WuH 2A, Miller
201 Seminar (1 cr)
213 Research Probs (ar cr; prereq PhmC or ♯)

218 Extraction, Distribution, Partition Coefficients (3-5 cr; prereq PhmC 163 or ‡) Miller

221 Homogeneous Systems in Pharmacy (3-5 cr; prereq PhmC 163, PCh 103 or ‡) Hadley

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AmSt)

Fall Quarter

90 Proseminar (3 cr; prereq sr, △)
VIII-IX M, FolH 10, Weber

200 Introduction (3 cr; prereq MA degree cand)
VIII-IX T, FolH 10, Bowron

210 Seminar: Bibliography (3 cr; prereq PhD cand or ‡)
VIII-IX T, FolH 108, Hornberger

211 Seminar (3 cr; prereq PhD cand)
VIII-IX W, FolH 10, Foster

240 Resources: American Civilization (2 cr; prereq ‡)
VI-VII Th, TSF 109, Turpie

Winter and Spring Quarters

-91w-92s See 90f
-201w-202s See 200f
-212w-213s See 211f
-241w-242s See 240f

ANTHROPOLOGY (Anth)

Fall Quarter

1A **Introduction: Prehistoric Man, Culture** (5 cr)
Lect II MWThF, MNH Aud, Murrill
—1, I T, ForH 150
—2, II T, ForH 150
—3, II T, ForH 130
—4, II T, ForH 20
—5, III T, ForH 150
—6, III T, ForH 20
—7, IV T, ForH 150
—8, VI T, ForH 130

2A **Introduction: Cultural Anthropology** (5 cr)
Lect IV MTWF, MNH Aud, Hoebel
—1, I Th, ForH 150
—2, II Th, ForH 150
—3, III Th, ForH 150
—4, III Th, ForH 20
—5, IV Th, ForH 150
—6, IV Th, ForH 15
—7, IV Th, ForH 20
—8, VI Th, ForH 130

90 Archaeology of North America (3 cr; prereq 1A)
II MWF, ForH 15, Johnson

100 Principles (3 cr, §1A, 2A)
VI-VII MW, ForH 185, Johnson

117 Indians of South America (3 cr; prereq 2A or 100)
III MWF, ForH 150, Johnson

120 Peoples, Cultures of Africa (3 cr; prereq 1A, 2A or 100)
I MWF, ForH 160, Gibbs

125 Peoples, Cultures of India (3 cr; prereq 2A or 100 or △)
II MWF, ForH 160, Spencer

161 Primitive Religion (3 cr; prereq 2A or 100)
VI MWF, ForH 180, Spencer

163 Economic Activities in Primitive Cultures (3 cr; prereq 2A or 100...or none for Econ or BA maj)
IV MWF, ForH 150, Merrill

164 Social Anthropology (3 cr; prereq 2A or 100)
IV MWF, ForH 170, Gibbs

165 **Culture, Personality** (3 cr; prereq sr, 2A or 100 or △; or none for PubH nurs, psy, soc, SW maj)
III MWF, ForH 55, Hoebel

170 Primate, Human Evolution (3 cr; prereq 1A or 100 or △)
IV MWF, ForH 30, Murrill

180 Phonetics, Phonemics (3 cr)
III MWF, ForH 160, Spencer

204 Seminar: Anthropology (3 cr)
VIII-IX W, ForH 175

Winter and Spring Quarters

1Aw,s See 1Af: Lect IV MTWF, rec I Th; II Th; III Th; IV Th; VI Th(w); Lect II MWThF, rec I T; II T; III T; IV T; VI T(s)

2Aw,s See 2Af: Lect II MWThF, rec I T; II T; III T; IV T; VI T(w); Lect IV MTWF, rec I Th; II Th; III Th; IV Th; VI Th(s)

80w The American Indian (3 cr; prereq...2A or 100 rec) II MWF

115s Indians of the Great Plains (3 cr; prereq 2A or 100 or △) IV MWF

118w Pre-Columbian Civilizations of Middle America (3 cr; prereq 1A or 100 or △) VI MWF

126s Peoples, Cultures of SE Asia, Indonesia (3 cr; prereq 2A or 100 or △) II MWF

127s Islamic Culture Sphere (3 cr; prereq 1A, 2A or 100 or △) VI MWF

130s Archaeological Methods, Techniques (3 cr; prereq 90, △) VI-VIII T

136w Prehistoric Archaeology of Old World (3 cr; prereq 1A or 100 or △) VI-VII TTh

150w Contact of Cultures (3 cr; prereq 1A, 2A or 100) IV MWF

154w Ethnological Field Techniques (3 cr; prereq ♯) VI-VII TTh

160w Law-ways of Primitive Man (3 cr; prereq 2A or 100...or none for law or other soc sci maj) III MWF

164w See 164f

165w,s See 165f: II MWF

166s Primitive Art (3 cr; prereq 2A or 100 or △) II-III TTh

169s Comprehensive Survey (3 cr; prereq sr, △) VI-VII MW

171w-172s Physical Anthropology (4 cr) Lect IV TTh, lab VI-VII TTh

173w Human Biology (3 cr; prereq 1A or △) III MWF

175s Human Physical Growth, Development (3 cr; prereq 1A or ♯ or none for child develop maj) III MWF

181w Descriptive Linguistics (3 cr; prereq 2A or 100 or △) III MWF

182s Language, Culture (3 cr; prereq 181) III MWF

200w-201s Anthropology, Scientific Method (3 cr) 7:00-9:30 pm T

-205w‡ See 204f

ART (Art)

Fall Quarter

1 Principles (5 cr, §50)
Lect III MWF, NH 45, Eitner
Lab 2 hrs ar

10 **Photography** (3 cr)
—1, I-II MWF, J 2, Liebling
—2, III-IV MWF, J 2, Liebling

20 **Drawing** (2 cr)
IV-V TTh, J 200a, Quirt

23 **Drawing, Design I** (3 cr; prereq 1 or ¶)
—1, I-II MWF, J 104, Young
—2, III-IV MWF, J 104, Young
—3, IV-V MWF, J 4, Downs
—4, VI-VII MWF, J 104, Young
—5, II-III TThS, J 4, Quirt
—6, VII-IX TTh, J 4

23A **Drawing, Painting for Architects I** (2 cr)
—1, II-IV TTh, J 11, Rollins
—2, II-IV TTh, J 10
—3, II-IV TTh, J 104
—4, VI-VIII TTh, J 10

32 **Printmaking** (3 cr)
—1, I-II TThS, J 203, Priede
—2, III-IV TThS, J 203, Priede

40 **Sculpture I** (3 cr; prereq 1 or ¶)
—1, I-II MWF, HolB 154, Morton
—2, III-IV MWF, HolB 154, Morton
—3, I-II TThS, HolB 154
—4, III-IV TThS, HolB 154

45 **Ceramic Processes** (3 cr)
—1, I-II MWF, HolB 134, MacKenzie
—2, III-IV MWF, HolB 134, MacKenzie
—3, VI-VII MWF, HolB 134, MacKenzie

50 **Visual Arts** (3 cr, §1)
II MWF, J 207b, Torbert

51 **Pictorial Design** (2 cr; prereq 25)
II-III MW, J 4, Booth

52 **Drawing II** (3 cr; prereq 25, △)
VI-VII MWF, J 11, Rollins

53 **Drawing II** (3 cr; prereq 52)
VI-VII MWF, J 11

54 **Life Drawing** (3 cr; prereq 52, △)
V-VI MWF, J 10

55 **Life Drawing** (3 cr; prereq 54)
V-VI MWF, J 10

56 **Renaissance, Baroque Art: 1300-1500** (3 cr; prereq 1 or 50 or △)
IV MWF, J 207b, Waldfogel

60A **Drawing, Painting for Architects II** (2 cr; prereq 25A)
—1, VI-VIII T, II-IV S, J 104
—2, VI-VIII T, II-IV S, J 11
—3, 6:00-9:00 pm TTh, J 4

60B **Water Color** (2 cr; prereq 20 or 23 or △)
III-IV MF, J 11, Rollins

61B **Water Color** (2 cr; prereq 60B)
III-IV MF, J 11, Rollins

62B **Water Color** (2 cr; prereq 61B)
III-IV MF, J 11, Rollins

63 **Drawing, Painting, Design** (5 cr, not open to art or art ed maj)
I-III MWF, J 10

66 **Modern Art: Classicism, Romanticism** (3 cr; prereq 1 or 50 or △)
VI MWF, J 207b, Waldfogel

70 **Oil Painting** (3 cr; prereq 54)
—1, II-IV MW, J 200a
—2, VI-VIII MW, J 200a, Booth
—3, VI-VIII TTh, J 200a, Quirt

71 **Oil Painting** (3 cr; prereq 70)
—1, II-IV MW, J 200a
—2, VI-VIII MW, J 200a, Booth
—3, VI-VIII TTh, J 200a, Quirt

72 **Oil Painting** (3 cr; prereq 71)
—1, II-IV MW, J 200a
—2, VI-VIII MW, J 200a, Booth
—3, VI-VIII TTh, J 200a, Quirt

80 **Sculpture II** (3 cr; prereq 42)
VI-VII MWF, HolB 154, Morton

80A **Direct Metal Sculpture, Constructions** (3 cr; prereq 42 or △)
VI-VII MWF, HolB 154, Morton

81 **Sculpture II** (3 cr; prereq 80)
VI-VII MWF, HolB 154, Morton

81A **Metal Sculpture in Relief, Repousse** (3 cr; prereq 80A)
VI-VII MWF, HolB 154, Morton

82 **Sculpture II** (3 cr; prereq 81)
VI-VII MWF, HolB 154, Morton

82A **Bronze Casting, Wax Modeling** (3 cr; prereq 81A)
VI-VII MWF, HolB 154, Morton

83 **Photography II** (3 cr; prereq 12 or Jour 12 or △)
VI-VII MWF, J 2, Liebling

100 **Ancient Egypt, Mesopotamia, Greece** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
VII MWF, J 207a, Simon

111 **Art of China** (3 cr; prereq 9 cr art hist... or 9 cr hist or lit with △...Hist 62, 63 rec)
I MWF, J 207a, Mather

116 **Renaissance, Baroque Art in Italy, Spain** (3 cr; prereq sr, maj, 9 cr art hist...or 9 cr hist or lit with △)
IV MWF, J 207a, Thomas

123 **Film Workshop** (3 cr; prereq art or hum or mus or theat maj, △)
VI-VII MWF, J 4, Downs

126 **Renaissance, Baroque Art in the North** (3 cr; prereq sr, maj, 9 cr art hist...or 9 cr hist or lit with △)
VII MWF, J 207b, Thomas

131 **Illuminated Book in Antiquity, Middle Ages** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
VI MWF, J 207a, Tselos

136 **Art in the United States** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
V MWF, J 207b, Torbert

140 **Scandinavian Architecture** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
I MWF, J 207b, Nelson

146 **European, American Architecture: 1775-1850** (3 cr; prereq 1 or 50, 9 cr art hist...or 9 cr hist or lit with △)
III MWF, J 207a, Tselos

150 **Probs: Painting** (ar cr; prereq 72, △)
—1, II-IV MW, J 200a
—2, VI-VIII MW, J 200a, Booth
—3, VI-VIII TTh, J 200, Quirt

151 **Probs: Painting** (ar cr; prereq 150)
—1, II-IV MW, J 200a
—2, VI-VIII MW, J 200a, Booth
—3, VI-VIII TTh, J 200a, Quirt

152 **Probs: Painting** (ar cr; prereq 151)
—1, II-IV MW, J 200a
—2, VI-VIII MW, J 200a, Booth
—3, VI-VIII TTh, J 200a, Quirt

166 **Modern Sculpture: Renaissance Tradition** (3 cr; prereq 1 or 50, 9 cr art hist...or 9 cr hist or lit with △)
II MWF, J 207a, Arnason

176 **20th Century European, American Painting** (3 cr; prereq sr, 1 or 50, 9 cr art hist... or 9 cr hist or lit with △)
V MWF, J 207a, Eitner

180 **Probs: Sculpture** (ar cr; prereq 82, 82A or △)
VI-VII MWF, HolB 154, Morton

181 **Probs: Sculpture** (ar cr; prereq 180)
VI-VII MWF, HolB 154, Morton

182 **Probs: Sculpture** (ar cr; prereq 181)
VI-VII MWF, HolB 154, Morton

193 Adv Probs: Design (ar cr; prereq 9 up div cr in design, cons maj adv)

194 Adv Probs: Design (ar cr; prereq 193)

195 Adv Probs: Design (ar cr; prereq 194)

196 Readings: Art History, Criticism (3 cr; prereq sr, △)

197 Readings: Art History, Criticism (3 cr; prereq sr, △)

198 Readings: Art History, Criticism (3 cr; prereq sr, △)

200 Adv Probs: Studio Work (ar cr; prereq ♯)

201 Adv Probs: Studio Work (ar cr; prereq 200)

202 Adv Probs: Studio Work (ar cr; prereq 201)

206 Seminar: European, American Architecture (ar cr; prereq ♯)

207 Seminar: European, American Architecture (ar cr; prereq 206)

208 Seminar: European, American Architecture (ar cr; prereq 207)

216 Seminar: European, American Painting (ar cr; prereq 27 cr up div courses in art hist, ♯)

217 Seminar: European, American Painting (ar cr; prereq 216)

218 Seminar: European, American Painting (ar cr; prereq 217)

236 Seminar: Probs in Art History, Criticism (ar cr; prereq ♯)

237 Seminar: Probs in Art History, Criticism (ar cr)

238 Seminar: Probs in Art History, Criticism (ar cr)

250 Thesis Seminar (no cr; prereq cons adv) Booth

251 Thesis Seminar (no cr; prereq 250) Booth

252 Thesis Seminar (no cr; prereq 251) Booth

Winter and Spring Quarters

1w,s See 1f

2w Ancient, Medieval Art (3 cr; prereq 1) III MWF

3s Renaissance, Modern Art (3 cr; prereq 1) III MWF

10w,s See 10f: I-II MWF

11w Photography (3 cr; prereq 10 or prac exper or △) III-IV MWF

12s Photography (3 cr; prereq 11 or △) III-IV MWF

20w,s See 20f

-24w-25s See 23f: I-II MWF(w,s); II-III TThS (w,s); III-IV MWF(w,s); IV-V MWF(w); IV-VI TTh(s); VI-VII MWF(w,s)

-24Aw-25As See 23Af

32w,s See 32f

-41w See 40f

42s Sculpture I: Design Workshop (3 cr; prereq 1) I-II MWF; III-IV MWF; I-II TThS; III-IV TThS

45w,s See 45f: I-II MWF; III-IV MWF

50w,s See 50f

51w,s See 51f

52w,s See 52f

53w,s See 53f

54w,s See 54f

55w,s See 55f

57w Renaissance, Baroque Art: 1500-1650 (3 cr; prereq 1 or 50 or △) IV MWF

58s Renaissance, Baroque Art: 1650-1800 (3 cr; prereq 1 or 50 or △) IV MWF

-60Bw-61Bs See 60Bf

60Bs See 60Bf

-61Aw-62As See 60Af

-61Bw-62Bs See 60Bf

62Bw See 62Bf

65s Commercial Design (3 cr; not open to art or art ed maj) IV-V MWF

67w Modern Art: Realism, Impressionism (3 cr; prereq 1 or 50 or △) VI MWF

68s Modern Art: Contemporary European, American (3 cr; prereq 1 or 50 or △) VI MWF

69s Lettering (3 cr; prereq 25) VI-VII MWF

70w,s See 70f

71w,s See 71f

72w,s See 72f

80w,s See 80f: VI-VII MWF(w,s); VI-VII TThS (s)

80Aw,s-81Aw,s-82Aw,s See 80Af-81Af-82Af

81w,s See 81f: VI-VII MWF(w,s); VI-VII TThS(s)

82w,s See 82f: VI-VII MWF(w,s); VI-VII TThS(s)

-84w-85s See 83f

86w-87s Art of the Film (3 cr; prereq 9 cr or 9 cr spch incl 31) VIII-IX MW, VIII F

90w,s-91w,s-92w,s Printmaking (3 cr; prereq 32 or △) VI-VIII TTh

94w,s-95w,s Ceramic Design (3 cr; prereq 45 or △) VI-VII MWF

101w Hellenistic Through Early Christian (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △) VII MWF

102s Romanesque, Gothic (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △) VII MWF

112w Art of Japan (3 cr; prereq 9 cr art hist... or 9 cr hist or lit with △) I MWF

113w Design in Jewelry (3 cr; prereq 25, △) III-IV MWF

114w Adv Design in Jewelry (3 cr; prereq 113) III-IV MWF

115w Probs: Jewelry Design (3 cr; prereq 114) III-IV MWF

-117w-118s See 116f

-124w-125s See 123f

-127w-128s See 126f

132w Illustrated Book from Renaissance to Rococo (3 cr; prereq 131) VI MWF

133s Book Illustration in Modern World (3 cr; prereq 132) VI MWF

-137w-138s‡ See 136f

141w Scandinavian Painting (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △) I MWF

142s Scandinavian Sculpture, Minor Arts (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △) I MWF

147w European, American Architecture: 1850-1900 (3 cr; prereq 1 or 50, 9 cr art hist... or 9 cr hist or lit with △) III MWF

148s Modern Architecture: 1900-1950 (3 cr; prereq 1 or 50, 9 cr art hist...or 9 cr hist or lit with △) III MWF

150w,s-151w,s-152w,s See 150f-151f-152f

167w Modern Sculpture: Origins of Modern Sculpture (3 cr; prereq 166) II MWF

168s Modern Sculpture: Contemporary Sculpture (3 cr; prereq 167) II MWF

-177w-178s‡ See 176f

180w,s See 180f: VI-VII MWF(w,s); VI-VII TThS(s)

181w,s See 181f: VI-VII MWF(w,s); VI-VII TThS(s)

182w,s See 182f: VI-VII MWF(w,s); VI-VII TThS(s)

186s Art of the Film (3 cr; prereq 87 or △) VIII-IX MW, VIII F

190w,s-191w,s-192w,s Probs: Printmaking (ar cr; prereq 92 or △) VI-VIII TTh

193w,s-194w,s-195w,s See 193f-194f-195f

196w,s-197w,s-198w,s See 196f-197f-198f

200w,s-201w,s-202w,s See 200f-201f-202f

236w,s-237w,s-238w,s See 236f-237f-238f

250w,s-251w,s-252w,s See 250f-251f-252f

ASTRONOMY (Ast)

Fall Quarter

11 **Descriptive Astronomy** (5 cr, §51) IV MTWF, Ph 166, Luyten

104 Celestial Mechanics (3 cr; prereq Math 59) V MWF, AE 209, Danby

Winter and Spring Quarters

11s See 11f

20w Celestial Navigation (5 cr) III MTWThF

51w Gen Astronomy (3 cr, §11; prereq Math T) IV MWF

52w Astrophysics (4 cr; prereq Math 53, Phys 50 or Phys 9, ♯) II MTWF

53s Stellar Astronomy (3 cr; prereq 11 or Phys 9, Math 53) II MWF

-105w-106s See 104f

BOTANY (Bot)

Fall Quarter

1 **Gen Botany** (3 cr, §4, §old NSci 7)
Lect III TTh, Bo B6, Roshal
—1, Lab V-VI TTh, Bo B4
—2, Lab VII-VIII TTh, Bo B4
—3, Lab V-VI WF, Bo B4

50 **Plant Ecology** (3 cr, §130; prereq 3 or 5 or Biol 3 or NSci 9)
V MWF, BoG 190, Lawrence, Martin

50A **Plant Ecology Lab** (2 cr; prereq 10 cr bot or biol or ‡)
—1, VI-IX M, Bo 214, Lawrence, Martin
—2, VI-IX W, Bo 214, Lawrence, Martin
—3, VI-IX F, Bo 214, Lawrence, Martin

52 Taxonomy (3 cr; prereq 3 or 5 or Biol 3 or NSci 9)
VI-VIII MW, Bo 401, Morley

108 Pteridophytes (3 cr; prereq 52 or ‡)
II-IV TTh, Bo 401, Ownbey

118 **Gen Cytology** (5 cr; prereq 10 cr bot or biol or zool or elem genetics or ‡)
Lect IV MWF, Z 211, Dahl
—1, Lab II-III MWF, Bo 202
—2, Lab VI-VII MWF, Bo 202

127 Morphology of Vascular Plants (5 cr; prereq 54 or 104 or ‡)
II-IV MWF, Bo 209, Hall

130 **Plant Ecology** (3 cr, §50; prereq sr, 10 cr bot or biol)
V MWF, BoG 190, Lawrence, Martin

130A **Plant Ecology Lab** (2 cr, §50A; prereq 10 cr bot or biol or ‡)
—1, VI-IX M, Bo 214, Lawrence, Martin
—2, VI-IX W, Bo 214, Lawrence, Martin
—3, VI-IX F, Bo 214, Lawrence, Martin

151 Phycology II (5 cr; prereq 10 cr bot or biol or ‡)
Lect VI MWF, BoG 190, Norris
Lab VII-VIII MWF, BoG 190

182 Adv Topics (3 cr; prereq 51 or 140 or ‡)
8:30-9:45 TTh, Bo 110, Frenkel, Roshal

197 Problems (1-5 cr; prereq 20 cr nat sci, ‡)

201 Research Probs: Morphology of Vascular Plants (ar cr) Hall

205 Research Probs: Taxonomy (ar cr) Ownbey, Morley

209 Research Probs: Paleobotany (ar cr) Hall

221 Research Probs: Ecology (ar cr) Lawrence, Martin

225 Research Probs: Plant Physiology (ar cr) Brown, Frenkel, Roshal

229 Research Probs: Cytology (ar cr) Dahl

233 Research Probs: Phycology (ar cr) Norris

240 Seminar: Morphology (1 cr) Hall

243 Seminar: Taxonomy (1 cr) Ownbey, Morley

246 Seminar: Paleobotany (1 cr) Hall

249 Seminar: Ecology (1 cr) Lawrence, Martin

252 Seminar: Plant Physiology (1 cr) Brown, Frenkel, Roshal

255 Seminar: Cytology (1 cr) Dahl

258 Seminar: Cryptogamic Plants (1 cr) Norris

Winter and Spring Quarters

-2w-3s See 1f

10s Minnesota Plant Life (3 cr) VI-VIII T, VI-VII Th

12w Plants Useful to Man (4 cr) III or V MWF

51s Plant Physiology (5 cr; prereq bot or biol, InCh 5 or 25) Lect VI MW, lab II-III MW, conf IV M; Lect VI W, lab VII-VIII MW, conf IX M

52s See 52f

53w Plant Anatomy (5 cr, §121; prereq 3 or 5 or Biol 3 or NSci 9) Lect III MWF, lab I-II MWF; IV-V MWF; VI-VII MWF

54s The Plant Kingdom (5 cr, §104; prereq 3 or 5 or Biol 3 or NSci 9) II-IV MWF

104s The Plant Kingdom (5 cr, §54; prereq 3 or 5 or NSci 9) II-IV MWF

114w Angiosperm Phylogeny (3 cr; prereq 52 or ‡) VI-VIII TTh

115s Flora of Minnesota (4 cr; prereq 52 or ‡) VI-VIII TTh

121w Plant Anatomy (5 cr, §53; prereq 10 cr bot or zool) Lect III MWF, lab I-II MWF; IV-V MWF; VI-VII MWF

128s Paleobotany (5 cr; prereq ‡) VI-VIII TTh

133w Phytogeography (3 or 5 cr; prereq 50 or 130 or ‡) Lect VI MWF, lab V-IX WF

137s Adv Ecology (5 cr; prereq 50, 50A or 130, 130A, ‡) VI-VII T, V-IX Th

140s Adv Survey of Plant Physiology (3 or 5 cr, §51; prereq elem biol or bot or zool or ‡, org chem or biochem) Lect VI MW, lab II-III MW, conf IV M; Lect VI MW, lab VII-VIII MW, conf IX M

155s Fresh-water Algae (4 cr; prereq 10 cr biol or ‡) VI-VIII MW

165w Pollen Analysis (3 cr; prereq ‡) VI-VIII TTh

166s Palynological Analysis (5 cr; prereq 165 or Zool 161 or ‡)

177w Photosynthesis (3 cr; prereq sr, 51 or 140, 20 cr chem or biochem, PCh 101, 102, 103 or ‡) 8:30-9:45 TTh

-198w-199s‡ See 197f
-202w-203s‡ See 201f
-206w-207s‡ See 205f
-210w-211s‡ See 209f
-222w-223s‡ See 221f
-226w-227s‡ See 225f
-230w-231s‡ See 229f
-234w-235s‡ See 233f
-241w-242s‡ See 240f
-244w-245s‡ See 243f
-247w-248s‡ See 246f
-250w-251s‡ See 249f
-253w-254s‡ See 252f
-256w-257s‡ See 255f
-259w-260s‡ See 258f

CLASSICS

Classics (Clas)

Fall Quarter

24 Technical Terms of Science, Medicine, Humanities (3 cr, §124; prereq soph)
I MWF, JohH 115, R Swanson

42 Greek Mythology (2 cr; prereq soph)
VI MW, FolH 303, Forbes

56 Linguistics (3 cr; prereq 1 yr col foreign lang or ‡)
VII MWF, FolH 304, D Swanson

81 Greek Tragedy in Translation (3 cr, §181; prereq 9 cr lit or △)
IV MWF, FolH 305, McDonald

124 Technical Terminology (3 cr, §24)
I MWF, JohH 115, R Swanson

181 Greek Tragedy in Translation (3 cr, §81; prereq grad, 9 cr lit or △)
IV MWF, FolH 305, McDonald

191 Classical Literary Traditions (3 cr; prereq 9 cr lit)
VII MWF, FolH 305, DeWitt

Winter and Spring Quarters

24w,s See 24f

42s See 42f

43w Ancient Mythology in Relation to Literature, Art (2 cr; prereq soph) VI MW

82w Aristophanes, Roman Drama in Translation (3 cr, §182; prereq 9 cr lit or △) IV MWF

106w-107s Study of Language (3 cr; prereq 56 or △)

122w Greek Archaeology (3 cr) VI MWF

123s Roman Archaeology (3 cr) VI MWF

124w,s See 124f

182w Aristophanes, Roman Drama in Translation (3 cr, §82; prereq grad, 9 cr lit or △) IV MWF

192w-193s‡ See 191f

Greek (Grk)

Fall Quarter

1 Bgn Greek (5 cr, †1-2)
II MTWThF, FolH 303, McDonald

51 Plato: Apology, Selections (3 cr, §151; prereq 3)
IV MWF, FolH 302, Allen

151 Plato: Apology, Selections (3 cr, §51; prereq grad, 3)
IV MWF, FolH 302, Allen

171 Independent Reading (3 cr; prereq 53 or △) D Swanson

211 Seminar: Greek Epic (3 cr)
VIII Th, Lib 317, McDonald

Winter and Spring Quarters

-2w See 1f

3s Attic Prose (5 cr; prereq 2) II MTWThF

52w Greek Drama (3 cr, §152; prereq 3) IV MWF

53s Homer (3 cr, §153; prereq 3) IV MWF

73s Hellenistic Greek (3 cr; prereq △) VII MWF

152w Greek Drama (3 cr, §52; prereq grad, 3) IV MWF

153s Homer (3 cr, §53; prereq grad, 3) IV MWF

-172w-173s‡ See 171f

-212w-213s See 211f

Latin (Lat)

Fall Quarter

1 Bgn Latin (5 cr, †1-2)
I MTWThF, FolH 303, Forbes

10 Readings (5 cr; prereq 1 yr HS Lat or △)
III MTWThF, FolH 303, Forbes

51 Survey of Literature (3 cr, §151; prereq 3 or 10 or △)
VI MWF, FolH 302, R Swanson

151 Survey of Literature (3 cr, §51; prereq 3 or 10 or ‡)
VI MWF, FolH 302, R Swanson

171 Independent Reading (3 cr; prereq 53 or △) D Swanson

Winter and Spring Quarters

-2w See 1f

3s Interm Latin (5 cr; prereq 2 or 1 yr HS Lat) I MTWThF

-52w-53s See 51f

73s Prose Composition (3 cr; prereq 3 yrs HS Lat or △)

-152w-153s See 151f

-172w-173s‡ See 171f

COMPARATIVE LITERATURE (CLit)

45 Nature of Literature (3 cr; prereq soph)
VI MWF, FolH 207, DeWitt

221 Seminar (ar cr) Falk

Winter and Spring Quarters

-46w-47s See 45f

-222w-223s See 221f

ENGLISH
English (Engl)

Fall Quarter

A **Literature, Composition** (5 cr, §1A or 1B or Comm 1; prereq classif 1 or 1A or 2)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C100 (for InCh 24 students only)
—1, Rec I MTWF, FolH 205
—2, Rec II MWThF, FolH 205
—3, Rec III MWThF, FolH 205
—4, Rec IV MTWF, FolH 205
—5, Rec V MTWF, ME 214
—6, Rec VI MTWF, FolH 205
—7, Rec IV MTWF, FolH 2 (cons of dept)

C **Literature, Composition** (5 cr, §3A or 3B or Comm 3; prereq B)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
Rec V MWThF, FolH 114

1A **Freshman English** (4 cr, §A or 1B or Comm 1; prereq classif card 1 or 1A or 2)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100 (for InCh 24 students only)
—1, Rec I MWF, FolH 5
—2, Rec II MWF, FolH 5
—3, Rec III MWF, ME 102
—4, Rec IV MWF, FolH 5
—5, Rec V MWF, ChE 40
—6, Rec VI MWF, FolH 5
—7, Rec VII MWF, E 215

1B **Freshman English** (4 cr, §A or 1A or Comm 1; prereq classif card 1 or 1A or 2 or 3)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100 (for InCh 24 students only)
—1, Rec I MWF, E 225
—2, Rec II MWF, E 225
—3, Rec III MWF, E 225
—4, Rec IV MWF, E 225
—5, Rec V MWF, E 225
—6, Rec VI MWF, E 225
—7, Rec VII MWF, E 4
—8, Rec VIII MWF, FolH 9

3B **Freshman English** (4 cr, §C or 3A or Comm 3; prereq 2B)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec II MWF, Ex 25
—2, Rec III MWF, ME 106
—3, Rec IV MWF, E 4
—4, Rec V MWF, ME 208
—5, Rec VI MWF, ME 214

21 **Introd Literature** (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3)
—1, III MTWThF, MMA 125, R Foster
—2, VI MTWThF, FolH 308, Buckley

23 **Introd Literature** (5 cr, §19 or 20; prereq 22)
II MTWThF, FolH 204, Montgomery

37 **Modern Literature** (3 cr; prereq soph, C or 3A or 3B or Comm 3)
—1, IV MWF, FolH 308, R Foster
—2, VII MWF, P 110, Myers

52 English Novel (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
II MWF, FolH 207, Frank

55 **Shakespeare: Early Plays** (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
—1, I MWF, FolH 206, Youngblood
—2, II MWF, FolH 107, Wright
—3, II MWF, FolH 213, Myers
—4, III MWF, FolH 107, Buckley
—5, IV MWF, FolH 213, Blum
—6, VI MWF, FolH 204, Youngblood
—7, VII MWF, FolH 207

56 **Shakespeare: Later Plays** (3 cr; prereq 55 or △)
9:30-10:45 TTh, FolH 306, Frank

66 Literature of the Bible (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
VI MWF, FolH 107, Jackson

72 **American Literature** (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
—1, II MWF, FolH 308, Hornberger
—2, VII MWF, FolH 308, C Foster

74 **American Literature** (3 cr; prereq 72 or ♯)
II MWF, P 210, Levenson

75 Chaucer (4 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
IV MWThF, FolH 204, Clark

85 **Adv Technical Communication for Engineers** (3 cr; prereq 16)
—1, I MWF, E 215
—2, I MWF, E 4
—3, II MWF, E 215
—4, II MWF, E 4
—5, III MWF, E 215
—6, III MWF, E 4
—7, IV MWF, E 215
—8, V MWF, E 215
—9, V MWF, E 4
—10, VI MWF, E 215
—11, VI MWF, E 4

100 Old English (4 cr; prereq 5 cr above C)
VII MWThF, FolH 204, Allen

104 Emerson, Thoreau (3 cr; prereq 5 cr above C)
II MWF, FolH 305, Turpie

109 Romantic Poets of Early 19th Century (3 cr; prereq 5 cr above C)
VI TTh, VII T, FolH 107, Jackson

111 Henry Adams, Theodore Dreiser (3 cr; prereq 5 cr above C)
IV MWF, FolH 107, Levenson
114 The Midwest in Literature (3 cr; prereq 5 cr above C)
I MWF, FolH 305, Buckley
120 Interpretation of Poetry (3 cr; prereq 5 cr above C)
1:30-2:45 TTh, FolH 207, Tate
126 Drama: 1660-1900 (3 cr; prereq 5 cr above C)
IV MWF, FolH 206, Hurrell
136 Adv Shakespeare (4 cr; prereq 56)
VI MTWF, FolH 213, Hurrell
137 19th Century Literature (3 cr; prereq 5 cr above C)
III MWF, FolH 206, Youngblood
154 American Novel (3 cr; prereq 5 cr above C)
II TThS, FolH 305, Bowron
162 Milton (3 cr; prereq 21, 22 or 56)
III MWF, FolH 305, Unger
165 Modern English (3 cr; prereq 5 cr above C)
VI MWF, FolH 206, Allen
176 Meter, Rhyme (3 cr; prereq 5 cr above C)
VII MWF, FolH 107, Jackson
181 Recent Trends in Literary Criticism (3 cr; prereq 5 cr above C)
VII MWF, FolH 206, O'Connor
184 Form, Idea in Dramatic Literature (3 cr; prereq 5 cr above C.,56 rec)
VIII-IX T, FolH 206, Hurrell
187 18th Century Literature (3 cr; prereq 5 cr above C)
II MWF, FolH 206, Monk
197 17th Century Literature (3 cr; prereq 5 cr above C)
IV MWF, FolH 303, Unger
205 Structure of Modern English (3 cr, §165)
VI TTh, VII T, FolH 302, Allen
210 17th Century Literature (3 cr)
VIII-IX M, FolH 103, Unger
213 Bibliography, Methods of Literary Research (2 cr)
VIII-IX W, FolH 304, O'Connor
222 Origins, Early Development of American Literary Tradition (3 cr)
VIII-IX M, FolH 108, Hornberger
240 The Canterbury Tales (3 cr)
VIII-IX Th, FolH 302, Clark
250 Modern Literature (3 cr; prereq ♯)
VIII-IX M, FolH 304, O'Connor
253 American Renaissance I: Emerson, Whitman, Melville (3 cr)
VIII-IX Th, FolH 108, C Foster
277 American Realism (3 cr; prereq ♯)
VIII-IX F, FolH 108, Bowron
284 Dryden, His Age (3 cr)
VIII-IX W, FolH 108, Monk
290 Critical Theory (3 cr)
VIII-IX W, FolH 103, Tate
297 Independent Reading (3 cr; prereq MA degree)

Winter and Spring Quarters

Aw-Bs See Af: Lect IV M or V T, rec I MTWF or V MWThF
-Bw-Cs See Af
1Aw-2As See 1Af: Lect IV M or V T, rec V MWF
1Bw-2Bs See 1Bf: Lect IV M or V T, rec I MWF; III MWF; V MWF; VI MWF; VII MWF
-2Aw-3As See 1Af
-2Bw-3Bs See 1Bf
21w-22s‡ See 21f: II MTWThF
-22w-23s‡ See 21f
-38w-39s‡ See 37f
-53w-54s‡ See 52f
55w,s See 55f: I MWF(w); II MWF(s); III MWF(w,s); IV MWF(w); VII MWF(w)
56w,s See 56f: I MWF(w); II MWF(w,s); III MWF(w,s); VI MWF(w,s); VII MWF(w)
-67w‡ See 66f
72w-73s See 72f: II MWF
73w-74s‡ See 72f
75w,s See 75f
85w,s See 85f: II MWF; IV MWF; VI MWF; VIII MWF
-86w,s See 85f: I MWF; III MWF; V MWF; VI MWF; VII MWF(w); I MWF; II MWF; IV MWF; VI MWF(s)
102w Readings: Old English Prose, Verse (3 cr; prereq 100) VII MWF
103s Beowulf (3 cr; prereq 100) VII MWF
105w Hawthorne, Melville (3 cr; prereq 5 cr above C) II MWF
106s Whitman, Mark Twain (3 cr; prereq 5 cr above C) VI MWF
-110w‡ See 109f
113s American Short Story (3 cr; prereq 5 cr above C) II MWF
-121w-122s See 120f
127w‡ See 126f
129s Modern Drama (3 cr; prereq 56 or 126, 127) IV MWF
131s Victorian Poetry II (3 cr; prereq 5 cr above C) III MWF
134s Origins of American Naturalism (3 cr; prereq 5 cr above C) II TThS
-138w-139s‡ See 137f
140w-141s Adv Chaucer (3 cr; prereq 75) VI MWF
142w-143s‡ 20th Century Literature (3 cr; prereq 5 cr above C) VII MWF
-155w‡ See 154f
156s American Drama (3 cr; prereq 5 cr above C) III MWF
157w-158s American Poetry (3 cr; prereq 5 cr above C) IV MWF
162s See 162f: VII MWF
165w See 165f
174s American English (3 cr) VI MWF
175s Chaucer (4 cr, §75; prereq 100) VI MTWF
-177w‡ See 176f
-185w-186s‡ See 184f

-188w-189s‡ See 187f
193s Poetry of W B Yeats (3 cr; prereq 5 cr above C) III MWF
195w-196s‡ Elizabethan Literature: Prose, Poetry, Drama (3 cr; prereq 5 cr above C) II MWF
-198w-199s‡ See 197f
204w History of English Language (3 cr, §166) VI TTh, VII T
206s English Language (3 cr; prereq 100, 174, 204, 205 or ‡) VI TTh, VII T
-211w-212s See 210f
213s See 213f
-223w-224s See 222f
-241w-242s See 240f
246w-247s English Literary Criticism (3 cr) VIII-IX F
-251w See 250f
-254w-255s See 253f
257w-258s Spenser, Milton (3 cr; prereq 256) VIII-IX M
-278w-279s See 277f
-285w-286s See 284f
-291w-292s See 290f
-298w-299s See 297f

English Composition (Comp)

Fall Quarter

X **Preparatory Composition** (0 cr)
—1, I MWF, Bu 123
—2, I T, I-II Th, FolH 9
—3, II MWF, TNCW 113
—4, II-III T, III Th, C 115
—5, III MWF, Bu 125
—6, IV MWF, Bu 123
—7, IV T, IV-V Th, FolH 11
—8, V MWF, FolH 11
—9, V-VI T, VI Th, FolH 5
—10, VI MWF, TNM 106
—11, VII MWF, FolH 226
—12, VII T, VII-VIII Th, FolH 226
—13, VIII MWF, FolH 226

27 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3)
—1, I MWF, FolH 107, Atkins
—2, I MWF, FolH 12, Hart
—3, II MWF, FolH 114, Alford
—4, II MWF, CW 206, Jones
—5, III MWF, FolH 108, Atkins
—6, III MWF, FolH 207, Coleman
—7, IV MWF, FolH 209½, Fraser
—8, IV MWF, FolH 114, Schneider
—9, V MWF, FolH 204, Cody
—10, V T, V-VI Th, FolH 204, Huebner
—11, VI MWF, FolH 305, Cody
—12, VII MWF, FolH 12, Fraser

28 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3...27 rec)
—1, II MWF, FolH 113, Ferris
—2, IV MWF, FolH 110, Myers

58 **Business Reports, Letters** (3 cr; prereq regis BA or ‡, C or 3A or 3B or Comm 3)
—1, II MWF, ForH 175, Haga
—2, IV MWF, Mines 120, Haga
—3, VI MWF, Mines 104, Guthrie

101 Writing of Fiction, Poetry (3 cr; prereq 6 cr above 50 in lit or ‡)
VIII-IX M, FolH 307, Blum

200 Seminar: Writing (3 cr; prereq ‡)
VIII-IX F, FolH 208, Tate

Winter and Spring Quarters

Xw,s See Xf: I MWF; II MWF; IV MWF; V MWF; VII MWF
27w See 27f: I MWF; II MWF; IV MWF; V MWF; V T, V-VI Th; VII MWF
27s See 27f: II MWF; III MWF; IV MWF; VI MWF; VII MWF
28w See 28f: I MWF; III MWF; V MWF; V T, V-VI Th; VI MWF
28s See 28f: II MWF; IV MWF; V MWF; V T, V-VI Th; VII MWF
58w,s See 58f: II MWF(w,s); IV MWF(w,s); VI MWF(w)
-102w-103s See 101f
-201w-202s‡ See 200f

GEOGRAPHY (Geog)

Fall Quarter

1 **Natural Resources** (5 cr)
Lect II MWThF, Owre 15, Borchert
—1, I T, ForH 60
—2, I Th, ForH 60
—3, III M, ForH 60
—4, III T, ForH 60
—5, III W, ForH 60
—6, III Th, ForH 60
—7, III F, ForH 60
—8, IV F, ForH 60
—9, V M, ForH 60
—10, V W, ForH 60
—11, V F, ForH 60
—12, VI F, ForH 60

4 **Human Geography** (5 cr)
Lect III MWF, Owre 15, Broek
—1, I MW, ForH 70
—2, I TTh, ForH 70
—3, II TTh, ForH 70
—4, II WF, ForH 70
—5, III TTh, ForH 70
—6, IV MW, ForH 70
—7, IV TTh, ForH 70
—8, V MW, ForH 70
—9, V TTh, ForH 70
—10, VI MW, ForH 70
—11, VI TTh, ForH 70
—12, VII MW, ForH 70

41 **Primary Production** (5 cr)
Lect VI MWThF, ForH 55, Lukermann
—1, I W, ForH 60
—2, VI T, ForH 60
—3, II T, ForH 60
—4, II Th, ForH 60
—5, IV T, ForH 60
—6, IV Th, ForH 60

60 **Maps, Map Interpretation** (3 cr; prereq 5 cr or ‡)
V-VI TTh, ForH 80, Porter

70 **Cartography** (3 cr; prereq 5 cr or ‡)
I-II TTh, ForH 80, Porter

105 Mediterranean Region (3 cr; prereq 10 cr or ‡)
VI MWF, ForH 285, Webb

109 Middle America (3 cr; prereq 10 cr or ‡)
II MWF, ForH 285, Mather

114 Historical Geography of North America (3 cr; prereq 10 cr or ‡)
IV MWF, ForH 285, Lukermann

133 Climatology (3 cr; prereq 1 or ‡)
VII MWF, ForH 285, Borchert

140 **Adv Cartography** (3 cr; prereq 138)
VII-VIII MW, ForH 80, Porter

150 **Rural Geography** (3 cr; prereq 10 cr or ‡)
—1, V MWF, ForH 285, Mather
—2, I MWF, HE 44 **(StP Campus)**, Mather

153 Urban Geography (3 cr; prereq 4 or ‡)
III MWF, ForH 285, Webb

160 Development of Geographic Thought (3 cr; prereq sr, 15 cr)
I MWF, ForH 285, Broek

190 Readings (1-3 cr; prereq sr)

251 Seminar: Land-Use Planning (ar cr; prereq ‡)
7:30-9:30 pm T, ForH 261, Borchert

254 Seminar: Population, Settlement in Western Europe (ar cr; prereq ‡)
VII-VIII Th, ForH 261, Webb

301 Research Probs (ar cr)

Winter and Spring Quarters

1w,s See 1f

4w,s See 4f

41w,s See 41f

67s Minnesota (3 cr; prereq 5 cr or ‡) VI MWF

70w See 70f: VI-VII TTh

100s Geographical Exploration, Discovery (3 cr; prereq 10 cr or ‡) III MWF

101w Western Europe (3 cr; prereq 10 cr or ‡) VI MWF

107w Soviet Union (3 cr; prereq 10 cr or ‡) V MWF

112s Western United States (3 cr; prereq 10 cr or ‡) IV MWF

113w Eastern United States (3 cr; prereq 10 cr or ‡) IV MWF

117w Middle East (3 cr; prereq 10 or ‡) III MWF

118s Africa (3 cr; prereq 10 cr or ‡) I MWF

121w Southeast Asia (3 cr; prereq 10 cr or ‡) II MWF

134w Adv Climatology (3 cr; prereq 133 or ‡) VII MWF

138w,s Statistical Cartography (3 cr; prereq 70 or ‡) I-II TTh

143w Political Geography (3 cr; prereq 4 or ‡) IV MWF

152s Industrial Geography (3 cr; prereq 41 or ‡) II MWF

170s Field Course (3 cr; prereq sr, 15 cr) VIII M

190w,s See 190f

196s Proseminar: East, South Asia (3 cr, §Anth 196, Pol 196; prereq sr) 3:30-5:15 M

252w,s Seminar: Agricultural Geography (ar cr; prereq ‡) VIII-IX M

253s Seminar: Settlement in the Tropics (ar cr; prereq ‡) VI-VII W

254w See 254f

255w,s Seminar: Development of Geographic Thought (ar cr; prereq ‡) VII-VIII T

301s See 301f

GEOLOGY AND MINERALOGY (Geol)

Fall Quarter

A **Gen Geol Lab** (2 cr; prereq 1 or 8 or 51 or ¶)
—1, VI-VII TTh, P 22
—2, III-IV TTh, P 22
—3, I-II TTh, P 22
—4, III-IV MW, P 22
—5, V-VI MW, P 22
—6, I-II MW, P 22
—7, VII-VIII W, I-II F, P 22

B **Gen Geol Lab** (2 cr; prereq A, 2 or ¶2)
I-II TTh, P 20

1 **Gen Geology** (3 cr)
—1, VI MWF, P 210, Gast
—2, IV MWF, P 2, Thiel
—3, II MWF, P 2, Craddock

2 Gen Geology (3 cr; prereq 1 or 8 or 51)
II MWF, P 110, Sloan

5 **Geology for Engineers** (3 cr; prereq InCh 15)
I MWF, P 210, Schwartz

23 Mineralogy (4 cr; prereq soph, 1 qtr chem)
Lect I MWF, P 110, Zoltai
—1, Lab VI-VII TTh, P 100
—2, Lab VII-VIII MW, P 100

51 Physical Geology (3 cr, §1 or 5 or 8 or NSci 6; prereq 15 cr col nsci or math)
III MWF, P 110, Wright

101 Sedimentation (3 cr; prereq 24)
VII MWF, P 210, Thiel

103 Micropaleontology (3 cr; prereq 107)
VIII MWF, P 10, Swain

106 Petrography (3 cr; prereq 25)
Lect II T, P 210, Phinney
Rec II Th, P 210
—1, Lab VI-VII TTh, P 200
—2, Lab ar

107 Invertebrate Paleontology (3 cr; prereq B or △)
Lect V MW, P 110, Sloan
Rec V F, P 110
—1, Lab III-IV T, P 105
—2, Lab III-IV Th, P 105

112 Petroleum Geology (3 cr; prereq sr, 125, 151 for SLA, 125 for IT students)
I MWF, P 218, Swain

118 Geomorphology (3 cr; prereq B)
VI MWF, P 110, Wright

121 Crystallography (3 cr; prereq trig, 1 yr chem) Zoltai

125 Structural Geology (4 cr; prereq 25 or ♯)
Lect III MWF, P 210, Craddock
—1, Lab VI-VII Th, P 125
—2, Lab VIII-IX Th, P 125

146 Soil Mineralogy (3 cr; prereq 1 qtr chem) Zoltai

170 Geologic Probs (1-3 cr)

171 Preparation of Geologic Report (1 cr; prereq sr, 150 or △) Craddock, Swain

181 Geochemistry (3 cr; prereq 1 yr col chem, 25)
II MWF, P 218, Gast

248 Seminar: Geomorphology, Pleistocene Geology (ar cr; prereq 118, 120) Wright

Winter and Spring Quarters

Aw,s See Af: I-II MW(w,s); I-II TTh(w); III-IV MW(w,s); III-IV TTh(w,s); V-VI MW(w,s); V-VI TTh(s); VI-VII TTh(w); VII-VIII MW(w,s); VII-VIII TTh(s)

Bw,s See Bf: I-II MW(s); I-II TTh(w); III-IV MW(s); III-IV TTh(w); VI-VII TTh (w,s)

1w,s See 1f: II MWF(w,s); IV MWF(w,s); VI MWF(s); VII MWF(w)

2w,s See 2f: IV MWF(w,s); VI MWF(w); VII MWF(s)

-6w See 5f

-24w See 23f

102w Methods of Study of Sediments (3 cr; prereq 101, 106) Lect VI T, lab VII-VIII T; VI-VII Th

108w Stratigraphic Paleontology (3 cr; prereq 107) VIII-IX F

109s Adv Invertebrate Paleontology (3 cr; prereq 108)

110w-111s Economic Geology (3 cr; prereq sr, 125) III MWF(w); I TTh, VIII F(s)

120s Glacial Geology (3 cr; prereq B) I MWF

126w Adv Structural Geology (3 cr; prereq 125) V MF, 1 hr ar

131w-132s Petrology (4 cr; prereq 106) Lect II MW, rec II F, lab VI-VII WF or ar(w); Lect III MW, rec III F, lab VI-VII WF(s)

140w Applied Petrography (3 cr; prereq 131) lab VIII-IX MW

145s Aerial Photographs (3 cr; prereq 118 or 125 or ♯) VI-VIII TTh

-147w See 146f

151w Stratigraphy I (3 cr; prereq 25, 107) I MWF

152s Stratigraphy II (3 cr; prereq 151) II MWF

153s Subsurface Stratigraphy (2 cr; prereq 151) VII-VIII TTh

154w Geological Oceanography, Limnology (2 cr; prereq 101, 118 or ♯) VIII MW

161w Adv Mineralogy (3 cr; prereq ar, 24) Lect I TTh, lab VI-VIII F

166w Mineralography (3 cr; prereq sr, 111, 131) VI-VII MWF

170w,s See 170f

171s See 171f

175s Field Work: Glacial Geology, Geomorphology (3 cr; prereq 118, 120)

179s Mining Geology (3 cr; prereq 111)

182w Isotopic, Nuclear Processes (3 cr; prereq 25, phys chem or ♯)

183s Adv Geochemistry (3 cr; prereq 182, diff equat or ♯)

227s Geotectonics (3 cr; prereq 125) VIII-IX MW

GERMAN (Ger)

Fall Quarter

1A Bgn German: Conversational (5 cr, §1B or 1C)
Lect I MWF, FolH 209½
Lab I TTh

1B Bgn German: Language, Culture (5 cr, §1A or 1C)
Lect III MWF, FolH 209
Lab III TTh

1C Bgn German (5 cr, §1A or 1B)
—1, Lect I MTTh, FolH 209
Lab I WF
—2, Lect II MWF, FolH 209
Lab II TTh
—3, Lect IV MWF, FolH 209
Lab IV TTh
—4, Lect V MTTh, FolH 209
Lab V WF

2C Bgn German (5 cr, §2A or 2B; prereq 1C or 1 yr HS Ger)
VII MTWThF, FolH 209½

3C Bgn German (5 cr, §3A or 3B; prereq 2C or 2 yrs HS Ger)
—1, IV MTWThF, FolH 109
—2, VI MTWThF, FolH 209

4 Interm German (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
—1, III MTWThF, FolH 209½
—2, VI MTWThF, FolH 209½

24 Chemical German (3 cr; prereq chem, mining students)
II MWF, FolH 209½

50 **Reading German: Bgn for Juniors, Seniors** (3 cr, §1A or 1B or 1C)
—1, II MWF, FolH 109
—2, VII MWF, FolH 209

56 Reading, Analysis of Literary Texts (3 cr; prereq 4 or 4 yrs HS Ger)
IV MWF, FolH 108

57 Composition (2 cr; prereq 4)
VI MF, FolH 108

61 Conversation (2 cr; prereq 4)
VI TTh, FolH 103

70 Lyric Poetry from Goethe to Rilke (2-3 cr; prereq 56...or 4, △)
IV TTh, FolH 208

73 Drama from Lessing to the Present (3 cr; prereq 56...or 4, △)
IV MWF, FolH 208

76 Prose of the 19th, 20th Century (2-3 cr; prereq 56... or 4, △)
III TTh, FolH 208

94 Survey of Literature (3 cr; prereq 3 cr above 69)
II MWF, FolH 208

133 Bibliography, Research Methods (1 cr; prereq sr, 11 cr above 69)
VII W, FolH 208

140 Drama in Translation (3 cr; prereq sr, 9 cr theat arts or lit above 50)
VIII-IX T, FolH 103, Menze

163 Goethe (3 cr; prereq sr, 14 cr above 69)
VIII-IX Th, FolH 208, Ramras

176 19th Century Drama (3 cr; prereq sr, 14 cr above 69)
VIII-IX T, FolH 208, Wood

Winter and Spring Quarters

1Cw-2Cs See 1Cf: III MTWThF; V MTWThF
1Cs See 1Cf: IV MTWThF; VI MTWThF
-2Aw-3As See 1Af
-2Bw-3Bs See 1Bf
-2Cw-3Cs See 1Cf
-3Cw See 2Cf
4w,s See 4f
-25w-26s See 24f
-51w-52s See 50f
56w,s See 56f
-58w-59s‡ See 57f
-62w-63s‡ See 61f
68s Pronunciation (2 cr; prereq 4) **III TTh**
69w,s Pronunciation, Diction (1-2 cr; prereq 3, cand for Ger play)
-71w-72s‡ See 70f
-74w-75s‡ See 73f
-77w-78s‡ See 76f
-95w-96s‡ See 94f
99s Faust I (3 cr; prereq 6 cr above 69)
-134w-135s‡ See 133f
-141w-142s‡ See 140f
-164w-165s‡ See 163f
-177w-178s‡ See 176f

HISTORY (Hist)

Fall Quarter

1 **Civilization of the Modern World** (3 cr)
Lect II TTh, NH 45, Wright
—1, I M, ForH 50
—2, I T, ForH 50
—3, I W, ForH 50
—4, I Th, ForH 50
—5, I F, ForH 50
—6, II M, ForH 50
—7, II F, ForH 50
—8, III T, ForH 50
—9, III Th, ForH 50
—10, IV T, ForH 50
—11, VI M, ForH 30
—12, VI W, ForH 50
—13, VI F, ForH 50
—14, VII T, ForH 50
—15, II W, ForH 50
—16, III W, ForH 50
—17, VI Th, ForH 50 (honors section, △)
—18, VI T, ForH 150
Lect III TTh, NH 45, Giesey
—19, I Th, ForH 30
—20, I T, ForH 30
—21, I F, ForH 30
—22, II M, ForH 30
—23, II Th, ForH 50
—24, III M, ForH 50
—25, IV Th, ForH 30
—26, VI W, ForH 60 (honors section, △)
—27, VII Th, ForH 50
—28, III W, ForH 30
Lect VI TTh, NH 45, Altholz
—29, I M, ForH 30
—30, I W, ForH 30
—31, I Th, ForH 180
—32, II W, ForH 30
—33, III T, ForH 30
—34, III Th, ForH 30
—35, IV F, ForH 70
—36, VI W, FraH 101 (honors section, △)

3 **Civilization of the Modern World** (3 cr)
Lect II MW, FraH 101, Bamford
—1, II Th, ForH 30
—2, II F, ForH 30
—3, I T, ForH 130
—4, I Th, ForH 130
—5, I F, ForH 60
—6, VI T, ForH 30
—7, II F, ForH 60
—8, VI Th, Mines 116

4 **English History** (3 cr)
Lect IV MW, FraH 101, Willson
—1, I M, ForH 60
—2, IV T, ForH 30
—3, IV T, ForH 20
—4, VI W, MMA 125
—5, VI F, ForH 30

11 Medieval, Renaissance History (3 cr; prereq art or mus maj or △)
IV MWF, ForH 115, Thompson

14 Ancient Civilization (3 cr, §14A)
VII TWTh, ForH 155, Jones

14A Ancient Civilization with Readings (5 cr, §14)
VII TWTh, ForH 155, VII MF, ForH 115, Jones

17 Asia (3 cr, §59)
VI MWF, ForH 130, Stein

20 **American History** (3 cr; prereq soph)
Lect I MW, Bo B6, Murphy
—1, II M, ForH 70
—2, I T, ForH 20
—3, VI T, ForH 15
—4, III W, JacH 104
—5, IV W, C 215
—6, III Th, ForH 160
—7, I Th, ForH 20
—8, II Th, ForH 15
—9, II T, ForH 50
Lect II TTh, ScH 108, Noble
—10, I M, MMA 100
—11, VI M, ForH 50
—12, I T, ForH 155
—13, III T, ForH 160
—14, IV T, ForH 15
—15, III W, Z 313
—16, IV W, MH 214
—17, VII W, ForH 50
—18, III Th, ForH 15
—19, VI Th, ForH 15
—20, I Th, Mines 116
—21, II M, FraH B25
Lect VI TTh, EE 335, Rutman
—22, III M, ForH 30
—23, II T, ForH 30
—24, VII T, ForH 30
—25, I W, FraH B25
—26, IV W, ForH 60
—27, VI F, ForH 175

22 **American History** (3 cr; prereq soph)
Lect IV MW, ForH 55, Rutman
—1, VI T, Mines 116
—2, I Th, Mines 120
—3, I M, Psy 115
—4, II T, ForH 15
—5, II Th, ForH 20
—6, III T, ForH 15

50 Ancient Civilization (3 cr, §14)
VII TWTh, ForH 155, Jones

53 **Civilization of the Modern World** (3 cr, §1)
Lect II TTh, ForH 155, Altholz
—1, II M, ForH 60
—2, III M, ForH 70
—3, II F, VH 205
—4, VI W, ForH 30

56 **England** (3 cr, §4)
Lect IV MW, FraH 101, Willson
Rec IV F, EE 137

59 Asia (3 cr, §17)
VI MWF, ForH 130, Stein

70 **English Constitutional History** (3 cr; prereq prelegal soph, C avg or jr)
—1, II MWF, ForH 115, Hoyt
—2, I MWF, ForH 115, Thompson

86 American Colonies (3 cr)
II MWF, JacH 304, Tyler

93 **American Diplomatic History** (3 cr)
I MWF, ForH 120, Beatty

97 **Minnesota, the Northwest** (3 cr)
III MWF, ForH 155, Jordan

100B Rome (3 cr)
VIII MWF, ForH 185, Jones

103 Europe in the Middle Ages (3 cr)
III MWF, ForH 185, Hoyt

103A Renaissance, Reformation (3 cr)
1:30-3:00 TTh, ForH 120, Giesey

106A Europe in the 19th Century (3 cr)
1:30-3:00 TTh, ForH 115, Bowditch

109 Europe in the 20th Century (3 cr)
I MWF, Owre 15, Deutsch

112 Economic History of Europe (3 cr)
9:00-10:20 TTh, ForH 170, Bamford

125 Russia (3 cr)
IV MWF, P 110, Anderson

125A Eastern Europe, Middle East in 19th, 20th Centuries (3 cr; prereq 1-2-3)
III MWF, ForH 175, Anderson

128A Modern England: 1714 to Present (3 cr)
II MWF, ForH 150, Willson

134 World War II (3 cr)
II MWF, Bo B6, Deutsch

137 Early Natl Period in United States History (3 cr)
I MWF, ForH 170, Jordan

137A American History: 1850-1900 (3 cr)
III MWF, ForH 20, Loehr

140 Germany (3 cr; prereq 1-2-3 or Ger maj or ♯)
VI MWF, ForH 160, Wright

146 American Economic, Social History (3 cr)
II MWF, ForH 20, Loehr

146A The South (3 cr)
10:30-12:00 TTh, ForH 55, Noble

149 Social, Intellectual History of the United States (3 cr)
III MWF, ForH 115, Tyler

149A American Constitutional History (3 cr)
IV MWF, ForH 20, Murphy

154B South Asia, Especially India (3 cr)
10:30-12:00 TTh, ForH 170, Stein

157 Latin-American History (3 cr)
III MWF, ForH 170, Beatty

167 Readings: Works of Great Historians (2 cr; prereq sr)
VIII-IX T, ForH 244, Giesey

170 Readings: Ancient History (3 cr, †170-171-172; prereq sr, ♯) Jones

173 Readings: Medieval, Renaissance History (3 cr, †173-174-175; prereq sr, ♯)
VI-VII M, ForH 346, Hoyt

173A Readings: Medieval English History (3 cr, †173A-174A-175A; prereq sr, ‡)
VI-VII Th, ForH 244, Thompson

176A Readings: Russian History (3 cr, †176A-177A-178A; prereq sr, 125-126-127, rdg Fren or Ger or Russ, ‡)
VI-VII F, ForH 256, Anderson

176B Readings: India (3 cr, †176B-177B-178B; prereq sr, ‡)
VI-VII Th, ForH 75, Stein

176C Readings: Recent European History (3 cr, †176C-177C-178C; prereq sr, course in 20th cen Europe or World War II, ‡)
1:00-2:40 M, ForH 175, Deutsch

176D Readings: 19th Century European History (3 cr, †176D-177D-178D; prereq 106A-107A, rdg Fren or Ger, ‡)
VIII-IX W, ForH 130, Bowditch

179 Readings: European Economic History since 1500 (3 cr, †179-180-181; prereq sr, ‡)
VI-VII T, ForH 256, Bamford

182 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq sr, ‡)
VI-VII F, ForH 244, Willson

185A Readings: The West in American History (3 cr, †185A-186A-187A; prereq sr, ‡)
VIII-IX W, ForH 244, Murphy

185B Readings: American Diplomatic History (3 cr, †185B-186B-187B; prereq sr, ‡)
VI-VII M, ForH 467, Beatty

185C Readings: 20th Century American History (3 cr, †185C-186C-187C; prereq sr, ‡)
VI-VII Th, ForH 175, Noble

185D Readings: 19th Century American History (3 cr, †185D-186D-187D; prereq sr, ‡)
VI-VII W, ForH 467, Jordan

185E Readings: Probs of 18th Century (3 cr, †185E-186E-187E; prereq sr, ‡)
VI-VII Th, ForH 256, Tyler

188A Readings: American History 1850-1900 (3 cr, †188A-189A-190A; prereq sr, ‡)
VI-VII F, ForH 346, Loehr

200 Historical Bibliography, Criticism (2 cr, †200-201-202)
V TTh, ForH 244, Jones

210 Ancient History (3 cr, †210-211-212) Jones

213 Medieval History (3 cr, †213-214-215) Hoyt

220 Medieval English History (3 cr, †220-221-222) Thompson

223 English History, Tudor-Stuart Period (3 cr, †223-224-225) Willson

240 Nineteenth Century Europe (3 cr, †240-241-242) Bowditch

243 Recent European History (3 cr, †243-244-245) Deutsch

250 European Economic History (3 cr, †250-251-252) Bamford

253 Russian History (3 cr, †253-254-255) Anderson

260 Latin American History (3 cr, †260-261-262) Beatty

263 History of India (3 cr, †263-264-265) Stein

270 Probs of 18th Century: Early American Social, Intellectual History (3 cr, †270-271-272) Tyler

273 Nineteenth Century American History (3 cr, †273-274-275) Jordan

276 American History: 1850-1900 (3 cr, †276-277-278) Loehr

283 American Economic History (3 cr, †283-284-285) Loehr

290 The West in American History (3 cr, †290-291-292) Murphy

293 American Diplomatic History (3 cr, †293-294-295) Beatty

Winter and Spring Quarters

1w-2s‡ See 1f: Lect II MW, rec ar
-2w-3s‡ See 1f
-5w-6s‡ See 4f
-12w-13s‡ See 11f
-15w-16s See 14f
-15Aw-16As See 14Af
-18w-19s‡ See 17f
20w-21s‡ See 22f
-21w-22s‡ See 20f
-51w-52s‡ See 50f
-54w-55s‡ See 53f
-57w-58s‡ See 56f
-60w-61s‡ See 59f
-71w-72s‡ See 70f
-87w-88s‡ See 86f
-94w-95s‡ See 93f
-98w-99s‡ See 97f
-101Bw-102Bs‡ See 100Bf
-104w-105s‡ See 103f
-104Aw-105As‡ See 103Af
-107Aw-108As‡ See 106Af
-110w-111s‡ See 109f
-113w-114s‡ See 112f
-126w-127s‡ See 125f
-126Aw-127As‡ See 125Af
-129Aw-130As‡ See 128Af
-135w-136s‡ See 134f
-138w-139s‡ See 137f
-138Aw-139As‡ See 137Af
-141w-142s‡ See 140f
-147w-148s‡ See 146f
-147Aw-148As‡ See 146Af
-150w-151s‡ See 149f
-150Aw-151As‡ See 149Af
-155Bw-156Bs‡ See 154Bf
-158w-159s‡ See 157f
-168w-169s‡ See 167f
-171w-172s See 170f
-174w-175s See 173f
-174Aw-175As See 173Af
-177Aw-178As See 176Af
-177Bw-178Bs See 176Bf
-177Cw-178Cs See 176Cf
-177Dw-178Ds See 176Df
-180w-181s See 179f
-183w-184s See 182f

-186Aw-187As See 185Af
-186Bw-187Bs See 185Bf
-186Cw-187Cs See 185Cf
-186Dw-187Ds See 185Df
-186Ew-187Es See 185Ef
-189Aw-190As See 188Af
-201w-202s See 200f
-211w-212s See 210f
-214w-215s See 213f
-221w-222s See 220f
-224w-225s See 223f
-241w-242s See 240f
-244w-245s See 243f
-251w-252s See 250f
-254w-255s See 253f
-261w-262s See 260f
-264w-265s See 263f
-271w-272s See 270f
-274w-275s See 273f
-277w-278s See 276f
-284w-285s See 283f
-291w-292s See 290f
-294w-295s See 293f

INTERDEPARTMENTAL COURSES AND GENERAL EDUCATION

Communication (Comm)

Fall Quarter

1 **Communication** (4 cr, §Engl A or 1A or 1B; prereq classif 1 or 1A or 2 or 3)
—1, I MTWF, TNM 114
—2, II MTWF, TNM 114
—3, III MTWF, TNM 114
—4, IV MTWF, TNM 114
—5, V MTWF, TNM 114
—6, VI MTWF, TNM 114

2 **Communication** (4 cr, §Engl B or 2A or 2B; prereq 1)
V MTWF, TNM 106

3 **Communication** (4 cr, §Engl C or 3A or 3B; prereq 2)
V MTWF, TNM 107

Winter and Spring Quarters

1w-2s See 1f: I MTWF; III MTWF; V MTWF
1s See 1f: I MTWF; IV MTWF; V MTWF
-2w-3s See 1f
3w See 3f

Family Life (FL)

Fall Quarter

1 **Preparation for Marriage** (3 cr, §1A)
—1, II MWF, TNM 115, Torbett
—2, II T, II-III Th, JohH 306, Torbett
—3, IV MWF, TNM 115, Hansen
—4, V MWF, TNM 115, Hansen
—5, V MWF, JohH 306, Mandell

1A **Preparation for Marriage** (3 cr, §1; prereq married students)
IV MWF, JohH 306, Neubeck

15 **The Home, Its Furnishing** (3 cr but cr added to SLA grad req)
II MWF, JohH 205, Ludwig

25 **Child Development, Adjustment** (3 cr, §CD 40 or 80, not open to NKP or psy maj)
III MWF, Bu 120, Grams

Winter and Spring Quarters

1w,s See 1f: II MWF(w,s); II T, II-III Th (w,s); IV MWF(w,s); V MWF(w,s); VI MWF(s)

1Aw,s See 1Af: II T, II-III Th(s); IV MWF (w,s); V MWF(w)

15w,s See 15f

20s Consumer Education (3 cr but cr added to SLA grad req) II MWF

25w,s See 25f

Humanities (Hum)

Fall Quarter

1 **Modern World I** (5 cr)
—1, I MTWThF, JohH 114, J Wright
—2, III MTWThF, FolH 9, Wood
—3, III MTWThF, FolH 204, Kwiat
—4, IV MTWThF, JohH 113, Ames
—5, IV MTWThF, P 210, Vogelbaum
—6, V MTWThF, JohH 114, Frank
—7, V MTWThF, JohH 115, Sharma
—8, VII MTWThF, JohH 115, Ludwig
—9, VII MTWThF, JohH 113, W Wright

1A **Age of Enlightenment** (3 cr)
—1, I MWF, Dairy 15 (StP Campus)
—2, II MWF, AgEng 108 (StP Campus)
—3, III MWF, AgEng 108 (StP Campus)
—4, VI MWF, So 115 (StP Campus)
—5, 1:30-2:50 TTh, AgEng 108 (StP Campus)

2 **Modern World II** (5 cr; prereq 1)
VI MTWThF, JohH 122, Bryan

3 **Modern World III** (5 cr; prereq 2)
II MTWThF, JohH 313, Siegelman

4 **Modern World IV** (5 cr; prereq 1 or 2 or 3)
III MTWThF, JohH 113, Siegelman

11 **Greek Heritage** (5 cr)
II MTWThF, JohH 105, Swanson

21 **American Life I** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
—1, II MWF, FolH 6, Kwiat
—2, III MWF, FolH 6, B Weber
—3, IV MWF, FolH 6, Turpie
—4, VI MWF, FolH 6, Rutman

51 **Modern World** (5 cr, §1)
—1, II MTWThF, JohH 114, Blum
—2, III-IV TTh, JohH 114, 1 hr ar, Ross
—3, VI MTWThF, JohH 113, Ames

54 **Modern World** (5 cr, §4)
VI MTWThF, JohH 115, Ludwig

61 **European Heritage: Homer to Molière** (5 cr, §11)
—1, II MTWThF, JohH 115, Vogelbaum
—2, III-IV TTh, JohH 115, 1 hr ar, Berryman
71 **Humanities in the United States** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
VII MWF, FolH 6, Levenson
131 **Proseminar** (3 cr; prereq sr)
VII-VIII T, JohH 105, Berryman

Winter and Spring Quarters

1w See 1f: II MTWThF; IV MTWThF; V MTWThF; VII MTWThF
1s See 1f: I MTWThF; II MTWThF; II MTWThF; IV MTWThF; VI MTWThF
1Aw Age of Enlightenment (3 cr) III MWF
2w See 2f: I MTWThF; III MTWThF; IV MTWThF; V MTWThF; VII MTWThF
2s See 2f: II MTWThF; IV MTWThF; V MTWThF; VII MTWThF
2Aw Romanticism, Industrial Revolution (3 cr; prereq 1A) I MWF; II MWF; 1:30-2:50 TTh
2As Romanticism, Industrial Revolution (3 cr; prereq 1A) III MWF
3w See 3f: VI MTWThF
3s See 3f: I MTWThF; III MTWThF; IV MTWThF; VII MTWThF
3As Science, Humanism (3 cr; prereq 1A) I MWF; II MWF; 1:30-2:50 TTh
4w,s See 4f: III MTWThF(w); V MTWThF(s)
12w Roman, Medieval Heritage (5 cr) II MTWThF
13s Renaissance, Reformation (5 cr) II MTWThF
22w American Life II (3 cr, §9 cr in 21, 22, 23, 71, 72, 73) II MWF; III MWF; IV MWF; VI MWF
23s American Life III (3 cr, §9 cr in 21, 22, 23, 71, 72, 73) II MWF; III MWF; IV MWF; VI MWF
24w,s American Humanities (3 cr; prereq 1A) VI MWF
-52w-53s‡ See 51f
54w See 54f: III-IV TTh, 1 hr ar
54s See 54f: III-IV TTh, 1 hr ar; VI MTWThF
-62w-63s‡ See 61f
-72w-73s‡ See 71f
-132w-133s See 131f

Natural Science (NSci)

Fall Quarter

1 **Orientation** (5 cr, §4 or Biol 1 or 1A or any elem sci, †1-2)
III MTWThF, Ph 166, Graubard
4 **Physical World** (3 cr, §1 or elem phy sci, †4-5; prereq 1 yr HS algebra)
Lect VII MWF, Ph 133, Winter, lab ar
171 Development of Sciences (3 cr; prereq 1 yr of HS biol, 1 yr phy sci or ‡)
IV MWF, Ph 143, Graubard

Winter and Spring Quarters

-2w-3s See 1f
-5w See 4f
6s Physical World (4 cr, §Geol 1 or 8; prereq 5) Lect VII MWF, lab ar
-172w-173s‡ See 171f

Personal Orientation (PO)

Fall Quarter

1 **How to Study** (2 cr but cr added to SLA grad req)
—1, I MWF, JohH 307
—2, II MWF, JohH 307
—3, VI MWF, JohH 307
—4, VII MWF, JohH 307
11 **Choosing a Vocation** (2 cr but cr added to SLA grad req)
I MWF, JohH 306, Hewer

Winter and Spring Quarters

1w,s See 1f: I MWF(w,s); II MWF(w,s); V MWF(w,s); VI MWF(s); VII MWF(w)
11w,s See 11f: III MWF(s); VI MWF(w)

Social Science (SSci)

Fall Quarter

1 **Introduction** (4 cr)
—1, I MWThF, JohH 113, Engelbourg
—2, II MWThF, JohH 122, Blum
—3, II-III TTh, JohH 205, Kanun
—4, IV MWThF, JohH 205, Engelbourg
—5, IV MWThF, JohH 122, Roshwald
—6, V MWThF, JohH 122, Roshwald
—7, VI MWThF, JohH 114, Cooperman
—8, VI MWThF, JohH 205, Blum
—9, VII MWThF, JohH 114, Cooperman
2 **Introduction** (4 cr; prereq 1)
—1, III MWThF, JohH 122, Roshwald
—2, VI MWThF, JohH 313, Krueger
3 **Introduction** (4 cr; prereq 2)
—1, II MWThF, JohH 113, Engelbourg
—2, VII MWThF, JohH 122, Lukermann
52 **Introduction** (4 cr, §2)
IV MWF, JohH 115, 1 hr ar, Blum

Winter and Spring Quarters

1w See 1f: II MWThF; III MWThF; V MWThF; VII MWThF
1s See 1f: II MWThF; IV MWThF; V MWThF; VI MWThF

2w See 2f: I MWThF; II MWThF; II-III TTh; IV MWThF; V MWThF; VI MWThF; VII MWThF
2s See 2f: II MWThF; III MWThF; VII MWThF
3w See 3f: III MWThF; VI MWThF
3s See 3f: I MWThF; II MWThF; II-III TTh; IV MWThF; VI MWThF
52w-53s‡ See 52f

JOURNALISM (Jour)

Fall Quarter

11 **Reporting for Nonmajors** (3 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3 or Rhet 3)
—1, I MWF, MurH 311, Sim
—2, IV MWF, MurH 210
—3, VII MWF, MurH 210, Hvistendahl
12 **Bgn News Photography** (3 cr; prereq soph)
VI-VIII TTh, MurH 20, Bush
13 **Journalistic Writing for Majors** (4 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3, typ 35 words/min or BA 32 or 33)
Lect IV T, MurH 308
—1, I-II MWF, MurH 212, Bush
—2, I-III TTh, MurH 212, Charnley
—3, VI-VIII TTh, MurH 212, Hage
—4, I-III TTh, MurH 210, Kildow
15 **Newspaper Reporting for Majors** (3 cr; prereq 14 with grade C or ‡, ¶Comp 27 or 28)
III-IV MWF, MurH 212, Gerald
18 **Prin Advertising** (3 cr; prereq 13, C avg, ¶Comp 27 or 28)
VI MWF, MurH 311, Winter
51 **News Editing** (3 cr; prereq 15 or B avg in 13, 14)
Lect VII M, MurH 311, Sim
—1, Lab I-II TTh, MurH 206, Gompertz
—2, Lab VI-VII TTh, MurH 206, Gompertz
—3, Lab I-II TTh, MurH 207
54 **Advertising Layout, Typography** (3 cr; prereq jour adv maj or min in Educ or BA or AFHE or ‡)
Lect III T, MurH 308, Wilson
—1, Lab III-IV MW, MurH 315, 320, Wilson
—2, Lab VI-VII TTh, MurH 315, 320, Wilson
65 Graphic Arts: Processes (3 cr)
8:30-10:00 TTh, MurH 308, Wilson
73 **Magazine Writing** (3 cr; prereq 15 or 41, ‡)
—1, IV MWF, MurH 308, Bush
—2, VI MWF, MurH 302, Kildow
78 Public Relations Methods (3 cr; prereq 51, 55, 73...or 41, 54, 69)
I MWF, MurH 308, Lindsay
79 **Advertising Copy Writing** (3 cr; prereq 41 or 51, 54, 65)
III MWF, MurH 210, Winter
84 **Radio News, Public Affairs** (3 cr; prereq 15, ‡)
VI MWF, MurH 212, Lindsay
93 Community Newspaper (3 cr; prereq 41 or 51 or ¶)
10:00-11:30 TTh, MurH 311, Sim
106 **Critical Writing** (3 cr; prereq up div writing course, ‡)
II TTh, 1 hr ar, MurH 302, Hage
109 History of Journalism (3 cr)
II MWF, MurH 308, Hage
113 Mass Communication Theory (3 cr; prereq jour maj or ‡)
IV MWF, MurH 311, Nixon
118 Adv Projects (1-3 cr; prereq sr, jour maj, B avg, ‡) Jones
120 Development of Radio, Television Communications (3 cr; prereq jour maj, 15 or 18...or others, 13 or ‡)
I MWF, MurH 302, Charnley
124 Intl Communications, Foreign Affairs (3 cr, §111; prereq 15 cr soc sci...up div hist or pol sci or intl rel rec)
VII MWF, MurH 302, Nixon
130 Public Opinion, Propaganda (3 cr; prereq 15 cr soc sci)
III MWF, MurH 308, Carter
140 Interpretation of Contemporary Affairs (3 cr; prereq sr, 51, 15 cr soc sci)
VI TTh, VII T, MurH 302, Gerald
161 **Advertising: Newspapers, Other Print Media** (3 cr; prereq 18, 54, 79 or ‡...or 41, 54, ‡)
2:30-4:00 TTh, MurH 311, Winter
162 **Advertising: Radio, Television Media** (3 cr; prereq 18, 79 or ‡)
II MWF, MurH 311, Mindak
163 Advertising Media Analysis (3 cr; prereq sr, 18, 161, 162, ‡...or 161, 162, BA 77 or ‡)
VII MWF, MurH 308, Mindak
200 Scope, Methods of Communications Research (3 cr; prereq cons adv)
VIII-IX W, MurH 311, Jones
205 Seminar: Intl News Communications, Comparative Foreign Journalism (3 cr; prereq 111, 125 or 126, rdg fgn lang) Nixon
277 Govt, Mass Communications (3 cr; prereq 12 cr incl 177, ‡)
III TTh, MurH 206, Gerald
290 Probs: Mass Communications (3 cr; prereq ‡)

Winter and Spring Quarters

11w See 11f: VI MWF
12w See 12f
13w,s See 13f: Lect IV T, rec I-III TTh; VI-VIII TTh(w); I-II MWF, 1 hr ar (s)
14w,s Newspaper Reporting for Majors (3 cr; prereq 13 with grade C or ‡, ¶Comp 27 or 28, typ 35 words/min or ¶BA 33) I-II MWF(w); I-III TTh(s); VI-VIII TTh(w)
15s See 15f: I-II TTh, 1 hr ar; VI-VII TTh, 1 hr ar
18w,s See 18f: I MWF(s); II MWF(w); VI MWF(w)

41w,s Publications Editing (3 cr; prereq soph, 11 or 13) Lect IV M, rec I-II TTh(w,s); IV-V WF(w,s); VIII-IX TTh(w)

51s See 51f: Lect III T, lab VIII-IX MW

53w Picture Editing (3 cr; prereq 41, 51 or ‡) Lect I T, lab II-III TTh

54s See 54f: Lect III T, rec I-II TTh; III-IV MW

55w Newspaper Make-up, Typography (3 cr; prereq maj, 51, ¶56 or ‡) Lect II MTWTh, rec III-IV MW; III-IV TTh; VI-VII WF; VIII-IX TTh

56w Newspaper Editing (3 cr; prereq 55 or ¶) Lect II MTWTh, rec III-IV MW; III-IV TTh; VI-VII WF; VIII-IX TTh

58s Newspaper, Periodical Design, Typography (3 cr; prereq 55, ‡) VI-VII TTh

59w Adv Advertising Typography, Layout (3 cr; prereq 54) VI-VII TTh

65s See 65f

66s News, Feature Photography (3 cr; prereq 12, 13 or ‡) VI-VIII TTh

69s Business News, Feature Writing (3 cr; prereq 41) II TTh, 1 hr ar; VII MWF

73w See 73f: VI MWF

74w Magazine Editing (3 cr; prereq 55, 73, ‡) VII-VIII M, 1 hr ar

79w,s See 79f: VII MWF(w); IV MWF(s)

82s Supervision of School Publications (3 cr; prereq 41 or 51) VI MWF

85w Television News, Public Affairs (3 cr; prereq 84) VI MWF

90s Mass Communications, News (3 cr; prereq non-jour maj) III MWF

95s Newspaper Mgt (3 cr; prereq 41 or 51) 8:30-10:00 TTh

101w,s Reporting Public Affairs (3 cr; prereq sr, 51) III MWF

103s Literary Aspects (3 cr; prereq ‡) VII MWF

113s See 113f: II MWF

115w,s Communications Analysis: Content, Audiences, Effects (3 cr; prereq BA 5 or Soc 45 or Psy 70 or ‡...Psy 167 rec) III TTh, 1 hr ar(w); II TTh, 1 hr ar(s)

118w,s See 118f

121w The Press in Dynamic Society (3 cr; prereq jour maj, 15 or 18...or others, ‡) IV MWF

122s Current Communications Probs (3 cr; prereq sr, 51) VI-VII T, 1 hr ar

125w Communication Systems of Free World (3 cr; prereq 15 cr soc sci...up div course intl rel or compar govt rec) VII MWF

126s Communications in Authoritarian Society (3 cr; prereq 15 cr soc sci...up div course in intl rel or compar govt rec) VII MWF

-131w See 130f

-141w See 140f

142s News Interpretation for Radio, Television (3 cr; prereq jour maj, 85, 140...or others, ‡) VI MWF

150s Institutional Public Relations (3 cr; prereq non-jour maj, sr, ‡) 3:30-5:00 MW

161w See 161f: 9:30-11:00 TTh

162w See 162f: III MWF

163s See 163f

164w,s Current Advertising Developments, Probs (3 cr; prereq 54, 79, 163 or ‡) VII MWF (w); III MWF(s)

177s Freedom of Press, Communications Law (3 cr; prereq 15 cr soc sci) IV MWF

190s Adv Probs: Journalistic Writing (3 cr; prereq grad, ‡)

208s Communication Agencies as Social Institutions (3 cr; prereq ‡) III TTh

213w Seminar: Mass Communication Theory (3 cr; prereq 113, ‡)

218w Seminar: Communications Analysis (3 cr; prereq 113 or 115, 200, stat or ‡)

220s Seminar: Advertising Research (3 cr; prereq 115 or 218 or ‡)

230s Seminar: Public Opinion, Propaganda (3 cr; prereq 131, cons adv)

-291w-292s See 290f

LIBRARY (Lib)

Fall Quarter

50 History of Libraries, Librarianship (3 cr)
VI MWF, Lib 4A, Shove

53 School Library Mgt (3 cr; prereq school librarians on cert prog)
4:00-6:30 T, Lib 4A, Callahan

55 Administration (3 cr)
9:00-10:30 TTh, Lib 4A, Berninghausen

62 Reference I (3 cr)
—1, 10:30-12:00 TTh, Lib 4A, Wezeman
—2, 6:30-9:00 pm M, Lib 4A, Wezeman

70 Selection Library Materials (3 cr)
IV MWF, Lib 4A, Callahan

83 Cataloguing, Classification (3 cr)
—1, III MWF, Lib 4A, Simonton
—2, 6:30-9:00 pm W, Lib 4A, Simonton

161 Literature of the Humanities (3 cr; prereq 62)
IV MWF, Lib 4B, Kingsley

165 Adv Bibliography (3 cr)
II MWF, Lib 4A, Shove

166 Reference Work (3 cr; prereq 62)
VI MWF, Psy 109, Wezeman

168 Research Methods (3 cr)
1:00-2:30 TTh, Lib 4A, Simonton

171 Reading Guidance for Children (3 cr; prereq 70)
VI MWF, Lib 4B, Callahan

Winter and Spring Quarters

55w See 55f: 4:30-6:00 TTh

62s See 62f: 6:30-9:00 pm W

70w See 70f: 6:30-9:00 pm M

74s Materials in Classroom (3 cr; prereq school librarians on cert prog) III MWF
83s See 83f: 9:00-10:30 TTh
131s Public Library Extension, Development (3 cr; prereq 55) 10:30-12:00 TTh
153s History of Books, Printing (3 cr) 9:00-10:30 TTh
154w The Public Library (3 cr; prereq 55) II MWF
155w College, University Library (3 cr; prereq 55) 1:00-2:30 TTh
156w Special Libraries (3 cr; prereq 55) VI-VII M
157w School Library Probs (3 cr; prereq 55) IV MWF
160w Literature of Social Sciences (3 cr; prereq 62) 9:00-10:30 TTh
168w See 168f: III MWF
172w Reading Guidance for Adolescents (3 cr; prereq 70) VI MWF
173w Reading Guidance for Adults (3 cr; prereq 70) IV MWF
175s Publishers, Publishing (3 cr) III MWF
176s Communication Media, Library (3 cr; prereq ♯) 6:30-9:00 pm M
184w Cataloguing, Classification II (3 cr; prereq 83) I MWF
258s Seminar: College, University Librarianship (3 cr; prereq 155) 1:00-3:00 M
259s Probs: Public Librarianship (3 cr; prereq 154) 1:00-3:00 T
272s Children's, Young People's Work (3 cr) 1:00-3:00 W
281s Seminar: Theories of Bibliographical Organization (3 cr; prereq 184) 1:00-3:00 Th

MATHEMATICS (Math)

Fall Quarter

X Preparatory Mathematics (0 cr; prereq △)
—1, I MTWThF, FolH 213
—2, III MTWThF, FolH 113
—3, VI MTWThF, FolH 113
—4, VII MTWThF, FolH 113

H Higher Algebra (3 or 5 cr; prereq 1 yr elem alg)
—1, I MTWThF, FolH 3
—2, III MTWThF, FolH 2
—3, V MTWThF, FolH 308
—4, VI MTWThF, FolH 301
—5, VII MTWThF, FolH 3
—6, II MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)
—7, IV MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

T Trigonometry (3 cr; prereq plane geom, H or HS higher alg)
—1, I MWF, FolH 109
—2, I TThS, FolH 109
—3, II TThS, FolH 105
—4, V MWF, FolH 104
—5, VI MWF, FolH 110
—6, VII MWF, FolH 213
—7, III MWF, AgEng 103 **(StP Campus)** (for AFHE students)

5 Foundations of Arithmetic (3 cr; prereq 1 yr elem alg, 1 yr HS geom)
VII MWF, FolH 301, Olmsted

10 College Algebra (5 cr; prereq plane geom or △, H or HS higher alg)
—1, I MTWThF, FolH 308
—2, II MTWThF, FolH 301
—3, III MTWThF, FolH 105
—4, IV MTWThF, CW 218
—5, V MTWThF, FolH 301
—6, VI MTWThF, FolH 3
—7, VII MTWThF, FolH 109
—8, II MTWThF, FolH 104 (honors section)

40 Mathematical Analysis I (5 cr; prereq 10, T or ¶ or HS trig)
—1, I MTWThF, FolH 301
—2, IV MTWThF, FolH 301
—3, VII MTWThF, FolH 104
—4, IV MTWThF, FolH 102 (honors section)

53 Mathematical Analysis II (5 cr; prereq 40)
—1, III MTWThF, FolH 301
—2, VII MTWThF, FolH 105

54 Mathematical Analysis III (5 cr; prereq 53)
—1, I MTWThF, FolH 101
—2, VI MTWThF, FolH 105

55 Interm Calculus (3 cr; prereq 51 or 51A or 54)
—1, I MWF, FolH 104
—2, V MWF, FolH 101

59 Elem Differential Equations (2 cr; prereq 50A or 51 or 53)
V TTh, FolH 104

60 Synthetic Metric Geometry (3 cr; prereq 40)
VI MWF, FolH 101

62 Theory of Equations (3 cr; prereq 53 or ¶)
VII MWF, FolH 101

100A Foundations of Arithmetic, Algebra, Geometry (3 cr; prereq 54, ♯)
—1, IV MWF, FolH 3
—2, VII MWF, FolH 9

106 Differential Equations (3 cr; prereq 52 or 55)
III MWF, FolH 101

107 Adv Calculus (3 cr; prereq 52 or 55)
II MWF, FolH 101, Storvick

112 Elem Set Theory (3 cr; prereq 51 or 51A or 54)
II TTh, FolH 102, 1 hr ar, Engeler

112A Mathematical Logic (3 cr; prereq 52 or 55 or Phil 155 or ♯)
IV MWF, FolH 105, Orey

121 Theory of Statistics (3 cr; prereq 52 or 55)
IV MWF, FolH 101, Gelbaum

127 Mathematics of Social, Biological Sciences (3 cr; prereq 50A or 51 or 53 or ♯)
VI MWF, FolH 102, Kalisch

136 Solid Analytic Geometry (3 cr; prereq 53 or ¶)
II MWF, FolH 102

157 **Methods of Applied Mathematics** (3 cr; prereq 52 or 55 or ♯)
II TThS, FolH 101, Spitzer

170 Modern Algebra (3 cr; prereq 131A)
VI MWF, FolH 109, Jonsson

178A Introd to Probability (3 cr; prereq 108 or 123 or ♯)
11:30-12:45 TTh, FolH 101, Baxter

203 Adv Topics: Mathematical Statistics (3 cr; prereq 123, 108 or ♯)
1:30-3:00 TTh, FolH 101, Spitzer

206 Theory of Functions of Real, Complex Variables (3 cr; prereq 108 or 125B or 159 or ♯)
II MWF, FolH 105, Gelbaum

252A Linear Spaces, Operator Theory (3 cr; prereq 170, 245 or ♯)
VII MWF, FolH 102, Kalisch

258 Theory of Probability (3 cr; prereq 245 or ♯)
III TTh, FolH 101, 1 hr ar, Baxter

293A Seminar: Stochastic Processes (2 or 3 cr; prereq 208 or 263, ♯) Spitzer

Winter and Spring Quarters

Xw,s See Xf: I MTWThF(w); III MTWThF (s); V MTWThF(w,s); VI MTWThF(w)

Hw See Hf: I MTWThF; IV MTWThF(StP); V MTWThF; VI MTWThF

Hs See Hf: II MTWThF(StP); III MTWThF; V MTWThF

Tw See Tf: I MWF; I TThS; III MWF; III TThS; VI MWF; III MWF(StP)

Ts See Tf: I MWF; I TThS; IV MWF; VI MWF; IV MWF(StP)

Cw Trigonometric Computation (2 cr; prereq HS Trig or T or ¶) III TTh

5w,s See 5f: II MWF(s); VI MWF(w)

10w,s See 10f: I MTWThF(w,s); II MTWThF (w); III MTWThF(s); V MTWThF(w,s); VI MTWThF(s); VII MTWThF(w); II MTWThF(StP)

20w,s Investment (5 cr; prereq 10) I MTWThF (s); IV MTWThF(w)

21w Life Insurance (3 cr, §BA 113; prereq 20 or 40 or BA 53 or 153 or ♯) II MWF

40w,s See 40f: I MTWThF(s); II MTWThF (w,s); III MTWThF(w); V MTWThF(w,s); VI MTWThF(w); VII MTWThF(s)

40Aw,s Mathematical Analysis I (5 cr; prereq pre-acctg students, 10) I MTWThF(s); III MTWThF(w)

53w See 53f: I MTWThF; IV MTWThF

53s See 53f: II MTWThF; III MTWThF; V MTWThF

54w See 54f: III or VII MTWThF

54s See 54f: I or IV MTWThF

55w,s See 55f: I or VI MWF(w); III or VII MWF(s)

59w,s See 59f: I TTh(w); III TTh(s)

60s See 60f: II MWF

62w See 62f: VI MWF

-100Bw-100Cs See 100Af

106s See 106f: I MWF

107w-108s See 107f: V MWF

-108w See 107f

111Aw-111Bs Development of Number System (3 cr; prereq 51 or 51A or 54) VII TTh, 1 hr ar

-112Bw-112Cs See 112Af

-122w-123s See 121f

125Aw-125Bs Critical Reasoning in Mathematical Analysis (3 cr; prereq 51 or 51A or 54) III MWF

-128w-129s See 127f

131Aw-131Bs Adv Algebraic Theory (3 cr; prereq 51 or 51A or 54) VII MWF

-158w-159s See 157f

-171w-172s See 170f

-178Bw-178Cs See 178Af

181Aw-181Bs Topology of Cartesian Plane (3 cr; prereq 52 or 55) II TTh, 1 hr ar

-204w-205s See 203f

-207w-208s See 206f

245s Lebesgue Integrals (4 cr; prereq 207) VII MTThF

-252Bw-252Cs See 252Af

-259w-260s See 258f

-293Bw-293Cs See 293Af

MUSIC (Mus)

Fall Quarter

A Piano (no cr)
Ar, ScH 107, Weiser, Freed, Hunter

D Voice (no cr)
Ar, ScH 107, Schuessler, Knowles

1 **Fundamentals** (2 cr; prereq non-mus maj)
—1, I MTWTh, NMA 4
—2, II MTWTh, ScH 4
—3, V MTWTh, ScH 4
—4, VIII-IX TTh, MusEd 200

1T **Theory** (3 cr)
—1, I MTWThF, ScH 3, Barry
—2, III MTWThF, ScH 3, Barry
—3, VI MTWThF, ScH 3, Argento
—4, VII MTWThF, ScH 3, Barry

3T **Theory** (3 cr; prereq 2T)
V MTWThF, ScH 3, Collins

4T **Theory** (4 cr; prereq 3T)
—1, II MTWThF, ScH 103, Malcolm
—2, III MTWThF, ScH 103, Malcolm
—3, VI MTWThF, ScH 103, Malcolm

6T **Theory** (4 cr; prereq 5T)
V MTWThF, ScH 103, Argento

7A Ear Training (2 cr)
I TWThF, ScH 103, Malcolm

10 **Introduction** (5 cr)
VI MTWThF, ScH 4, Houle

11 Piano: Individual Lessons (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Weiser, Freed, Hunter

11A **Piano: Class Lessons** (2 cr; prereq 1 for non maj, ♯ for others)
Mu Hr IV T, ScH 108
—1, III MWF, MusEd 103, Duckworth (2-3 yrs piano training)
—2, V MWF, MusEd 103, Duckworth (no piano training)
—3, VI MWF, MusEd 103, Duckworth (1-2 yrs piano training)

12 Voice: Individual Lessons (2 or 4 cr; prereq entr exam)
MU Hr IV T, ScH 108, lesson ar, ScH 107, Schuessler, Knowles

12C **Voice: Class Lessons** (2 cr)
Mu Hr IV T, ScH 108
—1, V MWF, MusEd 104, Knowles
—2, VI MWF, MusEd 104, Knowles
—3, VII MWF, MusEd 104, Knowles
—4, IV MWF, MusEd 4, Abelson

13 Violin (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Druian

14 Viola (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Druian

15 Cello (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Jamieson

16 Double Bass (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch

17 Flute (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Opava

18 Oboe (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Angelucci

19 Clarinet or Saxophone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch, Williams, Handlon

20 Bassoon (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Santucci

21 Trumpet (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Adelstein

22 French Horn (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Speyer

23 Trombone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

24 Tuba (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Walton

25 Percussion (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Dahlgren

26 Harp (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Miller

27 Organ (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

31 Music Literature (2 cr)
II MWF, ScH 108, Ivory

34 **History of Music** (2 cr; prereq 3T)
I MTWThF, ScH 104, Houle

39 Women's Glee Club (1 cr; prereq ♯)
VI MWF, NMA 4, Barry

40 Orchestra (1 cr; prereq ♯)
7:00 pm W, NMA Stage, sectionals ar, Oberg

43 **Chorus** (1 cr, †3 qtrs; prereq ♯)
—1, IV MWF, NMA 4, 5; 7:30 pm T, NH 45, Collins
—2, VIII MWF, NMA 5, NH 45; 7:30 pm T, NH 45, Collins

43S St Paul Campus Chorus (1 cr; prereq ♯)
4:30-5:30 MWF, CofH 225 (**StP Campus**), Abelson

46 Concert Band (1 cr; prereq ♯)
—1, VIII-IX MWThFS, NMA 4, 5, Sperry
—2, VIII-IX TWThFS, NMA 4, 5, Sperry

49 Men's Glee Club (1 cr; prereq ♯)
V MWF, NMA 5, Abelson

60 Instrumental Ensemble (2 cr)
VII MTWThF, ScH 104, Oberg

66 Chamber Singers (2 cr; prereq ♯)
VII MWF, NMA 5, Collins

70 Normal Piano (2 cr; prereq 2 yrs piano)
II TTh, MusEd 103, IV ar, MusEd 2, Duckworth

76 Form, Analysis (3 cr; prereq 6T)
II MWF, ScH 104, Argento

80 Adv Normal Piano (2 cr; prereq sr, 72)
III TTh, MusEd 103, VII, VIII ar, MusEd 2, Duckworth

90 Adv Instrumental Ensemble (2 cr; prereq sr, 62)
VII MTWThF, ScH 104, Oberg

97 Counterpoint (2 cr; prereq 6T)
III TTh, ScH 4, Fetler

100 Adv Applied Music (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

104 American Music (2 cr; prereq 36 or 9 cr Amer hist or Amer st, ♯)
III TTh, ScH 104, Riedel

110 Bibliography (3 cr; prereq 36 or 62 or 72 or 99 or ♯)
I MWF, ScH 4, Riedel

115 Vocal Literature (2 cr; prereq 12 cr in 12 or ♯)
II TTh, ScH 104, Schuessler

121 Adv Harmony (2 cr; prereq 6T)
II TTh, ScH 3, Argento

127 Composition (2 cr; prereq 99, 123)
II MW, ScH 2, 1 hr ar, Fetler

130 Symphonies of Classical Era (3 cr; prereq 6 cr mus hist or art hist or pol hist or Engl or Ger lit from 1750 or ♯)
VII MWF, ScH 4, Houle

134 History of Church Music (2 cr; prereq 36 or ♯)
VIII-IX T, ScH 103, Riedel

141 Orchestration (2 cr; prereq 6T)
I TTh, ScH 4, Argento

147 Opera Workshop (2 cr)
6:00-8:00 pm T, ScH 4, 3:30-5:00 Th, ScH 4, Knowles

154 Middle Ages, Renaissance (2 cr; prereq 36)
VII TTh, ScH 4, Riedel

204 Applied Music (3 cr, †3 qtrs; prereq entr exam)

212 Problems (3-9 cr; prereq 110)
VIII W, ScH 2

227 Seminar: Composition, Orchestration (3 cr)
VI MW, ScH 2, 1 hr ar, Dorati, Fetler

270 Organization, Guidance of Piano Classes (2 cr, §70, 80; prereq ♯)
II TTh, MusEd 103, IV ar, MusEd 2, Duckworth

Winter and Spring Quarters

Aw,s See Af
Dw,s See Df
1w,s See 1f
1Tw-2Ts See 1Tf: V MTWThF
-2Tw-3Ts See 1Tf
4Tw-5Ts See 4Tf: V MTWThF
-5Tw-6Ts See 4Tf
-7Bw-7Cs See 7Af
11w,s See 11f
-11Bw-11Cs See 11Af
12w,s See 12f
12Cw,s See 12Cf
13w,s See 13f
14w,s See 14f
15w,s See 15f
16w,s See 16f
17w,s See 17f
18w,s See 18f
19w,s See 19f
20w,s See 20f
21w,s See 21f
22w,s See 22f
23w,s See 23f
24w,s See 24f
25w,s See 25f
26w,s See 26f
27w,s See 27f
-32w-33s‡ See 31f: II MWF, III TTh
-35w-36s See 34f
39w,s See 39f
-41w-42s See 40f
43w,s See 43f
-44Sw-45Ss See 43Sf
-47w-48s See 46f: VIII MTTh; VIII MWF; VIII-IX TThF
49w,s See 49f
50w Introduction (5 cr) VI MTWThF
51w History of Musical Styles I (2 cr; prereq non-mus maj, 10 or 50) VII-VIII TTh
52s History of Musical Styles II (2 cr; prereq non-mus maj, 10 or 50) VII-VIII TTh
-61w-62s‡ See 60f
-67w-68s‡ See 66f
-71w-72s See 70f
76s Form, Analysis (3 cr; prereq 6T) II MWF
-81w-82s See 80f
-91w-92s‡ See 90f
-98w-99s See 97f
100w,s See 100f
-105w-106s See 104f
-116w-117s‡ See 115f
-122w-123s See 121f
-128w-129s See 127f
131w Symphonies of Beethoven (3 cr; prereq 6 cr mus hist or art hist or pol hist or Engl or Ger lit from 1750 or ♯) VII MWF
132s Symphonies of Romantic Era (3 cr; prereq 6 cr mus hist or art hist or pol hist or Engl or Ger lit from 1750 or ♯) VII MWF
-135w-136s See 134f
-142w-143s See 141f
-148w-149s See 147f
151w-152s Musicology (3 cr; prereq 110 or ♯) I MWF
-155w-156s See 154f
204w,s See 204f
212w,s See 212f
-228w-229s See 227f
-271w-272s See 270f

PHILOSOPHY (Phil)

Fall Quarter

1 **Probs of Philosophy** (5 cr, §1A; prereq 3rd qtr fr)
Lect II MWF, WeH 202
—1, Rec II TTh, JohH 307
—2, Rec III TTh, JohH 307
Lect III MWF, WeH 202, Raab
—3, Rec II TTh, WeH 202
—4, Rec III TTh, WeH 202

2 **Logic** (5 cr, §2A)
Lect I MWF, WeH 202
—1, Rec I TTh, JohH 105
—2, Rec II TTh, JohH 126
—3, Rec III TTh, JohH 105
Lect IV MWF, WeH 202, Terrell
—4, Rec III TTh, JohH 313
—5, Rec IV TTh, JohH 313
—6, Rec V TTh, JohH 306

2A Probs of Logic (3 cr, §2; prereq prelegal fr; or soph or cons adv)
VI MWF, WeH 202, Garver

3 Ethics (5 cr, §3A; prereq 3rd qtr fr)
II MTWThF, AE 19, Luce

10 Science, Religion (2 cr; prereq soph)
III MW, C 325, Luce

50 History of Western Philosophy (5 cr)
II MTWThF, C 410, Holmer

81 Science, Civilization (3 cr; prereq sr or ♯)
III MWF, JohH 307, Garver

105 American Philosophy: Puritanism to Pragmatism (3 cr)
IV MWF, JohH 114, Brodbeck
108 Political, Social Ethics (3 cr; prereq 3 or ‡)
VI MWF, JohH 105, Raab
112 Plato (3 cr; prereq 50 or ‡)
VI MWF, JohH 306, Allen
122 Spinoza (2 cr; prereq 121 or ‡)
IV MW, JohH 307, Garver
130 Locke, Berkeley (3 cr; prereq 52 or ‡)
III MWF, JohH 126, Terrell
154 Symbolic Logic (4 cr; prereq 2 or ‡)
III MWF, JohH 114, III T, JohH 122, Brodbeck
158 Theory of Knowledge (4 cr; prereq 2 or ‡)
II MTWF, JohH 106, Feigl
164 Logic of Social Sciences I (3 cr; prereq 15 cr educ or hist or phil or psy or soc sci or ‡)
VI MWF, JohH 106, Brodbeck
167 Philosophy of History (3 cr; prereq 6 cr phil or 10 cr hist)
IV MWF, JohH 105, Mason
210 Seminar: Moral Philosophy (3 cr; prereq 150) Mason
223 Seminar: Epistemology (3 cr; prereq 158 or ‡) Terrell
230 Adv History of Philosophy (3 cr)
VII MWF, JohH 105, Allen
233 Seminar: Philosophy of Religion (3 cr; prereq 182 or ‡) Holmer
241 Seminar: Philosophy of Physical Sciences (3 cr; prereq ‡) Feigl

Winter and Spring Quarters

1w See 1f: Lect II MWF, rec II or III TTh; Lect IV MWF, rec III or IV TTh
1s See 1f: Lect II MWF, rec I or II TTh; Lect IV MWF, rec III or IV TTh
1As Probs of Philosophy (3 cr, §1; prereq 2A or ‡) VI MWF
2w,s See 2f: I MTWThF(s); II MTWThF(w); III MTWThF(w,s)
3w,s See 3f: Lect III MWF, rec II TTh(w); Lect II MWF, rec II TTh(s)
10w See 10f: II MW
11s World Religions (5 cr) I MTWThF
40s Logic of Scientific Reasoning (3 cr; prereq 2) IV MWF
-51w-52s‡ See 50f
-82w See 81f
106w American Philosophy from William James (3 cr; prereq 105 or ‡) IV MWF
112w-113s See 112f
118w Readings: Medieval Philosophy (3 cr; prereq 50, 51 or ‡) III MWF
134s Kant (3 cr; prereq 52 or ‡) IV MWF
137w Kierkegaard, Scandinavian Philosophy (3 cr; prereq 50 or 51 or 52 or ‡) VI MWF
138s Contemporary Existentialism (3 cr; prereq 52 or 137 or ‡) VI MWF
140s Contemporary Philosophy (3 cr; prereq 52 or ‡) VI MWF
150s Ethical Theory (3 cr; prereq 3 or ‡) III MWF
151w Aesthetics (3 cr; prereq ‡) VII MWF
157w Metaphysics (4 cr; prereq 50 or 51 or 52 or ‡) IV MTWF
160s Philosophy of Science (4 cr; prereq 2 or ‡) II MTWF
165w Logic of Social Sciences II (3 cr; prereq 164) VI MWF
181w Psychology of Religion (3 cr; prereq 6 cr) VII MWF
182s Philosophy of Religion (3 cr; prereq 6 cr) VII MWF
191w-192s Seminar (3 cr; prereq 190)
-224w See 223f
-231w-232s See 230f
234w Seminar: Philosophy of Religion (3 cr; prereq 233)
245w Seminar: Philosophy of Psychology (3 cr; prereq 244)
262s Seminar: Metaphysics (3 cr; prereq 261)
351s Research: History of Philosophy (ar cr; prereq 350, ‡)

POLITICAL SCIENCE (Pol)

Fall Quarter

A **State in Modern World** (3 cr, †A-B)
III MWF, Bo B6, Lippincott
D Tutorial: State in the Modern World (3 cr; prereq A or B with grade of B) Holt
1 **American Govt, Politics** (3 cr, †1-2, §5)
IV MWF, NH 45, Christensen
5 **American Govt, Politics** (5 cr, §1-2)
VI MTWThF, FraH 102, Hathaway
25 World Politics (3 cr)
VI MWF, Owre 15, Mills
80 Natl Govt in United States (3 cr, §1-2 or 5)
IV MWF, ForH 185, Chase
91 Honors Work (ar cr; prereq 18 cr, cons maj adv)
95 Major Paper (no cr; prereq pol sci maj)
101 American Constitution I (3 cr; prereq 2 or 5)
10:30-12:00 TTh, ForH 180, Chase
116 Local Government (3 cr; prereq 2 or 5 or ‡)
IV MWF, ForH 180, Backstrom
120 Municipal Functions (3 cr; prereq 2 or 5 or ‡)
8:30-10:00 TTh, ForH 160, Peterson
123 City Planning (3 cr, §Arch 104 or Econ 110 or Soc 106; prereq sr)
III MWF, E 305, Broek, Caplow, Holloway, Peterson, Vivrett, Warp
124 Recent Social Legislation (3 cr; prereq 6 cr)
10:30-12:00 TTh, ForH 185, Warp
131 Public Administration (3 cr; prereq 2 or 5 or ‡)
II MWF, ForH 185, Short

137 American Political Parties (3 cr; prereq 2 or 5 or ‡)
VII MWF, ForH 20, Christensen
141 European Govt, Politics (3 cr, †141-142; prereq B or 12 cr soc sci or ‡)
III MWF, ForH 180, Holt
145 Govt, Politics in Scandinavian Countries (3 cr; prereq 6 cr or 12 cr soc sci)
VI MWF, FolH 4, Thorson
153 Japanese Govt, Politics (3 cr)
IV MWF, ForH 160, Turner
155 Govt, Intl Relations in Latin America (3 cr; prereq 6 cr or ‡)
II MWF, ForH 180, Christensen
160 American Political Thought (3 cr; prereq B or 9 cr soc sci or ‡)
IV MWF, ForH 155, Cooperman
164 Development of Political Thought: Ancient (3 cr; prereq B or 9 cr soc sci or ‡)
I MWF, ForH 20, Roshwald
167 Political Behavior (3 cr)
1:30-3:00 TTh, ForH 185, Hoffmann
175 Diplomacy (3 cr)
1:30-3:00 TTh, ForH 180, Wilson
180 Intl Law: Pacific Relations (3 cr, †180-181)
8:30-10:00 TTh, ForH 185, Baird
184 Intl Relations, Organization I (3 cr)
I MWF, ForH 180, Levi
194 Intl Politics of Asia (3 cr, §193)
III MWF, ForH 15, Levi
195 Colonial Govt, Probs of Imperialism (3 cr)
III MWF, ForH 130, Mills
210 Seminar: Public Admin (3 cr, †210-211-212, cons staff)
3:30-5:00 TTh, Lib 13, Warp
216 Seminar: Comparative European Govt (3 cr; prereq ‡)
VII-VIII W, ForH 75, Turner
225 Readings: Classics of Politics (3 cr; prereq 164, 165 or ¶ or ‡)
VIII-IX T, ForH 346, Lippincott
229 Scope, Methods (3 cr; prereq ‡)
VI-VII W, ForH 175, Lippincott
238 Seminar: History, System of Intl Law (3 cr; prereq 181 or ‡)
VI-VII F, ForH 75, Takeuchi
242 Topics: Colonization (3 cr; prereq 195 or ‡)
3:00-5:00 W, ForH 346, Mills
248 Seminar: Intl Organization (3 cr; prereq ‡)
IV-V F, ForH 346, Levi

Winter and Spring Quarters

Aw-Bs See Af: II MWF
-Bw-Cs See Af
-Es See Df
1w-2s See 1f: II MWF
-2w-3s See 1f
5w,s See 5f
8s Tutorial: American Govt, Politics (3 cr; prereq 7)
25s See 25f
26w American Foreign Policy (3 cr) VI MWF
27s Analysis of Intl Relations (3 cr; prereq 25 or 26 or ‡) VI MWF
81w State Govt, Politics (3 cr, §1-2 or 5) VII MWF
85w Probs of World Politics (3 cr) IV MWF
93w Honors Work (ar cr; prereq 18 cr, cons maj adv)
95w Major Paper (no cr; prereq pol sci maj)
102w American Constitution II (3 cr; prereq 101) 10:30-12:00 TTh
103s American Constitution III (3 cr; prereq 101 or 102) 10:30-12:00 TTh
108w Legislative Organization, Procedure (3 cr; prereq 2 or 5 or ‡) IV MWF
-117w See 116f
119As Rural Local Govt (3 cr; prereq 2 or 5 or ‡)
121w Municipal Admin (3 cr; prereq 2 or 5 or ‡) 8:30-10:00 TTh
122s Municipal Probs (3 cr; prereq 121 or ‡)
126w Govt, Economic Order I (3 cr; prereq 2 or 5) 10:30-12:00 TTh
127s Govt, Economic Order II (3 cr; prereq 2 or 5 or ‡) 10:30-12:00 TTh
-132w-133s See 131f
138s American Political Campaigns, Elections (3 cr; prereq 2 or 5 or ‡) IV MWF
-142w See 141f
143s Govt of USSR, Adjacent States (3 cr; prereq B or 12 cr soc sci or ‡) VI MWF
146w Social Legislation, Social Institutions in Scandinavian Countries (3 cr; prereq 2 or 5 or Soc 1) VI MWF
154w Chinese Govt, Politics (3 cr) IV MWF
-156w See 155f
157s Topics: Latin-American Govt (3 cr; prereq 155 or 156 or ‡) II MWF
158w-159s Comparative Govt Systems: Principles, Probs (3 cr; prereq 6 cr up div compar govt or ‡) 1:30-3:00 TTh
161w Probs of Democracy (3 cr; prereq B or 9 cr soc sci or ‡) IV MWF
162s Recent Political Thought (3 cr; prereq B or 9 cr soc sci or ‡) IV MWF
163s Political Theory, Utopia (3 cr; prereq B or 9 cr soc sci or ‡)
165w Development of Political Thought: Middle Ages (3 cr; prereq B or 9 cr soc sci or ‡) I MWF
166s Development of Political Thought: Early Modern (3 cr; prereq B or 9 cr soc sci or ‡) I MWF
-168w-169s See 167f
176w-177s Conduct of US Foreign Relations (3 cr, †176-177) 1:30-3:00 TTh
-181w-182s See 180f
185w Intl Relations, Organization II (3 cr) I MWF
186s Intl Relations, Organization III (3 cr) I MWF
196s Proseminar: East, South Asia (3 cr, §Anth 196, Geog 196; prereq sr) 3:30-5:00 F

197w Mediterranean Area in World Affairs (3 cr) III MWF

205w-206s Seminar: Administrative Law (3 cr; prereq 18 cr or ‡) 1:30-3:30 W

-211w-212s See 210f

213s Probs: Contemporary Latin American Govt, Politics (3 cr; prereq 155 or 156 or ‡) II MWF

214w Seminar: Political Parties (3 cr; prereq 12 cr or ‡) VI-VII Th

-217w-218s See 216f: VII-VIII W

-226w-227s See 225f

234w-235s‡ Related Disciplines (3 cr; prereq 164-165-166, 227 or ‡)

-239w See 238f

240s Intl Constitutional Law (3 cr; prereq 181 or ‡) VI-VII F

-243w See 242f

246w-247s Seminar: East Asian Govt, Intl Relations (3 cr; prereq 245) IV-V M

-249w See 248f

PSYCHOLOGY (Psy)

Fall Quarter

1 **Gen Psychology** (3 cr, †1-2; prereq soph or 3rd qtr fr with B avg)
—1, III MWF, ScH 108, Clark
—2, V MWF, ScH 108, Senders
—3, V MWF, NH 45, LaBerge
—4, VI MWF, ScH 108, Lofquist
—5, III MWF, Psy 115, Jenkins

4 **Lab Psychology** (2 cr, †4-5; prereq 2 or ¶1-2)
—1, Lect V T, Bo B6, Russell, others
—2, Lect VII T, Bo B6
—1, Lab IX-X T, Psy 211
—2, Lab I-II W, Psy 211
—3, Lab III-IV W, Psy 211
—4, Lab V-VI W, Psy 211
—5, Lab VII-VIII W, Psy 211
—6, Lab IX-X W, Psy 211
—7, Lab III-IV Th, Psy 211
—8, Lab V-VI Th, Psy 211
—9, Lab VII-VIII Th, Psy 211
—10, Lab IX-X Th, Psy 211
—11, Lab I-II F, Psy 211
—12, Lab VI-VII F, Psy 211

70 Psychological Measurement (3 cr; prereq 5)
VI MWF, C 225, Clark

101 **Experimental Psychology** (3 cr, †101-102; prereq 70)
VII MWF, Psy 115, LaBerge

125 **Individual Differences** (3 cr; prereq sr, 5 or 5 cr in stat)
—1, II MWF, Psy 115, Paterson
—2, II MWF, MMA 100, Jenkins

128 Learning (3 cr; prereq 9 cr)
IV MWF, Bu 211, Heron

132 Motivation (3 cr, †132-133; prereq 9 cr)
VI MWF, P 2, Russell

135 Occupational Counseling (2 cr; prereq sr, 9 cr or ‡)
VIII-IX M, Psy 115, Lofquist

144 **Abnormal Psychology** (3 cr, †144-145; prereq 9 cr or 6 cr, Zool 3 or 12 cr soc sci)
9:30-10:45 TTh, FraH 101, Rosen

151 Animal Psychology (3 cr; prereq 5)
VI MWF, Psy 115, Heron

156 **Psychology of Advertising** (3 cr; prereq 2, prin of econ)
II MWF, C 225, Longstaff

160 Personnel Work (3 cr; prereq 5 or 3 cr in stat, prin of econ or ‡)
III MWF, FraH 101, Longstaff

166 Opinion, Communication: Social Factors (3 cr; prereq sr, 140 or Soc 1 or 120 or ‡)
1:30-2:45 TTh, ForH 160, Hall

171 Clinical Psychology (3 cr, †171-172; prereq sr, 145, course in ment meas or stat)
VI MWF, TNM 115, Meehl

190 Project (ar cr; prereq sr, ‡)

200 **Systematic Psychology** (3 cr; prereq 15 cr)
VIII-IX Th, Psy 115, Meehl

210 Research Probs (ar cr)

215 Seminar: Areas of Psychology, Related Sciences (ar cr) Neubeck

227 Seminar: Vocational Rehabilitation Counseling (1 cr; prereq ‡)
IX-X alt F, Psy 109, Lofquist

230 Field Work: Psychometric, Applied Psychology (ar cr; prereq written cons)

235 Clinical Practice in Counseling (1-3 cr; prereq cons adv, ‡) Berdie, Layton, Snoxell

240 Seminar: Student Personnel Work (1 cr; prereq ‡) Williamson

250 Adv Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 229)
IX-X alt F, Psy 109, Lofquist

257 Methods of Research in Group Behavior (3 cr, †257-258-259; prereq ‡)
III-IV TTh, Psy 109, Schachter

265 Seminar: Adv Clinical Psychology (1 cr; prereq 172, adv stat, ‡) Hathaway

270 Adv Psychological Measurement (3 cr)
VI MWF, C 225, Clark

275 Seminar: Student Personnel Work (1 cr; prereq ‡) Layton

290 Projective Techniques (3 cr; prereq 145, 172)
VIII-IX T, Psy 109, Rosen

295 Seminar: Individual Differences, Applied Psychology (1 cr; prereq written ‡)
VIII-IX alt W, Paterson

Winter and Spring Quarters

1w-2s See 1f: VII MWF

1s-2s Gen Psychology (6 cr; prereq soph or 3rd qtr fr with B avg) VI MTWThF, 2:30-3:00 TTh

-2w See 1f

4w-5s See 4f: Lect I T, lab I-II Th; II-III T; III-IV F; V-VI T; VII-VIII T

4s-5s Lab Psychology (4 cr; prereq 2 or ¶1-2) Lect IV MW, lab V-VI MW; VII-VIII MW; IX-X TTh

-5w See 4f: Lect V or VII T, lab I-II W; I-II F; III-IV W; III-IV Th; V-VI W; V-VI Th; VII-VIII W; VII-III Th; IX-X W; IX-X T; IX-X Th

-6s See 4f: Lect VII T, lab I-II W; III-IV Th; VII-VIII Th

52s Genetic Psychology (3 cr; prereq 2) IV MWF

55s Sensation, Perception (3 cr; prereq 2) 11:00-12:30 MW

70w,s See 70f

-102w See 101f

117s Analysis of Behavior (3 cr, §old 165; prereq 2, course above 50) 12:30-1:45 TTh

-126w See 125f

-129w See 128f

130w,s Vocational, Occupational Psychology (3 cr; prereq 5 or 5 cr in stat) Lect III TTh, lab V-VI or VII-VIII F

-133w See 132f

-136w-137s See 135f

140w Social Psychology (3 cr; prereq 5, 9 cr soc sci) 10:50-12:10 TTh

141s Social Psychology of Small Groups (3 cr; prereq 5, 9 cr soc sci) 1:30-2:45 TTh

144w-145s See 144f: 10:50-12:10 TTh

-145w See 144f

148s Physiological Psychology (3 cr; prereq 5 or Zool 3 or ♯) II MWF

155s Industrial Psychology (3 cr; prereq 2, Math 10 or 10 cr in stat) V MWF

156w See 156f: VII MWF

160w See 160f: VI MWF

167w Measurement of Opinions, Attitudes (3 cr; prereq sr, 70) VII MWF

-172w-173s See 171f

190w,s See 190f

-201w-202s See 200f

-211w-212s‡ See 210f

-216w-217s‡ See 215f

219w Psychology of Personality (3 cr; prereq abnor psy, undergrad psy maj or ♯) IV MWF

-220s Psychology of Personality (3 cr; prereq 219)

-228w-229s See 227f

-231w-232s‡ See 230f

-236w-237s See 235f

-241w-242s‡ See 240f

243s Experimental Psychodynamics (3 cr; prereq 145, 129 or 165 or ♯) VI MWF

244w,s Experimental Psychodynamics (3 cr; prereq 243)

246s Psycho-Analytic Theory (3 cr; prereq 145, 172) 1:00-3:30 TTh

-251w-252s See 250f

-258w-259s See 257f: 10:30-12:30 TTh

-266w-267s See 265f

270w,s See 270f

274s Pre-Clinical Practicum: Clinical Psychology (2 cr; prereq clin psy maj, 172, 291 or ¶291)

-276w-277s See 275f

-291w See 290f

-296w-297s‡ See 295f

299w Tabulating Equipment Lab (1 cr; prereq PubH 111)

ROMANCE LANGUAGES

French (Fren)

Fall Quarter

1A Bgn French: Conversational (5 cr, §1B or 1C)
Dem III MTWThF, FolH 201, Renaud
—1, Lab I MTWThF, FolH 108
—2, Lab II MTWThF, FolH 108

1B Bgn French: Language, Culture (5 cr, §1A or 1C)
—1, I MWF, CW 218, Burks, I TTh, FolH 203
—2, I MWF, CW 218, Burks, II TTh, FolH 203
—3, II MTWThF, FolH 110
—4, III MWF, JohH 205, Falk, III TTh, FolH 108
—5, III MWF, JohH 205, Falk, IV TTh, FolH 108
—6, IV MTWThF, FolH 201

1C Bgn French: Standard (5 cr, §1A or 1B)
—1, II MTWThF, FolH 226, Brackney
—2, V MTWThF, FolH 201
—3, VI MTWThF, FolH 201

2C Bgn French: Standard (5 cr, §2A or 2B; prereq 1C)
V MTWThF, FolH 202

3C Bgn French: Standard (5 cr, §3A or 3B; prereq 2C)
—1, I MTWThF, FolH 226
—2, II MTWThF, FolH 2
—3, V MTWThF, FolH 8

4 Interm French (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Fren)
—1, II MTWThF, FolH 3, Vartanian
—2, IV MTWThF, FolH 8, Burks

20 Literary Texts (3 cr; prereq 4)
III MWF, FolH 203, Blinoff

50 Reading French: Bgn Course for Juniors, Seniors (3 cr)
V MWF, FolH 110, Burks

54 Conversation, Pronunciation (3 cr; prereq 4)
IV MTThF, FolH 103, Sullivan

60 Civilization, Culture (4 cr; prereq 4)
II MTWThF, FolH 201, Blinoff

65 Survey of Literature (3 cr; prereq 4)
VI MWF, FolH 208, Brackney

70 17th Century Literature (2 cr, §65; prereq 20)
IV TTh, FolH 203, Renaud

80 18th Century Literature (2 cr, §66; prereq 20)
III TTh, FolH 203, Vartanian
90 19th Century Literature (2 cr, §67; prereq 20)
IV MF, FolH 203, Falk
100 Phonetics (3 cr; prereq Fren maj or ‡)
III MWF, FolH 208, Sullivan
103 Syntax, Composition (2 cr; prereq Fren maj or ‡)
III TTh, FolH 302, Sullivan
121 Pre-Renaissance, Pleiade Poetry (3 cr; prereq sr with ‡)
VII T, VII-VIII Th, FolH 203, Renaud
135 20th Century Literature (2 cr)
VII MF, FolH 203, Blinoff
153 19th Century Novel: Balzac (3 cr; prereq sr with ‡)
VI MWF, FolH 203, Vartanian
175 Main Trends in Literary Criticism (2 cr; prereq sr with ‡)
VII-VIII W, FolH 203, Falk
204 Readings: Old Literature (2 cr)
VIII-IX T, FolH 302, Brackney
207 Old Provencal (2 cr) Brackney
230 Research Methods, Material (1 cr)
IV T, FolH 302, Grismer
259 Readings (ar cr)

Winter and Spring Quarters

1Cw-2Cs See 1Cf: V or VI MTWThF
-2Aw-3As See 1Af
-2Bw-3Bs See 1Bf: Dem I MWF, rec I or II TTh; Dem III MWF, rec III or IV TTh; II or IV MTWThF
-2Cw-3Cs See 1Cf: II MTWThF(w,s); V MTWThF(w); VI MTWThF(w,s)
-3Cw See 2Cf
4w,s See 4f: II MTWThF(w); IV MTWThF (w,s)
20w,s See 20f
-51w-52s See 50f
53s Diction (1-2 cr; prereq 3A or 3B or 3C or 4, Fren play cand)
54w,s See 54f: III or IV or V MTThF
55s Adv Conversation (3 cr; prereq 54) III or V MWF
56s History of Language (3 cr; prereq 20) VII MWF
-61w-62s See 60f
-66w-67s‡ See 65f
-71w-72s‡ See 70f
-81w-82s‡ See 80f
-91w-92s‡ See 90f
-104w-105s See 103f
124w Montaigne, Pascal (3 cr; prereq sr with ‡) VII T, VII-VIII Th
126s Classical Drama: Racine (3 cr; prereq sr with ‡) VII T, VII-VIII Th
-136w-137s‡ See 135f
154s 19th Century Novel: Stendhal (3 cr; prereq sr with ‡) VI MWF
156w 19th Century Novel: Zola, Goncourt (2 cr; prereq sr with ‡) VI MWF
-176w-177s‡ See 175f
-205w-206s See 204f
-208w-209s See 207f
-231w-232s See 230f
-260w-261s See 259f

Italian (Ital)

Fall Quarter

1 Bgn Italian (5 cr, §5)
IV MTWThF, FolH 304, Nissen
72 Modern Drama: Giacosa, Pirandello (3 cr; prereq 3 or 4...or 2 or 5, ‡)
VI MWF, FolH 103, Nissen
161 16th Century (3 cr; prereq 1 course above 50)
III MWF, FolH 305½, Nissen
172 Modern Drama (3 cr; prereq grad, 1 course above 50)
VI MWF, FolH 103, Nissen

Winter and Spring Quarters

-2w-3s See 1f
5w Reading Knowledge of Italian (5 cr, §1 prereq Fren or Lat or Span) VI MTWThF
71w Modern Poetry: Leopardi, Carducci (3 cr; prereq 3 or 4...or 2 or 5, ‡) III MWF
74s Petrarch (3 cr; prereq 3 or 4...or 2 or 5, ‡) III MWF
-162w See 161f
164s Dante in English (3 cr; prereq ‡) II MWF
171w Modern Poetry (3 cr; prereq grad, 1 course above 50) III MWF
174s Petrarch (3 cr; prereq grad, 1 course above 50) III MWF

Portuguese (Port)

Fall Quarter

1 Bgn Portuguese (3 cr)
II MWF, FolH 302, Floripe

Winter and Spring Quarters

-2w-3s See 1f

Spanish (Span)

Fall Quarter

1A Bgn Spanish: Conversational (5 cr, §1B or 1C)
II MTWThF, FolH 202, Cuneo
—1, Lab I MTWThF, FolH 201
—2, Lab I MTWThF, FolH 304

1C **Bgn Spanish: Standard** (5 cr, §1A or 1B)
—1, I MTWThF, FolH 202
—2, III MTWThF, FolH 213
—3, IV MTWThF, FolH 202, Pattison

2C **Bgn Spanish: Standard** (5 cr, §2A or 2B; prereq 10)
VI MTWThF, FolH 8

3C **Bgn Spanish: Standard** (5 cr, §3A or 3B; prereq 2C)
—1, III MTWThF, FolH 226
—2, IV MTWThF, FolH 226
—3, VI MTWThF, FolH 226

20 Interm Grammar, Composition (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
III MTWThF, FolH 110, Rundorff

21 Spanish, Spanish-American Literature, Culture (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
II MTWThF, FolH 304, Rundorff

53 Composition (3 cr; prereq 20)
IV MWF, FolH 113, Rundorff

65 Spanish Literature: The Middle Ages (3 cr, §68, 69; prereq soph, 21)
VII MWF, FolH 201, Grismer

70 Latin-American Civilization, Culture (3 cr; prereq 20 or 21 or ‡)
III MWF, FolH 202, Cuneo

74 Literature of Spanish America (3 cr; prereq 21)
II MWF, FolH 203, Irving

80 Spanish American Novel, Social Probs (2 cr; prereq jr or ‡, 6 qtrs)
III TTh, FolH 202, Cuneo

103 Syntax, Composition (1 cr; prereq 60 or ¶)
V T, FolH 203, Pattison

115 17th Century Literature: The Drama (3 cr; prereq 65, 66, 67 or 68, 69)
VIII-IX Th, FolH 304, Grismer

143 Colonial, 19th Century Latin-American Literature (3 cr; prereq 65, 66, 67 or 68, 69 or 76)
VII MWF, FolH 202, Floripe

161 Hispano-Arabic Culture (2 cr; prereq 21, ‡)
VIII-IX T, FolH 203, Irving

171 History of Language (1 cr, †171-172-173; prereq 20, 1 yr Lat or ‡)
V Th, FolH 203, Grismer

174 Contemporary Literature: Drama (3 cr; prereq 65, 66, 67 or 68, 69)
VI MWF, FolH 304, Pattison

230 Research Methods, Material (1 cr)
IV T, FolH 302, Grismer

241 Old Philology (2 cr)
VIII-IX M, FolH 203, Grismer

253 Seminar: Latin-American Literature (2 cr) Irving

259 Readings (ar cr)

Winter and Spring Quarters

1Cw-2Cs See 1Cf: III MTWThF; IV MTWThF; VI MTWThF

-2Aw-3As See 1Af: III MTWThF

-2Cw-3Cs See 1Cf

-3Cw See 2Cf

20w,s See 20f

21w,s See 21f

52s Pronunciation, Diction (1-2 cr; prereq 3A or 3B or 3C, Span play cand or ‡)

-54w-55s See 53f

56s Phonetics, Diction (3 cr; prereq 3A or 3B or 3C) IV TTh, 1 hr ar

66w Spanish Literature: The Renaissance (3 cr, §68, 69; prereq soph, 21) VII MWF

67s Spanish Literature: The Modern Period (3 cr, §68, 69; prereq soph, 21) VII MWF

-71w-72s‡ See 70f

-75w-76s See 74f

79s Latin-American Thought: 1850-1957 (2 cr; prereq jr or ‡, 6 qtrs) III TTh

81w Spanish American Novel, Social Probs (2 cr; prereq jr or ‡, 6 qtrs) III TTh

-104w-105s See 103f

116w 17th Century Literature: The Novel (3 cr; prereq 65, 66, 67 or 68, 69) VIII-IX Th

117s 17th Century Literature: Poetry (3 cr; prereq 65, 66, 67 or 68, 69) VIII-IX Th

-144w-145s See 143f

-162w-163s See 161f

-172w-173s See 171f

175w Contemporary Literature: Prose (3 cr; prereq 65, 66, 67 or 68, 69) VI MWF

176s Contemporary Literature: Poetry (3 cr; prereq 65, 66, 67 or 68, 69) VI MWF

179s Latin-American Thought: 1850-1957 (2 cr; prereq grad or ‡) III TTh

-231w-232s See 230f

-242w-243s See 241f

-254w-255s See 253f

-260w-261s See 259f

SCANDINAVIAN (Scan)

Fall Quarter

1 Bgn Norwegian (5 cr)
II MTWThF, FolH 8, Nelson

4 Adv Norwegian (3 cr; prereq 3)
III TTh, and ar, FolH 12, Nelson

7 Bgn Swedish (5 cr)
II MTWThF, FolH 12, Lorenzen

10 Adv Swedish (3 cr; prereq 9)
III MWF, FolH 12, Lorenzen

51 19th Century Literature (2 cr; prereq 6 or 12 or 8 cr lit) Gustafson

171 Ibsen, Bgn of Modern Drama (3 cr; prereq 6 or 12 or 8 cr lit)
IV MWF, FolH 12, Gustafson

191 Readings (3 cr; prereq 6 or 12) Gustafson

195 Old Norse: Language, Literature (3 cr, †195-196-197; prereq 1 Germanic lang)
VIII-IX W, FolH 208

221 Dramatic Intrepretative Probs in Strindberg (3 cr) Gustafson

Winter and Spring Quarters

-2w-3s See 1f
-5w-6s See 4f
-8w-9s See 7f
-11w-12s See 10f
22w-23s Scandinavian Life Today, Yesterday (3 cr) VII MWF
61s Norwegian Conversation (3 cr; prereq 3)
71s Swedish Conversation (3 cr; prereq 9)
161w Late 19th Century Novel (3 cr; prereq 6 or 12 or 8 cr lit)
162s Contemporary Novel (3 cr; prereq 6 or 12 or 8 cr lit)
172w Strindberg, Drama in Revolt, Transition (3 cr; prereq 6 or 12 or 8 cr lit) IV MWF
173s Contemporary Theater (3 cr; prereq 6 or 12 or 8 cr lit) IV MWF
-192w-193s‡ See 191f
-222w-223s See 221f

SLAVIC AND ORIENTAL LANGUAGES

Chinese (Chin)

Fall Quarter

1 Bgn Chinese (5 cr)
VI MTWThF, FolH 305½, Mather
51 Interm Chinese (3 cr; prereq 3)
II MWF, ForH 75, Mather
56 Composition (2 cr; prereq 3)
II TTh, FolH 103, Mather
101 Adv Chinese (3 cr; prereq 53)
III MW, Lib 338, Mather
110 Literature in Translation (3 cr; prereq 8 cr lit)
VII MWF, FolH 302, Mather
161 Readings (1-3 cr) Mather

Winter and Spring Quarters

-2w-3s See 1f
-52w-53s See 51f
-57w-58s See 56f
-102w-103s See 101f
-162w-163s See 161f

Japanese (Jap)

Fall Quarter

1 Bgn Japanese (5 cr)
III MTWThF, FolH 304, Copeland
51 Interm Japanese (3 cr; prereq 3)
II MWF, FolH 305½, Copeland
56 Composition (2 cr; prereq 3)
II TTh, FolH 302, Copeland
101 Adv Japanese (3 cr; prereq 53)
IV MWF, FolH 305½, Copeland
110 Literature in Translation (3 cr; prereq 6 cr lit)
I MWF, FolH 208, Copeland
161 Readings (1-3 cr) Copeland

Winter and Spring Quarters

-2w-3s See 1f
-52w-53s See 51f
-57w-58s See 56f
-102w-103s See 101f
-111w See 110f
-162w-163s See 161f

Oriental (Ortl)

Fall Quarter

78 Asian Civilization: Islamic World (3 cr)
V MWF, FolH 6, Irving

Winter and Spring Quarters

76w Asian Civilization: China (5 cr; prereq soph with ♯) I MTWThF
77s Asian Civilization: Japan (5 cr; prereq soph with ♯) I MTWThF

Russian (Russ)

Fall Quarter

1 **Bgn Russian** (5 cr)
—1, III MTWThF, FolH 11, Nice
—2, VI MTWThF, FolH 11, Niemi
—3, I MTWThF, FolH 11, Alexeev
—4, VII MTWThF, FolH 11
51 Interm Russian (3 cr; prereq 3)
II MWF, FolH 11, Nice
56 Conversation (3 cr; prereq 3)
I-II M, ForH 346, V T, FolH 108
61 Composition (2 cr; prereq 53)
III T, I Th, FolH 305½
71 Readings in Literature (3 cr; prereq 53 or ♯)
III MWF, FolH 302, Niemi
101 Literature in Translation (3 cr; prereq 9 cr lit)
V MWF, FolH 304, Niemi

Winter and Spring Quarters

-2w-3s See 1f
-52w-53s See 51f
-57w-58s See 56f
-62w-63s See 61f
-72w-73s See 71f
-102w-103s See 101f

Semitic (Sem)

Fall Quarter

51 Modern Spoken Arabic (3 cr)
I MWF, FolH 302, Irving

Winter and Spring Quarters

-52w-53s See 51f

SOCIAL WORK (SW)

Fall Quarter

201 Topics (ar cr; prereq ‡)

206 Readings (ar cr; prereq ‡)

210 Field Instruction (ar cr; prereq ¶265 or ¶275) Whitmore, others

215 Field Instruction (ar cr; prereq 212) Boehm, others

225 Social Policy, Programs I (3 cr)
8:00-9:30 TTh, ForH 115, Newhouse

228 Social Policy, Programs IV (2 cr; prereq 227)
I TTh, ForH 120, Mueller

241 Seminar: History of Social Work (ar cr)
VI-VII T, ForH 467, Konopka

248 Concepts of Human Growth, Behavior in Practice I (3 cr; prereq ¶210 or ‡)
VIII-IX T, VIII Th, ForH 115, Lewis, Mueller, Saloshin

251 Concepts of Human Growth, Behavior in Practice IV (2 cr; prereq ¶215, 250)
IX-X Th, Simon

262 Supervision in Social Group Work (2 cr; prereq ¶215, 260, 277)
II-III T, ForH 346, Pernell

265 **Social Casework I** (3 cr; prereq ¶210)
—1, II TThS, ForH 175, Whitmore
—2, IV TThS, ForH 175, Whitmore

268 **Social Casework IV** (2 cr; prereq ¶215, 267)
—1, II-III T, ForH 467, Scott
—2, II-III T, ForH 447, Boehm

274 Seminar: Community Organization (ar cr; prereq 271)
I-II S, ForH 467

275 **Social Group Work I** (3 cr; prereq SW maj)
Lect III TTh, ForH 115, Saloshin
—1, IV Th, ForH 160, Saloshin
—2, II T, ForH 180, Saloshin

278 Social Group Work IV (2 cr; prereq ¶215, 277)
II-III Th, ForH 467, Konopka

282 Use of Program in Groups II (1 cr; prereq 275)
IV-V Th, ForH 467, Pernell

285 Special Studies (ar cr)
IV-V T, ForH 130, Francel

298 Seminar: Social Work (ar cr; prereq MSW degree)
3:00-5:00 Th, ForH 467, Kidneigh, Scott

Winter and Spring Quarters

-202w-203s‡ See 201f

-207w-208s‡ See 206f

-211w-212s See 210f

-216w-217s See 215f

221w Seminar for Clinical Field Instructors (ar cr; prereq superv students in field work) I-II W

226w Social Policy, Programs II (2 cr; prereq 225) I TTh

227s Social Policy, Programs III (2 cr; prereq 226) III TTh

229w Social Policy, Programs V (2 cr; prereq 228) III TTh

242s Seminar: Social Work Education (ar cr; prereq MSW degree) VI-VII T

249w Concepts of Human Growth, Behavior in Practice II (3 cr; prereq 248, ¶211 or ‡) Lect VIII-IX T, VIII Th

250s Concepts of Human Growth, Behavior in Practice III (3 cr; prereq 249, ¶212 or ‡) Lect VIII-IX TTh

252w Concepts of Human Growth, Behavior in Practice V (2 cr; prereq ¶216, 250) IX-X Th

253s Concepts of Human Growth, Behavior in Practice VI (2 cr; prereq ¶217, 250) IX-X Th

260s Prin Administration (3 cr) 8:00-9:30 TTh

263w Admin in Social Group Work (2 cr; prereq ¶216, 260, 278) I-II T

266w Social Casework II (2 cr; prereq ¶211, 265) III or IV TTh

267s Social Casework III (2 cr; prereq ¶212, 265) II or IV TTh

269w Social Casework V (2 cr; prereq ¶216, 267) I-II T

270s Social Casework VI (2 cr; prereq ¶216, 267) II-III T

271s Community Organization (2 cr) I TTh

275s See 275f: IV-V TTh (open to other than social work majors)

276w Social Group Work II (2 cr; prereq ¶211, 275) IV-V T

277s Social Group Work III (2 cr; prereq ¶212, 276) IV-V T

279w Social Group Work V (2 cr; prereq 278) IV-V T

280s Social Group Work VI (2 cr; prereq 279) IV-V T

281Aw Use of Program in Groups I (2 cr; prereq 275) IV-V Th

281Bs Use of Program in Groups I (1 cr; prereq 281A) II T

285w,s See 285f: IV-V Th(w); VI-VII Th

290w,s Seminar: Recent Research (ar cr) I-II M

-299w-300s‡ See 298f

SOCIOLOGY (Soc)

Fall Quarter

1 **Introduction: Man in Modern Society (3 cr)**
—1, II MWF, NH 45, Sirjamaki
—2, II MWF, ForH 55, Forster
—3, VII MWF, NH 45, Forster
—4, V MWF, ForH 115, Forster (honors section)

1A Introduction: Man in Modern Society (3 cr; prereq regis AFHE)
II MWF, SnH 113 (StP Campus), Taylor

2 American Community (3 cr; prereq 1 or 1A or 3)
I MWF, ForH 55, Martindale

3 **Social Probs (3 cr)**
—1, VI MWF, Bo B6, Johnson
—2, 9:00-9:30 pm MTWTh, 1 hr ar, via KTCA, Channel 2, Johnson

14A Rural Sociology for Agriculture Students (3 cr)
V MWF, SnH 113 (StP Campus), Taylor

45 **Social Statistics (5 cr, §BA 5)**
Lect VII MWF, ForH 85, Francis
—1, Lab III-IV TTh, ForH 85, Francis, others
—2, Lab VI-VII TTh, ForH 85, Francis, others

50 Theory, Practice of Social Work (5 cr; prereq 3)
III MTWThF, Owre 113, Cohn

53 **Criminology** (3 cr; prereq 1 or 1A or ‡)
—1, VII MWF, ForH 55, Carroll
—2, VII MWF, ForH 130, Vold (honors section)

91 Case Method Applied to Study of Human Probs (3 cr; prereq 50 or cons maj adv)
IV MWF, ForH 130, Cohn

97 Tutorial, Honors Work (3 cr; prereq cons maj adv in soc)

101 Criminological Theories: Historical, Contemporary (3 cr; prereq 1, 53 or ‡)
II MWF, ForH 170, Vold

104 Police Probs, Practices in United States (3 cr; prereq 1, 53 or ‡)
IV MWF, ForH 15, Vold

106 City Planning (3 cr, §Arch 104 or Econ 110 or Pol 123; prereq sr)
III MWF, E 305, Broeck, Caplow, Vivrett, Warp

111 Population Trends (3 cr; prereq 1 or ‡)
V MWF, ForH 155, Francis

115 Social Aspects of Housing, Standards of Living (3 cr; prereq sr, 1 or ‡)
IV MWF, ForH 120, Sirjamaki

118 Delinquent Behavior (3 cr; prereq 53)
10:30-11:45 TTh, ForH 120, Monachesi

120 Social Psychology (3 cr; prereq 1 or ‡)
8:30-9:45 TTh, ForH 55, Rose

125 Opinion, Communication: Social Factors (3 cr; prereq sr, 1 or 120 or Psy 140 or ‡)
1:30-2:45 TTh, ForH 160, Hall

140 Social Organization (3 cr; prereq 1 or ‡)
VI MWF, ForH 115, Caplow

141 The Family (3 cr; prereq 1 or ‡)
11:30-12:45 TTh, ForH 155, Johnson

142 Religion as a Social Institution (3 cr; prereq 1 or ‡)
I MWF, ForH 150, Johnson, Taves

146 Industrial, Occupational Sociology (3 cr; prereq 1, 15 cr soc, econ, pol or psy)
II MWF, ForH 130, Caplow

170 Analytical Social Theory (3 cr; prereq 1 or ‡)
III MWF, ForH 120, Martindale

220 Seminar: Social Psychology (2 cr)
VIII-IX T, ForH 175, Rose

223 Seminar: Research Probs of Modern Mass Society (2 cr)
VIII-IX M, ForH 467, Brotz

238 Seminar: Principles (3 cr, †238-239)
VI-VII M, ForH 244, Sirjamaki

245 Seminar: Research in Urban Sociology (2 cr)
VIII-IX W, ForH 467, Caplow

260 Seminar: Rural Sociology (2 cr)
VI-VII Th, ForH 346, Taves

270 Seminar: Social Theory (2 cr)
VI-VII W, ForH 244, Martindale

284 Seminar: Statistical Theory in Relation to Social Theory, Practice (2 cr)
VI-VII F, ForH 467, Monachesi

297 Seminar (ar cr)

Winter and Spring Quarters

1w,s See 1f: I MWF(w); II MWF(s); VII MWF(w,s)

1Aw,s See 1Af

2w,s See 2f: I MWF(s); II MWF(w); V MWF (w) (honors section); VII MWF(w)

3w,s See 3f: II MWF(w,s); V MWF(s) (honors section); VII MWF(s)

14w,s Rural Sociology (3 cr) VI MWF(w); IV MWF(s)

14Aw See 14Af

45w,s See 45f

50w See 50f

53w,s See 53f: II MWF; VII MWF (honors section)

91s See 91f

-98w-99s See 97f

100s Contemporary Penology (3 cr; prereq 1, 53 or ‡) IV MWF

112w World Population Probs (3 cr; prereq 1 or ‡) 12:30-1:45 TTh

117s Scandinavian Folk Movements: Social, Political Significance (3 cr; prereq 1 or ‡) VI MWF

119w Modern Agencies for Control of Juvenile Delinquency (3 cr; prereq 53 or 118) 10:30-11:45 TTh

120w See 120f

121s Adv Social Psychology (3 cr; prereq 120 or ‡) 8:30-9:45 TTh

122w Conflict (3 cr; prereq 1 or ‡) IV MWF

123s Minority Group Relations (3 cr; prereq ‡) III MWF

124w Social Movements in Changing Society (3 cr; prereq 1 or ‡) 1:30-2:45 TTh

126s Family Development (3 cr; prereq 1, CD 80, ‡) VI-VII TTh

140s See 140f: V MWF

141w,s See 141f: IV MWF(w); 11:30-12:45 TTh(s)

144s Social Stratification (3 cr; prereq 1 or ‡) VI MWF

145w Urban Sociology (3 cr; prereq 1 or ‡) III MWF

151s Comparative Social Organization (3 cr; prereq 20 cr soc or econ or pol or ‡) I MWF

161s Rural Community Analysis (3 cr; prereq 1 or ‡) II MWF

162w,s Rural Social Institutions (3 cr; prereq 1 or ‡) VI MWF

171w Social Life, Cultural Change (3 cr; prereq 1 or ‡) IV MWF

172s Backgrounds of Modern Social Thought (3 cr; prereq 1 or ‡) III MWF

180w,s Methods of Social Research (3 cr; prereq 45) II TTh, VII T for SW students (w); 10:30-11:45 TTh(s)

182w Statistical Methods (3 cr; prereq grad, 45) V MWF

183s Probs: Social Measurement (3 cr; prereq 45 or 182) V MWF

201w-202s‡ Seminar: Research Probs in Crime, Social Conflict (2 cr) VIII-IX W

-221w-222s‡ See 220f

-224w-225s‡ See 223f: VIII-IX M(w); VIII-IX Th(s)

226 Seminar: Family Development Theory (2 cr; prereq ‡) VI-VII M

-239w See 238f

261w Seminar: Rural Sociology (2 cr) VI-VII Th

-271w-272s‡ See 270f

-285w-286s‡ See 284f

-298w-299s‡ See 297f

SPEECH AND THEATER ARTS (Spch)

Fall Quarter

2 **Fundamentals** (3 cr, †1-2, §5; prereq 1)
—1, II MWF, JohH 306
—2, III MWF, FolH 409

5 **Fundamentals** (5 cr, §old 1-2; prereq soph or fr with △)
—1, I MTWThF, FolH 306
—2, II MTWThF, FolH 307
—3, III MTWThF, FolH 307
—4, IV MTWThF, FolH 307
—5, V MTWThF, FolH 306
—6, VI MTWThF, FolH 307
—7, VII MTWThF, FolH 307

6 **Fundamentals** (3 cr, §old 3; prereq 5)
—1, I MWF, WeH 306
—2, IV MWF, Bu 103

9 Freshman Discussion, Debate (1 cr; prereq fr with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro

31 **Theater Arts** (4 cr)
II MWF, ShH 115, Ballet

32 **Bgn Acting: Creative Approach** (3 cr; prereq soph, 31)
—1, II MWF, ScH 19, Lenhoff
—2, VI MWF, ScH 19, L Manfull

33 **Bgn Acting: Technique** (3 cr; prereq 32)
II MWF, NH 304, Rumley

34 **Stagecraft: Construction, Painting** (3 cr; prereq soph, 31)
I-II TS, II Th, ShH 110, Struthers

39 **Parliamentary Procedures** (2 cr; prereq △)
IV MWF, FolH 10, Shapiro

51 **Adv Public Speaking** (3 cr; prereq 5)
—1, II MWF, FolH 306, Scott
—2, IV MWF, FolH 306

55 **Speech Writing, Platform Speaking** (3 cr; prereq 5 or ‡)
II MWF, FolH 409, Smith

61 **Personal Development Through Speech** (3 cr; prereq 5, Psy 2)
III MWF, FolH 308, Bryngelson

65 **Radio, Television Speech** (3 cr; prereq 5)
II MWF, MurH 302, Bormann

66 **Radio, Television Drama** (3 cr; prereq 32, 65)
IV MWF, MurH 302, Snook

67 **Phonetics** (3 cr; prereq 5)
III T, III-IV Th, FolH 409, Fletcher

74 **Play Production in Secondary School** (3 cr; prereq 31)
IV MWF, ShH 110, Adey

78 **Adv Acting** (3 cr; prereq 32)
I MWF, NH 304, Graham

81 **Interpretative Reading** (3 cr; prereq 5)
—1, III MWF, WeH 306, Thompson
—2, IV MWF, WeH 306, Thompson
—3, III-IV T, III Th, WeH 306, Fredricks
—4, VI MWF, WeH 306, Fredricks

90 **Costuming** (3 cr; prereq 5, 31, 34)
III Th, III-IV TS, NH 304, Moulton

97 Intercollegiate Oratory, Debate (1-3 cr; prereq soph with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro

101 **Argumentation, Persuasion** (3 cr; prereq 5, Psy 2, 10 cr soc sci)
—1, III MWF, FolH 306, Scott
—2, VI-VII T, VI Th, FolH 306, Howell

106 **Discussion** (3 cr; prereq 5)
VII MWF, FolH 306, Howell

107 Platform Reading (3 cr; prereq 82, grade B in 83)
VII MWF, WeH 306, Thompson

111 **Stage Direction** (3 cr; prereq sr, 5, 90 or 91 or 92, △)
—1, III MWF, ScH 19, Whiting
—2, IV MWF, ScH 19, Whiting

115 Playwriting, Production (3 cr; prereq 5, 33 or △)
II MWF, WeH 306, Thompson

122 Research (3 cr; prereq sr, 5, Psy 2)
I-II T, II Th, FolH 305½, Bormann

135 **Production of Television Drama** (3 cr; prereq 65, 66, 78, 111, 112, ‡)
VI MWF, ShH 102, Ballet

140 Voice Science (3 cr; prereq 5, Psy 2)
IV MWF, FolH 409, Fletcher

152 Hearing Disorders (3 cr; prereq 61, 67, Psy 2 or ‡)
III MWF, Mayo A675, Lassman

161 **Speech Correction** (3 cr, §old 119; prereq 5 or △)
II TThS, FolH 409, Henrikson

164 Clinical Methods, Practice in Speech Pathology (3 cr, §EdCI 174; prereq sr, 162, 163) Bryngelson, Henrikson, Starr

171 **History of Theater** (3 cr; prereq sr, 5, 31)
VI T, VI-VII Th, NH 304, Graham

177 Theater on Tour (3-6 cr; prereq 12 cr above 50, cons fac comm)

181 Readings (ar cr; prereq 5, 6 addtl cr, ‡)

190 Technical Stage Probs (3 cr; prereq 111, 112, 113) Moulton

201 Seminar (1 cr; prereq ‡) Smith, Fletcher

203 Debate Coaching (2 cr; prereq 101, 102, 103) Howell

207 Seminar: Persuasion (3 cr; prereq 101, 102, 103, Psy 140) Howell

211 Seminar: Dramatic Theory (3 cr; prereq 171, 172, 173, 9 cr dram lit) Ballet

214 Seminar: Stage Direction (3 cr; prereq 111, 112, 113) Whiting

241 Seminar: Radio Research (2 cr; prereq ‡) Ziebarth

251 Seminar: Listening Comprehension (2 cr; prereq undergrad maj spch, ‡)
VIII-IX W, AgEng 221 (**StP Campus**), Nichols

261 Seminar: Speech Pathology (3 cr; prereq 122, 163 or ‡) Bryngelson, Henrikson

267 Seminar: Experimental Phonetics (2 cr; prereq 67, 142) Fletcher

270 Adv Clinical Audiology (3 cr; prereq 153, ¶157, ‡) Lassman

271 Seminar: Hearing (3 cr; prereq 153, 155, ‡) Lassman

281 Seminar: Organic Disorders (2 cr; prereq 261, 262, 263, ‡) Henrikson

291 Research (ar cr)

Winter and Spring Quarters

5w,s See 5f

6w,s See 6f: I MWF; II MWF; IV MWF; III T, III-IV Th; V-VI T, V Th

6As Voice, Articulation (3 cr, §old 3A; prereq 5, ‡) VII MWF

9w See 9f

31w,s See 31f

32w,s See 32f: II MWF(w,s); III MWF(w); VI MWF(w,s)

33w,s See 33f: II MWF(w,s); III MWF(s)

34w,s See 34f: I MWF, II MF(w); I TS, II TThS(s)

39s See 39f

51w,s See 51f

55s See 55f

56w Speech Writing, Platform Speaking (3 cr; prereq 5 or ‡) II MWF

61s See 61f

65w,s See 65f

66w,s See 66f

67w,s See 67f: I MWF(s); II MWF(w)

69w Radio, Television Production (3 cr; prereq 65) II T, II-III Th

75w Play Production in Secondary School (3 cr; prereq 3, 32, 74) IV MWF

76s Play Production in Secondary School (3 cr; prereq 75 or 112 or ‡) IV MWF

78w See 78f: III MWF

79s Adv Acting (3 cr; prereq 32) IV MWF

81w-82s See 81f: III-IV T, III Th; VII MWF (w); III MWF(s)

82w-82s See 81f: IV or VI MWF

83w See 81f: III MWF

91w Scene Design (3 cr; prereq 5, 31, 34) III TThS, IV ThS

92s Lighting (3 cr; prereq 5, 31, 34) III TThS, IV ThS

97w See 97f

-102w-103s‡ See 101f

106w,s See 106f

109s Classical Rhetoric (3 cr; prereq 5, △) VI MWF

-112w-113s‡ See 111f

117s Writing Radio, Television Drama (3 cr; prereq 5, 32 or △) II MWF

131w Creative Dramatics (3 cr; prereq 5, 31 or elem educ maj or ‡...32 rec) VIII-IX T, VIII Th

132s Children's Theater (3 cr; prereq 5, 31 or ‡) VIII-IX T, VIII Th

-136w-137s‡ See 135f

141w Anatomy, Physiology of Voice Mechanism (3 cr; prereq 67 or ‡, Psy 5) IV MWF

142s Physical Bases, Instrumentation of Speech (3 cr; prereq 67, 140 or ‡, Psy 5) IV MWF

153w Audiometry, Hearing Aids (3 cr; prereq 152 or ‡) III MWF

155s Lip Reading, Lip Reading Methods (3 cr; prereq 152 or ‡) III MWF

157s Clinical Practice in Audiology (3 cr; prereq 153, 155 or ‡)

162w Speech Pathology (3 cr, †162-163; prereq 61, 67, 161) VI M, VI-VII T

163s Speech Pathology (3 cr, †162-163; prereq 61, 67, 161) VII MWF

-165w-166s See 164f
169w Speech, Language in Human Behavior (3 cr) VI MWF
170w Radio, Television Programming (3 cr; prereq 65 or 66 or ♯) V MWF
-172w-173s‡ See 171f
178w Theater on Tour (3-6 cr; prereq 12 cr above 50, cons fac comm)
-182w-183s‡ See 181f
201w,s See 201f
-204w‡ See 203f
-208w‡ See 207f
-212w-213s‡ See 211f
-215w-216s See 214f
222w-223s‡ Seminar: Oral Interpretation of Literature (3 cr; prereq 105, 122)
-242w-243s‡ See 241f
251w,s See 251f
-262w-263s‡ See 261f
-272w-273s‡ See 271f
277s Seminar: Rhetoric (3 cr; prereq 109 or ♯)
-282w-283s‡ See 281f
-292w-293s‡ See 291f

ZOOLOGY (Zool)

Fall Quarter

1 **Gen Zoology** (3 cr, †1-2-3)
—1, Lect II TTh, Bo B6
—2, Lect IV WF, Bo B6
—1, Lab I-II MF, Z 101D, 107
—2, Lab III-IV MF, Z 101D, 107
—3, Lab V-VI MF, Z 101D, 107
—4, Lab VII-VIII MF, Z 101D, 107
—5, Lab I-II TTh, Z 101D, 107
—6, Lab III-IV TTh, Z 101D, 107
—7, Lab V-VI TTh, Z 101D, 107
—8, Lab VII-VIII TTh, Z 107
51 **Animal Parasitology** (5 cr, §Ent 51; prereq 3 or Biol 3)
Lect VI MWF, Z 313, Wallace
—1, Lab III-IV MWF, Z 208
—2, Lab VII-VIII MWF, Z 208
54 **Histology** (5 cr; prereq 3 or Biol 3, not open to predent or premed students)
Lect I TThS, Z 313, Olson
—1, Lab II-IV TTh, Z 201
—2, Lab VI-VIII TTh, Z 201
82 Organic Evolution (3 cr; prereq 3 or Bot 3 or Biol 3)
VIII MWF, Z 211, Merrell
83 Genetics, Eugenics (3 cr; prereq 3 or Bot 3 or Biol 3)
II MWF, Z 313, Reed
84 **Genetics Lab** (1 cr; prereq 83 or ¶ or ♯)
—1, VII-VIII T, Z 202, Merrell
—2, III-IV W, Z 202
100 Zoological Techniques (ar cr; prereq grad)
112 Adv Gen Physiology (3 cr; prereq 15 cr incl 3 or Biol 3, ♯) Brokaw
117 **Animal Ecology** (3 cr, §Ent 117; prereq 15 cr incl 3 or Biol 3)
Lect VI-VII TTh, Z 211, Underhill
Lab VIII TTh, Z S3
121 **Ichthyology** (3 cr, §Ent 121; prereq 15 cr incl 3 or Biol 3)
Lect III MWF, Z 211, Eddy
Lab IV MWF, Z S3
144 **Medical Entomology** (3 cr, §Ent 144; prereq 15 cr incl 52, ♯)
Lect VI TTh, Z 208
Lab VII-VIII TTh, Z 208
155 Biophysics (3 cr; prereq 28 cr betw phys, biol, ♯...phys chem, physiol rec)
Lect VI T, Ph 49, Schmitt
Lab VI-VIII Th, Ph 49
170 **Adv Genetics** (3 cr; prereq 15 cr incl 83, ♯)
Lect VI TTh, Z 323, Merrell, Reed
Lab VII-VIII TTh, Z 16
183 **Physiology of Development** (4 cr; prereq 182, ♯) Spratt
197 Problems (ar cr; prereq 3 or Biol 3 or ♯)
201 Research: Entomology (ar cr) Mickel
211 Research: Ecology (ar cr) Eddy
217 Research: Physiology (ar cr) Richards
221 Research: Biophysics (ar cr) Schmitt
229 Research: Histology (ar cr) Olson
233 Research: Embryology (ar cr) Spratt
237 Research: Cytology (ar cr) Gall
242 **Insect Physiology** (4 cr, §Ent 242; prereq 15 cr zool or ent, ♯...50 rec)
Lect VI WF, CofH 8, Richards
Lab VII-IX WF, CofH 8
251 Research: Genetics (ar cr) Reed, Merrell
254 **Adv Entomology** (3 cr, §Ent 254; prereq 15 cr incl 52 or ♯)
Lect I TTh, Z 211, Mickel
Lab II-III Th, Z 401
261 Research: Parasitology (ar cr) Wallace
291 Seminar (no cr)
296 Seminar: Research Fields (ar cr)

Winter and Spring Quarters

-2w-3s See 1f
22w Comparative Anatomy (5 cr; prereq soph, 3 or Biol 3) Lect III TThS, lab III-IV MWF, VI-VIII MW; VI-VIII TTh
50s Gen Physiology (5 cr; prereq soph, 3 or Biol 3 or 15 cr bot, 10 cr chem or ♯, not open to predent or premed students)
52w Entomology (5 cr, §Ent 52; prereq 3 or Biol 3) Lect VII MWF, lab V-VI or VIII-IX MWF
53s Fauna of Central United States (5 cr; prereq 3 or Biol 3) Lect VII MWF, lab V-VI MWF; VIII-IX MWF; VI-VIII TTh
57w-58s Ornithology (3 cr, †57-58; prereq 3 or Biol 3) Lect VII TThS, lab VIII-IX TTh (w); Lect III TTh, lab I-II TTh(s)

59w Gen, Comparative Embryology (5 cr; prereq 3 or Biol 3, not open to predent or premed students) Lect I TTh, lab VI-VIII TTh, conf II and/or III S

83s See 83f

84s See 84f

-101w-102s‡ See 100f

107s Protozoology (4 cr; prereq 15 cr incl 3 or Biol 3 or Bot 3 or ♯) Lect VI TTh, lab VII-VIII TTh

113w Topics: Adv Gen Physiology (3 cr; prereq 15 cr incl 3 or Biol 3, ♯)

118w Animal Ecology (3 cr, §Ent 118; prereq 15 cr incl 3 or Biol 3, ♯) Lect VI TTh, lab VII-VIII TTh

140s Biological Microscopy (4 cr, §Ent 140; prereq sr, 15 cr zool or bot or ent, ♯) Lect VI WF, lab VII-IX WF

145w Parasitic Protozoa (3 cr, §Ent 145; prereq 15 cr incl 3 or Biol 3, ♯) Lect VI TTh, lab VII-VIII TTh

146s Helminthology (3 cr, §Ent 146; prereq 15 cr incl 3 or Biol 3, ♯) Lect VI TTh, lab VII-VIII TTh

-156w-157s‡ See 155f: Lect VI TTh, lab VII-VIII TTh(w); Lect VI-VII M, lab VIII-X M(s)

160w-161s Cytology (3 cr; prereq 15 cr incl 3 or Biol 3, ♯) Lect II MF, lab III-IV MF

171w Genetics of Speciation (3 cr; prereq 15 cr incl 83 or ♯) VI MWF

175s Human Genetics (3 cr; prereq 83, ♯) VIII MWF

182s Experimental Embryology (5 cr; prereq sr, 50, 59, ♯) Lect III-IV MW, lab ar

198w-199s Problems (ar cr)

-202w-203s See 201f

-212w-213s See 211f

-218w-219s See 217f

-222w-223s See 221f

-230w-231s See 229f

-234w-235s See 233f

236s Gen Ecology of Insects (3 cr; prereq 15 cr zool or ent) Lect VI TTh, lab VII-VIII TTh

-238w-239s See 237f

-243w See 242f

-252w-253s See 251f

-255w-256s See 254f

-262w-263s See 261f

-292w-293s See 291f

-297w-298s See 296f

UNATTACHED COURSES

Biology (Biol)

Fall Quarter

1 Gen Biol (3 cr, †1-2-3, §Bot 1 or 4 or Zool 1, §old Zool 14 or NSci 7)
—1, Lect III TTh, MNH Aud
—2, Lect IV TTh, NH 45
—3, Lect VII TTh, NH 45
—4, Lect V WF, Bo B6
—1, Lab I-II MF, Bo 1, 4, 5
—2, Lab III-IV MF, Bo 1, 4, 5
—3, Lab V-VI MF, Bo 1, 5
—4, Lab VII-VIII MF, Bo 1, 4, 5
—5, Lab I-II TTh, Bo 1, 4, 5
—6, Lab III-IV TTh, Bo 1, 4, 5
—7, Lab V-VI TTh, Bo 1, 5
—8, Lab VII-VIII TTh, Bo 1, 5

1A Gen Biol (2 cr, †1A-2A-3A, §Bot 1 or 4 or Zool 1, §old Zool 14 or NSci 7)
—1, Lect III TTh, MNH Aud
—2, Lect IV TTh, NH 45
—3, Lect VII TTh, NH 45
—4, Lect V WF, Bo B6
—1, Dem I W, Bo 1, 4, 5
—2, Dem II W, Bo 1, 4, 5
—3, Dem III W, Bo 1, 4, 5
—4, Dem IV W, Bo 1, 4, 5
—5, Dem V W, Bo 1, 5
—6, Dem VI W, Bo 1, 5
—7, Dem VII W, Bo 1, 4, 5
—8, Dem VIII W, Bo 1, 4, 5

Winter and Spring Quarters

-2w-3s See 1f: III TTh; IV TTh; V WF; VII TTh

-2Aw-3As See 1Af: III TTh; IV TTh; V WF; VII TTh

Linguistics and Comparative Philology (Ling)

Fall Quarter

151 Honors Course (1-3 cr; prereq sr, ♯)

Winter and Spring Quarters

-152w-153s‡ See 151f

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING

Aeronautical Engineering (Aero)

Fall Quarter

4 Aero-Space Survey, Laboratory (1 cr)
VIII T, AE 209

20 Flying: Theory, Practice (2 cr)
V Th, ME 102

21 Flying: Theory, Practice (2 cr; prereq 20)
VI Th, ME 102

22 Flying: Theory, Practice (2 cr; prereq 21)
VI Th, ME 102

46 Link Instrument Flying (no cr; prereq ‡)

101A Theoretical Aerodynamics II (3 cr; prereq 100A)
III MWF, AE 209

103 Dynamic Stability, Control in Flight (3 cr; prereq 103)
IV MWF, AE 211

107 Aerodynamics of Viscous Fluids (3 cr; prereq 102)
III MWF, AE 327

115A Structural System Analysis I (3 cr; prereq 114, MM 193)
II MWF, AE 327

130A Aero-Space System Design (4 cr; prereq ¶108, ¶115A)
—1, VI-VIII MW, AE 317
—2, VI-VIII T, III-V Th, AE 317

135 Testing of Aircraft Structures, Models (3 cr; prereq 114, MM 142)
Lect V TTh, AE 327
—1, Lab II-IV T, AE 30
—2, Lab VI-VIII T, AE 30

201 Aerodynamics of Compressible Fluid (3 cr; prereq 106 or ‡)
I T, I-II Th, AE 211

230 Aerodynamics of Supersonic Inlet Diffusers (3 cr; prereq 202 or ‡)
II-III T, III Th, AE 211

240 Dynamics of Aircraft Structures (3-4 cr)
Lect III T, VI T, AE 327
Lab VI-VIII M, AE 30

272 Research (3-6 cr; prereq ‡)

273 Research (3-6 cr; prereq 272)

274 Research (3-6 cr; prereq 273)

Winter and Spring Quarters

-5w-6s See 4f

20w,s See 20f

21w,s See 21f: VI Th(w); V Th(s)

22w,s See 22f

46w,s See 46f

100Aw Theoretical Aerodynamics I (3 cr; prereq ITM 26A, Hydr 101) III MWF

101As See 101Af

102Aw Theoretical Aerodynamics III (3 cr; prereq 101A) IV MWF

-104w-105s See 103f

106Aw Applied Aerodynamics I (3 cr; prereq 102A) III MWF

107As Applied Aerodynamics II (3 cr; prereq 106A) III MWF

114s Analysis of Structural Components (3 cr; prereq MM 41, 150) II MWF

116Aw Structural System Analysis II (3 cr; prereq 115A) IV MWF

117As Analysis of Load-Carrying Surfaces (3 cr; prereq 115A) IV MWF

-131Aw-132As See 130Af

141s Experimental Aerodynamics (3 cr; prereq 102A) VII-IX MW or TW

150s Aeroelasticity I (3 cr; prereq 107 or 102, MM 193)

159w Aerodynamic Retardation (3 cr; prereq 102 or 107 or ‡)

-202w-203s‡ See 201f

220w Astronautics (3 cr; prereq 201, ITM 152, 153 or ‡) VI T, V-VI Th

231w Aerodynamics, Flight Performance of Supersonic Missiles (3 cr; prereq 230) II-III T, III Th

232s Aerodynamics, Flight Performance of Supersonic Missiles (3-5 cr; prereq 231 or ‡) II-III T, III Th

241w Dynamics of Aircraft Structures (3 cr; prereq 240) Lect VI M, VII W, lab VII-IX M

272w,s-273w,s-274w,s See 272f-273f-274f

Mechanics and Materials (MM)

Fall Quarter

27 Rigid-Body Mechanics I (3 cr; prereq ITM 25A, Phys 14)
—1, I MWF, AE 209
—2, III MWF, Ex 193

28 Rigid-Body Mechanics II (3 cr; prereq 27, ITM 26A)
—1, I MWF, Ex 193
—2, II MWF, Ex 193
—3, III MWF, AE 227
—4, IV MWF, Ex 193
—5, VI MWF, Ex 193
—6, VII MWF, Ex 193
—7, VIII MWF, Ex 193

29 Rigid-Body Mechanics III (3 cr, §Phys 100; prereq 28)
VI MWF, AE 327

40 Deformable-Body Mechanics I (3 cr; prereq 27)
—1, II MWF, AE 209
—2, 9:00-10:30 TTh, Ex 193
—3, IV MWF, AE 209

—4, V MWF, Ex 193
—5, VI MWF, AE 209
—6, VII MWF, AE 209
—7, VIII MWF, AE 209

41 **Deformable-Body Mechanics II** (3 cr; prereq 40)
VI MWF, Ex 25

142 **Experimental Mechanics** (2 cr; prereq 40) Lect V TTh, NH 45
—1, Lab VI-VII M, Ex 130
—2, Lab VIII-IX M, Ex 130
—3, Lab VI-VII T, Ex 130
—4, Lab VIII-IX T, Ex 130
—5, Lab VI-VII Th, Ex 130
—6, Lab VIII-IX Th, Ex 130

150 **Rheology, Strength of Solids** (3 cr; prereq 41, Met 56)
IV MWF, AE 9

164 **Problems** (3 cr; prereq ♯)

180 **Introd to Theory of Elasticity** (3 cr; prereq 40, ITM 149)
10:30-12:00 TTh, Ex 25

193 **Introd to Theory of Mechanical Vibrations** (3 cr; prereq 29, ITM 26 or 26A or 80)
—1, IV MWF, Ex 22
—2, 9:00-10:30 TTh, Ex 25

221 Theory of Plasticity (3 cr; prereq ¶180, ITM 147)
VI MWF, Ex 22

240 Theory of Viscoelasticity (3 cr; prereq 180, 193)
9:30-11:00 TTh, E 4

265 Adv Topics (3 cr; prereq ♯)

297 Seminar (0-3 cr)

Winter and Spring Quarters

27w,s See 27f: I MWF(s); II MWF(w); III MWF(s); IV MWF(s); V MWF(s); VI MWF(w,s); VII MWF(s); VIII MWF(s)

28w,s See 28f: III MWF(w); IV MWF(s); VI MWF(w); VII MWF(s)

29w,s See 29f: I MWF(w); III MWF(w); IV MWF(w,s); V MWF(w); VI MWF(w); VII MWF(w,s); VIII MWF(w)

40w,s See 40f: II MWF(w,s); III MWF(s); VI MWF(w,s)

41w,s See 41f: I MWF(w); III MWF(s); IV MWF(w); VI MWF(s); VII MWF(w); VIII MWF(w)

92w Statics (4 cr; prereq arch or combined engr-bus students, ITM 24A or 91) I MTWThF

93s Solid Mechanics for Architects (4 cr; prereq 92) Lect I MTTh, lab I W; II W; I F; II F

142w,s See 142f: Lect V TTh, lab VI-VII M(w,s); VIII-IX M(w,s); I-II T(w,s); III-IV T(s); VI-VII T(w,s); VIII-IX T(w,s); VI-VII W(w,s); VIII-IX W(w,s); I-II Th(w,s); III-IV Th(s); VI-VII Th(w,s); VIII-IX Th(s); VI-VII F(w,s); VIII-IX F(s)

151w Fatigue of Materials, Structures (3 cr; prereq 150)

-165w-166s‡ See 164f

181w Deformable-Body Mechanics III (3 cr; prereq 41 or 180) 10:30-12:00 TTh

182s Deformable-Body Mechanics IV (3 cr; prereq 41 or 180) 10:30-12:00 TTh

193s See 193f: III MWF

196w Probs: Adv Rigid-Body Mechanics (3 cr; prereq 193 or ITM 162 or EE 150 or Phys 102)

199s Thermal Stresses (3 cr; prereq 180, ME 133) VI MWF

211w Theory of Vibrations I (3 cr; prereq 193, ITM 147) VI MWF

212s Theory of Vibrations II (3 cr; prereq 193, ITM 147) VI MWF

-222w-223s See 221f

227w Structural Instability (3 cr; prereq 180 or ITM 173) 9:00-10:30 TTh

-241w-242s‡ See 240f

-266w‡ See 265f

290s Theory of Plates, Shells (3 cr; prereq 180, ITM 147, ♯) VI MWF

295w-296s Theory of Elasticity with Applications (3 cr; prereq 180) VII MWF

-298w-299s‡ See 297f

AGRICULTURAL ENGINEERING (AgEn)

Fall Quarter

8 **Laboratory: Units, Measurements** (1 cr)
VIII-IX T, AgEng 101, Flikke, Larson

82 **Soil, Water Mgt** (3 cr)
1:00-2:30 TTh, AgEng 305, Manson

101 **Summer Employment I** (2 cr; prereq 4th yr or △) Schwantes

102 **Summer Employment II** (2 cr; prereq 101)

141 **Agricultural Drainage** (3 cr; prereq 82, Hydr 103, Soil 19)
I MWF, AgEng 305, Manson

191S **Probs: Soil Moisture** (2-6 cr; prereq ♯)

191P **Probs: Power, Machinery** (2-6 cr; prereq ♯)

191F **Probs: Farmstead Equipment, Operations** (2-6 cr; prereq ♯)

200 Seminar (1 cr; prereq ♯)

211 Adv Probs, Research (2-6 cr; prereq 191 or 192 or 193)

Winter and Spring Quarters

9w Laboratory: Materials (1 cr) VIII-IX T

10s Laboratory: Applications (1 cr) VII-IX T

62w Farm Structures (3 cr; prereq MM 41 or ¶) VI WF

72s Principles of Farm Machinery (3 cr; prereq ME 24 or ¶) Lect VI TTh, lab VII-IX Th

125s Topics: Agricultural Physics (3 cr; prereq 4th yr, EE 37 or inte calc, 25)

142w Erosion Control (3 cr; prereq 82, Hydr 103, Soil 19) I MWF

143s Irrigation (3 cr; prereq 82, Hydr 103, Soil 19) I MWF

147w Design, Mgt of Farm Machinery (3 cr; prereq 72) Lect VI TTh, lab VII-IX Th

159s Instrumentation (3 cr; prereq EE 37) Lect VII MW, lab VIII-X W

167w Adv Farm Structures (3 cr; prereq ME 160, CE 37) Lect VI TTh, lab VII-IX Th

170w Agricultural Tractors (3 cr; prereq ME 121, ME 150) Lect II TTh, lab VII-IX T

171w Design of Agricultural Machinery (3 cr; prereq 147, ME 121) Lect VII M, lab VIII-X M, VII-IX W

172s Agricultural Machine Analysis (3 cr; prereq 171, MM 142) Lect VI T, lab VII-IX T, VI-VIII Th

176s Mgt of Power, Machinery (3 cr; prereq 147) Lect IV MW, lab ar

179w Agricultural Process Engineering (3 cr; prereq ME 160) Lect IV TTh, lab VII-IX F

180w Agricultural Hydrology, Flood Control (3 cr; prereq 142 or ¶) III MWF

181s Field Problems in Soil-Water Mgt (4 cr; prereq 141, 142, or 143 or ¶) Lect I TTh, lab II-IV TTh

-192Sw-193Ss‡ See 191Sf

-192Pw-193Ps‡ See 191Pf

-192Fw-193Fs‡ See 191Ff

200w,s See 200f

-212w-213s‡ See 211f

ARCHITECTURE (Arch)

Fall Quarter

11 **Architectural Drawing** (2 cr)
III-V TTh, E 315

51 **History** (4 cr; prereq 2nd yr for IT or 3rd yr for SLA)
II MTWF, E 305, Koeper

71 **Building Technology** (4 cr, §old 57; prereq 2nd yr)
III-IV TTh, E 305

74 **Building Technology** (4 cr; prereq 73)
III-IV TTh, AE 209

81 **Architectural Design I** (6 cr, †81-82-83; prereq 2nd yr for IT; or 3rd yr for SLA, △)
Lect VI W, E 305
Lab VI-IX MThF, VII-IX W, E 411

82 **Architectural Design I** (6 cr, †81-82-83; prereq 81)
Lect VI W, E 305
Lab VI-IX MThF, VII-IX W, E 411

83 **Architectural Design I** (6 cr, †81-82-83; prereq 82)
Lect VI W, E 305
Lab VI-IX MThF, VII-IX W, E 411

91 **Architectural Design II** (6 cr, †91-92-93; prereq 83)
VI-IX MWThF, E 306, Bliss

92 **Architectural Design II** (6 cr, †91-92-93; prereq 91)
VI-IX MWThF, E 306, Bliss

93 **Architectural Design II** (6 cr, †91-92-93; prereq 92)
VI-IX MWThF, E 306, Bliss

101 **Tutorial Work in History** (2 cr; prereq 53) Koeper

104 **Planning** (3 cr, §Econ 110 or Pol 123 or Soc 106; prereq 4th yr)
III MWF, E 305, Vivrett

110 **Planning Techniques** (ar cr; prereq 105) Vivrett

111 **Architectural Design III** (8 cr, †111-112-113; prereq 93, MM 93)
VI-IX MTWThF, 4 hrs ar, E 315, Vivrett

112 **Architectural Design III** (8 cr, †111-112-113; prereq 111)
VI-IX MTWThF, 4 hrs ar, E 315, Vivrett

113 **Architectural Design III** (8 cr, †111-112-113; prereq 112)
VI-IX MTWThF, 4 hrs ar, E 315, Vivrett

121 **Architectural Design IV** (9 cr, †121-122; prereq 113, CE 41)
VI-IX MTWThF, 7 hrs ar, E 417, Cerny

122 **Architectural Design IV** (9 cr, †121-122; prereq 121)
VI-IX MTWThF, 7 hrs ar, E 417, Cerny

123 **Thesis** (12 cr; prereq 122)
36 hrs ar, E 405, Rapson

201 Research: History (ar cr; prereq 53) Koeper

231 Planning (ar cr; prereq cons grad adv)

251 Architectural Design VI (ar cr; prereq 123) Rapson

Winter and Spring Quarters

1s Introduction (1 cr) VI T

-12w-13s See 11f

-52w-53s See 51f

-72w-73s See 71f

-75w-76s See 74f

-82w-83s See 81f

91w,s-92w,s-93w,s See 91f-92f-93f

-102w-103s See 101f

105w Seminar: Planning (3 cr; prereq 104)

106s Planning (3 cr; prereq 104 or Econ 111 or Pol 123 or Soc 106)

110w,s See 110f

111w,s-112w,s-113w,s See 111f-112f-113f

121w,s-122w,s See 121f-122f

123w,s See 123f

126w Professional Relations (3 cr; prereq 4th yr) III-IV MF

201w,s See 201f

-232w-233s See 231f

-252w-253s See 251f

CHEMICAL ENGINEERING (ChEn)

Fall Quarter

100 **Stoichiometry** (3 cr; prereq 3rd yr)
—1, I MWF, ChE 162
—2, III MWF, ChE 150
—3, VII MWF, ChE 50

101 **Principles** (5 cr; prereq 3rd yr, ¶PCh 101)
Lect II MWF, ChE 240
—1, I TThS, ChE 154
—2, II TThS, Mines 116
—3, II TThS, ChE 50
—4, III TTh, ChE 150, II S, ChE 154

111 **Laboratory** (2 cr; prereq 101)
Conf II T, ChE 240
—1, VI-IX M, ChE 3 fl
—2, VI-IX T, ChE 3 fl
—3, VI-IX W, ChE 3 fl
—4, VI-IX Th, ChE 3 fl
—5, VI-IX F, ChE 3 fl

116 **Process Evaluation, Design** (3 cr; prereq 103)
IV MWF, ChE 50

153 **Problems** (ar cr)

155 **Problems** (ar cr)

161 **Nuclear Reactor Design** (3 cr; prereq ♯)
I MWF, ChE 40

171 **Process Control** (3 cr; prereq 4th yr or ♯)
I TTh, II S, ChE 240

201 Seminar (1 cr)
VI T, ChE 240

205 Physical Rate Processes, Transfer Operations (3 cr; prereq 103, ♯)

208 Physical Rate Processes, Transfer Operations (3 cr; prereq 103, ♯)

214 Adv Mathematics for Chemical Engineers, Chemists (3 cr; prereq diff equat)

221 Chemical Rate Processes, Reactor Design Principles (3 cr; prereq ♯)

225 Fluid Mechanics, Related Topics (3 cr; prereq ♯)
I-II TTh, ChE 54

264 Survey (1 cr; prereq ♯)

301 Research (ar cr)

Winter and Spring Quarters

-102w See 101f: Lect II TThS, rec I MWF; II MWF; III MWF

103s Principles (3 cr; prereq 102) Lect II TTh, rec I MW; II MW; III MW

112w Laboratory (2 cr; prereq 102) Conf III T, lab VI-IX M; VI-IX T; VI-IX W; VI-IX Th; VI-IX F

113s Laboratory (2 cr; prereq 103) Conf III T, lab VI-IX M; VI-IX T; VI-IX W; VI-IX Th; VI-IX F

-117w-118s See 116f: VII-VIII T, VIII-IX Th

119w-120s Thermodynamics (3 cr; prereq PCh 101) Lect I TTh, rec II MW; VII WF; VII W, II F; VIII MW

122w Biochemical Engineering (3 cr; prereq 103, Bact 53 or ♯) I TThS

123s Biochemical Engineering Lab (3 cr; prereq 122) VI-IX WF

131w-132s Chemical Reactor Analysis (3 cr; prereq 120, PCh 109) I MWF

153w-154s‡ See 153f

-154w-155s‡ See 153f

-162w-163s See 161f

-172w See 171f: Lect I TTh, II S, lab VI-IX W or F

173s Adv Process Control (3 cr; prereq 172) Lect I TTh, II S

-202w-203s‡ See 201f

-206w-207s‡ See 205f

-209w-210s See 208f

-215w-216s See 214f

217w Analysis of Probs (3 cr; prereq 216)

218s Adv Topics (3 cr)

219w-220s Adv Thermodynamics (3 cr; prereq 120 or ♯)

-222w-223s‡ See 221f

-226w-227s See 225f

264w,s See 264f

-302w-303s See 301f

CHEMISTRY

Analytical Chemistry (AnCh)

Fall Quarter

57 **Quantitative Analysis** (4 cr; prereq InCh 11 or InCh 26)
—1, Lect VI MWF, C 410, Meehan
Lab VII-IX MW, VII-VIII F, C 310
—2, Lect VI TTh, VII Th, C 325, Herr
Lab VII-IX T, VIII-X Th, 2 hrs from I-III T or Th, C 310

96 **Senior Thesis** (ar cr; prereq 4th yr)

104 **Qualitative Inorganic Microanalysis** (3 cr; prereq 51, 52, 53, 54)
Lect VI F, C 315, Sandell, lab ar

106 **Technical Analysis** (2 or 3 cr; prereq 51, 52, 53, 54) Sandell

109 **Rock Analysis** (3 cr; prereq 51, 52, 53, 54, ♯) Goldich

123 **Adv Analytical Chemistry** (3 cr; prereq 51, 52, 53, 54 or ♯) Meehan

127 **Theoretical, Practical Fundamentals of Instrumental Methods** (3 cr; prereq PCh 103)
III TTh, V W, C 315, Meehan

131 **Applications of Indicators in Neutralization Reactions, pH Determinations** (2 or 3 cr; prereq 51, 52, 53, 54, PCh 103)
VI MW, C 315, Bruckenstein, lab ar

134 **Voltammetry, Amperometric Titrations** (2 cr; prereq 133 or ¶) Bruckenstein

135 **Seminar: Modern Probs** (1 cr; prereq 51, 52, ♯53, 54, PCh 103)
IV T, C 325, Kolthoff

201 Topics (ar cr; prereq 51, 52, 53, 54) Kolthoff

235 Seminar: Research (ar cr)
4:00-5:00 Th, C 315, Kolthoff
262 Survey (1 cr; prereq ♯)
301 Research: Quantitative Analysis (ar cr)

Winter and Spring Quarters

51w Quantitative Analysis: Gravimetric (2 cr; prereq InCh 26) VI MWF
52s Quantitative Analysis: Volumetric (2 cr; prereq 51) VI MWF
53w Quantitative Analysis Lab (3 cr; prereq 51 or ¶) VI-IX MWF; VI-IX T, VI-X Th
54s Quantitative Analysis Lab (3 cr; prereq 53, 52 or ¶) VI-IX MWF; VI-IX T, VI-X Th
57s See 57f: Lect VI MWF, lab VI-IX TTh
58s Quantitative Analysis (3 cr; prereq 52 or ¶52) VI-IX TTh
-97w-98s‡ See 96f
101w-102s‡ Quantitative Analysis (5 cr; prereq InCh 26) VI-IX MWF
103s Quantitative Inorganic Microanalysis (3 cr; prereq 51, 52, 53, 54) Lect VI F, lab ar
105w Polarizing Microscope (3 cr; prereq PCh 101) Lect VI F, lab ar
-107w-108s‡ See 106f
109w,s See 109f
122s Adv Analytical Chemistry (2 cr; prereq 51, 52, 53, 54) III TTh
132w Electrometric Measurements, Titrations (2 or 3 cr; prereq 51, 52, 53, 54, PCh 103) Lect VI MW, lab ar
133s Voltammetry, Amperometric Titrations (2 cr; prereq 51, 52, 53, 54, PCh 103, VI MW
134w,s See 134f
-136w-137s‡ See 135f
138s Adv Volumetric Analysis (3 cr; prereq 131)
140w Water Analysis (2 cr; prereq 51, 52, 53, 54)
141w Instrumental Methods (1-3 cr; prereq sr, 127) VII-IX F
-202w-203s‡ See 201f
-236w-237s‡ See 235f
262w,s See 262f
-302w-303s‡ See 301f

Inorganic Chemistry (InCh)

Fall Quarter

4 Gen Inorganic Chemistry (5 cr, †4-5; prereq HS alg)
—1, Lect VI MWThF, C 100, Brasted
Lab VI-IX T (for med, med tech, dent, SLA, ed students)
—2, Lect VII MTWF, C 100, Britton
Lab VI-IX Th (for med, med tech, dent, SLA, nurs, nu ed, PubH nurs students)
—3, Lect VII TWF, C 325, Bent
Quiz VII Th, C 100
Lab VI-IX M (VII M, C 410, Sept 28 only)
—4, Lect VIII TWThF, C 100, Conroy
Lab VI-IX M (VIII M, PH 150, Sept 28 only) (for AFHE, SLA students)
11 Semimicro Qualitative Analysis (4 cr; prereq 5 or 15 or 25)
Lect I MWF, C 325, Tobias
Lab VI-IX W
14 Inorganic Chemistry (4 cr, †14-15; prereq Phys 12 or △)
—1, Lect I MTWThF, C 100, Johnson
Lab VII-IX Th
—2, Lect I MTWThF, C 100, Johnson
Lab VII-IX F
—3, Lect IV MTWThF, C 100, Tobias
Lab VII-IX T
—4, Lect IV MTWThF, C 100, Tobias
Lab VII-IX W
24 Chemical Principles (5 cr, †24-25)
Lect II MWF, C 100, O'Connor
Lab I-III TTh
26 Chemical Principles (5 cr; prereq 25)
Lect I MWF, C 325, Tobias
Lab VI-VIII MW
50 Modern Chemistry (3 cr; prereq jr or ♯)
II MWF, C 115, Bent
96 Senior Thesis (ar cr; prereq 4th yr)
103 Atomic Structure, Properties of Elements Based Thereon (3 cr; prereq PCh 103)
III MWF, C 225, Reynolds
111 Silicon, Related Elements (3 cr; prereq OrCh 62)
VII MWF, C 215, Johnson
134 Seminar: Modern Probs (1 cr; prereq PCh 103)
IV T, C 215
203 Atomic Structure, Chemical Bond (3 cr; prereq PCh 103, OrCh 62)
Lect III MWF, C 315, Hugus
211 Topics (ar cr; prereq △)
220 Adv Lab Methods (ar cr; prereq ♯) O'Connor, Hugus
260 Survey (1 cr; prereq ♯)
301 Research (ar cr)

Winter and Spring Quarters

4w-5s See 4f: Lect V MWThF, lab VI-IX M; VI-IX T; VI-IX W; VI-IX Th; VI-IX F
-5w See 4f
11s See 11f: Lect IV MWF, lab VI-IX M; Lect VI MWF, lab VI-IX T; Lect VII MWF, lab VI-IX Th
-15w See 14f
24w-25s See 24f: Lect V MWF, lab VI-VIII MW
-25w-26s See 24f
-51w See 50f
-97w-98s‡ See 96f
104w The More Representative Elements (3 cr, grad 4 cr; prereq 103 or ♯) III MWF
105s Coordination Compounds (3 cr; prereq 103 or ♯) III MWF
113w Mechanisms of Inorganic Rections (3 cr; prereq PCh 103) VII MWF

122s Adv Inorganic Chemistry Lab (2 cr; prereq AnCh 51, 52, 53, 54, PCh 103, 105)
-135w-136s‡ See 134f
-212w-213s‡ See 211f
-221w-222s‡ See 220f
260w,s See 260f
-302w-303s‡ See 301f

Organic Chemistry (OrCh)

Fall Quarter

42 **Organic Chemistry** (4 cr; prereq 41)
Lect V MTWThF, C 100, Leete
—1, Lab VI-IX Th, C 390
—2, Lab VI-IX F, C 390

61 **Organic Chemistry** (4 cr, †61-62; prereq 12 cr chem)
Lect I MTWF, C 410, Kreevoy
Lab Conf V T, C 410
—1, Lab VI-IX T, C 390
—2, Lab VI-IX W, C 390
—3, Lab I-IV Th, C 390
Lect III MWThF, C 410, Noland
Lab Conf IV Th, C 410
—4, Lab VI-IX M, C 390
—5, Lab II-V T, C 390
—6, Lab VI-IX T, C 390
—7, Lab VI-IX Th, C 390

63 **Organic Chemistry** (3 cr; prereq 42 or 62)
I MWThF, ForH 155, Parham

64 **Laboratory** (3 cr; prereq 63 or ¶)
Lab Conf VII M, C 325, Leete
—1, Lab II-IV T, VI-VIII T, C 390
—2, Lab VI-VII TTh, C 390
—3, Lab VII-IX WF, C 390

96 **Senior Thesis** (ar cr; prereq 4th yr)

102 **Qualitative Analysis** (4 cr; prereq 63, 64)
III T, C 225, Fenton

163 **Interm Organic Chemistry** (3 cr, §63; prereq 42 or 62)
I MWF, ForH 155, Parham

201 Seminar (1 cr)
7:45-8:45 pm W, C 325

205 Stereochemistry: Polymerization, High Polymers (3 cr; prereq 107)
I MWF, C 315, Lauer

210 Organic Qualitative Analysis (4 cr; prereq maj or min)
Lect III T, Koelsch, lab ar

239 Organic Research Techniques (2-5 cr; prereq OrCh maj) Parham

261 Survey (1 cr; prereq ♯)

301 Research (ar cr; prereq 102, △)

Winter and Spring Quarters

16s Carbon Compounds (4 cr; prereq InCh 15)
I MTWF

17s Carbon Compounds Lab (1 cr; prereq 16 or ¶) Conf I Th, lab III-IV T; VI-VIII M; VIII-IX M

41s Organic Chemistry (4 cr; prereq InCh 5)
Lect IV MTWThF, lab VI-IX Th or F

61w-62s See 61f: Lect IV MTWThF, lab I-IV Th; VI-IX M; VI-IX T; VI-IX W; VI-IX Th
-62w See 61f
63s See 63f: III MWThF
64s See 64f
-97w-98s‡ See 96f

101w Interm Organic Chemistry (3 cr; prereq 63, 64) III MWF

102s See 102f: Lect III T, lab ar

106w-107s Adv Organic Chemistry (3 cr; prereq 63, 64) II MWF

130s Quantitative Analysis (3 cr; prereq 63, 64, AnCh 51, 52, 53, 54, ♯)

139w Adv Laboratory (2-5 cr; prereq 63, 64) Conf IX F, lab ar

140w Aromatic Compounds (3 cr; prereq 63, 64)
II MWF

142w Chemistry of Natural Products (3 cr; prereq 63, 64) III TThS

165s Mechanisms of Organic Reactions (3 cr; prereq 63 or 163, 106 or 140 or 164) I MWF
-202w-203s‡ See 201f
-206s‡ See 205f: II MWF

215s Theoretical Organic Chemistry (3 cr; *prereq 107, PCh 103, inte calc or ♯) III TThS
239w,s See 239f
261w,s See 261f
-302w-303s‡ See 301f

Physical Chemistry (PCh)

Fall Quarter

96 **Senior Thesis** (ar cr; prereq 4th yr)

101 **Physical Chemistry** (4 cr; prereq 1 yr col chem, Phys 9 or ¶ with △, ITM 25A or Math 53)
—1, IV MWFS, C 410, Livingston
—2, IV MWFS, Owre 12, Wertz

104 **Laboratory** (1-2 cr; prereq 101 or ¶)
Lect V M, C 325
—1, Lab VII-VIII M, VI-VIII W, C 190
—2, Lab VI-VIII T, VII-VIII Th, C 190
—3, Lab III-IV T, II-IV Th, C 190

107 **Physical Chemistry for Premedical Students** (3 cr, †107-108; prereq 1 yr col chem, 1 yr col phys, Math 40)
Lect IV MWF, C 325
—1, Lab II-IV T, C 190
—2, Lab II-IV Th, C 190
—3, Lab VI-VIII F, C 190

109 **Physical Chemistry** (4 cr; prereq 103)
I MWFS, C 225

116 **Thermodynamics** (4 cr; prereq 103, calc)
IV MWF, C 225, Mead

128 **Colloid Chemistry** (3 cr; prereq 103)
II MWF, C 111, Reyerson

132 **Colloid Chemistry Lab** (1-2 cr; prereq 128 or ¶) Reyerson

204 Atomistics (4 cr; prereq 103, calc) Prager

221 Seminar: Colloid (ar cr) Reyerson
250 Seminar: Physical Chemistry (1 cr) 7:30 pm W, C 225
253 Seminar: Molecular Spectroscopy (ar cr) Crawford
259 Seminar: Chemical Kinetics (ar cr) Livingston
263 Survey (1 cr; prereq ‡)
265 Seminar: Magnetochemistry (ar cr) Wertz
268 Seminar: Polymers (ar cr) Prager
274 Seminar: Quantum Mechanics (ar cr) Mead
290 Topics (ar cr)
301 Research (ar cr)

Winter and Spring Quarters

-97w-98s‡ See 96f
-102w-103s See 101f
105w Laboratory (1-2 cr; prereq 104, 102 or ¶) Lect V M, lab III-IV T, II-IV Th; VI-VIII T, VII-VIII Th; VII-VIII M, VI-VIII W
106s Laboratory (1-2 cr; prereq 105, 103 or ¶) Lect V M, lab III-IV T, II-IV Th; VI-VIII T, VII-VIII Th; VII-VIII M, VI-VIII W
-108w See 107f
115w History of Chemistry (3 cr) VIII TTh
117w Fundamentals of Reaction Kinetics (3 cr; prereq 103) IV MWF
118s Adv Physical Chemistry (3 cr; prereq 103) IV MWF
129w Adsorption, Catalysis (3 cr; prereq 128) II MWF
131s Colloidal Processes (3 cr; prereq 128) II MWF
-133w-134s‡ See 132f
-205w-206s See 204f
217w-218s Thermodynamics (4 cr; prereq 116) III MWF
-222w-223s See 221f
-251w-252s‡ See 250f
-254w-255s‡ See 253f
-260w-261s‡ See 259f
263w,s See 263f
-266w-267s‡ See 265f
-269w-270s‡ See 268f
-275w-276s See 274f
-291w-292s‡ See 290f
-302w-303s‡ See 301f

CIVIL ENGINEERING

Civil Engineering (CE)

Fall Quarter

1 Laboratory (1 cr)
VII-IX M, ME 18

18 Surveying (3 cr; prereq ITM 12, EG 14)
Lect I TTh, E 215
—1, Lab VI-IX M, E 217
—2, Lab VI-IX T, E 217
Lect I TTh, E 203
—3, Lab VI-IX W, E 217
—4, Lab VI-IX Th, E 217
Lect IV TTh, E 215
—5, Lab VI-IX F, E 217
—6, Lab I-IV S, E 217
Lect VII TTh, E 215
—7, Lab I-IV T, E 217
—8, Lab I-IV Th, E 217

31 Structural Analysis (3 cr; prereq EG 14, MM 27)
—1, Lect II MWF, E 227
—2, Lect VI MWF, E 227
—1, Lab VII-IX M, E 225
—2, Lab II-IV T, E 225
—3, Lab VII-IX T, E 225
—4, Lab II-IV Th, E 225

37 Structural Engineering (3 cr; prereq MM 40)
Lect V TTh, AE 15
Lab VI-VII T, AE 15

38 Structural Design: Steel (3 cr; prereq MM 93)
—1, I MWF, ChE 154
—2, III MWF, E 227

51 Highways, Pavements (3 cr; prereq ¶MM 40)
—1, Lect V M, E 227, V F, ChE 240
—2, Lect V T, E 227, V F, ChE 240
—3, Lect V W, E 227, V F, ChE 240
—1, Lab VII-IX M, Ex 177
—2, Lab VII-IX T, Ex 177
—3, Lab II-IV W, Ex 177
—4, Lab VII-IX W, Ex 177
—5, Lab VII-IX Th, Ex 177
—6, Lab VII-IX F, Ex 177

124 Railway Engineering (3 cr; prereq 23 or ‡)

130 Statically Indeterminate Structures (3 cr; prereq 33)
—1, Lect IV TTh, E 227
—2, Lect VI TTh, E 227
—1, Lab VII-VIII T, E 227
—2, Lab VII-VIII Th, E 227

136 Adv Structural Analysis (3 cr; prereq 132)
II MWF, AE 211

141 Reinforced Concrete (3 cr; prereq 33)
—1, Lect I TTh, AE 19
—2, Lect II TTh, E 205
—1, Lab VII-IX M, TSCE 220
—2, Lab VII-IX W, TSCE 220
—3, Lab VII-IX Th, TSCE 220

146 Concrete, Concrete Materials (3 cr; prereq 51 or ¶)
Lect II TTh, E 227
—1, Lab VI-IX T, Ex 93
—2, Lab VI-IX F, Ex 93

153 Soils in Highway Engineering (3 cr; prereq 53)
IV MWF, AE 15

156 Highway Traffic Engineering (3 cr; prereq 52)
Lect IV TTh, E 205
Lab VII-IX Th, E 225

158 **Airport Design** (3 cr; prereq 52)
I MWF, ChE 54

160 **Applied Hydraulics** (3 cr; prereq Hydr 103, 104)
Lect III MW, Ex 25
—1, Lab VII-IX M, E 229
—2, Lab VII-IX W, E 229
Lect III TTh, E 227
—3, Lab III-V W, TSCE 220
—4, Lab I-III F, TSCE 220

161 **Hydrology** (3 cr; prereq Hydr 101 or 103)
Lect VI MW, E 203
Lab VII-IX F, E 229

166 **Water Power** (3 cr; prereq 161)

169 **Public Works Engineering** (3 cr; prereq 52)
III TTh, Ex 250

170 **Water Supply** (3 cr; prereq 160)
Lect I MWF, Ex 22
Lab I-III T, E 229

172 **Sanitary Lab** (3 cr; prereq 5th yr)

173 **Sanitary Engineering Probs: Water** (3 cr; prereq 170)
II MWF, Ex 250

176 **Seminar: Sanitary Engineering** (1 cr)

234 Adv Theory of Structures (3-5 cr; prereq 132, 142)
I MWF, AE 19

276 Adv Sanitary Engineering: Water (3-5 cr; prereq 173)

280 Research (3-5 cr; prereq ‡)

281 Research (3-5 cr; prereq 280)

282 Research (3-5 cr; prereq 281)

Winter and Spring Quarters

-2w-3s See 1f: VII-IX M(s); VII-IX T(w); VII-IX W(w,s); VII-IX Th(w,s)

17s Surveying (3 cr; prereq not open to IT students, ITM 12) Lect IV TTh, lab VI-IX Th or F

-19w-20s See 18f: Lect I TTh(w,s), lab VI-IX M; VI-IX T; VI-IX W; VI-IX Th; Lect IV TTh(w,s), lab VI-IX F; I-IV S; Lect VII TTh(w); VI TTh(s), lab I-IV T or Th

32w-33s Structural Design (3 cr; prereq 31, MM 40) Lect II or VI MWF, lab VII-IX M(w,s); II-IV T(w,s); VII-IX T(w); VII-IX W(s); I-III Th(w); VII-IX F(w,s)

34s Drafting Room Practice (2 cr; prereq ¶33) Lect IV T; VI Th; V F, lab VII-IX M; VII-IX W; II-IV Th; VII-IX Th

39w Structural Design: Steel, Timber (3 cr; prereq 38) I or III MWF

41s Structural Design: Concrete (3 cr; prereq 39) I or III MWF

-52w See 51f: Lect V MF; V TF; V WF, lab VII-IX M; I-III T; VII-IX T; VII-IX W; I-III Th; VII-IX Th; VII-IX F

53s See 53f: Lect III TTh, V MW; V TTh, lab VII-IX M; IV-VI W; VII-IX W; I-III Th; VII-IX Th; VII-IX F; I-III S

111s Land Surveying (3 cr; prereq 23 or ‡) III MWF

112w Aerial Surveying, Photogrammetry (3 cr; prereq 23 or ‡) III MWF

131w Structural Analysis (2 cr; prereq 130) Lect VI T, lab VII-IX T; Lect VI Th, lab VII-IX Th

132s Structural Design (2 cr; prereq 131) Lect VI T, lab VII-IX T; Lect VI Th, lab VII-IX Th

137w Structural Lab (3 cr; prereq 141, ¶131) Lect III TTh, lab VI-VIII T; VII-IX W

142w Reinforced Concrete Design (3 cr; prereq 130, 141) Lect I or II TTh, lab VIII-IX M; VIII-IX T; VIII-IX Th; VIII-IX F

143s Arch Analysis, Design (3 cr; prereq ‡) I TTh, II T

144s Prestressed Reinforced Concrete (3 cr; prereq 142) IV MWF

146s See 146f: Lect I TTh, lab VI-IX T

147w,s Foundations (3 cr; prereq 141) I MWF (w,s); II MWF(w)

148w Probs: Concrete (2-3 cr; prereq 146) VII-IX MW

151s Adv Highway Lab (3 cr; prereq 52) VI-IX MW

152s Highway Design (3 cr; prereq 52) Lect III TTh, lab VII-IX Th

159w Soil Mechanics (3 cr; prereq 53) IV MWF

160s See 160f: Lect II TTh, lab VII-IX T or F

161w See 161f: Lect III MW, lab I-III T or Th; Lect III TF, lab VII-IX W or F

170w See 170f: Lect I MWF, lab VII-IX M or Th; Lect VI MWF, lab II-IV Th

171w,s Sewerage, Sewage Treatment (3 cr; prereq 161, 170) Lect I TTh, II T, lab VII-IX W(w); Lect I MWF, VI MWF, lab I-III T; VII-IX T; II-IV F(s)

174w Sanitary Engineering Probs: Sewage, Industrial Wastes (3 cr; prereq 171) II MWF

175s Industrial Waste Disposal (3 cr; prereq 174) II MWF

177w-178s‡ See 176f

-235w‡ See 234f: II MWF

236s Adv Structural Probs (3 cr; prereq 132) VI MWF

251w-252s Adv Soil Mechanics Lab (3 cr; prereq 159 or ¶)

261w Water Plant Design (3-5 cr; prereq 173)

262s Sewage Plant Design (3-5 cr; prereq 174)

264w Sanitary Engineering Unit Operations (3 cr)

277s Adv Sanitary Engineering: Sewage, Industrial Waste (3-5 cr; prereq 174)

280w,s-281w,s-282w,s See 280f-281f-282f

Hydromechanics (Hydr)

Fall Quarter

101 Fluid Mechanics for Aeronautical, Electrical Engineering Students (3 cr; prereq MM 27)
—1, I MWF, AE 211
—2, II-III T, II Th, AE 317
—3, IV MWF, E 227

103 Fluid Mechanics (5 cr; prereq MM 27)
—1, I MTWThF, E 227
—2, V MTWThF, AE 211
—3, V MTWThF, Ex 10

104 Fluid Mechanics Lab (1 cr; prereq 101 or 103 or ChEn 101 or ¶)
—1, VIII-IX M, Ex 138
—2, VIII-IX T, Ex 138
—3, VIII-IX W, Ex 138
—4, VIII-IX Th, Ex 138
—5, VI-VII F, Ex 138

183 Open Channel Flow (3 cr; prereq 101 or 103, 104)
3:00-4:30 WF, HL 307

184 Adv Hydraulic Probs (2 cr; prereq 183 or ¶ or ♯)

185 Adv Hydraulic Probs (2 cr; prereq 184)

187 Interm Fluid Mechanics (3 cr; prereq 101 or 103, 104)
1:15-2:45 WF, HL 307

293 Hydrodynamics (3 cr; prereq 187, ITM 151 or ♯)
8:00-9:30 TTh, HL 307

Winter and Spring Quarters

101w,s See 101f: I MWF(w); II MWF(s); III MWF(s); IV MWF(s); V MWF(s); VI MWF(w,s); VII MWF(s)

103w,s See 103f: I MTWThF(w,s); II MTWThF(s); III MTWThF(s); IV MTWThF(w,s); V MTWThF(w); VI MTWThF(w); VII MTWThF(w,s)

104w,s See 104f: III-IV M(w,s); VI-VII M(w,s); VIII-IX M(w,s); II-III T(w); III-IV T(s); VI-VII T(w,s); III-IV W(w); VI-VII W(w,s); VIII-IX W(w,s); II-III Th(w); III-IV Th(s); VI-VII Th(w,s); III-IV F(s); VI-VII F(w,s)

-185w-186s See 184f-185f

187s See 187f: II MWF

190w Mechanics of Similitude, Dimensional Analysis (3 cr; prereq 101 or 103 or ♯) 3:00-4:30 WF

191w Hydraulic Motors, Pumps (3 cr; prereq 187 or ♯) 1:15-2:45 WF

192s Natural, Artificial Waterways (3 cr; prereq 183 or ♯) 3:00-4:30 WF

193s Hydraulic Measurements (3 cr; prereq 187 or ♯) 1:15-2:45 WF

-294w-295s See 293f

ELECTRICAL ENGINEERING (EE)

Fall Quarter

12 Laboratory (1 cr; prereq ITM 13A)
—1, VIII-IX M, EE 237
—2, VII-VIII T, EE 237
—3, VIII-IX W, EE 237
—4, VII-VIII Th, EE 237

36 Elements (3 cr; prereq ITM 26A or 80)
—1, Lect III MWF, ME 18
—2, Lect 10:30-11:45 TTh, ME 18
—1, Lab VIII-IX M, EE 118
—2, Lab I-II T, EE 118
—3, Lab VI-VII T, EE 118
—4, Lab VIII-IX T, EE 118
—5, Lab VIII-IX W, EE 118
—6, Lab III-IV Th, EE 118
—7, Lab VI-VII Th, EE 118
—8, Lab VIII-IX Th, EE 118

37 Elements (3 cr; prereq 36)
11:30-12:45 TTh, ME 202

37A Laboratory (1 cr; prereq ¶37)
—1, VI-VII M, EE 121
—2, VIII-IX T, EE 121
—3, VIII-IX W, EE 121
—4, VI-VII Th, EE 121

51 Electrical Engineering (5 cr; prereq ITM 26A or 80, Phys 50)
—1, II MTWThF, EE 137 (honors section)
—2, I MTWThF, EE 335
—3, III MTWThF, EE 335

52 Laboratory (1 cr; prereq ¶51)
—1, VI-VII Th, EE 216 (honors section)
—2, IV-V M, EE 216
—3, VI-VII M, EE 216
—4, VIII-IX M, EE 216
—5, I-II T, EE 216
—6, IV-V T, EE 216
—7, VI-VII T, EE 216
—8, VIII-IX T, EE 216
—9, IV-V W, EE 216
—10, VI-VII W, EE 216
—11, VIII-IX W, EE 216
—12, I-II Th, EE 216
—13, IV-V Th, EE 216
—14, VIII-IX Th, EE 216
—15, I-II F, EE 216
—16, VI-VII F, EE 216

52A Prob Solving Lab (1 cr; prereq ¶51)
For EE 51, Lect 2 students only
—1, VI-VII M, EE 137
—2, IV-V T, EE 137
—3, VIII-IX T, EE 137
—4, IV-V W, EE 137
—5, IV-V Th, EE 137
—6, VI-VII Th, EE 137
For EE 51, Lect 3 students only
—7, I-II T, ME 208
—8, VI-VII T, EE 137
—9, VI-VII W, EE 137
—10, VIII-IX W, EE 137

—11, I-II Th, ME 208
—12, VIII-IX Th, EE 238
For honors section students only
—13, VIII-IX M, EE 137

101 Summer Engineering Employment (1-3 cr; prereq 2 yrs engin, ♯)

102 Summer Engineering Employment (1-3 cr; prereq 101, ♯)

103 Summer Engineering Employment (1-3 cr; prereq 102, ♯)

109 Electromagnetic Fields (3 cr; prereq 55, 56)
—1, I MWF, ME 18
—2, V MWF, EE 335

109A Electromagnetic Fields Lab (1 cr; prereq ¶109)
—1, VI-VII M, EE 205
—2, VIII-IX M, EE 205
—3, I-II T, EE 205
—4, III-IV T, EE 205
—5, VI-VII T, EE 205
—6, VIII-IX T, EE 205
—7, VIII-IX W, EE 205
—8, I-II Th, EE 205
—9, III-IV Th, EE 205
—10, V-VI Th, EE 205
—11, VII-VIII Th, EE 205

121 Analysis of Electromagnetic Devices (3 cr; prereq 55, 56)
—1, II MWF, EE 238 (honors section)
—2, III MWF, EE 237
—3, VI MWF, ME 18

122 Experimental Study of Electromagnetic Devices (1 cr; prereq ¶121)
—1, VIII-IX M, EE 107 (honors section)
—2, I-II T, EE 107
—3, III-IV T, EE 107
—4, VI-VII T, EE 107
—5, VIII-IX T, EE 107
—6, VI-VII W, EE 107
—7, VIII-IX W, EE 107
—8, I-II Th, EE 107
—9, III-IV Th, EE 107
—10, V-VI Th, EE 107
—11, VII-VIII Th, EE 107
—12, VIII-IX F, EE 107

131 Electronic Circuit Design (3 cr; prereq 163)
Lect II TTh, EE 335
—1, Lab I-II M, EE 35
—2, Lab VIII-IX M, EE 35
—3, Lab III-IV T, EE 35
—4, Lab VI-VII T, EE 35
—5, Lab VIII-IX T, EE 35
—6, Lab I-II W, EE 35
—7, Lab VI-VII W, EE 35
—8, Lab VIII-IX W, EE 35
—9, Lab III-IV Th, EE 35
—10, Lab V-VI Th, EE 35
—11, Lab VII-VIII Th, EE 35
—12, Lab I-II F, EE 35
—13, Lab VI-VII F, EE 35
—14, Lab VIII-IX F, EE 35

132 Electric Machines (3 cr; prereq 125)
Lect III TTh, EE 237
—1, Lab VIII-IX Th, EE 116
—2, Lab II-III F, EE 116

138 Electric Power Control (3 cr; prereq 109, 125, 161)
Lect IV TTh, EE 237
—1, Lab VI-VII M, EE 107A
—2, Lab VI-VII T, EE 107A
—3, Lab VIII-IX T, EE 107A
—4, Lab VI-VII Th, EE 107A

143 Engineering Acoustics (3 cr; prereq 53, ITM 26A or 30, MM 29)
VIII MWF, EE 238

150 Dynamical Methods (3 cr; prereq MM 29, ITM 153, ♯)
VIII-IX T, VII-VIII Th, EE 335

153 Properties of Solids (3 cr; prereq Phys 125 or Phys 101, 103, 105, ♯)
IX MWF, EE 238

157 Electronic Control (3 cr; prereq 125, 163)
Lect I TTh, ME 18
—1, Lab I-II M, EE 21
—2, Lab VI-VII M, EE 21
—3, Lab VIII-IX M, EE 21
—4, Lab III-IV T, EE 21
—5, Lab VI-VII T, EE 21
—6, Lab VIII-IX T, EE 21
—7, Lab VI-VII W, EE 21
—8, Lab VIII-IX W, EE 21
—9, Lab III-IV Th, EE 21
—10, Lab V-VI Th, EE 21
—11, Lab VII-VIII Th, EE 21
—12, Lab VI-VII F, EE 21

161 Networks (3 cr; prereq 53, 54, 59, 60)
—1, V MWF, EE 238 (honors section)
—2, II MWF, EE 335
—3, VII MWF, EE 335

161A Networks Lab (1 cr; prereq ¶161)
—1, VIII-IX M, EE 210
—2, I-II T, EE 210
—3, III-IV T, EE 210
—4, VIII-IX T, EE 210
—5, III-IV W, EE 210
—6, V-VI W, EE 210
—7, I-II Th, EE 210
—8, III-IV Th, EE 210
—9, V-VI Th, EE 210 (honors section)
—10, IV-V F, EE 210
—11, VI-VII F, EE 210
—12, VIII-IX F, EE 210

164 Communication Circuits (3 cr; prereq 163)
Lect III TTh, EE 238
—1, Lab VI-VII M, EE 204
—2, Lab VIII-IX M, EE 204
—3, Lab VI-VII W, EE 204
—4, Lab VIII-IX Th, EE 204

167 Electromagnetic Theory, Application (3 cr; prereq 109, ♯)
Lect IV TTh, EE 238
—1, Lab VIII-IX M, EE 217
—2, Lab VIII-IX T, EE 217

173 **Physical Electronics** (3 cr; prereq 141)
II MWF, EE 237

178 **Nonlinear Active Circuits** (3 cr; prereq 163)
VI-VII TTh, EE 238

183 **Electrical Lab** (1-3 cr; prereq ‡)

187 **Problems** (3 cr; prereq 109, 125, 163)
IV MWF, EE 335

191 **Active Network Theory** (3 cr; prereq 163, ITM 153, ‡)
VII MWF, EE 237

194 **Servomechanisms** (3 cr; prereq 125, 163, ‡)
V MWF, EE 237

211 Network Analysis, Synthesis (3 cr; prereq 163, ‡)
V-VI TTh, EE 237

236 Solid State Theory (3 cr; prereq 185, ‡)
VIII-IX MW, EE 335

255 Analysis of AC Power-Systems Circuits (3 cr; prereq ‡)
IV MWF, EE 115

267 Theory of Communication (3 cr; prereq ‡)
V TTh, EE 238, VI F, ME 321

287 Electron Tube Analysis (3 cr; prereq Phys 103, ‡)
VI MWF, EE 237

Winter and Spring Quarters

-14w-16s See 12f

36s See 36f: Lect V MWF, labs VIII-IX M; I-II T; VI-VII W; VI-VII Th

-37w-38s See 36f: III MWF; 10:30-11:45 TTh

37Aw-38As See 37Af: V-VI M(w,s); VIII-IX M(w,s); I-II T(w,s); III-IV T(w,s); VI-VII T(w,s); V-VI W(w); VIII-IX W(w,s); I-II Th(w,s); III-IV Th(w,s); VIII-IX Th(w,s); V-VI F(w,s); VIII-IX F(w)

-38w See 37f

-38Aw See 37Af

40w Survey for Civil, Mining Engineering Students (4 cr; prereq 36) Lect VII MWF, labs IV-V M; I-II W; VIII-IX W; VI-VII F

53w-55s Electrical Engineering (5 cr; prereq 51) I MTWThF; II MTWThF; III MTW-ThF

-54w-56s See 52f: VI-VII M; VIII-IX M; I-II T; III-IV T; VI-VII T; VIII-IX T; VI-VII W; VIII-IX W; I-II Th; III-IV Th; VI-VII Th (honors section); VIII-IX Th; I-II F; VI-VII F

-54Aw See 52Af

-56As See 52Af: VI-VII M; IV-V T; VIII-IX T; IV-V W; III-IV Th; V-VI Th, open to EE 52, Lect 2 registrants only; I-II T; VI-VII T; VI-VII W; VIII-IX W; I-II Th; VII-VIII Th, open to EE 55, Lect 3 registrants only; VIII-IX M, open to honors section registrants only

57w-59s Engineering Electronics (3 cr; prereq 51) II MWF; VI MWF

58w-60s Engineering Electronics Lab (1 cr; prereq ¶57) I-II M; VI-VII M; VIII-IX M; I-II T; III-IV T; VI-VII T; VIII-IX T; VI-VII W; VIII-IX W (honors section); I-II Th; III-IV Th; VI-VII Th; VIII-IX Th; III-IV F; VIII-IX F

101w,s-102w,s-103w,s See 101f-102f-103f

-123w-125s See 121f

-124w-126s See 122f

-133w-135s See 131f

-134w-136s See 132f

-139w-140s See 138f

141s Materials (3 cr; prereq 109) IV or VIII MWF

141As Materials Lab (1 cr; prereq ¶141) I-II M; VIII-IX M; I-II T; III-IV T; VI-VII T; VIII-IX T; VIII-IX W; I-II Th; III-IV Th; V-VI Th; VII-VIII Th; VI-VII F

-144w-145s See 143f

151w Thermodynamic Methods (3 cr; prereq Phys 51 or ME 30, ITM 153, ‡) VIII-IX T, VII-VIII Th

152s Statistical-Mechanical Methods (3 cr; prereq 150, 151, Phys 109) VIII-IX TTh

-154w-155s See 153f

-158w-159s See 157f

-162w-163s See 161f

-162Aw-163As See 161Af: VIII-IX M; I-II T; III-IV T; VIII-IX T; I-II W; V-VI W; I-II Th; III-IV Th; V-VI Th (honors section); IV-V F; VI-VII F; VIII-IX F

-165w-166s See 164f

-168w-169s See 167f

-174w-175s See 173f: Lect II MW, labs VI-VII T; VIII-IX T; VI-VII Th

-179w-180s See 178f

-184w-185s‡ See 183f

-188w-189s See 187f

-192w-193s See 191f

-195w-196s See 194f

-212w-213s See 211f

-237w-238s See 236f

-256w-257s See 255f

-268w-269s See 267f

-288w-289s See 287f

MATHEMATICS (ITM)

Fall Quarter

8 **Solid Geometry** (no cr; prereq plane geom)
—1, V MWF, ChE 54
—2, V MWF, ChE 158
—3, VI MWF, ChE 154
—4, VI MWF, ChE 50
—5, VII MWF, E 206
—6, VII MWF, ChE 150
—7, VIII MWF, E 203

11 **College Algebra, Trigonometry I** (5 cr; prereq 9)
—1, I MTWThF, AE 15
—2, I MTWThF, E 205
—3, I MTWThF, AE 21

—4, I MTWThF, ChE 50
—5, I MTWThF, AE 9
—6, I MTWThF, ChE 158
—7, II MTWThF, AE 227
—8, II MTWThF, AE 21
—9, II MTWThF, E 203
—10, II MTWThF, ChE 162
—11, II MTWThF, E 106
—12, II MTWThF, AE 15
—13, II MTWThF, AE 9
—14, III MTWThF, ChE 154
—15, III MTWThF, AE 9
—16, III MTWThF, Ex 10
—17, III MTWThF, ChE 158
—18, III MTWThF, ChE 50
—19, III MTWThF, AE 21
—20, IV MTWThF, ChE 40
—21, IV MTWThF, ChE 158
—22, IV MTWThF, ChE 154
—23, IV MTWThF, ChE 162
—24, IV MTWThF, AE 227
—25, V MTWThF, AE 21
—26, V MTWThF, Mines 116
—27, V MTWThF, ChE 150
—28, V MTWThF, ChE 154
—29, VI MTWThF, Mines 124
—30, VI MTWThF, ChE 162
—31, VI MTWThF, ChE 150
—32, VI MTWThF, ChE 54
—33, VI MTWThF, Ex 10
—34, VII MTWThF, E 106
—35, VII MTWThF, E 203
—36, VII MTWThF, E 205
—37, VII MTWThF, ChE 154
—38, VII MTWThF, ChE 54

12 College Algebra, Trigonometry II (5 cr; prereq 11)
—1, VI MTWThF, AE 19
—2, VII MTWThF, Mines 124

13A Calculus I: Analytic Geometry, Calculus (5 cr; prereq 8, 12)
—1, IV MTWThF, ChE 150
—2, IV MTWThF, AE 19
—3, V MTWThF, Mines 120
—4, VI MTWThF, AE 21
—5, VI MTWThF, AE 9
—6, VII MTWThF, ChE 162

24A Calculus II: Analytic Geometry, Calculus (5 cr; prereq 13A)
—1, I MTWThF, E 305
—2, I MTWThF, Ex 10
—3, I MTWThF, EE 238
—4, II MTWThF, Ex 22
—5, II MTWThF, Ex 10
—6, II MTWThF, ChE 40
—7, II MTWThF, ChE 154
—8, III MTWThF, AE 19
—9, III MTWThF, Ex 22
—10, III MTWThF, AE 15
—11, IV MTWThF, E 203 (honors section)
—12, IV MTWThF, E 106
—13, IV MTWThF, Ex 10
—14, V MTWThF, E 106
—15, V MTWThF, AE 227
—16, V MTWThF, ChE 50
—17, VI MTWThF, E 106
—18, VI MTWThF, E 205

25A Calculus III: Analytic Geometry, Calculus (5 cr; prereq 24A)
—1, I MTWThF, AE 327
—2, IV MTWThF, AE 21
—3, VI MTWThF, ChE 158

26A Calculus IV: Differential Equations, Calculus (5 cr, §80; prereq 25A)
—1, II MTWThF, ChE 158
—2, II MTWThF, ChE 150
—3, IV MTWThF, ChE 54
—4, IV MTWThF, Mines 124
—5, VI MTWThF, Mines 120

90 Engineering Statistics (3 cr; prereq 25 or 25A or ¶25A)
—1, I MWF, AE 227
—2, I MWF, ChE 150
—3, V MWF, Mines 124

99 Mathematical Probs Seminar (3 cr; prereq 25 or 25A)
III-IV TTh, E 104

105A Summer Employment (2 cr; prereq 4th yr, △)

132 Statistics, Probability (3 cr; prereq 25 or 25A)
—1, V MWF, E 104
—2, V MWF, Ex 25

142 Vector, Matrix Theory with Applications (3 cr, §149; prereq 25 or 25A)
—1, I MWF, E 104
—2, II MWF, E 104

147 Vector Analysis (3 cr, §152, §old 154; prereq 25 or 25A)
—1, III MWF, E 205
—2, III MWF, ChE 162
—3, V MWF, E 203
—4, V MWF, E 205

151A Calculus V: Interm (3 cr; prereq 26 or 26A or 80)
—1, I MWF, E 203
—2, I MWF, E 106
—3, I MWF, Ex 25
—4, III MWF, ChE 40 (honors section)
—5, III MWF, E 106
—6, III MWF, E 206
—7, III MWF, E 104
—8, IV MWF, Ex 25

153 Calculus VII: Adv (3 cr; prereq 151A)
IV MWF, E 205

161 Analytical Dynamics (3 cr; prereq MM 28, 29 or MM 127 or ♯)
IV MWF, E 206, Koehler

164 Theory, Programming of Modern Digital Computers (3 cr; prereq 26 or 26A or 80)
VIII-IX MTh, E 106, Stein

173 Partial Differential Equations (3 cr; prereq 148 or 153)
—1, II MWF, E 205
—2, II MWF, E 206

184 **Numerical Analysis** (3 cr; prereq 26 or 26A or 80)
III MWF, E 203

190A **Combinatorial Topology** (3 cr; prereq 142 or ¶ or ‡)
VI MWF, E 206

196 **Functions in Mathematical Analysis** (3 cr; prereq 168A or 174 or ‡)
III MWF, ChE 54, Fulks

199A **Prob Course** (3 cr; prereq ‡)
III-IV TTh, E 206

224 Lie Groups, Lie Algebras (3 cr; prereq ‡)
I MWF, E 206, Yamabe

248 Reading, Research (1-3 cr; prereq ‡)
VI MWF, E 104

261 Functions of a Complex Variable (3 cr; prereq 152, 153 or ‡)
IV MWF, E 104, Warschawski

270A Adv Numerical Analysis of Partial Differential Equations (3 cr, §old 270B; prereq 173, 186 or ‡)
V MWF, E 206

274 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 150A, 152, 153, 174 or ‡)
II MWF, ChE 54, Serrin

301 Topics: Adv Differential Geometry (3 cr; prereq ‡)
VIII MWF, E 104

304 Adv Topics: Differential, Difference Equations (3 cr; prereq ‡)
VII MWF, E 104, Markus

Winter and Spring Quarters

8w,s See 8f: V MWF

11w See 11f: I MTWThF; II MTWThF; IV MTWThF; V MTWThF; VI MTWThF

11s See 11f: V or VI MTWThF

12w,s See 12f: I MTWThF(w,s); II MTWThF(w,s); III MTWThF(w,s); IV MTWThF(w,s); V MTWThF(w,s); VI MTWThF(w,s); VII MTWThF(w)

13Aw See 13Af: IV or V MTWThF

13As See 13Af: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF

14s Laboratory (1 cr; prereq 2nd yr) VI-VII T

24Aw See 24Af: II MTWThF; IV MTWThF; V MTWThF; VI MTWThF

24As See 24Af: IV or V MTWThF

25Aw See 25Af: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF

25As See 25Af: I MTWThF; III MTWThF; IV MTWThF; VI MTWThF

26Aw See 26Af: V or VI MTWThF

26As See 26Af: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF

90w,s See 90f: I MWF(w); II MWF(s); III MWF(w); V MWF(s)

133w-134s Statistics with Applications (3 cr; prereq 132) V MWF

133Bw-134Bs Probability with Applications (3 cr; prereq 132, 153...or 132, 148, 149...or ‡) VIII MWF

-143w See 142f

147w,s See 147f: I MWF

148w Differential Equations (3 cr, §150A; prereq 26 or 26A or 80) III MWF

149s Determinants, Matrices (3 cr, §142; prereq 25 or 25A) III MWF

150Aw,s Ordinary Differential Equations (3 cr, §148; prereq 26 or 26A or 80) I MWF(s); IV MWF(w)

151Aw See 151Af: IV MWF

152w,s Calculus VI: Adv (3 cr, §147; prereq 151A) I MWF(w); III MWF(w); IV MWF(s)

153s See 153f: I MWF; III MWF

155w-156s Tensor Analysis with Applications (3 cr; prereq 147, 149 or 142, 152 or ‡) V MWF

-162w-163s See 161f

-165w-166s See 164f

165Aw,s Programming Modern Digital Calculators (3 cr, §165; prereq 25 or 25A) VI MWF(s); VII MWF(w)

168Bs Applications of Complex Variables (3 cr; prereq 168A or 174 or ‡) III-IV TTh

169s Mathematical Theory of Fluid Flow (3 cr; prereq 152, 168A or 152, 174 or 147, 168A or 147, 174 or ‡) VII MWF

174w Theory of Complex Variables (3 cr; prereq 26 or 26A) II MWF; III-IV TTh

175s Integral Transforms (3 cr; prereq 168A or 174) II MWF

180s Finite Groups (3 cr; prereq 143 or ‡) II MWF

185w-186s Numerical Analysis (3 cr; prereq 147, 148, 149, 184...or 152, 153, 184 or ‡) III MWF

-190Bw-190Cs See 190Af

192s Theory of Approximation in Numerical Analysis (3 cr, §old 270E; prereq 174, 186 or ‡) V MWF

-197w-198s See 196f

-199Bw-199Cs‡ See 199Af

-225w-226s See 224f

-249w-250s See 248f

-262w-263s See 261f

-275w-276s See 274f

-302w-303s See 301f

-305w-306s See 304f

MECHANICAL ENGINEERING

Engineering Graphics (EG)

Fall Quarter

14 **Engineering Graphics** (3 cr; prereq solid geom)
Lect I MW, AE 215
—1, Rec I T, E 201
—2, Rec I Th, E 201
—3, Rec I F, AE 215
Lab ar
Lect III MW, AE 215
—4, Rec III F, AE 215
Lab ar
Lect V MW, AE 215
—5, Rec V T, E 201
—6, Rec V Th, E 201
—7, Rec V F, AE 215
Lab ar
Lect VII MW, AE 215
—8, Rec VII F, AE 215
Lab ar
Lect I TTh, AE 215
—9, Lab I-II WF, E 18
—10, Lab I-II WF, TSCE 100
—11, Lab I-II WF, TSCE 120
Lect II TTh, AE 215
—12, Lab I-II WF, TNCE 100
—13, Lab I-II WF, TNCE 120
—14, Lab I-II WF, TSCE 210
Lect III TTh, AE 215
—15, Lab III-IV WF, E 18
—16, Lab III-IV WF, TSCE 100
—17, Lab III-IV WF, TSCE 120
Lect IV TTh, AE 215
—18, Lab III-IV WF, TNCE 100
—19, Lab III-IV WF, TNCE 120
—20, Lab III-IV WF, TSCE 210
Lect V TTh, AE 215
—21, Lab V-VI WF, E 18
—22, Lab V-VI WF, TSCE 100
—23, Lab V-VI WF, TSCE 120
Lect VI MW, AE 215
—24, Lab V-VI TTh, E 18
—25, Lab V-VI TTh, TSCE 100
—26, Lab V-VI TTh, TSCE 120
Lect VII TTh, AE 215
—27, Lab VII-VIII WF, TSCE 100
—28, Lab VII-VIII WF, TSCE 120
—29, Lab VII-VIII WF, TSCE 210
Lect VIII TTh, AE 215
—30, Lab VII-VIII WF, TNCE 100
—31, Lab VII-VIII WF, TNCE 120
—32, Lab VII-VIII WF, E 18

15 **Engineering Graphics** (3 cr; prereq 14)
Lect IV MW, AE 215
—1, Lab III-IV TTh, E 18
—2, Lab III-IV TTh, TSCE 100
—3, Lab III-IV TTh, TSCE 120
Lect VII MW, E 227
—4, Lab VII-VIII TTh, E 18

16 **Engineering Graphics** (3 cr; prereq 15)
Lect II MW, AE 215
—1, Lab I-II TTh, E 18
—2, Lab I-II TTh, TSCE 100
Lect VIII MW, AE 215
—3, Lab VII-VIII TTh, TSCE 100
—4, Lab VII-VIII TTh, TSCE 120

50 **Diagrams, Charts** (2 cr; prereq 14)
II TTh, TNCE 100

55 **Production Illustration** (2 cr; prereq 16)
V-VI MWF, TNCE 120

152 **Nomography** (3 cr; prereq 52, ITM 25A or ♯)
V MWF, TNCE 100

Winter and Spring Quarters

14w See 14f: Lect II MW, lab I-II TTh; Lect VI MW, lab V-VI TTh; Lect VIII TTh, lab VII-VIII WF

14s See 14f: Lect II TTh, lab I-II WF; Lect IV MW, lab III-IV TTh

15w See 15f: Lect I MW, rec I T; I Th; I F, lab ar; Lect I TTh, lab I-II WF; Lect III MW, rec III F, lab ar; Lect IV TTh, lab III-IV WF; Lect V MW, rec V T; V Th; V F, lab ar; Lect V TTh, lab V-VI WF; Lect VII MW; rec VII F, lab ar; Lect VII TTh, lab VII-VIII WF; Lect VIII MW, lab VII-VIII TTh

15s See 15f: Lect II MW, lab I-II TTh; Lect VI MW, lab V-VI TTh; Lect VIII TTh, lab VII-VIII WF

16w See 16f: Lect II TTh, lab I-II WF; Lect IV MW; lab III-IV TTh

16s See 16f: Lect I TTh, lab I-II WF; Lect I MW, rec I T; I Th; I F, lab ar; Lect III MW, rec III F, lab ar; Lect IV TTh, lab III-IV WF; Lect V MW, rec V T; V Th; V F, lab ar; Lect V TTh, lab V-VI WF; Lect VII MW, rec VII F, lab ar; Lect VII TTh, lab VII-VIII WF; Lect VIII MW, lab VII-VIII TTh

51w Graphic Representation, Computation (3 cr; prereq 15, ITM 11) VI MWF

52s Alignment Charts (3 cr; prereq 15, ITM 12) VI MWF

55w,s See 55f

118s Curve Fitting (3 cr; prereq 16, ITM 25A, or ♯) VI MWF

-153w-154s See 152f

Industrial Engineering (IE)

Fall Quarter

50 **Elements, Mgt** (3 cr, §old 150; prereq 3rd yr)
—1, II MWF, ME 18
—2, IV MWF, ME 18

153 **Methods Engineering, Work Measurement** (3 cr; prereq 50 or ¶)
Lect II TTh, ME 202
—1, Lab VII-IX M, ME 180
—2, Lab VII-IX T, ME 180
—3, Lab VII-IX F, ME 180

163 **Process Planning, Development** (3 cr; prereq 50, ME 15, 16)
Lect I TTh, ME 106
Lab VII-IX W, ME 180

165 **Industrial Plants** (3 cr; prereq 153)
Lect VI TTh, ME 106
Lab VII-IX Th, ME 180

170 **Production Planning, Control** (3 cr; prereq 50)
II MWF, ME 106

173 **Engineering Economic Analysis** (3 cr; prereq 50)
—1, IV MWF, ME 106
—2, V MWF, ME 106

182 **Industrial Safety** (3 cr; prereq 50)
I MWF, ME 106

195 **Applied Industrial Engineering** (3 cr; prereq 15 cr)

197 **Industrial Sampling Techniques** (3 cr; prereq 171, ITM 132 or ‡)
VI MWF, ME 102

251 Adv Industrial Engineering (3 cr; prereq ‡)

261 Probs: Production Engineering (3-5 cr; prereq ‡)

271 Research (3-5 cr; prereq ‡)

Winter and Spring Quarters

50w,s See 50f: I MWF(s); II MWF(w); IV MWF(w)

153w See 153f

154w Adv Methods Engineering, Work Measurement (3 cr; prereq 153) Lect III TTh, lab VII-IX W or Th

155s Industrial Wage Admin (3 cr; prereq 153) III MWF

163w,s See 163f: Lect II TTh, lab VII-IX M(w); Lect V TTh, lab VII-IX Th(s)

167w Materials Handling, Packaging (3 cr; prereq 153) I MWF

170w,s See 170f: II MWF(s); IV MWF(w)

171w,s Quality Control (3 cr; prereq ITM 90 or 132 or ‡) III MWF(w); IV MWF(s)

173w See 173f: II MWF

174s Analysis for Prod Mgt (3 cr; prereq 50, 171 or ‡) V MWF

180s Supervision (3 cr; prereq 50) I MWF

190s Seminar (1 cr; prereq 12 cr) II-III T

194s Applied Industrial Engineering (3 cr; prereq 15 cr) IV MWF

195w-196s‡ See 195f

-196w‡ See 195f

198w Sequential Analysis of Industrial Data (3 cr; prereq ITM 133 or ‡) VI MWF

199s Design of Industrial Experiments (3 cr; prereq ITM 133 or ‡) VI MWF

-252w-253s See 251f

-262w-263s See 261f

-272w-273s See 271f

Mechanical Engineering (ME)

Fall Quarter

21 **Kinematics, Mechanisms** (3 cr; prereq ITM 26A or ¶, EG 16)
Lect VI TTh, ME 321
—1, Lab VI-VII F, ME 308
—2, Lab VIII-IX F, ME 308

23 **Dynamics of Machinery** (3 cr; prereq 22, MM 29)
Lect III TTh, ME 110
—1, Lab VII-IX M, ME 314
—2, Lab VII-IX T, ME 314
—3, Lab VII-IX W, ME 314
—4, Lab VII-IX Th, ME 314
—5, Lab VII-IX F, ME 314

24 **Machine Design** (3 cr; prereq MM 41)
Lect IV TTh, ME 110
—1, Lab VII-IX M, ME 325
—2, Lab VII-IX T, ME 325
—3, Lab VII-IX W, ME 325
—4, Lab VII-IX Th, ME 325

30 **Thermodynamics** (3 cr, §old 130; prereq ITM 26A or ¶, Phys 14)
—1, I MWF, ME 110
—2, II MWF, ME 110
—3, III MWF, ME 110
—4, IV MWF, ME 110
—5, V MWF, ME 110

32 **Thermodynamics** (3 cr, §old 132; prereq 31)
VI MWF, ME 110

33 **Laboratory I** (2 cr; prereq 30 or ¶)
—1, Lect IV T, EE 335
—2, Lect V T, EE 335
—1, Lab VII-IX M, ME 370
—2, Lab VII-IX M, ME 370
—3, Lab VII-IX T, ME 370
—4, Lab VII-IX T, ME 370
—5, Lab VII-IX W, ME 370
—6, Lab VII-IX W, ME 370
—7, Lab VII-IX Th, ME 370
—8, Lab VII-IX Th, ME 370
—9, Lab VII-IX F, ME 370
—10, Lab VII-IX F, ME 370
—11, Lab I-III S, ME 370

90 **Industrial Assignment** (4 cr, †90-91-92-93; prereq regis coop work-study program)

91 **Industrial Assignment** (4 cr, †90-91-92-93; prereq 90)

94 **Industrial Assignment** (3 cr, †90-91-92-93-94-95; prereq 93)

95 **Industrial Assignment** (3 cr, †90-91-92-93-94-95; prereq 94)

101 **Summer Employment I** (2 cr; prereq 4th yr, △)

102 **Summer Employment II** (2 cr; prereq 101

112 Properties, Fabrication of Plastics (3 cr; prereq 15, 16 or ♯)
Lect III TTh, ME 106
—1, Lab VII-IX M, ME 251
—2, Lab VII-IX T, ME 251

121 Machine Design (3 cr; prereq 24)
Lect II TTh, ME 110
—1, Lab VII-IX M, ME 308
—2, Lab VII-IX T, ME 308
—3, Lab VII-IX W, ME 308
—4, Lab VII-IX Th, ME 308

122 Design (3 cr; prereq 121)
Lect VI T, ME 302
Lab VII-IX TTh, ME 302

125 Machine Design Lab (2 cr; prereq 24)
—1, Lect VI M, ME 321
Lab VII-IX M, ME 357
—2, Lect VI W, ME 321
Lab VII-IX W, ME 357

128 Photoelastic Stress Analysis (3 cr; prereq MM 41)
Lect III TTh, ME 351
Lab VII-IX M, ME 351

133 Heat Transmission (3 cr; prereq 32, Hydr 101 or 103 or ¶...or Hydr 101 or 103, ♯)
—1, I MWF, ME 202
—2, II MWF, ME 202
—3, III MWF, ME 202
—4, IV MWF, ME 202
—5, V MWF, ME 202

134 Thermodynamics of Fluid Flow (3 cr; prereq 32, Hydr 103)
VI MWF, ME 202

143 Turbomachinery (3 cr; prereq 134 or ¶)
—1, IV MWF, ME 302
—2, IV MWF, ME 102
—3, V MWF, ME 302

146 Combustion (3 cr; prereq 133 or ¶)
—1, I MWF, ME 302
—2, I MWF, ME 102
—3, II MWF, ME 302
—4, II MWF, ME 102
—5, III MWF, ME 302
—6, IV MWF, ME 321

150 Internal Combustion Engines (3 cr; prereq 32)
II MWF, ME 321

155 Rocket Propulsion (3 cr; prereq 146, 134 or Aero 102A)
V MWF, ME 321

157 Gas Turbine, Jet Propulsion Power Plants (3 cr; prereq 143)
III MWF, ME 321

159 Heat Power Lab (2 cr; prereq 143, 146)
—1, VI-IX M, ME 480
—2, VI-IX W, ME 480

160 Psychrometrics, Air Conditioning (3 cr; prereq 133 or ¶)
III MWF, ME 214

161 Heating, Air Conditioning Design (3 cr; prereq 160, 180)
Lect VI T, ME 208
Lab VII-IX TTh, ME 208

163 Particle Technology (3 cr; prereq 32 or ♯)
I-II TTh, ME 302

169 Air Conditioning, Refrigeration Lab (2 cr; prereq 34, 160, 180)
—1, VI-IX M, ME 362
—2, VI-IX W, ME 362

170 Tool Design (3 cr; prereq 15, 16)
Lect VI W, ME 325
Lab VII-IX WF, ME 325

180 Mechanical Refrigeration (3 cr; prereq 32)
—1, I MWF, ME 214
—2, II MWF, ME 214
—3, IV MWF, ME 214

194 Adv Problems (2-4 cr; prereq 5th yr, ME maj, 2.5 GPA, △)

198 Industrial Instrumentation, Automatic Control (3 cr; prereq EE 38 or ¶)
Lect I TTh, ME 110
—1, Lab VII-IX M, ME 359
—2, Lab VII-IX T, ME 359
—3, Lab VII-IX W, ME 359
—4, Lab VII-IX Th, ME 359

199 Servomechanisms (3 cr; prereq EE 37, ITM 26A)
Lect IV TTh, ME 321
—1, Lab VII-IX T, ME 358
—2, Lab VII-IX F, ME 358

224 Adv Applied Dynamics (3 cr; prereq 129)

228 Photoelasticity (3 cr; prereq 128)

230 Adv Thermodynamics (3 cr, §old 231; prereq 32)
I MWF, ME 208

233 Conduction (3 cr; prereq 133)
II MWF, ME 208

246 Flames in Homogeneous Mixtures (3 cr; prereq 146)
III MWF, ME 208

250 Dynamics of High Speed Engines (3 cr; prereq 121, 150)
VI MWF, ME 302

265 Adv Psychrometric Theory, Atmospheric Environmental Control (3 cr; prereq 160, 180)
IV MWF, ME 208

290 Research (ar cr; prereq △)

291 Research (ar cr; prereq 290)

292 Research (ar cr; prereq 291)

Winter and Spring Quarters

15w Casting, Working, Welding Engineering Materials (3 cr; prereq IE 50, Met 56, MM 142) Lect VI TTh, lab VII-IX T or Th

16w,s Cold Processing Materials (3 cr; prereq IE 50, Met 56, MM 142) Lect VI TTh, lab VII-IX T or Th

21s See 21f: Lect III or IV TTh, labs VI-VII M; VIII-IX M; VI-VII T; VIII-IX T; VI-VII W; VIII-IX W; VI-VII Th; VIII-IX Th

22w Mechanisms of Automatic Machines (3 cr; prereq 21) Lect V TTh, lab VII-IX Th or F

23w See 23f: Lect IV TTh, lab VII-IX M; VII-IX T; VII-IX W

24w,s See 24f: Lect III TTh(w); I TTh(s), lab VII-IX M(w,s); VII-IX T(w); VII-IX W(s); VII-IX F(s)

30w-31s See 30f: I MWF(w); V MWF(w,s); VI MWF(w)

-31w-32s See 30f: I MWF; II MWF; III MWF; IV MWF

33w See 33f: Lect I or II T, lab VII-IX W; VII-IX Th; VII-IX F

34w,s Laboratory II (2 cr; prereq 33) Lect I T or II T or IV W(s); IV T or W(s), lab VII-IX M(w,s); VII-IX T(w,s); VII-IX W(w,s); VII-IX Th(w,s); VII-IX F(s)

90w,s-91w,s See 90f-91f

-94w,s-95w,s See 94f-95f

111s Adv Casting Processes (3 cr; prereq 110) Lect III TTh, lab VII-IX M

112s See 112f: Lect I TTh, lab VII-IX T or W

121w,s See 121f: Lect II TTh, lab VII-IX M; VII-IX T; VII-IX W; VII-IX Th; VII-IX F

122s See 122f

123w Creative Engineering (3 cr; prereq 4th yr) Lect VI T, lab VIII-IX TTh

124w Experimental Stress Analysis (3 cr; prereq MM 41) III TTh, lab VII-IX M

125w,s See 125f: VI-IX M; VI-IX T; VI-IX W; VI-IX Th; VI-IX F

127s Lubrication (3 cr; prereq 121) III MWF

129s Vibration Engineering (3 cr; prereq MM 193) IV MWF

133w,s See 133f: I MWF(w,s); VI MWF(w)

134w,s See 134f: II MWF(w,s); III MWF(w); IV MWF(w,s)

136s Reactor Heat Transfer (3 cr; prereq 133, ChE 161 or ♯) III MWF

141w Heat Power Engineering (3 cr; prereq 32) I MWF

142s Adv Heat Power Engineering (3 cr; prereq 141) IV MWF

143w,s See 143f: I MWF(s); II MWF(s); IV MWF(w,s)

146w,s See 146f: I MWF(w); II MWF(w); V MWF(s); VI MWF(s)

147w Heat Power Design (3 cr; prereq 143, 146) Lect VI T, lab VII-IX TTh

150w See 150f: V MWF

151s Adv Internal Combustion Engines (3 cr; prereq 150) III MWF

152w Diesel, Free Piston Engines (3 cr; prereq 150) II MWF

154s Internal Combustion Engines (3 cr; prereq 121, 150) II MWF

157s See 157f: V MWF

158s Aircraft Power Plant Lab (2 cr; prereq 143, 146) VI-IX Th

159w,s See 159f: VI-IX M(s); VI-IX T(w); VI-IX W(w,s); VI-IX Th(w); VI-IX F(s)

160w,s See 160f: I MWF(s); III MWF(s); V MWF(w); VI MWF(w)

161w See 161f

166s Industrial Ventilation, Exhaust System (3 cr; prereq 160) II MWF

169w,s See 169f: VI-IX M(w,s); VI-IX T(w); VI-IX W(w,s); VI-IX Th(w); VI-IX F(w,s)

180w,s See 180f: II MWF(s); III MWF(w)

181w Adv Mechanical Refrigeration (3 cr; prereq 180) II MWF

194w,s See 194f

198w,s See 198f: Lect I TTh, lab I-III M(w); IV-VI M(w); VII-IX M(s); VIII-X M(w); VII-IX T(w,s); VII-IX W(w,s); VII-IX Th(s); VII-IX F(s)

-225w-226s See 224f

229w Adv Vibration Engineering (3 cr; prereq 129)

231w Statistical, Non-equilibrium Thermodynamics (3 cr; prereq 230) I MWF

232s Adv Thermodynamics of Fluid Flow (3 cr; prereq 134, 230 or ♯) I MWF

234w Convection (3 cr; prereq 233) II MWF

235s Radiation (3 cr; prereq 234) II MWF

242w Adv Power Plants (3 cr; prereq 142)

247w Diffusion Flames (3 cr; prereq 146) III MWF

248s Atomization, Vaporization, Mixing (3 cr; prereq 132) III MWF

253w Adv Gas Turbines, Jet Propulsion (3 cr; prereq 157) Lect V TTh, lab VII-IX M

255s Adv Rocket Propulsion (3 cr; prereq 134, 155) VI MWF

266w Adv Psychrometric Processing (3 cr; prereq 265) IV MWF

267s Adv Air Conditioning (3 cr; prereq 266 or ♯) IV MWF

280w Theoretical Refrigeration (3 cr; prereq 180) III MWF

282s Reverse Applications of Refrigeration: Heat Pump (3 cr; prereq 180) III MWF

290w,s-291w,s See 290f-291f

292w,s See 292f

296w-297s Adv Servomechanisms (3 cr; prereq 199, ITM 174 or ¶)

298s Adv Instrumentation, Automatic Control (3 cr; prereq 198)

METALLURGY (Met)

Fall Quarter

53 Physical Metallurgy I (3 cr; prereq 3rd yr) I MWF, Mines 120, Nicholson

53A Physical Metallurgy Lab (2 cr; prereq ¶53) VI-IX Th, Mines 410, Jerabek

56 Physical Metallurgy (3 cr; prereq 3rd yr)
—1, I MWF, Mines 116, Sivertsen
—2, III MWF, Owre 12, Jerabek
—3, VI MWF, Mines 116, Jerabek

90 Industrial Employment (2 cr; prereq ♯)

91 Industrial Employment (2 cr; prereq ♯)

92 Industrial Employment (2 cr; prereq ♯)

170 Probs: Physical Metallurgy (1-3 cr)

173 **Crystalline Properties of Metals** (3 cr, prereq 155)
9:00-10:20 TTh, Mines 124, Sivertsen

180 **Thermodynamics of Alloys, Solid State Reactions** (3 cr, §old 163A; prereq PCh 103 or ‡)
II MWF, Swalin

207 Physical Metallurgy (ar cr)

213 Seminar: Physical Metallurgy (ar cr)

250 Thermodynamics of Alloys (3 cr; prereq 180 or ‡) Swalin

260 Dislocation Theory of Crystals (3 cr; 155 or ‡) Johnston

Winter and Spring Quarters

1s Metallurgy Lab (1 cr) VII-IX Th

56w,s See 56f: VII MWF(w); III MWF(s)

57s Physical Metallurgy of Industrial Alloys (2-3 cr; prereq 53 or 56 or 60) Lect I TTh, lab VI-VIII F

60s Physical Metallurgy for Chemical Engineering Students (3 cr; prereq 3rd yr) III MWF

90w See 90f

91w See 91f

154w Physical Metallurgy II (3 cr; prereq 53 or ‡) II MWF

154Aw Physical Metallurgy Lab (2 cr; prereq ¶154) VI-IX Th

155s Physical Metallurgy III (3 cr; prereq 154 or ‡) I MWF

155As Physical Metallurgy Lab (2 cr; prereq 154 or ¶155) VI-IX Th

158s Metal Fabrication (3 cr) Lect VII TTh, lab VII-IX W

159w Dental Physical Metallurgy (2 cr) I TTh

161s Corrosion of Metals (2 cr; prereq PCh 101) II TTh

162w Nuclear Metallurgy (1 cr; prereq 56 or ‡) II Th

165s Engineering Physical Metallurgy (3 cr; prereq 56 or 60 or 154) II MWF

-171w-172s‡ See 170f

174w Modern Theory of Metals, Alloys (3 cr, §old 164A; prereq Phys 51 or ‡) III MWF

175s Imperfections in Metals (3 cr; prereq 174 or ‡) V MWF

-181w-182s See 180f

-208w-209s‡ See 207f

-214w-215s‡ See 213f

251w Kinetics of Solid State Reactions (3 cr; prereq 182 or ‡)

252s Kinetics of Solid State Reactions (3 cr; prereq 251 or ‡)

261w Dislocation Theory of Crystals (2 cr; prereq 260)

MINES AND METALLURGY

Metallurgical Engineering (MetE)

Fall Quarter

11 **Metallurgical Engineering** (3 cr; prereq 8 cr inorg chem)
II MWF, Mines 124, Joseph

12 **Processes** (3 cr; prereq 8 cr inorg chem)
III MWF, Mines 124, Bitsianes

90 **Industrial Employment** (2 cr; prereq ‡)

91 **Industrial Employment** (2 cr; prereq ‡)

106 **Prin Process Metallurgy** (3 cr; prereq 8 cr inorg chem)
III MWF, Mines 120, Bitsianes

110 **Mineral Dressing** (4 cr)
Lect III TTh, Mines 120, I S, Mines 124, Cooke
—1, Lab VI, VIII M, Mines 16, VII M, Mines 120
—2, Lab VI, VIII Th, Mines 16, VII Th, Mines 120

118 **Practice** (ar cr; prereq ‡)

121 **Iron Ore Beneficiation** (3 cr; prereq 111)
Lect VI W, MEx, Wade
Lab VII-IX W

124 **Probs: Mineral Dressing** (ar cr; prereq 112) Cooke

134 **Unit Processes** (3 cr; prereq 108)
I MWF, Mines 124, Bitsianes

141 **Probs: Process Metallurgy** (ar cr; prereq 108) Joseph, Bitsianes

201 Research: Process Metallurgy (ar cr) Joseph, Bitsianes

204 Research: Mineral Dressing (ar cr) Cooke

210 Seminar (ar cr)
IV T, Mines 104

220 Flotation Theory (3 cr) Cooke

Winter and Spring Quarters

1s Laboratory (1 cr) VII Th

90w See 90f

-91w-92s‡ See 90f

-107w-108s See 106f (3-4 cr) III MWF, VI-IX W(w); III MWF(s)

-111w See 110f: Lect III TTh, I Th, lab VI-VIII T; VI-VIII F; or ar

-112s See 110f: Lect III TTh, I S, lab VI-VIII M; VI-VIII W; VI-VIII F

-119w‡ See 118f

122w-123s Adv Mineral Dressing (3 cr; prereq 112) VI M, VII MTh(w); VI M, II TTh(s)

-125w-126s‡ See 124f

135w Unit Processes (3 cr; prereq 11) II MWF

136s Unit Processes (3 cr; prereq 108) III MWF

138s Adv Process Metallurgy (2 cr; prereq 134) III TTh

-142w-143s‡ See 141f

144s Metallurgical Unit Operations (2 cr; prereq 111 or ‡) IV TTh

-202w-203s‡ See 201f

-205w-206s‡ See 204f
-211w-212s‡ See 210f

Mining Engineering (MinE)

Fall Quarter

16 **Mine Maps** (1-2 cr; prereq 15A or 15B)
VI-IX Th, Mines 321, Yardley
70 **Prin of Mining** (3 cr; prereq ‡)
V MWF, Mines 104, Yardley
90 **Industrial Employment** (2 cr; prereq ‡)
91 **Industrial Employment** (2 cr; prereq 90)
111 **Exploration of Mineral Deposits** (3 cr; prereq 3rd yr or ‡)
II MTWF, Mines 104, Yardley
123 **Mine Air Conditioning** (3 cr; prereq 113, Hydr 103)
Lect I MWF, Mines 104, Roberts
Lab VI-VIII F, Mines 210
131 **Rock Mechanics I** (3 cr; prereq MM 142 or ‡)
IV MWF, Mines 104, Fairhurst
141 **Mineral Economics** (3 cr; prereq 113 or PetE 112 or ‡)
II MWThF, Mines 120, Pfleider
151 **Problems** (ar cr; prereq 113) Pfleider
201 Seminar: Mineral Engineering (ar cr) Pfleider

Winter and Spring Quarters

1s Mineral Engineering Lab (1 cr) VII Th
13s Mine Surveying (3 cr; prereq CE 18 or ‡) II MWThF
16w See 16f: VI-IX T
90w,s See 90f
91w,s See 91f
92w Industrial Employment (2 cr; prereq 91)
112w Development of Mineral Deposits (3 cr; prereq 111 or ‡) II MTWF
113s Exploitation of Mineral Deposits (3 cr; prereq 112 or ‡) I MWF, II T
121w Mine Plant Engineering (3 cr; prereq 113, MM 28 or ‡) VI-VIII MW
122s Mine, Petroleum Plant Engineering (3 cr; prereq EE 37, Hydr 103, ME 30 or ‡) Lect VI TTh, lab VII-VIII TTh
132w Rock Mechanics II (3 cr; prereq 131) IV MWF
133s Adv Rock Mechanics (3 cr; prereq 132 or ‡) IV MWF
142w Surface Mining Engineering (3 cr; prereq 112 or ‡) II MWF, IV T
143s Coal Mining Engineering (3 cr; prereq 113) II TTh, V F
144w Adv Mining Engineering (2 cr; prereq 141) VI-IX M, VI-VIII WF
-145s Adv Mining Engineering (4 cr; prereq 144) VI-IX M, VI-VIII WF
-152w-153s‡ See 151f
160s Mining, Processing Industrial Minerals (ar cr; prereq 112 or ‡)
180w Geochemical Exploration (3 cr; prereq ‡)
-202w-203s‡ See 201f
214s Research Probs (ar cr)
230s Adv Geochemical Exploration (ar cr; prereq ‡)

Petroleum Engineering (PetE)

Fall Quarter

90 **Industrial Employment** (2 cr; prereq ‡) Lacabanne
111 **Oil Field Development** (3 cr; prereq Geol 25 or ‡)
III MWThF, Mines 104, Lacabanne
152 **Petroleum Production Technology** (3 cr; prereq 112 or ‡)
Lect III T, Mines 104, Lacabanne
—1, Lab VI-VIII TTh, Mines 216
—2, Lab ar
201 Seminar: Petroleum, Natural Gas Engineering (ar cr) Lacabanne

Winter and Spring Quarters

90w See 90f
-91w-92s See 90f
112w Oil Field Production (3 cr; prereq 111 or ‡) III MTWF
131s Reservoir Mechanics (3 cr; prereq 134, Hydr 103 or ‡) 10:30-11:45 TTh
134w Natural Gas Engineering (2 cr; prereq 112 or ‡) IV TTh
144w Adv Petroleum Engineering (2 cr; prereq MinE 141) VI-IX M, VI-VIII WF
-145s Adv Petroleum Engineering (4 cr; prereq 144) VI-IX M, VI-VIII WF
-153w-154s See 152f: Lect III Th, lab VII-IX Th, VI-VIII F or ar(w); Lect I Th, lab VI-VIII TTh or ar(s)
156w Problems (ar cr; prereq ¶144 or ¶145 or ‡)
-202w-203s See 201f
208w Research Probs (ar cr)

PHYSICS (Phys)

Fall Quarter

1 Physical Science (3 cr; prereq HS alg, plane geom)
III MWF, Ph 150, Wall
1A Physical Science Lab (1 cr; prereq 1 or ¶)
4 Gen Physics: Mechanics (5 cr; prereq Math 40 or ¶)
I MTWThF, Ph 166, Buchta
Lab sec assigned during first 2 days of class

7 **Gen Physics** (5 cr; prereq ¶ITM 13A or Math 40)
II MTWThF, Ph 150, Freier
Lab sec assigned during first 2 days of class

11 **Gen Physics** (5 cr; prereq ¶ITM 11 or ¶Math T)
—1, I MTWThF, Ph 150
—2, III MTWThF, Ph 170
—3, IV MTWThF, Ph 150
—4, VI MTWThF, Ph 150
—5, VII MTWThF, Ph 150
Lab sec assigned during first 2 days of class

13 **Gen Physics** (5 cr; prereq 12, ¶ITM 13A or ¶Math 40)
V MTWThF, Ph 150, Valasek
Lab sec assigned during first 2 days of class

14 **Interm Physics** (4 cr; prereq 13, ¶ITM 24A or Math 53)
—1, II MTWThF, Ph 166 (honors section)
—2, I MTWThF, Ph 133
—3, III MTWThF, Ph 133
—4, VI MTWThF, Ph 166

14A **Laboratory** (1 cr; prereq ¶14)
—1, VI-VIII M (honors section)
—2, VI-VIII T (honors section)
—3, VI-VIII Th (honors section)
—4, VI-VIII F (honors section)
—5, Ar during first 2 days of class

100 Mechanics, Electromagnetism (4 cr, §MM 29; prereq 9 or 14, ITM 26 or 26A or Math 55)
I MTWF, Ph 170

101 Theoretical Physics (3 cr; prereq 4th yr, 9 or 14, ¶diff equat or ♯)
II MWF

107 **Modern Physics** (3 cr; prereq ITM 26 or 26A or Math 55)
VI MWF, ForH 150

108 Atomic, Nuclear Physics (3 cr; prereq 50, ITM 153 or Math 108, △)
VI MWF, Ph 145, Eisberg

114 Physical Investigation (3 cr; prereq △)

120 **Atomic Physics** (3 cr; prereq 50 or ¶107)
—1, VI-IX TTh, Ph 250, Blair
—2, VII-X MF, Ph 250

123 **Thermodynamics, Statistical Mechanics, Theories of Structure of Matter** (3 cr; prereq 4th yr, 50, ¶diff equat)
IV MWF, Ph 145, Werntz

131 Geometrical Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
II TThS, Ph 143, Valasek

134 Experimental Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
Lect VII T, Ph 143, Valasek
Lab VIII-X TTh, Ph 348

144 Electrical Measurements (4 cr; prereq 9 or 14, ITM 25A or Math 54)
Lect II MWF, Ph 133, Blair, lab ar

181 Atomistics, Quantum Mechanics (3 cr; prereq 101-103-105 or ♯)
IV MWF, C 315

191 Mathematical Physics (3 cr, †191-192-193; 103, 105, diff equat, adv calc)
III MWF, Ph 145, Hill

210 Quantum Mechanics (3 cr; prereq 191, 192, 193, △)
VI MWF, Ph 143

216 Seminar: Contemporary Theoretical Physics (3 cr; prereq 191, 192, 193, △)
VII-VIII W, Ph 143

225 Adv Quantum Theory (3 cr; prereq 193, 212 or ♯)
VII-VIII TF, Ph 145

228 Nuclear Physics (3 cr; prereq 193, 212 or 233 or ♯)
III MWF, Ph 143

231 Theory of Atomic, Molecular Structure (3 cr; prereq 191, 192, 193, △)
IV TThS, Ph 143

237 Seminar: Radiofrequency Spectroscopy (ar cr; prereq 191, 192, 193, △)

249 Theory of Solid State of Matter (3 cr; prereq 191, 192, 193, △)
VI T, VI-VII Th, Ph 143

252 Seminar: Nuclear Physics (ar cr; prereq 191, 192, 193, △)
VII-IX F, Ph 143

255 Seminar: Mass Spectroscopy (ar cr; prereq 191, 192, 193, △)

258 Seminar: Cosmic Rays (ar cr; prereq 191, 192, 193, △)

267 Atmospheric Physics (3 cr; prereq 191, 192, 193, △)
VI T, VI-VII Th, Ph 145

301 Research (ar cr; prereq 191, 192, 193, △)

Winter and Spring Quarters

1w See 1f: IV MWF

-2w-3s See 1f

5w Gen Physics: Heat, Electricity (5 cr; prereq 4) I MTWThF

6s Gen Physics: Sound, Light (5 cr; prereq 5) I MTWThF

8w-9s Gen Physics (5 cr; prereq 7, ¶ITM 24A or Math 53) II MTWThF

11w See 11f: V or VII MTWThF

12w,s Gen Physics (5 cr; prereq 11, ¶ITM 12 or ¶Math 10) I MTWThF(w); III MTWThF(w); VI MTWThF(w); VII MTWThF(s)

13s See 13f: I MTWThF; II MTWThF; VI MTWThF

14w See 14f: V MTWThF

14Aw See 14Af: Ar

50w,s Interm Physics (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54) I MTWThF; II MTWThF (honors section); III MTWThF; VI MTWThF(w); V MTWThF(s)

50Aw,s Physics Lab (1 cr; prereq ¶50) VI-VIII M; VI-VIII T; VI-VIII Th; VI-VIII F open to Phys 50 honors section registrants only (w); Ar(w,s)

51s Interm Physics (4 cr; prereq 50, ITM 25A or Math 54) I MTWThF; II MTWThF (honors section); III MTWThF; VI MTWThF

51As Physics Lab (1 cr; prereq ¶51) VI-VIII M; VI-VIII T; VI-VIII Th open to Phys 51 honors section registrants only; or ar

-102w-104s See 100f

-103w-105s See 101f

-109w-111s See 107f

-110w-112s See 108f

-116w-118s‡ See 114f

121w Experimental Nuclear Physics I (3 cr; prereq 50, 107) VI-IX TTh; VII-X MF

122s Experimental Nuclear Physics II (3 cr; prereq 50, 107 or ‡) VI-IX TTh; VII-X MF

-124w-125s See 123f

133s Physical Optics (3 cr; prereq 15 cr, ITM 25A or Math 54) II TThS

133As Physical Optics Lab (1 cr; prereq ¶133) Lect VII T, lab VIII-X T or Th

134w See 134f

136s Spectrum Analysis (3 cr; prereq 15 cr, ITM 25A or Math 54) Lect VII T, lab VIII-X TTh

146w Vacuum Tubes, Associated Circuits (4 cr; prereq 144 or ‡) Lect II MWF, lab ar

148s Application of Electronic Circuits (4 cr; prereq 146 or ‡) Lect II MWF, lab ar

-183w-185s See 181f

-192w-193s See 191f

-211w-212s See 210f

-217w-218s See 216f

-226w-227s See 225f

-229w-230s See 228f

-232w-233s See 231f

-238w-239s See 237f

-250w-251s See 249f

-253w-254s See 252f

-256w-257s See 255f

-259w-260s See 258f

-268w-269s See 267f

302w-303s‡ Research (ar cr)

UNATTACHED COURSES

General Engineering (GE)

Fall Quarter

70 Slide Rule (1 cr; prereq ITM 11 or ¶)
—1, VI T, AE 215
—2, VI Th, AE 215
—3, VII T, AE 209
—4, VII Th, AE 209

101 Contracts, Specifications (3 cr; prereq 5th yr)
IV MWF, ChE 240

105 Engineering Library Techniques (1 cr)
VI T, E 206

Winter and Spring Quarters

70w,s See 70f: III T; III Th; VI T; VI Th

101w,s See 101f

105w,s See 105f

Geophysics (GPhy)

Fall Quarter

90 Industrial Employment (2 cr; prereq △) Mooney

108 Gen Geophysics (3 cr; prereq Geol 2, Phys 9 or 14...Geol 125 rec)
III MWF, Mines 219, Mooney

125 Gravity, Magnetic Exploration (2 cr; prereq Phys 14, Geol 125, ITM 25A)
III TTh, Mines 219, Mooney

131 Topics: Theoretical Seismology (ar cr; prereq ‡) Mooney

135 Problems (ar cr; prereq ‡) Mooney

Winter and Spring Quarters

-91w-92s See 90f

109w Seismology (3 cr; prereq Geol 125, Phys 9 or 14) III MWF

110s Exploration Geophysics (3 cr; prereq Geol 2, Phys 9 or 14...Geol 125 rec) II MWF

126w Seismic Exploration (2 cr; prereq Phys 14, Geol 125, ITM 25A) III TTh

127s Electrical Exploration (2 cr; prereq Phys 14, Geol 125, ITM 25A) III Th

-132w-133s See 131f

-136w-137s‡ See 135f

COLLEGE OF VETERINARY MEDICINE

Veterinary Anatomy (VAna)

Fall Quarter

100 Orientation (1 cr; prereq ‡)
VI M, VetS 257, Kitchell

101 Anatomy of the Dog (7 cr; prereq ‡)
Lect I MWF, VetS 257, Stromberg
Lab II-III MWF, VI-VIII TTh, VetS 141

150 Comparative Prenatal Development of Domestic Animals (4 cr; prereq ‡)
Lect I TTh, VetS 257, Kitchell, Stinson
Lab II-IV TTh, VetS 247

151 Microscopic Anatomy of Domestic Animals (3 cr; prereq ‡)
Lect VI WF, VetS 257, Kitchell, Stinson
Lab VII-IX W, VetS 247

191 Special Studies (1-5 cr; prereq 151, ‡) Kitchell, Stromberg

Veterinary Bacteriology and Public Health (VBac)

Fall Quarter

102 Pathogenic Bacteria, Fungi (6 cr; prereq 101, ‡)
Lect II MWF, VII T, VetS 229, Lindorfer, Loken, Pomeroy
Lab III-IV MWF, VetS 325

125 Public Health (4 cr; prereq 103, VPaP 153, ‡)
Lect VII TTh, VetC 125, Anderson, Olson, Schuman
Lab VIII-IX TTh, VetS 325

128 Probs: Bacteriology, Public Health (ar cr; prereq 103, ‡) Pomeroy, Anderson, Lindorfer, Loken

131 Poultry Diseases (4 cr; prereq 103, VPaP 153, ‡)
I MWThF, VetC 125, Pomeroy

201 Adv Poultry Diseases (ar cr; prereq 131, ‡) Pomeroy

205 Adv Bacteriology (ar cr; prereq ‡) Pomeroy, Fenstermacher, Lindorfer

Veterinary Medicine and Clinics (VMC)

Fall Quarter

102 Large Animal Medicine (5 cr; prereq ‡)
VI MTWThF, VetA 102, Hoyt, Sorensen

110 Clinics (5 cr; prereq 101, ‡)
II-IV MTWThF, I-III S, VetC

114 Clinics (5 cr; prereq 113, ‡)
II-IV MTWThF, I-III S

117A Clinical Conference (1/3 cr, †117A-117B-117C; prereq ‡)
IX W, VetC 125, Campbell

118A Clinical Conference (1/3 cr, †118A-118B-118C; prereq ‡)
IX W, VetC 125, Campbell

122 Small Animal Medicine (5 cr; prereq ‡)
VI MTWThF, VetC 125, Mather

201 Adv Veterinary Medicine (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

202 Adv Diagnosis, Therapeutics of Animal Diseases (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

203 Seminar (ar cr; prereq ‡) Hoyt, Mather, Sorensen

204 Medical Conference (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

Veterinary Obstetrics (VObs)

Fall Quarter

201 Probs: Animal Reproduction (ar cr; prereq ‡)
VetC 128, Zemjanis

Veterinary Pathology and Parasitology (VPaP)

Fall Quarter

151 Gen Pathology (5 cr; prereq VBac 101, ‡)
Lect VI MWF, VetS 229, Sautter, Willigan
Lab VII-IX MW, VetS 225, 229, Nielsen

154 Clinical Pathology (2 cr; prereq 153, ‡)
VIII T, VII Th, VetS 229, Perman

157 Veterinary Necropsies (1-3 cr; prereq 153, ‡) Sautter

158 Surgical Pathology (1-3 cr; prereq 153, ‡) Sautter

201 Adv Veterinary, Poultry Pathology (ar cr; prereq ‡) Sautter, Fenstermacher

202 Seminar: Pathology (1 cr; prereq 153, ‡)
VetS 229, Sautter, Kernkamp

203 Neoplasms of Domestic Animals (ar cr; prereq ‡) Sautter

241 Probs: Parasitology (ar cr; prereq 102, ‡) Griffiths

Veterinary Physiology and Pharmacology (VPP)

Fall Quarter

105 Animal Physiology (5 cr; prereq VAna 153, PhCh 103, ‡)
I MTWThF, VetA 103, Good, Sellers

106 Animal Physiology Lab (2 cr; prereq ¶105)
II-IV TTh, TEH 103, Dziuk

152 Veterinary Pharmacology (4 cr; prereq 151, ‡)
Lect VII T, VIII WF, VetA 103, Stowe, Hammond
Lab VIII-X M, TEH 103, Stowe, Hammond

Veterinary Surgery and Radiology (VSR)

Fall Quarter

101 Prin Surgery (5 cr; prereq VMC 101, ‡)
Lect I MTWThF, VetS 229, Arnold, Clifford, Usenik, Gourley

104 Lamenesses of Domestic Animals (1 cr; prereq 103, ‡)
Lect VII W, VetC 125, Campbell

105 Special Surgery (1 cr; prereq 103, ‡)
Lab VII-IX M, VetA 102, 103, Arnold, Clifford, Usenik, Gourley

121 Radiology (3 cr; prereq VMC 113, ‡)
Lect I T, VII F, VetC 125, Spurrell, Wolf
Lab VIII-IX F, VetC 70

210 Adv Radiology (2 cr; prereq 121, ‡) Spurrell

220 Anesthesia (ar cr; prereq 103, ‡) Arnold, Usenik, Clifford

225 Adv Small Animal Surgery (ar cr; prereq 103, ‡) Arnold, Usenik, Clifford

230 Adv Large Animal Surgery (ar cr; prereq 103, ‡) Arnold, Usenik

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE (Air)

Fall Quarter

31 **Air Science I: Foundations of Air Power** (1 cr)
Drill I M or V M or VI M
—1, I TTh, A 12, Icenhour
—2, III TTh, A 12, Icenhour
—3, V TTh, A 12, Icenhour
—4, VI TTh, A 12, Icenhour

34 **Air Science II: Foundation of Air Power** (1 cr; prereq 33)
Drill I M or V M or VI M
—1, I WF, A 12, Stockdale, Kramer
—2, III WF, A 12, Stockdale, Kramer
—3, IV WF, A 12, Stockdale, Kramer

131 **Air Science III: Air Force Officer Development** (3 cr; prereq 36)
Drill I M or V M or VI M
—1, I TWThF, A 14, Bennett, Dern
—2, III TWThF, A 14, Bennett, Dern
—3, V TWThF, A 14, Bennett, Dern

134 **Air Science IV: Weather, Navigation** (3 cr; prereq 133)
Drill I M or V M or VI M
—1, II TWThF, A 14, Bush
—2, IV TWThF, A 14, Bush

Winter and Spring Quarters

-32w-33s See 31f

-35w-36s See 34f

-132w-133s See 131f

-135w-136s See 134f

MILITARY SCIENCE AND TACTICS (Mil)

Fall Quarter

1 **Military Science I** (1 cr)
Drill III or VI T or Th
—1, II MW, A 116, Edwards
—2, III MW, A 116, Edwards
—3, VI MW, A 116, Edwards
—4, II TTh, A 116, Edwards
—5, V TTh, A 116, Edwards
—6, VII TTh, A 116, Edwards

4 **Military Science II** (1 cr; prereq 3)
Drill III or VI T or Th
—1, II MW, A 105, Gessner
—2, V MW, A 105, Gessner
—3, II TTh, A 105, Gessner
—4, V TTh, A 105, Gessner

151 **Military Science III** (3 cr; prereq 6)
Drill III or VI T or Th
—1, I MTWTh, A 201, Carlton
—2, IV MTWTh, A 201, Carlton
—3, VI MTWTh, A 201, Carlton

154 **Military Science IV** (3 cr; prereq 153)
Drill III or VI T or Th
—1, II MTWTh, A 116A, Elliott
—2, V MTWTh, A 116A, Elliott

Winter and Spring Quarters

-2w See 1f: I MWF; II MWF; III MWF; V MWF; VI MWF

-3s See 1f: Drill VI-VII Th, rec II M; II T; III M; III T; VI M; VI T

-5w See 4f: II MWF; III MWF; V MWF

-6s See 4f: Drill VI-VII Th, rec II T; III T; V T
-152w See 151f: I MTWThF; IV MTWThF; VI MTWThF
-153s See 151f: Drill VI-VII Th, rec I MTW; IV MTW; VI MTW
-155w See 154f: II MTWThF; V MTWThF
-156s See 154f: Drill VI-VII Th, rec II MTW; V MTW

MORTUARY SCIENCE (Mort)

Fall Quarter

3 **Introd Restorative Art** (1 cr)
I Th, NH 102, Gates
4 **Restorative Art** (1 cr, †4-5-6; prereq soph)
—1, VIII-IX T, NH 102, Gates
—2, VIII-IX Th, NH 102, Gates
8 **Orientation in Funeral Service** (1 cr)
I T, NH 211, Slater
10 **Orientation in Funeral Service** (1 cr)
VIII M, NH 209, Slater
11 **Mortuary Mgt** (2 cr; prereq 10)
II TTh, JacH 304, Thorsell
12 **Embalming** (3 cr; prereq 10)
VIII MWF, JacH 304, Thorsell
13 **Mortuary Law** (3 cr)
II MWF, C 215, Carney
14 **Mortuary Law** (3 cr)
I MWF, C 111, Grayson
53 **Pathology** (3 cr, †53-54; prereq Biol 3 or Zool 3, Phsl 4)
II MWF, JacH 104, Gamble
56 **Embalming Theory, Practice** (3 cr, †56-57-58; prereq 12, Zool 3 or 15, Phsl 4)
III MWF, JohH 306, Slater
59 **Public Health, Minnesota Law, Regulations** (2 cr; prereq △)
IV TTh, JacH 304, Larson
60 **Funeral Mgt** (2 cr; prereq 11)
III TTh, ME 102, Slater

Winter and Spring Quarters

3s See 3f
-5w-6s See 4f
8w See 8f
9w,s Orientation in Funeral Service (1 cr) I Th(w); I T(s)
10s See 10f
11s See 11f
12s See 12f: II MWF
13s See 13f
-14w‡ See 13f
51w-52s Anatomy (3 cr, †51-52; prereq Zool 3 or 15, Phsl 4) V-VII TTh
-54w See 53f
55s Medical Science Survey (3 cr; prereq 52, 54) I MWF
-57w-58s See 56f: III MWF(w); VI MWF(s)
59w,s See 59f
-61w-62s‡ See 60f: I TTh(s); III TTh(w)
63w,s Business Methods (2 cr; prereq Econ 24) II TTh(w); VII MW(s)
64w,s Psychology of Funeral Service (2 cr; prereq GC 41 or Psy 1-2) V MW(s); VII MW(w)
70w-71s Chemistry for Embalmers (3 cr, †70-71; prereq InCh 2) Lect VI MW, lab VI-VII F(w); Lect II TTh, lab III-IV W(s)
72s Bacteriology (4 cr; prereq Zool 3 or 15, Phsl 4) Lect II MWF, lab III M, III-IV F

NAVAL SCIENCE (Nav)

Fall Quarter

11 **Naval Orientation** (3 cr)
Drill 7:30-8:20 am T
—1, Lect III MWF, A 205, McCabe
—2, Lect IV MWF, A 205
—1, Lab III T, A 205
—2, Lab IV T, A 205
—3, Lab VI T, A 205
21 **Naval Weapons** (no cr; prereq △, psych or ¶psych...Psy 1 rec)
Drill 7:30-8:20 am T
—1, Lab III T, A 202, Laing
—2, Lab IV T
51 **Naval Engineering** (3 cr)
Drill 7:30-8:20 am T
—1, Lect V MWF, A 12A, Loberger
—2, Lect VII MWF, A 12A
—1, Lab V T, A 12A
—2, Lab VII T, A 12A
54 **Evolution of the Art of War I** (3 cr)
Drill 7:30-8:20 am T
Lect VI MWF, A 205, Hollier
Lab VI Th, A 205
57 **Organization, Logistics: Naval Finance** (3 cr)
Drill 7:30-8:20 am T
Lect IV MWF, A 202, Donnelly
Lab IV Th, A 202
61 **Naval Operations** (3 cr)
Drill 7:30-8:20 am T
—1, Lect III MWF, A 12A, Thiel
—2, Lect IV MWF, A 12A
—1, Lab III T, A 12A
—2, Lab IV T, A 12A
64 **Amphibious Warfare I** (3 cr)
Drill 7:30-8:20 am T
Lect VII MWF, A 205, Hollier
Lab III Th, A 205
67 **Ships Store Afloat; Clothing, Small Stores** (3 cr)
Drill 7:30-8:20 am T
Lect VI MWF, A 202, Donnelly
Lab VI Th, A 202

Winter and Spring Quarters

12w Sea Power (3 cr) Lect III or IV MWF, lab II T; III T; VI T, drill IV T

13s Sea Power (3 cr) Lect III or IV MWF, lab III T; IV T; VI T, drill 7:30-8:20 T
-22w-23s‡ See 21f: Lect III or IV MWF, lab II or III T, drill 7:30-8:20 T(s); IV T (w)
52w Naval Engineering: Introd to Navigation (3 cr) Lect V or VII MWF, lab V or VII T, drill IV T
53s Celestial Navigation (3 cr) Lect VI-VII MW or TTh, drill 7:30-8:20 T
55w Evolution of the Art of War II (3 cr) Lect VI MWF, lab VI Th, drill IV T
56s Modern Basic Strategy, Tactics (3 cr) Lect VI MWF, lab VI Th, drill 7:30-8:20 T
58w Naval Accounting: Basic Supply Afloat (3 cr) Lect V MWF, lab V Th, drill IV T
59s Advanced Supply Afloat (3 cr) Lect V MWF, lab V Th, drill 7:30-8:20 T
62w Naval Operations: Leadership (3 cr) Lect III or IV MWF, lab II or III T, drill IV T
63s Leadership (3 cr) Lect III or IV MWF, lab III or IV T, drill 7:30-8:20 T
65w Amphibious Warfare II (3 cr) Lect VII MWF, lab III Th, drill IV T
66s Leadership (3 cr) Lect VII MWF, lab III Th, drill 7:30-8:20 T
68w Commissary (3 cr) Lect VI MWF, lab VI Th, drill IV T

PHYSICAL EDUCATION FOR MEN (PE M)

Nonprofessional

Fall Quarter

All classes meet the first day in CH gymnasium

1A Sports Education (1 cr)
Swimming, Bgn
—1, II MWF, CH Pool, Boyce
—2, VII MWF, CH Pool, Thorpe
—3, VIII MWF, Gy Pool (**StP Campus**), McDonnell
—4, II-III T, II Th, CH Pool, Boyce
Bowling, Bgn
—5, I MWF, CMU
—6, II MWF, CMU
—7, III TTh, 1 hr ar, StCen (**StP Campus**), McDonnell
Handball-Paddleball-Squash
—8, IV MWF, StadN
Tennis, Bgn
—9, III MWF, CH Gym
Badminton, Bgn
—10, II MWF, CH Gym
Golf, Bgn
—11, II MTWThF, G Course-StadS, Bolstad
—12, V MWF, Gy 100 (**StP Campus**), McDonnell
Adapted Activities
—13, III MWF, StadS, Osell
—14, IV MWF, StadS, Osell
—15, VIII MWF, StadS, Osell
Weight Lifting
—16, III T, III-IV Th, CH Gym
Freshman Football
—17, CH, Johnson
Freshman Cross Country
—18, CH, Kelly

2A Sports Education (1 cr)
Swimming, Interm
—1, II T, II-III Th, CH Pool, Boyce
—2, VI MWF, CH Pool, Thorpe
—3, V-VI T, V Th, CH Pool
—4, V T, V-VI Th, CH Pool
Life Saving
—5, III MWF, CH Pool, Boyce
Gymnastics
—6, VII MWF, App Gym
Weight Lifting
—7, VIII MWF, CH Gym
Touch Football, Volleyball
—8, IV MWF, FieldHse, Gym
Archery
—9, II MWF, FieldHse
—10, III MWF, Gy 100 (**StP Campus**), McDonnell
—11, VI TTh, Gy 100 (**StP Campus**), 1 hr ar, McDonnell
Square-Folk Dancing
—12, VII TTh, NGW
Ballroom Dancing
—13, III TTh, NGW
—14, VIII TTh, NGW
Golf, Adv
—15, III MTWThF, G Course-StadS, Bolstad
Body Building
—16, VIII MWF, StadS, Osell
Varsity Football
—17, CH, Warmath
Varsity Cross Country
—18, CH, Kelly

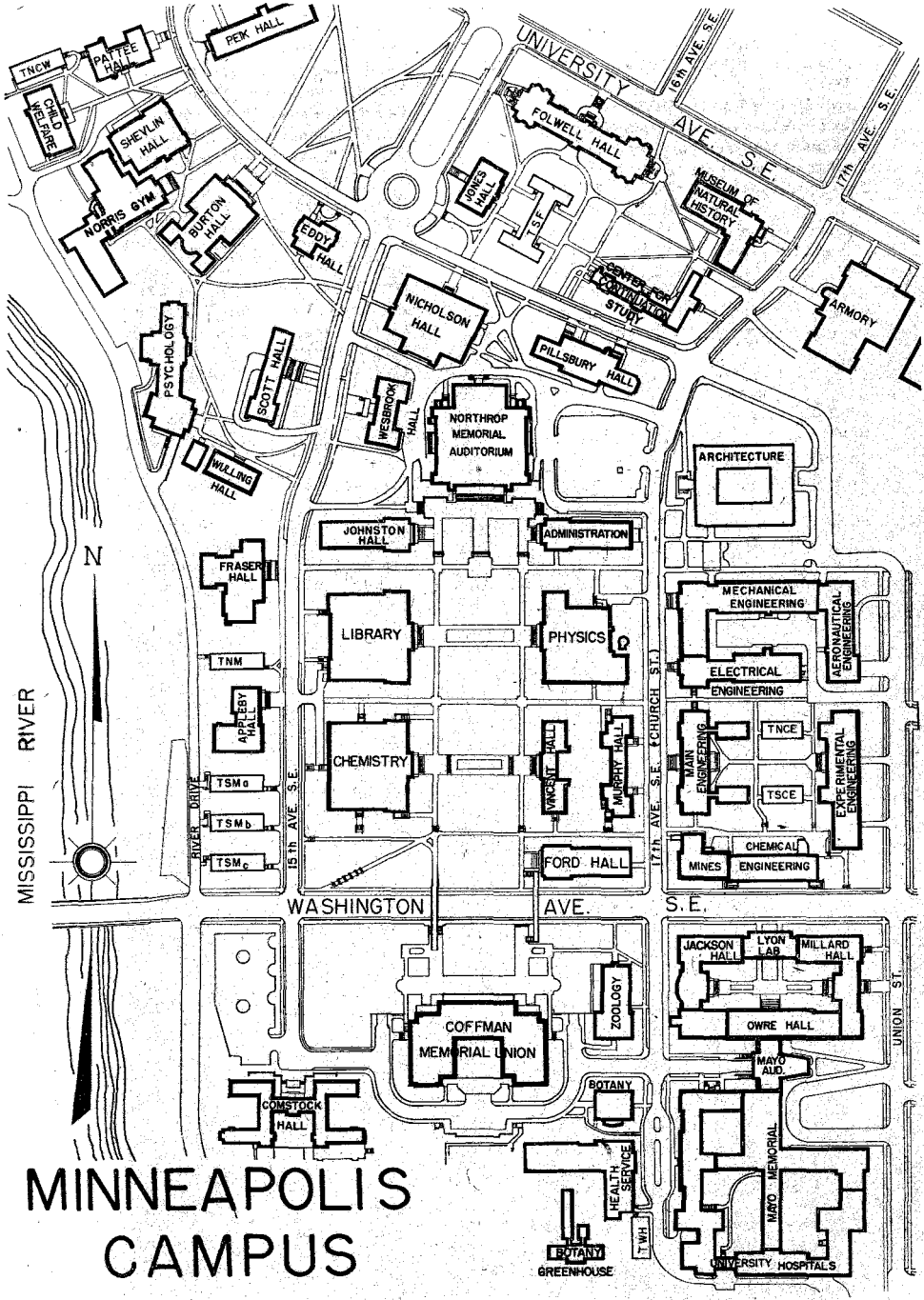
Winter and Spring Quarters

1Bw Sports Education (1 cr)
Adapted Activities III MWF; IV MWF; VIII MWF
Badminton, Bgn IV MWF
Bowling, Bgn I MWF; II MWF; III TTh, 1 hr ar
Freshman Basketball Ar (cons coach)
Freshman Gymnastics Ar (cons coach)
Freshman Ice Hockey Ar (cons coach)
Freshman Swimming Ar (cons coach)
Freshman Wrestling Ar (cons coach)
Golf, Bgn II TTh, 1 hr ar, III MWF; III TTh, 1 hr ar; IV MWF; V MWF
Handball V TTh, 1 hr ar
Handball-Paddleball-Squash VII MWF
Skating, Bgn VI MWF
Swimming, Bgn II MWF; II-III T, II Th; VI MWF; VIII MWF
Weight Lifting III T, III-IV Th

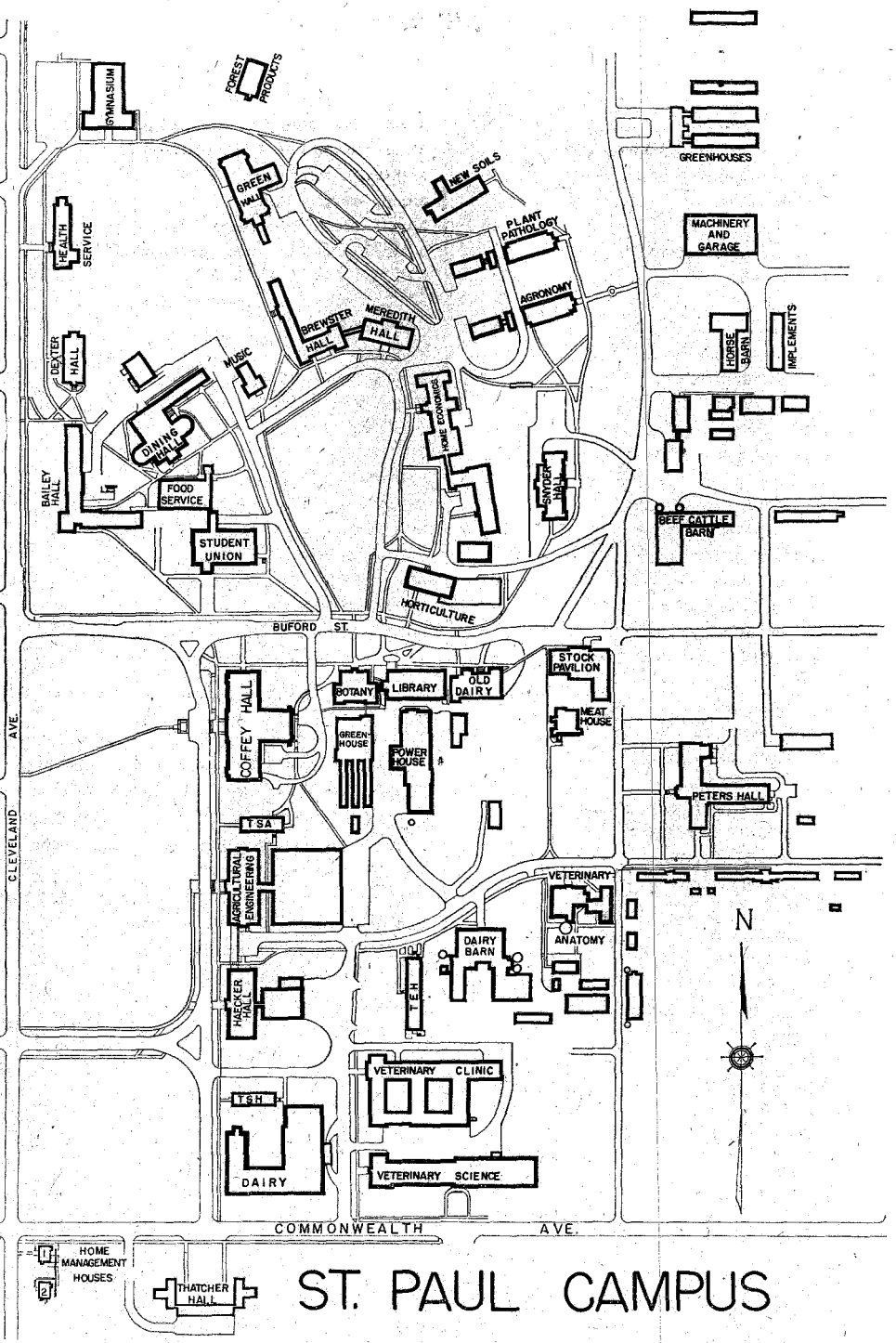
1Cs Sports Education (1 cr)
Adapted Activities III MWF; IV MWF; VIII MWF
Bowling, Bgn I or II MWF
Freshman Baseball Ar (cons coach)
Freshman Golf Ar (cons coach)
Freshman Tennis Ar (cons coach)
Freshman Track Ar (cons coach)
Golf, Bgn II MWF; II TTh, 1 hr ar; III MWF; V MWF
Handball-Squash IV MWF
Swimming, Bgn II MWF; III T, II-III Th; VII MWF
Swimming, Bgn-Interm VIII MWF
Tennis, Bgn II MWF; IV MWF; V TTh, 1 hr ar
Weight Lifting III T, III-IV Th

2Bw Sports Education (1 cr)
Archery III MWF
Badminton, Adv III T, III-IV Th
Basketball VII MWF
Body Building VIII MWF
Dancing, Ballroom IV or VII TTh
Dancing, Folk, Square II TTh
Gymnastics VII MWF
Life Saving III MWF
Swimming, Interm II T, II-III Th; VI MWF
Tennis II MWF
Varsity Basketball Ar (cons coach)
Varsity Gymnastics Ar (cons coach)
Varsity Ice Hockey Ar (cons coach)
Varsity Swimming Ar (cons coach)
Varsity Wrestling Ar (cons coach)
Volleyball III MWF
Weight Lifting VIII MWF

2Cs Sports Education (1 cr)
Archery I TTh, 1 hr ar; II MWF; III MWF
Body Building VIII MWF
Dancing, Ballroom I or VII TTh
Dancing, Folk, Square VIII TTh
Golf, Interm III TTh, 1 hr ar; IV MWF; VII-VIII TTh
Handball-Squash IV MWF
Life Saving III MWF
Softball, Volleyball IV MWF
Swimming, Interm II T, II-III TTh; VI MWF
Tennis, Adv III MWF
Varsity Baseball Ar (cons coach)
Varsity Golf Ar (cons coach)
Varsity Tennis Ar (cons coach)
Varsity Track Ar (cons coach)
Weight Lifting VIII MWF



MINNEAPOLIS CAMPUS



ST. PAUL CAMPUS

BUILDING ABBREVIATIONS

A, Armory
AE, Aeronautical Engineering
AgBot(StP), Agricultural Botany
AgEng(StP), Agricultural Engineering
Agr(StP), Agronomy
AH, Appleby Hall
Bo, Botany
BoG, Botany Greenhouse
Bu, Burton Hall
C, Chemistry
CH, Cooke Hall
ChE, Chemical Engineering
CofH(StP), Coffey Hall
CW, Child Welfare
Dairy(StP), Dairy
DCB(StP), Dairy Cattle Barn
E, Main Engineering
EdH, Eddy Hall
EE, Electrical Engineering
Ex, Experimental Engineering
FieldHse, Fieldhouse
FP(StP), Forest Products
FolH, Folwell Hall
ForH, Ford Hall
FraH, Fraser Hall
GH(StP), Green Hall
Gy(StP), Gymnasium
HE(StP), Home Economics
HH(StP), Haecker Hall
HL, Hydraulic Lab (Hennepin Island)
HolB, Holman Bldg (2035 Univ Ave)
Hosp, University Hospitals
Hr(StP), Horticulture
J, Jones Hall
JacH, Jackson Hall
JohH, Johnston Hall
Lib, Walter Library
LsPav(StP), Livestock Pavilion
LyonL, Lyon Laboratories
Mayo, Mayo Memorial
ME, Mechanical Engineering
MeH(StP), Meredith Hall
MEx, Mines Experiment Station
MH, Millard Hall
Mines, Mines
MMA, Mayo Memorial Auditorium
MNH, Museum of Natural History
MSh(StP), Meat Shop
MurH, Murphy Hall
MusEd, Music Education
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
Owre, Owre Hall
P, Pillsbury Hall
PeikG, Peik Hall Gymnasium
PeikH, Peik Hall
PetH(StP), Peters Hall
Ph, Physics
PoH, Powell Hall
PP(StP), Plant Pathology
Psy, Psychology
Pt, Pattee Hall
SBH, State Board of Health
ScH, Scott Hall
ShH, Shevlin Hall
SnH(StP), Snyder Hall
So(StP), New Soils
Stad, Stadium
TEH(StP), Temporary, East of Haecker Hall
TNCE, Temporary, North Court of Engineering
TNCW, Temporary, North of Child Welfare
TNM, Temporary, North of Mines (Appleby Hall)
TSCE, Temporary, South Court of Engineering
TSF, Temporary, South of Folwell
TSH(StP), Temporary, South of Haecker Hall
VCHH, Variety Club Heart Hospital
VetA(StP), Veterinary Anatomy
VetC(StP), Veterinary Clinic
VetS(StP), Veterinary Science
VH, Vincent Hall
WeH, Wesbrook Hall
WmsA, Williams Arena
WuH, Wulling Hall
Z, Zoology

DIRECTORY OF DEPARTMENTAL OFFICES

Admissions and Records, Office of:
Minneapolis Campus 105Adm
St. Paul Campus 220CofH
Aeronautical Engineering 107AE
Agricultural Biochemistry 214SnH
Agricultural Economics 303HH
Agricultural Education 205Hr
Agricultural Engineering 200AgEng
Agricultural Journalism 107CofH
Agronomy and Plant Genetics 303Agr
Air Science 3A
American Studies 101TSF
Anatomy 201JacH
Anesthesiology ..... C596 Mayo
Animal Husbandry 122PetH
Anthropology 325ForH
Architecture 310E
Art 108J
Art Education 106J
Astronomy 358Ph
Bacteriology ..... 1060 Mayo
Biology 104Z
Biophysics 48Ph
Botany 8Bo
Business Administration 109VH
Cancer Biology 274LyonL
Chemical Engineering 151ChE
Chemistry 139C
Child Development and Welfare 103CW
Civil Engineering 123E
Classics 310FolH
Dairy Husbandry 202HH
Dairy Industries ..... 225 Dairy
Dental Assisting ..... 302 Owre
Dental Hygiene ..... 106 Owre
Dentistry ..... 136 Owre
Economics 221VH
Electrical Engineering 139EE
Engineering Graphics 125ME
English 219FolH
Entomology and Economic Zoology 300CofH
Food Technology 214SnH
Forestry 110GH
General College 106NH
General Education 204Bu
Geography 290aForH
Geology and Mineralogy 108P
Geophysics ..... 207 Mines
German 210FolH
History 200ForH
Home Economics 200HE
Home Economics Education 117HE
Horticulture 111Hr
Industrial Education 103TNCW
Interdepartmental Courses, General Education 208JohH
Journalism 111MurH
Law 125FraH
Library 3Lib
Linguistics and Philology 311FolH
Mathematics (IT) 114E
Mathematics (SLA) 119FolH
Mechanical Engineering 125ME
Medical Technology ..... C205 Mayo
Medicine ..... C309 Mayo
Metallurgy ..... 403 Mines
Military Science and Tactics 108A
Mines and Metallurgy ..... 112 Mines
Mortuary Science 155NH
Music 107ScH
Music Education 214ScH
Naval Science 203A
Nursing ..... 125 Owre
Obstetrics and Gynecology ..... A616 Hosp
Ophthalmology ..... A684 Mayo
Orientation 202CofH
Otolaryngology ..... A605 Mayo
Pathology 110JacH
Pediatrics ..... 1403 Mayo
Pharmacology 105MH
Pharmacy 101WuH
Philosophy 100WeH
Physical Education for Men 111CH
Physical Education for Women 101NGW
Physical Medicine ..... 860 Mayo
Physics 148Ph
Physiological Chemistry 227MH
Physiology 424MH
Plant Pathology and Agricultural Botany 304PP
Political Science 395ForH
Poultry Husbandry 205PetH
Psychiatry and Neurology ..... B692 Mayo
Psychology 112Psy
Public Health ..... 1325 Mayo
Radiology ..... B238 Mayo
Rhetoric 309AgEng
Romance Languages 200FolH
Scandinavian 13FolH
Slavic and Oriental Languages 322FolH
Social Work 400ForH
Sociology 400ForH
Soils 125So
Speech 309FolH
Student Counseling Bureau 101EdH
Surgery ..... B518 Mayo
Veterinary Medicine 301VetS
Zoology 108Z

FINAL EXAMINATIONS

Hours and days—The time of your examination is based on the hours and days the class is regularly scheduled, and the college under which the course is listed in the *Class Schedule*. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine . . . or to courses numbered over 200 which have no regularly scheduled classrooms.

In determining your proper final examination time from this schedule:

- Go by the lecture hours rather than the laboratory or recitation hours.
- Follow the MWF sequence if your class meets four or more days a week.
- Use the first full class hour if your class meets for more than one continuous hour.
- Use the common examination hour if your course is listed on the following page.

Classes meeting II Hour Saturday only will be examined 8:00-10:00 S December 12.
Classes meeting III-IV Hour Saturday only will be examined 10:30-12:30 S December 12.

Courses Listed Under Business Administration, General College, and Institute of Technology

Class Hours					Class Hours				
I	MWF	3:45- 5:45	T	Dec 15*	VI	MWF	1:30- 3:30	M	Dec 14*
I	TThS	10:45-12:45	F	Dec 11	VI	TTh	4:00- 6:00	M	Dec 14
II	MWF	1:30- 3:30	Th	Dec 17*	VII	MWF	8:00-10:00	Th	Dec 17*
II	TThS	1:30- 3:30	S	Dec 12	VII	TTh	10:30-12:30	Th	Dec 17
III	MWF	8:00-10:00	S	Dec 12*	VIII	MWF	7:00- 9:00 pm	F	Dec 11*
III	TThS	10:45-12:45	W	Dec 16	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	10:15-12:15	T	Dec 15*	IX				
IV	TThS	4:00- 6:00	F	Dec 11	X				
V	MWF	1:30- 3:30	W	Dec 16*					
V	TTh	4:00- 6:00	W	Dec 16					

Courses Listed Under Science, Literature, and the Arts, Education, Medical Sciences‡, Dentistry‡, and Unattached Departments**

Class Hours					Class Hours				
I	MWF	1:30- 3:30	T	Dec 15*	VI	MWF	1:30- 3:30	M	Dec 14*
I	TThS	10:45-12:45	F	Dec 11	VI	TTh	4:00- 6:00	M	Dec 14
II	MWF	3:45- 5:45	Th	Dec 17*	VII	MWF	8:00-10:00	Th	Dec 17*
II	TThS	1:30- 3:30	S	Dec 12	VII	TTh	10:30-12:30	Th	Dec 17
III	MWF	10:15-12:15	S	Dec 12*	VIII	MWF	7:00- 9:00 pm	F	Dec 11*
III	TThS	10:45-12:45	W	Dec 16	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:00-10:00	T	Dec 15*	IX				
IV	TThS	4:00- 6:00	F	Dec 11	X				
V	MWF	1:30- 3:30	W	Dec 16*					
V	TTh	4:00- 6:00	W	Dec 16					

Courses Listed Under Agriculture, Forestry, and Home Economics

Class Hours					Class Hours				
I	MWF	1:30- 3:30	T	Dec 15*	VI	MWF	1:30- 3:30	M	Dec 14*
I	TThS	10:45-12:45	F	Dec 11	VI	TTh	4:00- 6:00	M	Dec 14
II	MWF	1:30- 3:30	Th	Dec 17*	VII	MWF	8:00-10:00	Th	Dec 17*
II	TThS	1:30- 3:30	S	Dec 12	VII	TTh	10:30-12:30	Th	Dec 17
III	MWF	8:30-10:30	S	Dec 12*	VIII	MWF	7:00- 9:00 pm	F	Dec 11*
III	TThS	10:45-12:45	W	Dec 16	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:30-10:30	T	Dec 15*	IX				
IV	TThS	4:00- 6:00	F	Dec 11	X				
V	MWF	1:30- 3:30	W	Dec 16*					
V	TTh	4:00- 6:00	W	Dec 16					

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* Classes meeting four or more hours per week may give three-hour examinations provided the instructor notifies the Room Scheduling Office of his intention to do this. Three-hour examinations will be scheduled from 8:30-11:30 or 1:30-4:30 on the respective morning or afternoon the examination would otherwise be given (6:30-9:30 p.m. for VIII Hour classes).

‡ Courses offered primarily to students other than medical and dental students.

** Courses listed under Air Science, Military Science, Mortuary Science, Naval Science, and non-professional Physical Education for Men.

Common Examinations—All sections of the following courses are examined together at the time indicated.

BA 5—1:30-3:30 F	Dec 11	GC 32A—10:45-12:45 M	Dec 14
BA 24, 25, 26—4:00-6:00 S	Dec 12	Ger 1C, 3C, 4—8:15-10:15 W	Dec 16
Biol 1, 1A—7:00-9:00 **pm** W	Dec 16	ITM 11, 26A—7:30-10:30 W	Dec 16
Comm 1—10:45-12:45 M	Dec 14	ITM 12, 24A—7:30-10:30 F	Dec 11
Comp X—10:45-12:45 M	Dec 14	ITM 13A, 25A—7:30-10:30 M	Dec 14
Econ 1, 2—7:00-9:00 **pm** T	Dec 15	Math X, T, 55—8:15-10:15 M	Dec 14
EG 14—1:30-3:30 S	Dec 12	Math H, 10, 40, 53, 54—7:30-10:30 F	Dec 11
EG 15—10:45-12:45 W	Dec 16	ME 30—10:45-12:45 M	Dec 14
EG 16—1:30-3:30 F	Dec 11	MM 28—7:30-10:30 M	Dec 14
Engl A, 1A, 1B—1:30-3:30 F	Dec 11	MM 40—7:30-10:30 F	Dec 11
Engl C, 3B—10:45-12:45 M	Dec 14	Psy 4—7:00-9:00 **pm** M	Dec 14
Fren 1C, 3C, 4—7:30-10:30 W	Dec 16	Span 1C, 3C—7:30-10:30 W	Dec 16
GC 10A—8:15-10:15 W	Dec 16	Zool 1—7:00-9:00 **pm** W	Dec 16

Rooms—Examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Instructors note: Requests for special final examination rooms are submitted to the Office of Room Assignments and Scheduling by your department office on Form A123. These rooms will be scheduled beginning November 16.

Conflicts and Three Examinations in One Day—Report conflicts with examinations in other courses and situations involving three examinations in one day to your college office.

Changes in Final Examination Hours—All requests for adjustment of final examination hours should be made by December 1 to permit publication and orderly consideration of hardships. Additional common examinations may be requested on Form A163, which is available in department offices. The same form is used to request exceptions to official examination hours. Please note Regulations Regarding Examinations below.

University Schedule Committee Regulations Regarding Examinations

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the chairman of the University Scheduling Committee. This prohibition precludes also moving a final examination from a scheduled time to the last or earlier meetings of the class, except laboratory final examinations which cannot be held in accordance with the regular final examination schedule.
2. Instructors requesting any variation from the official final examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one day because of the change in hours being requested.
3. No variations from the University final examination schedule will be considered official until published in the Official Daily Bulletin.
4. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.

Recommended: In order to give students an opportunity for thorough review prior to final examinations, instructors are requested not to schedule quizzes or term papers to be due during the last week of class.

GRADES

Academic Staff—Grades are due in the Office of Admissions and Records within 90 hours after the examination. Fall quarter grades are due beginning December 15 with last day examination grades due by noon, Monday, December 21. Messenger service is provided. Please call Extension 6658 when grades are ready. Do not put reports in campus mail.

Students—Your Fall quarter grade reports will be available Wednesday, December 30 as follows:

Agriculture, Forestry, Home Economics; Veterinary Medicine—in post office boxes, St. Paul Campus.

Business Administration; Education; General College; Graduate School; Institute of Technology; Medical School; Science, Literature, Arts; University College—at Admissions and Records Office.

Other Colleges—at the college offices except for Law grades which will not be reported until the end of the year.

On Monday, January 4, SLA grades will be in the Library basement study room and IT grades will be in the Mechanical Engineering lobby.

GRADING SYSTEM

1. There shall be four permanent grades, A (highest), B, C, and D (lowest), which shall be acceptable for the completion of a single course.

2. There shall be a permanent grade of F (failure) given when a student does not complete successfully the work of a course.

3. There shall be a temporary grade of I (incomplete) which may be assigned when there is not sufficient information immediately available to permit the assignment of a permanent grade. This would be the case if the student has not done all the work of the course or if the instructor does not know why a student, officially registered for his course, has not appeared or has left. If the instructor is able to ascertain that the student has no adequate excuse or if the student attended beyond the sixth week and was failing, F is the appropriate grade.

   An I which is not turned into a permanent grade or into a W (official cancellation with approval of the student's college) by the end of the sixth week of the next regular quarter of attendance shall become an F. (This does not apply to students in the Graduate School or to students in a Master's degree program in undergraduate colleges; their I grades remain until changed by the instructors to some other grade.) Permission to complete the work must be obtained from the instructor. He may set a makeup deadline of less than 6 weeks.

   An extension of time may be permitted for removal of I grades upon recommendation of the instructor concerned and with approval of the Scholastic Committee of the college in which the student is registered. If the petition is presented after the end of the sixth week of the next quarter of residence, a restoration of the mark of I and the completion of the required work would be considered in the nature of a special examination for which the special examination fee would be required.

4. There shall be a symbol W to indicate official cancellation from a course without grade. This shall be assigned in all cases of official cancellation during the first 6 weeks of classes irrespective of the student's standing. Whether cancellation is permitted is within the authority of the student's college to determine. After 6 weeks, W shall be posted only if the student is not failing at the time of official cancellation. W is a registration symbol, not a grade, and shall be posted by the Recorder on the basis of the student's registration activity as approved by the student's college.

5. A student who cancels officially or otherwise leaves a class after the sixth week of classes and is failing at the time shall receive an F.

6. There shall be a symbol X which may be reported in continuation courses in which a student is permitted to continue but in which a grade cannot usually be determined until the sequence is completed. The instructor shall submit a grade for each X when the student has completed the entire sequence.

7. In courses numbered 200 and higher, the permanent grade S (satisfactory) may be used to indicate satisfactory work for graduate students. In calculating grade point averages, it counts as a B.

8. In the Doctor of Medicine program, the permanent grade P (pass) may be used to indicate satisfactory work for Doctor of Medicine candidates. The student's standing will be calculated using more detailed evaluations available in the college office.

9. There shall be a registration symbol V (visitor) to indicate registration as an auditor or visitor.

10. There shall be a symbol T (transferred) indicating credits transferred from another institution, or from one college to another within the University when a revaluation is required. It shall be posted as a preceding supplement to the original grade.

11. For purposes of determining scholarship averages, grade points shall be assigned as follows:

Each credit of A	4 grade points
Each credit of B	3 grade points
Each credit of C	2 grade points
Each credit of D	1 grade point
Each credit of F	0 grade points

   A student's scholastic average—or grade point average—shall be the sum of grade points divided by the sum of credits passed and failed. In general, all credits must enter into the grade point average. If a course is repeated, usually both grades should enter into the computation of the grade point average. However, the faculty of a school or college may determine which credits and grade points are to be included in the average.

12. Any college or school may set special scholastic standards or other standards as a condition for registration in particular courses of study, for placing students on probation, for admission to the college or school, for promotion, for honors, for continued residence in the college or school, or for degrees, etc.

13. The official grade point average shall be calculated in accordance with paragraph 11 above regardless of when grades were earned.

CALENDAR 1959-60

Fall Quarter

September

-25 Fall registration
Orientation program for new students
7 Holiday (Labor Day)
17 Fall quarter fees due for students registered through September 11
18-26 New Students' Week
25 Last day for registration and payment of fees for the undergraduate colleges
28 Fall quarter classes begin

October

1 Opening convocation, 11:30 a.m., IV hour classes excused
2 Last day for registration and payment of fees for the Graduate School and for teachers in service
12 Holiday (Columbus Day)
31 Homecoming Day

November

5 Senate meeting, 3:30 p.m.
11 Holiday (Veterans' Day)
26 Holiday (Thanksgiving Day)
27-28 Classes excused (except Medical and Veterinary)

December

10 Senate meeting, 3:30 p.m.
11-17 Final examination period
17 Commencement, 8:00 p.m.
19 Fall quarter closes

Winter Quarter

25 Holiday (Christmas Day)
28 Winter quarter fees due for students in residence fall quarter
29-30 Registration for new students

January

1 Holiday (New Year's Day)
4 Registration continues. Fees due for new students in all undergraduate colleges
4 Winter quarter classes begin
8 Last day for registration and payment of fees for the Graduate School, and teachers in service

February

4 Senate meeting, 3:30 p.m.
12 Holiday (Lincoln's Birthday)
22 Holiday (Washington's Birthday)
22-28 University of Minnesota Week
25 Charter Day Convocation, 11:30 a.m., IV hour classes excused

March

10 Senate meeting, 3:30 p.m.
11-17 Final examination period
17 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
17 Commencement, 8:30 p.m.
19 Winter quarter closes

Spring Quarter

24-25 Registration and payment of fees for new students in all undergraduate colleges
28 Spring quarter classes begin

April

1 Last day for registration and payment of fees for the Graduate School, and for teachers in service
15 Holiday (Good Friday)
28 Senate meeting, 3:30 p.m.

May

19 Cap and Gown Day Convocation; 11:30 a.m., IV hour classes excused
30 Holiday (Memorial Day)

June

2 Senate meeting, 3:30 p.m.
4-10 Final examination period
5 Baccalaureate service, 3:00 p.m.
11 Commencement, 8:00 p.m.
11 Spring quarter closes

COURSES TALLIED IN COLLEGE OFFICES

Aeronautical Engineering
All courses under 200—E 136
Agricultural Biochemistry
1A, 2—CofH 220
Agricultural Economics
1 (lect and rec), 2, 12, 25—CofH 220
Agricultural Engineering
All courses under 200—E 136
Agronomy and Plant Genetics
2, 131—CofH 220
Air Science
All courses—A 1
Analytical Chemistry
57—Mayo C205 for Med Tech, and JohH 210 for other students
All other courses under 200—E 136
Animal Husbandry
1, 36A—CofH 220
Anthropology
1A, 2A, 165—JohH 210
Architecture
All courses under 200—E 136
Art
23A, 60A—E 136
All other courses under 193 except 1—JohH 210
Art Education
17, 18, 19, 53, 84—Bu 206
Astronomy
11—E 136 for IT, and JohH 210 for other students
Bacteriology and Immunology
53—CofH 220 for AFHE, Mayo C205 for Med Tech, WuH 101 for Pharm, Owre 125 for Nurs, Mayo 1325 for PubH Nurs, Mayo 860 for PT, and JohH 210 for other students
Biology
1 (lect and lab), 1A (lect and lab)—CofH 220 for AFHE, Owre 125 for Nurs, and JohH 210 for other students
Botany
1—CofH 220 for AFHE, and JohH 210 for other students
50, 50A, 118, 130, 130A—JohH 210
Business Administration
1, 5, 24, 25, 26—JohH 210
28—E 136
All other courses under 200 except 32, 33, 34, 36, 37, 107A, 195B—VH 107
Chemical Engineering
All courses under 200—E 136
Child Development and Welfare
80—JohH 210
Civil Engineering
All courses under 200 (lect and lab for 31, 51, 130, 141)—E 136
Communication
All courses—JohH 210
Curriculum and Instruction
60, 61, 62, 63, 64, 65, 66, 110, 125—Bu 206
Dairy Husbandry
1, 49—CofH 220
Dairy Industries
1—CofH 220
Economics
1T—E 136
1, 2—JohH 210
All other courses under 200 except 90, 110—VH 107 for BA, and JohH 210 for other students
Education
55A, 75A—Bu 206
Educational Psychology
116A, 125, 133, 142, 150, 151, 216, 216A, 233, 253, 281—Bu 206
Electrical Engineering
All courses under 200 (lect and lab for 36)—E 136
Engineering Graphics
All courses—E 136
English
A (lect and rec), 3B (lect and rec), C, 21, 23, 37, 55, 56, 72, 74—JohH 210
1A (lect and rec)—E 136 for IT, and JohH 210 for other students
1B (lect and rec)—E 136 for IT, Owre 106 for DH, NH 156 for Mort Sci, and JohH 210 for other students
85—E 136
English Composition
58—VH 107
All other courses under 200 except 101—JohH 210
Entomology and Economic Zoology
1A, 51, 117, 121, 144, 242, 254—CofH 220
Family Life
All courses—JohH 210
Forestry
7, 10, 59, 75—CofH 220
French
1A, 1B, 1C, 2C, 3C, 4, 50, 54—JohH 210
General College
7A, 7C, 10A, 10B, 26A—CofH 220 for AFHE, and NH 106 for other students
38A—Bu 206 for Educ, and NH 106 for other students
All other courses—NH 106
General Engineering
All courses—E 136
Geography
1, 4, 41, 60, 70, 140, 150 (sec 1)—JohH 210
150 (sec 2)—CofH 220
Geology and Mineralogy
A, 1—CofH 220 for AFHE, and JohH 210 for other students
B—JohH 210
5—E 136
Geophysics
All courses—E 136
German
1A, 1B, 1C, 2C, 3C, 4, 50—JohH 210
24—E 136
History
1, 3, 4, 20, 22, 53, 56, 70, 93, 97—JohH 210
History and Philosophy of Education
180—Bu 206
Home Economics
1, 20, 31, 40, 76, 120—CofH 220 for AFHE, and JohH 210 for other students
30—Owre 125 for Nurs, and JohH 210 for other students
All other courses under 200 except 140—CofH 220
Humanities
1A—CofH 220
All other courses—JohH 210
Hydromechanics
All courses under 200—E 136

Industrial Education
1—Bu 206
2, 3, 6, 7, 15, 20—TNCW 103
Industrial Engineering
All courses under 200—E 136
Inorganic Chemistry
4—CofH 220 for AFHE, and JohH 210 for other students
11—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
24—WuH 101 for Pharm, E 136 for IT, and JohH 210 for other students
26—E 136 for IT, JohH 210 for other students
50—JohH 210
All other courses under 200—E 136
Journalism
11—CofH 220 for AFHE, and JohH 210 for other students
12, 13, 15, 18, 51, 54, 73, 79, 84, 106, 161, 162—JohH 210
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62, 83—JohH 210
Mathematics (IT)
All courses under 200—E 136
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X, H, T, 10—CofH 220 for AFHE, and JohH 210 for other students
40, 53, 54, 55, 59, 60, 62, 100A, 106, 107, 121, 157—JohH 210
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All courses under 200—E 136
Military Science and Tactics
All courses—A 106
Mining Engineering
All courses under 200—E 136
Mortuary Science
All courses—NH 156
Music
1, 1T, 3T, 4T, 6T, 10, 11A, 12C, 34, 43—JohH 210
Music Education
4, 5, 6, 51, 52—Bu 206
Natural Science
All courses except 171—JohH 210
Naval Science
All courses—A 203
Organic Chemistry
42—CofH 220 for AFHE students
61—WuH 101 for Pharm, and E 136 for other students
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Orientation
1—CofH 220
Personal Orientation
All courses—JohH 210
Petroleum Engineering
All courses under 200—E 136
Philosophy
1—E 136 for IT, and JohH 210 for other students
2—JohH 210
Physical Chemistry
107—JohH 210
All other courses under 200—E 136
Physical Education for Men
1A (secs 1, 2, 4, 5, 6, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18)—JohH 210
1A (secs 3, 7, 12)—CofH 220
2A (secs 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18)—JohH 210
2A (secs 10, 11)—CofH 220
Physical Education for Women
A (nonprofessional) secs 1, 11, 21, 31—CofH 220 for AFHE, and JohH 210 for other sections
20A, 20C, 25, 45, 70, 91—Bu 206
Physics
7, 11, 13, 14, 14A, 107, 120, 123—E 136
Plant Pathology and Botany
1, 120—CofH 220
Political Science
A, 1—E 136 for IT, and JohH 210 for other students
5—JohH 210
Poultry Husbandry
52, 154—CofH 220
Psychology
1—CofH 220 for AFHE, E 136 for IT, Owre 125 for Nurs, and JohH 210 for other students
4 (lect and lab), 101, 125, 144, 156, 200—JohH 210
Public Health
2, 111—JohH 210
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Rhetoric
47—CofH 220 for AFHE, and JohH 210 for other students
22, 51, 52, 54, 56, 91, 151—CofH 220
Russian
1—JohH 210
Social Science
1—NH 156 for Mort Sci, and JohH 210 for other students
2, 3—E 136 for IT, and JohH 210 for other students
All other courses—JohH 210
Social Work
265, 268, 275—JohH 210
Sociology
1—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
3, 45, 53—JohH 210
Soils
1, 126—CofH 220
Spanish
1A, 1C, 2C, 3C—JohH 210
Speech and Theater Arts
All courses under 177 except 9, 97, 107, 115, 122, 140, 152, 164—JohH 210
Zoology
1 (lect and lab)—Owre 106 for DH, Owre 125 for Nurs, and JohH 210 for other students
51, 54—Mayo C205 for Med Tech, and JohH 210 for other students
84, 117, 121, 144, 170, 183, 242, 254—JohH 210

COURSE FEES

All fees are per quarter unless otherwise indicated.

Students taking the following courses will pay course fees in addition to tuition as follows:

Civil Engineering (Summer)
$35.00 per term—23

Composition (SLA)
*$21.00—X Preparatory Composition

English (Duluth)
*$21.00—X Preparatory English

Itasca Biological Station (Summer)
$10.00—Laboratory fee
*$25.00—Research Table Fee

Mathematics (IT)
*$21.00—8 Solid Geometry

Mathematics (SLA)'
*$35.00—X Preparatory Mathematics

Modern Language Institute (Summer)
$40.00 per term—French (22, 58, 109); or German (22, 66, 107); or Spanish (22, 58, 109)

Music
$35.00 for 1 half-hour individual lesson per week; $70.00 for 2 half-hour lessons or 1 hour-lesson per week—A, D (no cr) ¶¶
$35.00 (2 cr) for 1 half-hour individual lesson per week; $70.00 (4 cr) for 2 half-hour lessons or 1 hour-lesson per week—11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 100 ¶¶
$50.00—for 2 half-hour individual lessons per week or 1 hour lesson per week—13B (Summer)
$25.00—60B, 61B, 62B (Summer)
$70.00—for 1 hour-lesson per week—204 ¶¶
$10.00—Piano for Children, ages 6-16

Music Education
225E—Same as Music 11-27, 100 ¶¶

Physical Education (men)
Towel and locker fee for students using PE facilities for activity, $2.50 per quarter payable at department
Uniforms (optional for class or recreation activity) $2.00 per quarter payable at department

Physical Education (women)
$3.25 (maximum $6.50 per quarter—All nonprofessional courses except Horseback Riding, 20A, 20B, 20C, 21A, 21B, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 40D, 41A, 41B, 42A, 54, 70, 76, 87, 88

Public Health
$100.00—169, 190
$185.50—231, 232
*$200.00—230 (September field course)

Rhetoric (AFHE)
*$7.00 per credit for more than 6 credits in Rhet 1

DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry cards are $10; Agricultural Biochemistry, Pharmacy, and Physiological Chemistry cards are $5.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be credited to your matriculation deposit at the end of the course.

You must present your deposit card to be assigned a laboratory desk. Veterans (P.L. 346, 16, 894) will receive information from their instructor concerning deposit cards and laboratory assignments.

SPECIAL FEES

Supplement to *General Information Bulletin.*

Matriculation Deposit
$5.00—required of students in all colleges including the Graduate School. Students who overdraw or seriously deplete their accounts are required to pay a supplementary deposit of $10.00 to reinstate their accounts.

Music Practice Room
$1.00 per qtr for one, $2.00 for two, 50 cents for each addtl hr per week—all instruments except organ
.20 per hr—small organ
.40 per hr—large organ

Record Service Fee
$1.00—Deducted from matriculation deposit. This fee provides three certified copies of student records. When more than three copies of records are requested, a charge of $1 will be made for each additional copy.

Speech and Hearing Clinic—Students
$5.00 per qtr—spec clinical treatment

Speech and Hearing Clinic—Nonstudents
Articulatory cases, per 10 weeks—$15.00 for one, $25.00 for two, $30.00 for three, $35.00 for four, $40.00 for five lessons per week.
Stuttering, per session—$100.00 for full time remediation

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* In lieu of tuition.

¶¶ Number of lessons are doubled per Summer Session term for courses listed in these sections.

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REGISTRATION DATES

New students participating in the orientation program should register on the date they are scheduled to appear for this activity. Other students may register at any time during the period listed below for their college or course.

Education and Graduate students taking Saturday classes only may register also on Saturday, October 3 at 206 Burton Hall.

Agriculture, Forestry, Home Economics (220 Coffey)
Aug. 3-14, Sept. 14-25

Business Administration (107 Vincent)
Aug. 3-7, Sept. 24-25

Dental Hygiene (106 Owre)
Aug. 19-21, Sept. 23-25

Dental Hygiene (106 Owre)
Aug. 3-Sept. 25

Duluth
Sept. 21-25

Education (206 Burton)
Aug. 3-14, Sept. 21-25

General College (106 Nicholson)
Aug. 10-21, Aug. 31-Sept. 25

Graduate School (316 Johnston)
Aug. 3-Oct. 2

Law School (125 Fraser)[1]
First year students, Sept. 8-18
Other students, Sept. 8-25

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June 25, Sept. 25

Medical Technology (C205 Mayo)
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Mortuary Science (156 Nicholson)
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Nursing (125 Owre)
Aug. 3-21, Sept. 14-25

Occupational Therapy (860 Mayo)
Aug. 3-11, Sept. 14-25

Pharmacy (101 Wulling)
Aug. 3-14, Sept. 21-25

Physical Therapy (860 Mayo)
Aug. 3-11, Sept. 14-25

Public Health (1325 Mayo)
Sept. 17-25

Science, Literature, and the Arts
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Students with approved program folders
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Veterinary Medicine (220 Coffey)
June 4-5, Sept. 24-25

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[1] Beginning first year Law students will register Sept. 8-18 and attend a Law School Orientation Program Sept. 21-25 designed to give an introduction to the study of law that will be essential for satisfactory progress in the study of law. Failure to attend this program will seriously handicap a student in the commencement of his law studies. Full information on the orientation program will be distributed to students when they register. Other Law students may register Sept. 8-25.

[2] Institute of Technology—Enrolling Schedule—

	8-9 a.m.	9-10 a.m.	10-11 a.m.	11-12 a.m.	1-2 p.m.	2-3 p.m.	3-4 p.m.
Sept. 21	H-Hel	Hem-Hz	I-Joj	Jok-Kn	Ko-Lau	Lav-Lz	M-Mc
Sept. 22	Md-Mz	N-Nz	O-Pa	Pb-Pz	Q-Ro	Rp-Sc	Sd-Sr
Sept. 23	Ss-Sz	T-Tz	U-Wey	Wez-Zz	A-Az	B-Bin	Bio-Br
Sept. 24	Bs-Choo	Chop-Cz	D-Eg	Eh-Fj	Fk-Gi	Gj-Gz	
Sept. 25	Completion of tallying and checking						

Those students in the last group to register in each quarter who must request special registration for valid reasons must submit a formal request on Form 10AB (Request for Special Registration) to the Registration Appeal Board (Room 5, in the new Mines and Metallurgy Building) one week prior to registration dates established. Forms for fall quarter must be in this office by September 14, 1959. Requests received after this date will not be acted upon. The forms for special registration may be obtained from your college office.

University of Minnesota

CLASS SCHEDULE

Winter Quarter

1960

Minneapolis and St. Paul Campuses

including

- Registration instructions, page 2
- Final examination schedule, page 78
- Courses tallied in college offices, page 84
- Course fees, page 82
- Calendar, page 86

Every Student Is Held Accountable for Information Contained Herein and Should Save This Bulletin for Future Reference.

Courses Are Listed Under the Departments Which Offer Them. Consult Index on Page 87.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office.
Follow the instructions given you by your college. Registration dates for each college are listed on the back cover.

Step 2—Get class reservation cards for courses tallied in the college offices.
Courses which are tallied in college offices are listed on page 84.

Step 3—New students (who have not already done so) go to the University Health Service and make an appointment for your physical examination. Required of all undergraduate students taking 6 credits or more and of all graduate students except "teachers in service" taking less than 6 credits.

Step 4—Turn in your registration permit, class reservation cards, and approved registration blank at your record window in the Office of Admissions and Records to obtain statement of fees. New students, in addition, must present physical examination appointment slip (if required) and turn in University Relations mailing slips, Dean of Students information card, and religious census card.

Step 5—Pay your fees to the bursar.

Every fee statement must be receipted, even when no payment is required, before you are considered officially registered.

Fees for students in residence fall quarter in undergraduate colleges are due December 28.

Fees for new students in undergraduate colleges are due January 4.

Fees for students in the Graduate School are due January 8.

Change of registration—Have your "cancel-add" blank approved by your college office, get necessary class reservation cards for courses you are adding as in step 2 above, and present to your college window in the Office of Admissions and Records. You will get a supplementary fee statement or fee refund statement as necessary.

Withdrawal from the University—Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. All-University property such as library books, military, athletic or band equipment, laboratory material, locker keys or locks, athletic tickets, etc., must be turned in before you leave. P.L. 346, 16, and 894 veterans must also notify 102 Administration Building.

Accounts Paid By Various Agencies

If you have authorization for the University to bill a donor for your tuition and fees you must have your fee statement approved at window 18 in the Office of Admissions and Records (or room 200 Coffey Hall, St. Paul Campus) and *receipted by the bursar*. Failure to have your fee statement receipted before the last date for payment will necessitate a "late fee."

Veterans and War Orphans

P.L. 550 veterans and P.L. 634 war orphans—You must register and pay fees like every other student. Your business with the Veterans Administration is separate, and you must attend to it on your own responsibility. The University assists you by certifying that your claims for payment are justified. You initiate this business at window 18 on the first floor of the Administration Building (or room 220 Coffey Hall, St. Paul Campus). Do the following:

Make application to the Veterans Administration for benefits on or before your first day of classes. You don't get paid unless you do apply. A Certificate of Education and Training comes to you from the Veterans Administration about a month after you apply. Turn this in as soon as you complete your registration at one of the above addresses.

If you are returning for another session, your previous training period under either law having been officially interrupted, you have to make out a re-entrance form to notify the Veterans Administration that you wish to return to training status. Do this at one of the above addresses.

Make a report of your attendance every month. During the first five days of each month, fill out the Certification of Attendance Form and turn it in at one of the above addresses. The Admissions and Records Office adds to this form a certification of the amount of work you are doing and sends it on to the Veterans Administration, which in turn sends you a check at your home address. If you want full benefits, take 14 credits per quarter as an undergraduate or 12 credits in the Graduate School.

P.L. 16, 346, and 894 veterans—Have your fee statement approved at window 18 in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), and then receipted by the bursar. Present the receipted statement and your course list to room 102 Administration Building to obtain an order for books and supplies. (The $5 matriculation fee is not chargeable to the Veterans Administration.)

Additional information and assistance with problems concerning any of the above laws may be obtained at room 102 Administration Building.

Graduate School Fees for Staff Members

All academic appointees giving 25 per cent or more of full time service and all 75 per cent time or more civil service appointees, when enrolled in the Graduate School, will pay tuition at the Graduate School resident rate, regardless of source of fund, resident status, or curriculum pursued. Similar staff members when enrolled in the final year of a Master's degree curriculum in an undergraduate college will pay tuition at the respective college resident rate. If you are a non-resident, entitled to resident fee privileges under these regulations, tell the fee statement clerk that you are a staff member when you turn in your approved registration blank at your college window in the Admissions and Records Office.

If You are Graduating This Year

For the March Commencement, you must file a form called "Application for Degree" at the appropriate window in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), preferably with your winter quarter registration material. A graduation fee of $10 is due February 8 for winter quarter graduation.

If you expect to graduate anytime within the year (through August 1960), file your formal Application for Degree now. Shortly thereafter you will receive a balance sheet which shows whatever requirements for the degree you still must complete.

Foreign Students

Your first action upon arriving at the University should be to show your passport at the Foreign Student Adviser's Office, 302 Eddy Hall. There you will be given full information about federal, state, and local regulations, and about housing, finance, health and personal problems. Following this, you register in the same manner as all other students.

HOW TO USE THIS BULLETIN

Bold face titles—You must obtain a class reservation card to enroll in courses which appear with **bold face** titles. Instructions on where to get these class reservation cards precede the index at the back of this bulletin.

Prerequisites—Before you can enroll in some courses, you must have completed or be concurrently enrolled in certain other courses or possess some particular qualification or class standing. These requirements are known as prerequisites. If no prerequisites are listed, there are none, except insofar as the course number indicates a class standing requirement.

Class standing requirements, unless otherwise noted, are indicated by the course number:

1-49 for freshmen and sophomores

50-99 for juniors, seniors, and fifth-year students

100-199 for juniors, seniors, fifth-year students, and graduate students

200 and over for graduate students only

A minimum of prerequisite information is shown. For example, when courses which must be taken in sequence are prerequisites, only the last course of the sequence is listed. A comma always means "and"; while a semi-colon indicates that there are alternative prerequisites.

Example: prereq 2 or 5, Psy 1 (you must have had Psychology 1 plus either course 2 or 5)

Example: prereq C; or Comp 6 or Comm 3, 5 addtl cr; or 5 cr in 21-22-23 (you must have had either course C; or 5 credits in the same department plus either Composition 6 or Communication 3; or 5 credits from either course 21, course 22, or course 23)

When no departmental designation precedes the course number listed as a prerequisite, that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.

Work equivalent to a prerequisite course (having the same content) is ordinarily accepted in lieu of that prerequisite. You will also note that the instructor may, in some instances, waive prerequisites at his discretion. See your college bulletin for further information.

Symbols—The following symbols are used throughout this bulletin:

† To receive credit, all courses listed after the dagger must be completed.
‡ Students may enter any quarter.
§ No credit if credit received for equivalent course after the symbol.
¶ Means "concurrent registration in."
♯ Means "consent of instructor."
△ Means "consent of department or school offering the course."

Hours and days—Class hours are identified by Roman numerals, and continue for 50 minutes after the beginning time shown below:

Hour	I	II	III	IV	V	VI	VII	VIII
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00

A class listed I-III TTh meets the first through the third hours Tuesdays and Thursdays, the hyphen always indicating "through." Days of the week are abbreviated M, T, W, Th, F, and S.

Building name abbreviations—Refer to the index for page reference.

Nursing Administration (NuAd)

160 Ward Admin (3 cr; prereq 170)
VI MWF, MH 128, Grainger
167A Studies, Experience in Ward Admin (3 cr; prereq 160, Nurs 165, ‡)
II TTh, Owre 116, Grainger
170 Nursing Service Admin (3 cr, not open to students in MNA prog)
V MWF, ForH 170, Walseth
173 Fundamentals of Educ in Nursing (3 cr; prereq NuAd maj, 170 or ‡)
V MWF, MH 128, Weise
175 Nursing Admin (5 cr; prereq 170)
VI-VII MW, VI F, MH 116, Harris, others
176 Nursing Admin (5 cr; prereq 177)
III-IV TTh, VII F, MH 128, Walseth
192 Nursing Service Admin (6 cr; prereq 191)
I-II MWF, ForH 244, Harris

Nursing Education (NuEd)

162 Personnel Work in Nursing (3 cr)
II MWF, Bu 125, Holm
175 Educational Admin in Nursing (3 cr; prereq sr or ‡)
IV MWF, MH 116, Fritz
197E Adv Teaching (3 cr; prereq regis Med prog or ‡)
VII-IX Th, MH 116, Harrington

Practical Nursing (PNur)

2 Elements of Nursing Care (8 cr)
III-IV M, VII-VIII W, PoH Amph, 11:00-12:00 TWThF, PoH 2309, Taylor, Moncure
10 Care of Mothers, Infants (3 cr)
I-II M, VII-VIII F, PoH Amph, Hanson

OBSTETRICS AND GYNECOLOGY (Obst)

121 Obstetrics (1 cr; prereq 120)
8:00-8:50 T, Hosp EustisAmph
135 Clinical Clerkship (6 cr; prereq regis Med)
201 Adv Obstetrics, Gynecology I (ar cr)
202 Adv Obstetrics, Gynecology I (ar cr; prereq 201)
203 Adv Obstetrics, Gynecology I (ar cr; prereq 202)
204 Adv Obstetrics, Gynecology I (ar cr; prereq 203)
205 Adv Obstetrics, Gynecology II (ar cr; prereq 204)
206 Adv Obstetrics, Gynecology II (ar cr; prereq 205)
207 Adv Obstetrics, Gynecology II (ar cr; prereq 206)
208 Adv Obstetrics, Gynecology II (ar cr; prereq 207)
209 Adv Obstetrics, Gynecology III (ar cr; prereq 208)
210 Adv Obstetrics, Gynecology III (ar cr; prereq 209)
211 Adv Obstetrics, Gynecology III (ar cr; prereq 210)
212 Adv Obstetrics, Gynecology III (ar cr; prereq 211)

OPHTHALMOLOGY (Opth)

100 Ophthalmology (½ cr, †3 qtr; continuation of 100f)
8:00-8:50 M, Hosp EustisAmph, Harris, others
106 Clerkship: Diseases of Eye (2 cr; prereq regis Med)
9:00-12:00 MTWThF, Hosp OPD, Harris, others
201 Clinical Ophthalmology (6 cr)
9:00-5:00 MTWThF, Hosp OPD, Harris, others
202 Ocular Muscles (1 cr)
4:00-5:00 Th, Harris, others
204 Surgery of Eye (3 cr)
7:30-10:00 MTTh, Hosp OR, Harris, others
205 Pathology of Eye (2 cr)
1:30-4:00 Th, Monahan
207 Neuro-ophthalmology, Diseases of the Fundus (1 cr)
4:45-6:00 F, Hosp ToddAmph, Wendland, Baker
220 Basic, Applied Ophthalmology (2 cr)
8:30-12:00 S, Hosp OPD, Harris, others

OTOLARYNGOLOGY (Otol)

102 Rhinology (½ cr; prereq 101)
8:00-8:50 M, Hosp EustisAmph, Boies
104 Clinic, Conferences in Diseases of Ear, Nose, Throat (2 cr) Boies
230 Clinical Otology (3 cr)
9:00-12:00 MTWThF, ENT Clinic, Boies
231 Clinical Rhinology, Laryngology (3 cr)
9:00-12:00 MTWThF, ENT Clinic, Boies
232 Surgery of Ear, Nose, Throat (3 cr) Boies
237 Endoscopy (2 cr) Boies
238 Pathology of Ear, Nose, Throat (1 cr) Boies
241 Seminar (1 cr) Boies

PATHOLOGY (Path)

102 Special Pathology (8 cr; prereq 101)
Lect VII MTWThF, JacH 102, Dawson, others
Dem I, III MWFS, JacH 104
—1, Lab I-II MF, III-IV WS, JacH 106, 107, 108
—2, Lab III-IV MF, I-II WS, JacH 106, 107, 108
104 Autopsies (ar cr; prereq 102) Dawson

153 Topics: Immunology (ar cr)
VIII F, Mayo C295, Otten

MEDICINE (Med)

101 Physical Diagnosis (4 cr; prereq Med, Anat 100, Phsl 106-107)
1:30-2:30 MW, Hosp ToddAmph, Watson, others

104 Internal Medicine (2 cr per qtr, †3 qtrs; prereq 101, 102)
8:00-9:00 T, Hosp ToddAmph, Watson, others

111 Junior Clinical Clerkship (8 cr; prereq regis Med)
9:00-12:00, 1:00-3:00 MTWThFS

112 Senior Clerkship: Internal Medicine (6 cr; prereq regis Med)
9:00-12:00, 1:00-3:00 MTWThFS

123 Dermatology, Syphilology (1 cr, †2 qtrs; continuation of 123f)
4:00-4:50 M, MMA 125, Lynch, others

124 Senior Clerkship: Dermatology (2 cr; prereq regis Med)
1:30-3:30 WF, 2:30-3:30 M, Hosp Eustis-Amph, Lynch, others

201 Clinical Medicine (ar cr) Watson, others

202 Diseases of Cardiovascular Apparatus (ar cr) Tobian, Winchell, others

203 Research: Medicine (ar cr) Watson, others

205 Diseases of Chest (ar cr) MacDonald

206 Clinical Conference (1 cr)
9:00-9:50 F, Hosp ToddAmph, Watson, others

207 Clinical Pathological Conference (1 cr)
11:00-11:50 W, Hosp ToddAmph, Dawson, others

208 Clinical Radiological Conference (1 cr)
9:00-9:50 M, Hosp ToddAmph, Peterson

210 Seminar: Infectious Disease (1 cr) Spink

211 Electrocardiographic Conference (1 cr) Tuna, others

212 Pigment Metabolism (1 cr) Schwartz

213 Seminar: Psychosomatic Medicine (1 cr, §NPsy 244) Magraw

225 Clinical Dermatology (ar cr) Lynch, others

226 Dermatology (ar cr) Lynch, others

227 Histopathology of Skin (ar cr) Lynch, others

228 Research: Dermatology, Syphilology (ar cr) Lynch, others

NURSING

Nursing (Nurs)

18 Clinical Nursing (6 cr; prereq 17)
Lect VI MW, I T, III-IV F, PoH Amph, Ryden, others
—1, Lab II-IV M
—2, Lab II-IV T
—3, Lab VI-VIII T
—4, Lab II-IV W
—5, Lab II-IV Th
—6, Lab VI-VIII Th

51 Medical, Surgical Nursing (12 cr; prereq 50)
I-IV T, VI-VIII T, III-IV Th, PoH 2309, Brennan, Peterson

52 Nurse-Patient Relationships (1½ cr; prereq regis Nurs)
I-II Th, PoH 2309, Brennan

54 Pathology (2 cr) Coe

56 Operating Room Nursing (6 cr) Ellison

58 Orthopedic Nursing (2 cr)
1:00-3:00 pm MTWTh, PoH 1326, Kume

59 Gynecologic Nursing (4 cr)
1:00-3:00 pm MTWTh, PoH 1326, Stevens

60 Maternal, Child Nursing (12 cr)
III TTh, PoH 1326, VI-VII T, ForH 175, Whitney

61 Maternal, Child Nursing (12 cr; prereq 60)
2:00-5:00 MWTh, 1:00-4:00 T, Owre 113, Cook, Geis

66 Neuropsychiatric Nursing (4 cr)
VI-VII TTh, PoH 2317, Lediger

67 Care of Neuropsychiatric Patients (8 cr)
IV MTWTh, VI-VII W, VI-VIII M, PoH 2317, Lediger

79 Tuberculosis Nursing (3 cr) Einerson

87 Field Experience in Public Health Nursing (10 cr) Pennebaker

88 Rural Nursing (5 cr) Low

95 Orientation to Nurs Mgt (5 cr; prereq regis Nurs) Titt

96 Out-Patient Nursing (5 cr) Corliss

151B Medical Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, MH 116, Coe
Lab I-III TTh, MH 116

152B Obstetric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, PoH 1326, Whitney
Lab I-II TTh, PoH 1326

153B Operating Room Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, Owre 113, Ellison
Lab I-III TTh, Owre 112

154B Pediatric Nursing (6 cr; prereq CD 40 or 80 or 132 or 140 or ¶ or #)
Lect III MWF, PoH 2317, Cook
Lab I-II TTh, PoH 2317

155B Psychiatric Nursing (6 cr; prereq Psy 144 or NPsy 171A or ¶ or #)
Lect III MWF, MH 128, Lediger
Lab I, III-IV TTh, ForH 75

156A Rural Nursing (15 cr) Low

156B Rural Nursing (9 cr) Low

157B Surgical Nursing (6 cr)
Lect III MWF, Owre 113, Peterson
Lab 9:00-11:30 TTh, Owre 113

158 Tuberculosis Nursing (15 cr) Einerson

165 Work Simplification in Nursing (4 cr)
VI-VII TTh, MH 128, Grainger

COLLEGE OF MEDICAL SCIENCES

ANATOMY (Anat)

101 Gross Human Anatomy (7 cr, †100-101; prereq 100)
Lect VI MWThF, JacH 102, Lazarow, Hartmann, Morgan
Lab VII-IX MWF, VII Th

107 Human Embryology (4 cr; prereq ‡)
Lect I TF, IV Th, JacH 102, Wells
—1, Lab I-II M, II-III F
—2, Lab II-III T, I-II Th

131 Biological Electron Microscopy (ar cr; prereq ‡) Hartmann

132 Experimental Study of Fetus (ar cr; prereq ‡) Wells

141 Skeletal Tissue Biology (1 cr; prereq 140) Felts

154 Adv Anatmy (ar cr; prereq ‡) Lazarow, Wells, Hartmann, Morgan, Sundberg, Felts, Carpenter, Davidson

166 Hematology (4 cr; prereq 165, ‡)
Lect VII TTh, JacH 104, Sundberg
Lab VIII-IX TTh, JacH 213, Sundberg

202 Research (ar cr; prereq ‡) Lazarow, Wells, Hartmann, Morgan, Sundberg, Felts, Carpenter

206 Seminar: Anatomy (1 cr; prereq ‡) Lazarow, others)

ANESTHESIOLOGY (Anes)

165 Clinical Anesthesia (2 cr; prereq regis Med) VanBergen, others

265 Gen Anesthesia (12 cr)
IX M, MMA 100, VanBergen, others

266 Regional Anesthesia (4 cr)
X M, MMA 100, VanBergen, others

267 Preoperative, Postoperative Evaluation (2 cr)
X W, MMA 100, VanBergen, others

268 Seminar (2 cr)
IX W, MMA 100, Van Bergen, others

269 Research (ar cr) VanBergen, others

BACTERIOLOGY AND IMMUNOLOGY (Bact)

1 Elem Bacteriology (4 cr, offered by Ext Div, open to DH, PT students without addtl fee winter qtr with △)
Lect I MWF, MMA 100, Tankersley
Lab II M, II-III F, Mayo A205

53 **Gen Bacteriology** (5 cr; prereq soph with C aver in prereq courses, 10 cr chem, 4 cr biol sci or ‡)
Lect VII MWF, Owre 15, Schmidt
Lab VIII-IX MWF, Mayo A205

106 Infectious Disease (5 cr; prereq 105)
Lect I-II TTh, VI T, MMA 125, Syverton, Scherer, others
Lab II-IV TTh, Mayo A205

112 Gen Mycology (3 cr; prereq 53 or ‡)
III TThS, MH 214, Bradley

116 Immunology (4 cr; prereq 53)
Lect VI MTTh, MMA 100, Watson
Lab VII-VIII TTh, Mayo A205

122 Physiology of Bacteria Lab (3 cr; prereq 121 or ‡)
Lect IX T, MMA 125, Lichstein
Lab VI-VIII TTh, Mayo A205

152 Problems (ar cr; prereq grad, ‡)

153 Gen Bacteriology (3 cr, §53; prereq grad, 10 cr chem, 4 cr biol sci or ‡) Schmidt

201 Research (ar cr) Watson

202 Diagnostic Microbiology (ar cr; prereq bact maj, ‡) Syverton, Bridges

203 Seminar (1 cr)
V W, Mayo 1050, Bradley

204 Adv Bacteriology (ar cr; prereq 122 or ¶, ‡) Lichstein

205 Adv Bacteriology (ar cr; prereq 204) Lichstein

MEDICAL TECHNOLOGY (MedT)

11 Orientation (1 cr; prereq 10)
VIII W, MMA 100, Hoyde

31 Case Presentations (1 cr; prereq 30)
V Th, Hosp EustisAmph, Hovde

51 Clinical Diagnosis by Lab Methods (1 cr)
II W, Hosp EustisAmph, Rausch

70A Lab Methods in Clinical Chemistry A (10 cr) Clayson

70B Lab Methods in Clinical Chemistry B (5 cr) Freier

73 Electrocardiography, Basal Metabolism Testing (2 cr) Halsted

75 Clinical Hematology (5 cr) Hanauer

80 Clinical Microbiology (9 cr) Blanz

82 Blood Bank Techniques (4 cr) Otten

85 Histologic Techniques (4 cr) McMaster

98 Adv Lab Techniques (4 cr) Gonyea

110 Adv Clinical Lab Techniques (5 cr)

130 Elements of Admin (3 cr)
VI WThF, Mayo C295, Hovde

141 Educational Admin (3 cr)
VII MWF, Mayo C295, Rausch

145 Development (1 cr)
VI T, Mayo C295, Hovde

150 Topics: Bacteriology (ar cr)
III W, Mayo C295, Bridges

151 Topics: Chemistry (ar cr)
I T, Mayo C295, Freier

152 Topics: Hematology (ar cr)
III M, Mayo C295, Gonyea

32C Oral Communication: Speech Organization (3 cr; prereq 32A)
—1, 10:30-11:45 TTh, NH 107, Hagen
—2, IV MWF, JohH 126, Amram

33A Oral Communication: Radio, Television Today (3 cr)
I MWF, JohH 126, Blue

33B Oral Communication: Creative Speech Activities (3 cr; prereq 32A, ‡)
I-II TTh, NH 107, Benson

36 Contemporary Education (3 cr)
VII MWF, P 110, King

37 Social Trends, Probs (5 cr)
III MTWThF, FraH 102, Stovall

38A Geography (5 cr)
—1, V MTWThF, NH 213, Steinhauser
—2, VII MTWThF, NH 213, Steinhauser

39 Anthropology (3 cr)
—1, II MWF, CW 222, Tefft
—2, VI MWF, P 2, Tefft

40 Problems of Contemporary Society (5 cr)
I MTWThF, FraH 102, McCune

41A Man in Society (5 cr)
VI MTWThF, TNM 107, Stovall

43A Background of Modern World (5 cr)
—1, III MTWThF, MMA 125, Thorson
—2, VI MTWThF, WeH 202, Jones

43C The Far East (5 cr)
—1, I MTWThF, Bu 120, Matsumoto
—2, V MTWThF, P 2, Matsumoto

44B Current History (2 cr)
II TTh, Ph 133, F Harris

45A Growth of American Democracy (5 cr)
V MTWThF, FraH 102, F Harris

45B Impact of Science, Technology on American History (5 cr)
IV MTWThF, NH 211, McCune

46A Probs of Natl Govt (3 cr)
IV MWF, Bu 120, Menke

46D Probs of Intl Relations (5 cr)
VIII MTWThF, WeH 302, Jones

LAW SCHOOL (Law)

Winter Quarter

101 Contracts (3 cr)
—1, VII MTW, FraH B1, Kinyon
—2, VII MTW, FraH 20, Hogg
—3, I MT, II W, FraH B25, Kinyon

102 Criminal Law (2 cr)
—1, II MTW, FraH 20, Pirsig
—2, II MTW, FraH B1, Kamisar
—3, IV MTW, FraH B1, Kamisar

105 Legal Accounting (2 cr)
Lect IV F, FraH 101, Waterbury
Lab VIII T, FraH 101, Waterbury

106 Legal Research I (1 cr)
II Th, FraH 101, Liddell

107 Property I (3 cr)
III WThF, FraH 101, Cound

108 Torts (2 cr)
VI MT, FraH 101, McCoid

110 Constitutional Law (3 cr)
I WThF, FraH 101, Lockhart

Second Semester

124 Property II (3 cr)
II MW, FraH 101, Bade

126 Sales (4½ cr)
III TWF, FraH 20, McClure

127 Trusts, Estates (6 cr)
I MT, II ThF, FraH 20, Hogg

128 Taxation I (6 cr)
VI MTWTh, FraH 20, Waterbury

129 Evidence (3 cr, §old 147)
VII Th, IV F, FraH 20, Hetland

142 Conflicts (4½ cr)
I MTW, FraH 120, Cound

143 Creditors Remedies (4½ cr)
VI MTW, FraH 120, McClure

144 Seminar: Criminal Law (3 cr)
VIII T, Pirsig, Ellingston

146 Seminar: Estate Planning (3 cr)
VIII F, Hogg, Waterbury

155 Labor Law Practice (1½ cr)
VIII Th, McCoid

157 Standards of Legal Profession (1 cr)
III F, FraH 120, Pirsig

161 Modern Social Legislation (4½ cr)
IV MTW, FraH 120, Gradwohl

162 Mortgages (3 cr)
II ThF, FraH 120, Bade

163 Practice (6 cr)
III MTWTh, FraH 120, Hetland

165 Trade Regulation (4½ cr)
II MTW, FraH 120, Levy

170 Seminar: Judicial Administration (3 cr)
VIII M, Pirsig

171 Seminar (3 cr)
VII M, Kamisar

176 Seminar: Medical-Legal (3 cr) McCoid

185 Jurisprudence (4½ cr)
VII TWF, FraH 120, Kamisar

186 Family Law (3 cr)
I ThF, FraH 120, Levy

10A Human Biology: Fundamental Similarities in Living World (3 cr)
—1, I MWF, NH 211, Jefferson, lab ar
—2, III MWF, NH 211, Jefferson, lab ar

10B Human Biology: Living Machinery in Man (3 cr; prereq 10A)
—1, II MWF, NH 211, Dearden
—2, V MWF, NH 211, Dearden

10C Human Biology: Healthful Living (3 cr)
VI MWF, NH 211, Dearden

16A Bookkeeping, Accounting Lab (3 cr)
—1, II-III WF, ForH 15, Donnelly (for DA students only)
—2, II-III TTh, FolH 113, Donnelly

16B Bookkeeping, Accounting Laboratory (3 cr; prereq 16A or ♯)
IV-V TTh, FolH 113, Donnelly

17B Probs of Finance, Credit (3 cr)
VII MWF, P 2, Nilsen

18B Retailing, Selling (5 cr; prereq ♯)
—1, II M, II-III TTh, Bu 103, Crisp
—2, II M, II-III WF, Bu 103, Crisp

19A Probs of Business Transactions (5 cr)
—1, II MTWThF, CW 206, Wallace
—2, IV MTWThF, NH 122, Larson
—3, VI MTWThF, NH 122, Wallace

19B Probs of Investment Transactions (5 cr; prereq 19A or ♯)
V MTWThF, NH 207, McCutcheon

20A Practical Law (5 cr)
—1, III MTWThF, FraH B25, Newcomb
—2, VII MTWThF, FraH B25, Newcomb

21 Gen Arts (3 cr)
—1, III MWF, NH 111, Caswell
—2, VII MWF, NH 111, Gates

22B Art Today (3 cr)
IV MWF, NH 111, Safer

23A Art Lab (3 cr)
—1, I-II MW, NH 102, 1 hr ar, MacInnes
—2, VI-VII MW, NH 102, 1 hr ar, Safer
—3, III-IV WF, NH 102, 1 hr ar, Gates
—4, VI-VII TTh, NH 102, 1 hr ar, MacInnes

23B Commercial Art (3 cr)
II-III TTh, NH 102, Safer

24B Music Today: Background of Contemporary Music (3 cr)
—1, I-II TTh, NH 111, Seecamp
—2, III-IV TTh, NH 111, Caswell
—3, VI-VII TTh, NH 111, Caswell

25A Music Lab: Choral Singing (2 cr; prereq ♯)
VI MWF, NH 111, Caswell

26A Photography (3 cr)
Lect III T, J 2, Agar
—1, I-II TTh, J 2, Agar
—2, IV-V TTh, J 2, Agar

28A French Language, Civilization (5 cr)
Lect II TTh, NH 213, Finnberg
—1, II MWF, NH 111, Finnberg
—2, VI MWF, AE 227, Finnberg

29A World Literature I (5 cr)
III MTWThF, NH 213, Burrows

29B World Literature II (5 cr)
VI MTWThF, NH 213, Kivits

29C American Literature (3 cr)
VIII MWF, NH 216, Rathburn

29E Individual Reading in Literature (3 cr; prereq credit in 29, ♯)
II TTh, JohH 126, 1 hr ar, Rice

29H Reading Short Stories (3 cr)
I MWF, NH 213, Stockdale

30A Reading, Vocabulary Development (5 cr)
—1, I MTWThF, NH 216, Draxten
—2, II MTWThF, NH 216, Kurak

31A Writing Lab: Personal Writing (3 cr)
—1, I-II M, I WF, NH 209, Burrows
—2, I-II M, I WF, JohH 309, McBride
—3, II-III WF, JohH 309, McBride
—4, III-IV M, IV WF, NH 209, Draxten
—5, III-IV M, IV WF, WeH 302, Hansen
—6, V-VI M, V WF, WeH 302, Trachtenberg
—7, V-VI M, V WF, JohH 309, Burrows
—8, V-VI TTh, NH 107, Keeler
—9, V-VI TTh, NH 209, Kurak

31B Writing Lab: Organizing Ideas (3 cr; prereq 31A)
—1, I-II M, I WF, WeH 302, Rathburn (for DA students only)
—2, I-II TTh, NH 209, Hansen
—3, I-II TTh, ME 214, Gilbert
—4, III-IV M, III WF, NH 216, Keeler
—5, III-IV TTh, WeH 302, Bergstrom
—6, III-IV TTh, ME 214, Rice
—7, IV-V WF, NH 216, Rice
—8, V-VI M, V WF, NH 209, Rathburn
—9, V-VI TTh, JohH 309, Gilbert
—10, V-VI TTh, WeH 302, Bergstrom
—11, V-VI M, VI WF, NH 216, Sheldon
—12, VI-VII WF, WeH 302, Trachtenberg
—13, VII-VIII TTh, NH 209, Hansen

31C Writing Lab: Communicating in Society (3 cr; prereq 31B)
II-III WF, WeH 302, Kivits

31D Writing Lab: Business Writing (3 cr; prereq 31A...31B rec)
—1, I-II TTh, WeH 302, Keeler
—2, II-III WF, NH 209, Sheldon
—3, III-IV TTh, JohH 309, McBride
—4, VI-VII WF, NH 209, Reisman

31E Writing Lab: Individual Writing (3 cr; prereq 31A, ♯)
I-II TTh, JohH 309, Sheldon

32A Oral Communication: Basic Prin (3 cr)
—1, I MWF, NH 107, Manfull
—2, II MWF, JohH 126, Blue
—3, III MWF, NH 107, Amram
—4, IV MWF, JohH 105, Hagen
—5, V MWF, NH 107, Manfull
—6, VI MWF, JohH 105, Benson

32B Oral Communication: Applications of Speech (3 cr; prereq 32A)
—1, II MWF, JohH 105, Manfull
—2, VI MWF, NH 107, Blue
—3, VII MWF, NH 107, Hagen

94 Student Teaching: School Health Education (2 cr; prereq sr, 83, ‡)
III Th and ar, NGW 202, Slocum

Advanced Courses for Men and Women (PE)

101 Principles (3 cr; prereq PE M 55)
I MWF, CH 215, Heusner

102 Program in Elementary, Secondary School (3 cr; prereq sr)
III MWF, NGW 3, Jaeger

107 Camp Admin (3 cr; prereq PE M 46, ‡)
VIII-IX W, CH 206, 1 hr ar, Osell, Ostrander, Thorpe

110 Recreation Surveys (3 cr; prereq PE M 58)
VI MWF, CH 214, Fitzgerald

113 Physical Education Elem School (3 cr; prereq elem sch exper or ‡)
4:00-5:30 TTh, NGW 3, Baker

115 Adv Kinesiology (3 cr; prereq undergrad kinesiology or ‡)
4:00-5:30 MW, NGW 3, Wilson

117B Adv Instruction in School Health for Secondary Schools (3 cr, §117A; prereq PE W 83 or ‡)
III-IV S, NGW 3, 1 hr ar, Slocum

118E Probs: Teacher Education in Health, Physical Education, Recreation (ar cr; prereq ‡) Baker, Jaeger, Slocum, Wilson

143 Programming in Hospital Recreation (3 cr; prereq 142)
III MWF, CH 206, Chapman

221 Seminar: Physical Education (no cr)
Baker, Jaeger, Slocum, Wilson

224 Research Probs: School Health Education, Physical Education, Recreation (ar cr; prereq 236, 135 or EPsy 116 or ‡) Baker, Chapman, Donnelly, Fitzgerald, Jaeger, Heusner, Slocum, Stish, Wilson

233 Admin of Physical Education Program in Secondary Schools (3 cr; prereq 63)
VI MWF, CH 206, Stish

241 Admin of Public Recreation (3 cr)
IV MWF, CH 206, Fitzgerald

261B Seminar: Contemporary Probs (ar cr; prereq cons adv)
III-IV Th, CH 206, Chapman

GENERAL COLLEGE (GC)

1A Individual Adjustment (4 cr)
II-III TTh, P 210, Lund

1B Vocational Planning (5 cr; prereq 2nd qtr fr, ‡ or cons couns)
II MTWThF, NH 122, Long

2A Psychology in Modern Society (5 cr)
—1, II MTWThF, FraH 102, Burris
—2, VII MTWThF, FraH 102, Horton

2B Fields of Applied Psychology (5 cr; prereq 2A)
IV MTWThF, NH 213, Burris

2C Psychology of Human Development (3 cr)
II MWF, MMA 125, Wahlstedt

3A Home Life: Marriage, Family Living (5 cr)
—1, III MTWF, FolH 308, III Th, NH 211, Anderson
—2, V MTWThF, WeH 202, Anderson
—3, VIII MTWThF, WeH 202, Sudia

3B Food Selection, Purchase (3 cr)
V MWF, P 110, Gormican

4 Leisure Today (3 cr)
III MWF, CH 215, Giles

5A Functions, Problems of Philosophy (3 cr)
IV MWF, P 210, Kurak

5B Functions, Problems of Logic (3 cr)
—1, II MWF, NH 213, Capitan
—2, V MWF, P 210, Capitan
—3, VIII MWF, NH 209, Benson

5C Probs of Ethics (3 cr)
I MWF, Bu 211, Capitan

6B Related Physical Sciences (5 cr, §7C; prereq 6A or ‡)
IV MTWThF, Ph 150, M Harris

7A Physical Science: Elements of Physics (5 cr, §6A)
—1, II MTWThF, Ph 150, Vaughan
—2, VII MTWThF, Ph 133, Policoff

7C Physical Science: Elements of Chemistry (5 cr, §6B)
—1, IV MTWThF, Ph 170, Stoppel
—2, VI MTWThF, Ph 170, Stoppel

7D Physical Science: Elements of Geology (5 cr, §6C)
I MTWThF, P 2, M Harris

8A Applied Mathematics (5 cr)
—1, II MTWThF, NH 207, 1 hr ar, Baldwin
—2, III MTWThF, NH 207, 1 hr ar, Rassweiler
—3, IV MTWThF, NH 207, 1 hr ar, Kehle
—4, VI MTWThF, NH 207, 1 hr ar, Schwabacher
—5, VII MTWThF, NH 207, 1 hr ar, Baldwin
—6, VIII MTWThF, NH 207, 1 hr ar, Mandeville

8B Applied Mathematics (5 cr; prereq 8A)
—1, I MTWThF, NH 122, Schwabacher
—2, III MTWThF, NH 122, Giese
—3, V MTWThF, NH 122, Policoff

9A Statistics (5 cr)
—1, I MTWThF, NH 207, Giese
—2, VII MTWThF, NH 122, McCutcheon

Swimming, Adv Bgn
—3, VII TTh, NGW 51 (1 cr)
Swimming, Interm Adv
—4, VII MWF, NGW 58 (1½ cr)
ARC Sr Life Saving
—5, VI MWF, NGW 58 (1½ cr)
Water Safety Instructors Course
—6, IV MWF, NGW 58 (1½ cr)

Body Building
Posture, Individual Exercise (activity rating 1, 2, 3)
—7, III TTh, Gy 100 (**StP Campus**) (1 cr)
—8, I MWF, NGW 153a (1½ cr)
—9, II MWF, NGW 153a (1½ cr)
—10, V MWF, NGW 3, 153a (1½ cr)
—11, I TTh, NGW 153a (1 cr)
—12, VI TTh, NGW 153a (1 cr)
—13, VII TTh, NGW 3, 153a (1 cr)
Conditioning Exercises (activity rating 1, 2)
—14, II TTh, NGW 153 (1 cr)

Individual Sports
Archery, Elem (activity rating 1, 2, 3)
—15, VI MWF, NGW 60 (1½ cr)
—16, VII TTh, NGW 60 (1 cr)
Badminton, Elem (activity rating 1, 2)
—17, III MWF, NGW 60 (1½ cr)
—18, IV MWF, NGW 60 (1½ cr)
—19, V MWF, NGW 60 (1½ cr)
—20, III TTh, NGW 60 (1 cr)
Badminton, Interm
—21, IV TTh, NGW 3, 60 (1 cr)
Bowling, Elem (activity rating 1, 2, 3)
—22, II TTh, StCen (**StP Campus**) (1 cr)
—23, III MWF, NGW 201, CMU (1½ cr)
—24, IV MWF, NGW 201, CMU (1½ cr)
—25, II TTh, NGW 201, CMU (1 cr)
—26, III TTh, NGW 201, CMU (1 cr)
Fencing (activity rating 1, 2)
—27, V TTh, NGW 60 (1 cr)
Riflemarksmanship (activity rating 1, 2, 3)
—28, I TTh, NGW 201, Armory (1 cr)
—29, II TTh, NGW 201, Armory (1 cr)
Skating, Elem (activity rating 1, 2, 3)
—30, II MWF, NGW 3, WmsA (1½ cr)
—31, III MWF, NGW 201, WmsA (1½ cr)
Skating, Figure (activity rating 1, 2)
—32, II MWF, NGW 201, WmsA (1½ cr)
—33, III MWF, NGW 201, WmsA (1½ cr)
Social Games, Mixers (activity rating 1, 2, 3)
—34, VI TTh, NGW 3, 153 (1 cr)
Tennis, Elem (activity rating 1, 2)
—35, V TTh, NGW 151, 201 (1 cr)
Tumbling, Trampoline (activity rating 1, 2)
—36, V MWF, NGW 153, 201 (1½ cr)

Rhythms
Ballroom Dance, Elem (activity rating 1, 2, 3)
—37, IV TTh, NGW 3, 151 (1 cr)
—38, VII TTh, NGW 151, 201 (1 cr)
Folk, Square Dance (activity rating 1, 2)
—39, IV TTh, Gy 100 (**StP Campus**) (1 cr)
—40, II TTh, NGW 151 (1 cr)
Modern Dance, Elem (activity rating 1, 2)
—41, IV MWF, NGW 3, 151 (1½ cr)
Modern Dance, Adv Bgn (activity rating 1, 2)
—42, VII MWF, NGW 3, 151 (1½ cr)

Team Sports (activity rating 1, 2)
Basketball
—43, I MWF, NGW 3, 151 (1½ cr)
—44, III TTh, NGW 151, 201 (1 cr)
Volleyball
—45, I TTh, NGW 151 (1 cr)
—46, VI TTh, NGW 151 (1 cr)

Professional Courses

21A Adv Basketball (½ cr)
VIII MW, NGW 151, Hauptfuehrer

21B Rhythmic Fundamentals, Elem Folk Dance (1 cr)
V TTh, NGW 153, 153A, 1 hr ar, Bockstruck

21E Winter Sports (½ cr)
III TTh, WmsA, Reiter

25 **ARC First Aid: Standard, Adv** (2 cr)
—1, IV MWF, NGW 153, 201
—2, VII MWF, NGW 153, 201

40D Interm Modern Dance (1 cr)
II MWF, NGW 151

41A Adv Aquatics (1 cr)
II MWF, NGW 58

41B Officiating Basketball (½ cr; prereq 21A)
IV MW, NGW 153, 153A, Hauptfuehrer

45 **Physical Education Activities for the Elem School** (2 cr; prereq elem educ maj only)
—1, III MWF, NGW 153, 153A
—2, VIII MWF, NGW 153, 153A

48 Teaching Individual, Dual Sports (3 cr; prereq ♯)
II MWThF, NGW 60, 201, 1 hr ar, Tenney

70 **Teaching Health, Physical Education in the Elem School** (3 cr; prereq 3rd qtr soph, elem educ maj)
—1, III TTh, IV T, NGW 153, 153A, 201, Bockstruck, Slocum
—2, VI MWF, NGW 153, 153A, 201, Bockstruck, Slocum

83 Methods, Materials of School Health Education (3 cr)
III MWF, NGW 201, Slocum

85 Teaching Posture, Self-Testing Activities (3 cr)
VII MTWThF, NGW 3, 153, 153A, Bockstruck

90B Student Teaching (3 cr; prereq 90A)
I T, II Th and ar, NGW 3, Jaeger

90C Student Teaching (3 cr; prereq 90B)
III Th and ar, NGW 4, Jaeger

90E Student Teaching (2-3 cr; prereq 4 qtr student teachers) Jaeger

91 **Prin Play** (3 cr; prereq NKP maj)
I MWF, NGW 153, 201, Tinker

93 Student Teaching for Minors (2 cr; prereq Ed 55B, phys educ min)
III TTh and ar, NGW 3, Hauptfuehrer

85C Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85B)
V W, CH 215, 6 hrs ar maj, 3 hrs ar min, Giles

90B Teaching Distributive Education Subjects (2 cr, †90A-90B-90C; prereq 90A)
V TTh, Bu 103, Meyer

93 Student Teaching: Core Curriculum (3-9 cr, †9 cr; prereq Ed 55B, C+ aver maj)
4:00-5:40 M and ar, Goralski, others

93B Methods of Teaching for Core Majors (2 cr; prereq 93A)
4:00-5:40 Th, Psy 109, Bossing (for majors only)

MUSIC EDUCATION (MuEd)

4 **Applied Instrumental Technique** (2 cr; prereq mus educ maj)
VI MTWTh, MusEd 200, Fitzsimmons

5 **Applied Instrumental Technique** (2 cr; prereq 4)
V MWThF, NMA 16, Prescott

6 **Applied Instrumental Technique** (2 cr; prereq 5)
VII MTWTh, NMA 4, Prescott

50B **Teaching in Interm Grades** (2 cr; prereq ‡)
V WF, MusEd 200, 1 hr ar, Ellefson

51 **Teaching Music** (2 cr; prereq Mus 1)
—1, I MWF, NMA 5, Peck
—2, IV MWF, ScH 104, Peck
—3, VIII MWF, ScH 4, Peck (for Elem Ed IIIA maj)

52 **Teaching Music** (2 cr; prereq 51 or ‡)
—1, IV MWF, ScH 4, Abelson
—2, VI MWF, ScH 104, Abelson

59 Choral Literature, Conducting (2 cr sr, 1 cr others)
V MTTh, NMA 4, ScH 104, Caswell

60 Supervision, Teaching (3 cr; prereq sr, 50B, 53, Ed 55B, ‡)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

61 Supervision, Teaching (3 cr; prereq 60)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

62 Supervision, Teaching (3 cr; prereq 61)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

64 Band Organization (3 cr; prereq 6, ‡)
VI MWF, NMA 5, Prescott

65 Instrumentation (3 cr; prereq sr, Mus 6T)
III MWF, ScH 104, Ivory

105 Adv Topics: Instrumental Music (3 cr; prereq sr, ‡)
IV MWF, ScH 3, Ivory

124 Selection, Conducting of Choral Materials (3 cr; prereq sr)
V MWF, ScH 104, Caswell

224 Research Probs (3-9 cr; prereq elem stat)
VIII W, ScH 214, Caswell, Ivory

PHYSICAL EDUCATION

Undergraduate Courses for Men (PE M)

4A **Football Fundamentals** (1 cr)
—1, VI-VII TTh, CH 215, Nash
—2, VIII MWF, CH 215, Nash

5B **Gymnastics** (1 cr)
III-IV TTh, App Gym, Ostrander, Novak

6B Intramural Sports (1 cr)
IV-V TTh, CH 215, Lewis, McCarthy, Novak

6C Aquatics (1 cr)
IV MWF, CH Pool, Thorpe

7B Boxing, Wrestling (1 cr)
II-III TTh, StadN, Johnson

9A Fundamental Rhythms (1 cr)
V TTh, I hr ar, NGW, Piper

11B Survey of Recreation Activities (1 cr; prereq 11A)
V T, CH 214, Starr

23B Recreation Leadership (1 cr; prereq 23A)
VI T, CH 214, Starr

52 **Leadership in Social Activities** (3 cr)
VI-VII TTh, StadS, Ostrander

55 Methods, Materials (4 cr; prereq 5A-B-C, 6A-B-C, 7A-B-C)
III MWF, 1 hr ar, CH 214, Stish

59 **Instructor's Course in First Aid** (3 cr; prereq age 20, PE W 25)
II MWF, CH 206, Osell

60B Athletic Training Lab (1 cr; prereq 60A)
CH Trg Rm, Stein

64A Leadership in Nature Recreation (2 cr; prereq 15 cr nat sci)
III-IV T, CH 206, Chapman

69 Track Coaching (2 cr; prereq 4C)
VI MWF, CH 215, Kelly

73 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 206, Ostrander, Piper

74 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 206, Ostrander, Piper

75 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 206, Ostrander, Piper

76 Directed Teaching-Block Plan (9 cr, not open to students who have taken 73, 74, 75; prereq 55, Ed 55B)
I T and ar, CH 206, Ostrander, Piper

78 Scout Leadership (2 cr)
VII MW, CH 206, Osell

81 Hockey Coaching (2 cr; prereq 6B or ‡)
VII MWF, CH 215, Mariucci

Undergraduate Courses for Women (PE W)

B Nonprofessional Physical Education
Aquatics (activity rating 1)
Swimming, Adv Bgn
—1, V TTh, Gy Pool (**StP Campus**) (1 cr)
Swimming, Bgn
—2, VI MWF, NGW 51 (1½ cr)

METHODS AND STUDENT TEACHING (EdT)

50 Junior Practicum in Special Education (3 or 6 cr; prereq jr, ‡) Kenmore, Capobianco, Force

51A Teaching: Nursing (4 cr; prereq Ed 55N)
I MWF, ForH 175, Dunning, Weise

51B Teaching: Nursing (6 cr; prereq 51A)
I TTh, ForH 175, VIII-IX T, ForH 75, Dunning, Weise

52 Student Teaching (ar cr; prereq spec methods course or tchg exper) Davies, others

53A Teaching Handicapped Children (6 cr, prereq ‡)
IX M and ar, Chase, others

53B Teaching Handicapped Children (6 cr, prereq ‡)
IX M and ar, Chase, others

54A Student Teaching: Elem School (6 cr, †54A-54B)
IX M and ar, Chase, others

54B Student Teaching: Elem School (6 cr, †54A-54B; prereq 54A)
IX M and ar, Chase, others

60 Student Teaching: Library Science (3 cr; prereq sr, Ed 55B, Lib 53, 62, 74, 171, 172) Zimmerman

67 Student Teaching: Mathematics (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶67B, Math 60 or ¶)
4:00-5:40 M and ar (for off-campus) D Johnson, Goralski, others

67B Teaching Secondary School Mathematics (1 cr, †67A-67B-67C; prereq 67A)
4:00-5:40 W, CW 222, D Johnson (for majors only)

68 Student Teaching: Science (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶68B)
4:00-5:40 M and ar (for off-campus) Boeck, Goralski, others

68B Teaching Secondary School Science (1 cr, †68A-68B-68C; prereq 68A)
4:00-5:40 W, PeikH 165, Boeck (for majors only)

69 Student Teaching: Social Studies (1 or 2 cr, UHS; 6 cr, off-campus, †9 cr; prereq jr, ¶Ed 55A...or sr, ¶69B)
VIII M (for UHS), 4:00-5:40 M and ar (for off-campus) West, Goralski, others

69B Teaching Social Studies in Secondary School (1 cr, †69A-69B-69C; prereq 69A)
4:00-5:40 T, PeikH 175, West (for majors only)

69M Teaching Social Studies in Secondary School (3 cr; prereq minor only)
I MWF, PeikH 165, Zito

70 Student Teaching: Modern Languages (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶70B)
4:00-5:40 M and ar (for off-campus) Birkmaier, Goralski, others

70B Teaching Modern Languages (1 cr, †70A-70B-70C; prereq 70A)
4:00-5:40 T, PeikH 225, Birkmaier (for majors only)

71 Student Teaching: Latin (3-9 cr, †9 cr; prereq sr, ¶71B)
4:00-5:40 M and ar (for off-campus) Goralski, others

71B Teaching Latin (1 cr, †71A-71B-71C; prereq 71A)
4:00-5:40 T, PeikH 225, Birkmaier (for majors only)

72 Student Teaching: Distributive Education (3-9 cr, †9 cr; prereq ¶90B) Meyer

73 Student Teaching: Business Subjects (3-9 cr, †9 cr; prereq ¶81) Price

74 Teaching Journalism (3 cr; prereq Ed 55B, Jour 41 or 51, ‡)
VII MWF, MurH 420, Kildow

75 Student Teaching: Language Arts (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶75B)
4:00-5:40 M and ar (for off-campus) Kegler, Goralski, others

75B Teaching Language Arts in Secondary Schools (1 cr, †75A-75B-75C; prereq 75A)
4:00-5:40 W, FraH 20, Kegler (for majors only)

77 Student Teaching: Nursery School (6 cr; prereq cons maj adv)
IX M and ar, CW 12, Mijanovich

78 Student Teaching: Kindergarten (6 cr; prereq cons maj adv)
IX M and ar, CW 218, Sorensen, others

79 Student Teaching: Primary Grades (6 cr; prereq cons maj adv)
IX M and ar, CW 218, Sorensen, others

81 Teaching Shorthand (2 cr; prereq Ed 55B or ¶)
IX-X M, Bu 103, Price

84A Practice, Field Work in Recreation Leadership (2 cr; prereq recr maj)
V T, CH 215, 6 hrs ar, Giles

84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
V T, CH 215, 6 hrs ar, Giles

84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
V T, CH 215, 6 hrs ar, Giles

85A Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq sr, recr maj or min)
V W, CH 215, 6 hrs ar maj, 3 hrs ar min, Giles

85B Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85A)
V W, CH 215, 6 hrs ar maj, 3 hrs ar min, Giles

253 **Research Probs** (ar cr; prereq ‡)
—1, VIII-IX M, Bu 125, Dugan
—2, Ar, Hoyt
—3, I T, Pt 104, Hodges
260 Seminar (no cr)
280 Practicum in Group Leadership (3 cr; prereq ‡) Flanders
281 **Practice in Personnel Work** (3 cr; prereq 226 or ‡)
—1, VI-VII Th and ar, EdH 204, Hagenah
—2, Ar, Wrenn, Snoke
—3, I-IV T, Bu 129, Dugan, Soldahl
282 Practice in High School Personnel Work (3 cr; prereq ‡)
I-IV T, Bu 129, Dugan, Tennyson, Soldahl
292 Recent Literature (3 cr; prereq ‡) Hoyt
293 Psychology of Learning (3 cr; prereq 12 cr educ psy, psy)
III MWF, Bu 123, Mork

History and Philosophy of Education (HEd)

131 Comparative Education (3 cr)
IX-X M, Bu 120, R Beck
180 **The School, Society** (3 cr; prereq sr)
—1, VII-VIII T, VII Th, Bu 211, R Beck
—2, III MWF, JohH 115, C Beck
—3, IV MWF, CW 222, C Beck
—4, VIII M, VIII-IX W, JohH 113, C Beck
241 Problems (ar cr; prereq ‡) R Beck
242 Seminar: Educational Philosophy (3 cr; prereq ‡)
III-IV W, Psy 109, R Beck

HOME ECONOMICS EDUCATION (HEEd)

91 Observation, Materials, Teaching (5 cr; prereq HE 4, 21, 41, Ed 55B, ¶93)
VIII MWF, IX W, McNH 103, Kafka
92 Teaching Probs (2 cr; prereq sr, 91, 93, ¶94, ¶192, ¶194A)
II MTWTh, McNH 103, Wantoch
93 Supervised Teaching (3 cr; prereq HE 4, 21, 41, Ed 55B) Kafka, Wantoch
94 Supervised Teaching (6 cr; prereq 93) Brown, Ford, Holmblade, Kafka
95 Field Experience for Home Agents (6 cr; prereq 91, 93, △, cons dir agric ext) Ford
190 Readings (1-3 cr; prereq ‡) Ford
192 Evaluation in Home Economics (2-3 cr; prereq sr, 91, 93, Ed 55B)
III-IV TTh, McNH 129, Brown
193B Curriculum College Level (3 cr; prereq ‡)
IX-X Th, McNH 102, 1 hr ar, Holmblade
194A Adult Education (3 cr; prereq 91, 93)
III-IV MWF, McNH 129, Ford
293 Problems (1-9 cr; prereq ‡...294 rec) Esteros, Ford, Holmblade, Brown
295 Seminar (1 cr)
IX-X T, McNH 102, Brown

INDUSTRIAL EDUCATION (Ind)

1 **Handicrafts** (3 cr)
I-III TTh, TNCW 218, Miletich
2 **Wood Processing I** (3 cr)
I-II MWF, TNCW 1, Gierke
4 Wood Processing III (3 cr)
5 Wood Processing (3 cr)
8 **Design I** (3 cr; prereq 7)
VI-VIII TTh, TNCW 201, Gierke
12 **Craftwork** (3 cr)
II-IV TTh, TNCW 218, Flug (OT students only)
16 **Graphic Arts II** (3 cr)
III-IV MWF, TNCW 14, Flug
21 **Communication Electronics** (3 cr; prereq 20)
VI-VII MWF, TNCW 15, Kavanaugh
23 Applied Electronics I (3 cr)
24 Applied Electronics II (3 cr)
25 Metal Processing I (3 cr)
26 Metal Processing II (3 cr) Parks
27 Metal Processing III (3 cr)
28 Metal Processing IV (3 cr)
29 Metal Processing V (3 cr)
30 Small Gas Engines (3 cr)
50 **Industrial Practices, Processes** (3 cr; prereq 35)
VI-VIII T, TNCW 113, Widdowson
55 **Teaching Industrial Arts** (5 cr; prereq Ed 55A)
VI-VIII TTh, TNCW 116, Flug
60A Student Teaching (3 cr, †60A-60B-60C; prereq 5, 55 or 100, 2.5 HPR) Kuhl
60B Student Teaching (3 cr, †60A-60B-60C; prereq 60A) Kuhl
60C Student Teaching (3 cr, †60A-60B-60C; prereq 60B) Kuhl
90 Independent Study (3 cr; prereq sr coll or ‡)
VIII W, TNCW 103, Gierke
91 Independent Study (3 cr; prereq 90)
VIII W, TNCW 103, Gierke
92 Independent Study (3 cr; prereq 91)
VIII W, TNCW 103, Gierke
101 Tests in Industrial Subjects (3 cr; prereq Ed 55B)
IX-X W, TNCW 113, Kavanaugh
105 Administration (3 cr; prereq 35)
IX-X T, TNCW 113, Nelson
107 Coordination (3 cr; prereq 35 or 125 or ‡)
IX-X M, TNCW 116, Widdowson
200 Research Probs (3, 6 or 9 cr)
III-IV M, TNCW 103, Nelson, Kavanaugh
251 Research (3 cr; prereq ‡)
IX-X Th, TNCW 113, Nelson

—4, III TTh, WuH 201, Flanders
—5, III TTh, CW 218, Jaeger
—6, VI TTh, Bu 120, Jackson
—7, VI TTh, Pt 202, Thompson
—8, VII TTh, CW 218, Gardner

75B Introd Elem School Teaching (5 cr, §old 71A; prereq 75A)
Lect VII MWF, NH 45, Curtin
—1, II-III MW, Bu 211, Barrett
—2, I-II TTh, Psy 115, Dykstra
—3, I-II TTh, Pt 202, Lambert
—4, I-II TTh, Bu 211, Balzer
—5, III-IV TTh, Bu 123, Ekman
—6, III-IV TTh, Psy 115, Dykstra
—7, VI-VII TTh, Bu 123, Balzer
—8, VI-VII TTh, Psy 115, Dykstra

81 Education for Public Health Nurses (3 cr, not open to educ degree cand; prereq PubH 62, 100, 133)
I-II T, II Th, Mayo 1210, Grout

Educational Administration (EdAd)

117 Schools in Rural Areas (3 cr)
III-IV S, Bu 125, 1 hr ar, Archer

202 Foundations (3 cr)
4:30-6:00 TTh, Bu 211, Hooker, Lane

218 Recent Literature in Secondary Education (ar cr)
IX-X W, PeikH 225, Bossing, Keller, Winter

226 School Plant Planning, Mgt (3 cr; prereq 227)
I-II S, Bu 125, 1 hr ar, Domian

227 Teacher, Employee Admin (3 cr; prereq 225)
III-IV S, Bu 123, 1 hr ar, Lane

228 Probs: Educational Admin (1-3 cr; prereq 225) Domian, Hooker, Lane, Popper

235 Seminar: Educational Admin (no cr)
IX-X M, JohH 105, Bossing, Domian, Hooker, Keller, Lane, Popper

236 Field Study (0-10 cr; prereq ‡) Domian, Hooker, Lane, Popper

253 Admin in Higher Education (3 cr)
3:00-5:00 M, NH 111, 1 hr ar, Keller, Morse

264 Admin of Instructional Activities in Secondary School (3 cr)
III-IV S, Bu 211, 1 hr ar, Popper

270A Probs: Elem Educ (ar cr; prereq ‡) Archer, Bond, Clymer, Curtin, Goossen, Mullins

270B Probs: Secondary Educ (ar cr; prereq ‡) Bossing, Domian, Hooker, Keller, Lane, Popper

Educational Psychology (EPsy)

110 Measurement in the Classroom (3 cr)
VIII MWF, Bu 120, Corcoran

116 Statistical Methods (3 cr; prereq ¶116A or ‡)
VI MWF, Bu 123, Collier

116A Statistical Methods Lab (2 cr; prereq ¶116)
VI-VII TTh, Bu 251, Collier

117 Measurement (3 cr; prereq 116 or 216 or Psy 70)
VII MWF, CW 218, Lathrop

125 **Group Dynamics** (3 cr)
VI-VII TTh, Bu 103, Flanders

133 Procedures in Student Personnel Work (3 cr; prereq 9 cr educ)
VIII-IX W, Bu 123, Tennyson

134 School Counseling Procedures (3 cr; prereq 110 or 117, 133, ‡)
3:45-5:15 TTh, Bu 125, Dugan

142 **Individual Mental Testing** (3 cr; prereq sr, 110 or 117 or ¶117 with ‡)
III-IV S, Pt 202, Reynolds, Hodges

150 **Clinical Practice in Remedial Teaching** (3 cr; prereq EdCI 145 or 151, ‡) Balow

151 **Clinical Practice in Educational Diagnosis** (3 cr; prereq 142, EdCI 145, ‡)
VI-VIII MWF, Pt 108, Balow, Capobianco, Force, Hodges, Reynolds

159 Personality Development, Mental Hygiene (3 cr; prereq sr)
II MWF, Pt 202, Wrenn

182 Education of Exceptional Children (3 cr; prereq Ed 55B or 75B)
VII MWF, CW 222, Force, Hodges

183 Education of Gifted Children (3 cr; prereq Ed 55B or 75B)
IX-X T, CW 218, Reynolds

190 Educational Problems of Cerebral Palsy (3 cr; prereq 182 or ‡)
IX-X M, Psy 109, Force

191 Education of the Mentally Retarded in Secondary Schools (3 cr; prereq 182 or ‡)
IX-X M, CW 222, Capobianco

208 Methods in Educational Research (3 cr)
VII MWF, Bu 123, Johnson

217 **Statistical Methods** (3 cr)
II MWF, Bu 123, Johnson

217A Statistical Methods Lab (2 cr)
—1, I-II TTh, Bu 251, Collier
—2, III-IV TTh, Bu 251, Collier

221 Adv Theory of Measurement (2 cr; prereq 220)
III TTh, Bu 125, Hoyt

225 Diagnosis as a Phase of Counseling (3 cr; prereq 140 or ¶, 133 or 250 or Psy 130)
IV MWF, Bu 125, Wrenn

233 **Probs: Guidance, Personnel Work** (1-9 cr)
—1, VIII-IX M, Bu 125, Dugan, Tennyson
—2, Ar, Wrenn, Edson, Hagenah, Snoke

240 Probs: Measurement (3 cr) Johnson

243 Probs: Statistics for Students in Education, Psychology (3 cr) Johnson

244 Research: Special Education (3 cr; prereq 116, 117 or equiv, ‡)
IX-X Th, Pt 202, Capobianco, Force, Hodges, Reynolds

139 Coordination Techniques (3 cr)
4:00-6:20 W, Bu 103, Meyer

145 Reading Difficulties (3 cr; prereq 143 or 144)
VII-VIII T, VII Th, Bu 120, Bond

149 Teaching Supervision of Arithmetic in Elem School (3 cr; prereq 9 cr educ)
IX-X M, Pt 202, Capps

151 Diagnosis, Treatment of Learning Difficulties (3 cr)
I-II S, Pt 202, Clymer

153 Supervision, Teaching of English in Elem Schools (3 cr; prereq Ed 75B)
IX-X W, Bu 211, 1 hr ar, Chase

168 Current Developments in Social Studies (3 cr; prereq grad or ‡)
I-II S, JohH 105, McCune

170B Curriculum, Course of Study Construction (3 cr; prereq 113 or 119 or ‡)
IX-X T, Bu 123, Bossing

171 Curriculum Lab Practice (0-3 cr; prereq 170A or 170B, ‡) Bossing, Goossen

174 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 164; prereq Spch 163)
VII-VIII W, Bryngelson

175 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 165; prereq 174)
VII-VIII W, Bryngelson

176 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 166; prereq 175)
VII-VIII W, Bryngelson

178 Educational, Social Implications of Visual Impairment (3 cr; prereq ‡)
III-IV S, JohH 115, Kenmore

191 Adv Teaching, Supervision of Secondary Mathematics (3 cr)
IX-X Th, JohH 306, D Johnson

193B High School Mathematics: Content, Teaching Techniques (4 cr; prereq 193A)
I MW, V-VI TTh, JohH 306, D Johnson

199E Internship (ar cr)

201 Probs: Teaching Social Studies (3 cr; prereq 155 or 168, 204 or ‡) Morse, McCune, West, Stovall

205 Probs: Audio-Visual Education (ar cr; prereq ‡) Pearson

215 Probs: School Health Education Program (ar cr; prereq ‡) Grout

217 Seminar: School Health Education Program (ar cr; prereq ‡)
III-IV W, III F, Mayo 1210, Grout

222 Seminar: Current Probs in Techniques of High School Instruction (ar cr; prereq Ed 55B, sr methods)
IX-X W, PeikH 225, Bossing, Keller, Winter

225 Probs: Secondary School Supervision (ar cr; prereq ‡) Keller, Lane, Popper

226 Seminar: Elem School Probs (2 cr)
IX-X Th, Bu 123

227 Probs: Rural Education (ar cr; prereq EdAd 117) Archer

228 Probs: Higher Education, Teacher Education (ar cr; prereq ‡) Eckert

238 Probs: Distributive Education (ar cr; prereq ‡) Meyer

239 Probs: Business Education (ar cr; prereq ‡) Price

243 Recent Research: Reading (3 cr; prereq ‡)
IX-X W, Pt 202, Bond

250 Higher Education in the United States (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II S, Bu 123, Eckert

251 Curriculum Trends in American Colleges (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II T, I Th, Bu 123, Eckert

253 Seminar: Improvement of College Instruction (ar cr; prereq ‡)
7:30-9:30 pm W, Bu 123, Eckert, Wrenn

253A Seminar: Materials, Methods in Marriage Education (4 cr; prereq ‡)
VI-VII TTh, VH 210, Hill

254 Directed Experience in College Instruction (ar cr; prereq ‡) Eckert, Hill

257 Research: Language Instruction in Elem Schools (3 cr; prereq 153)
IX-X W, Bu 125, Archer

261 Probs: Improvement of Instruction (ar cr; prereq ‡) Archer, Goosen, Curtin, Mullins

264 Research: Educational Diagnosis (3 cr)
IV MWF, Bu 123, Clymer

271 Probs: Curriculum Construction (3-6 cr; prereq ‡)

273 Probs: Reading (ar cr; prereq 143 or 144 or ‡) Bond, Clymer, Chase, Odland, Reynolds, Balow

284 Probs: Student Teaching (3-9 cr; prereq ‡) Davies

285 Professional Education of Teachers (3 cr; prereq 15 cr educ incl 184, 250 or HEd 182 or EPsy 250 or ‡)
III-IV S, JohH 113, Davies

294 Adv Curriculum, Methods in Secondary School English (2 cr; prereq EdT 75C)
IX-X M, JohH 126, Kegler

296 Probs: Teaching English (ar cr) Kegler

Education (Ed)

55A **Introd Secondary School Teaching** (5 cr; prereq Psy 2)
Lect I TThS, NH 45, Neale
—1, II TTh, FolH 9, Gardner
—2, II TTh, FolH 11, Olstad
—3, III TTh, Bu 211, Jackson
—4, III TTh, Pt 202, Bicak
—5, VI TTh, CW 218, Olstad
—6, VII TTh, Pt 202, Bicak

55B **Introd Secondary School Teaching** (5 cr; prereq 55A or ‡)
Lect I MWF, NH 45, Mork
—1, II TTh, WuH 201
—2, II TTh, Bu 120, Mork
—3, II TTh, FolH 6

140 Behavior Probs (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
VIII-IX TTh, CW 222, Wahlstedt

160 Physical Growth, Development (2 cr; prereq sr, 12 cr educ pys or psy or soc or HE)
III TTh, CW 206, Roff

170 Parent Education (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
V MWF, CW 218, Grams

185 Children in a Changing World (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
VI MWF, CW 222, Templin

190 Use, Interpretation of Tests (2 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
II TTh, CW 222, Hurst

191 Lab: Use, Interpretation of Mental Tests (2 cr; prereq ¶190, ♯)
I TTh and ar, CW 206, Hurst

211 Emotional, Social, Personality Development (3 cr; prereq 20 grad cr or 20 grad cr in educ psy or psy)
III MWF, CW 206, Anderson

221 Seminar: Current Research (ar cr)
VIII-IX alt W, CW 206, Roff

224 Seminar: Developmental Theory (1 cr; prereq 223) Anderson

231 Seminar: Recent Literature (1 cr)
VIII-IX alt W, CW 206, Palermo

233 Research Methods (2 cr; prereq 12 cr educ psy or psy incl stat)
VII-VIII TTh, JohH 307, Roff

237 Seminar: Human Development (2 cr; prereq 30 grad cr or 30 grad cr in educ psy or psy or soc)
VIII-IX T, CW 206, Stevenson

241 Practicum: Behavior Probs (ar cr; prereq 140, ♯) Grams

248 Clinical Child Psychology (3 cr, †247-248, §140, Psy 172; prereq 247)
IX-X MF, CW 206, Wirt

250 Internship: Professional Work (ar cr; prereq △)

271 Readings, Research: Child Development (ar cr; prereq MA plan B students or ♯)

274 Technique, Field Work: Parent Education (ar cr; prereq 170, ♯) Grams

291 Psychometric Clerkship with Young Children (ar cr; prereq ♯) Hurst

GENERAL EDUCATION

Curriculum and Instruction (EdCI)

45 Business, Distributive Education (2 cr)
IV MW, Bu 103, Price, Meyer

57 Nursery School-Kindergarten Lab: Art, Literature, Music, Social Studies, Science (6 cr; prereq 55 or ¶)
VIII MTWThF and ar, CW 218, Headley

58 Core Curriculum Foundations (1 cr; prereq ♯)
VII-VIII M, Bu 103, Bossing

60 Teaching Reading in Elem School (3 cr; prereq Ed 75A)
—1, II MWF, Bu 120, Clymer
—2, VI MWF, Bu 120, Bond

61 Teaching Social Studies in Elem School (3 cr; prereq Ed 75B)
—1, III MWF, CW 218, Mullins
—2, VI MWF, CW 218, Mullins

62 Teaching Arithmetic in Elem Schools (3 cr; prereq Ed 75A)
—1, III MWF, Pt 202, Stochl
—2, VI MWF, Pt 202, Stochl
—3, VII MWF, Pt 202, Stochl

63 Children's Literature (2 cr)
—1, VII MW, Bu 120, Odland
—2, IX-X W, Bu 120, Odland

64 Teaching English in Elem School (3 cr; prereq Ed 75A)
—1, VI MWF, Bu 211, Barrett
—2, VII MWF, Bu 211, Barrett
—3, VI T, VI-VII Th, FraH B1, Archer

65 Teaching Science in Elem School (3 cr; prereq Ed 75A, 10 cr nat sci)
—1, VII-VIII M, VII W, JohH 205, Goossen
—2, VI-VII T, VI Th, JohH 205, Boeck

66 Treatment of Learning Difficulties (3 cr; prereq 60, 62A, ¶student tchg)
—1, IX-X T, JohH 114, Balow
—2, IX-X Th, JohH 114, Balow

102 Teaching Social Studies in Elem School (3 cr; prereq Ed 75B)
IX-X T, JohH 115, Mullins

103 Teaching Science in Elem School (3 cr; prereq sr, Ed 75B or tchg exper)
IX-X T, Bu 120, Goossen

104 Adult Education (3 cr)
VIII-IV Th, JohH 113, Nolte

105 Audio-Visual Materials in Education (3 cr; prereq sr)
IX-X M, NH 211, 1 hr ar, Pearson

109 Audio-Visual Materials, Equipment Lab (3 cr; prereq 105 or ¶ or ♯)
Lect IX-X T, WeH 202, Pearson
—1, VI-VII W, WeH 206, Pearson
—2, IX-X Th, WeH 202, Pearson

110 Practicum: Laboratory School Teaching, K-6 (ar cr; prereq cons adv)

117 Braille II (3 cr; prereq 116)
4:30-6:00 MW, JohH 122, Kenmore

118 Education of Blind Children in the Elem Grades (3 cr; prereq ♯)
IX-X T, Pt 202, Kenmore

119 Elem School Curriculum (3 cr; prereq Ed 75B)
III-IV S, JohH 114, Goossen

121 Literature for Elem School (3 cr)
I-II S, Bu 120, Odland

132 Teaching Basic Business Subjects (3 cr)
IX-X Th, Bu 103, Price

135 Group Procedures in Guidance (3 cr; prereq EPsy 133 or ♯, 9 cr educ)
I-II S, Bu 211, 1 hr ar, Tennyson

243 Adv Clinical Restorative Dentistry (ar cr) Jensen, Wittich, Yock
247 Research Probs: Restorative Dentistry (ar cr) Crawford, Jensen, Wittich, Yock
250 Adv Oral Surgery (ar cr) Clark
251 Seminar: Oral Surgery (1 cr) Clark
252 Research: Oral Surgery (ar cr) Clark
253 Probs: Oral Surgery (ar cr) Clark
261 Adv Dental Radiographic Technique (ar cr) Peterson
262 Research: Oral Pathology (ar cr) Gorlin
263 Seminar: Dental Research (1 cr) Gorlin
264 Clinical Oral Pathology Conference (1 cr) Bartholdi, Clark, Gorlin
280 Adv Periodontics Clinic (ar cr) Schaffer
281 Adv Periodontics Lectures (3 cr) Schaffer
282 Research: Periodontics (ar cr) Schaffer
283 Seminar: Periodontics (1 cr) Schaffer
284 Supporting Structures of the Teeth (3 cr) Schaffer

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AgEd)

1 Introduction (2 cr)
III TTh, Hr 102, Swanson, Kitts
20 Rural Education, Community Leadership (3 cr)
IV TTh, Hr 302, Swanson, Christensen
81 Teaching in Secondary School (4 cr; prereq Ed 55B or ¶)
Lect IV MWF, Hr 301, Kitts
Lab VII-VIII T, Hr 301, Kitts
82 Teaching in Secondary School (4 cr; prereq 81)
Lect III MWF, Hr 301, Kitts
Lab VII-VIII Th, Hr 301, Kitts
91 Supervised Teaching Experience (6 cr; prereq sr, 82, ♯) Kitts
103 Young Farmer, Adult Education (4 cr; prereq 81)
Lect II MWF, Hr 302, Peterson
Lab VII-VIII Th, Hr 302, Peterson
104 Planning Programs (2 cr; prereq 3rd qtr sr or ♯)
IV TTh, Hr 301, Peterson
120 Rural Education, Community Leadership (3 cr; prereq grad or ♯)
IV TTh, Hr 302, Swanson, Christensen
221 Field Probs (3 cr) Peterson, Kitts, Swanson
232 Research (ar cr; prereq 15 cr educ) Peterson, Kitts, Swanson
286 Current Issues (ar cr; prereq ♯) Peterson, Kitts, Swanson

ART EDUCATION (ArEd)

14 Introduction (2 cr)
VII MW, J 109, Gayne
17 **Pictorial Expression for Elem Education** (3 cr)
—1, I-II MWF, TSF 259, Cherry
—2, III-IV MWF, TSF 259, Wold
—3, VI-VII MWF, TSF 259, Wold
—4, VIII-IX MWF, TSF 259, Wold
18 **Design Activities for Elem Education** (3 cr)
—1, III-IV MWF, TSF 256, Cherry
—2, VI-VII MWF, TSF 256, Cherry
—3, VIII-IX MWF, TSF 256, Hegg
19 **Functional Arts, Crafts in Elem Education** (3 cr)
I-II MWF, TSF 256, Wold
53 **Introduction to Weaving** (3 cr)
VI-VII MWF, TSF 203, Smits
57 Principles, Experiences (5 cr; prereq 14)
III-IV MTWThF, J 109, Hastie, Hegg
81 Puppetry in Education (3 cr)
I-IV S, TSF 256, Cherry
84 **Teaching in Elem School** (3 cr; prereq 6 cr from 17, 18, 19)
Lect VII TTh, P 210, Gayne
—1, Lab VI TTh, J 109, Hegg
—2, Lab VIII TTh, J 109, Gayne
87 Student Teaching, Supervision (3 cr, †86-87-88; prereq sr, 56, 57, Ed 55A, 55B, ¶87A) Hastie, Hegg
87A Teaching, Supervision (2 cr, †86A-87A-88A; prereq sr, 56, 57, Ed 55A, 55B, ¶87) IX-X T, J 109, Hastie
151 Curriculum Building (3 cr)
I-II S, J 109, Hastie
158 Art Education in Europe (3 cr)
III-IV S, J 109, Gayne

CHILD DEVELOPMENT AND WELFARE (CD)

40 **Child Training** (3 cr, §HEEd 90; prereq soph, Psy 2)
—1, V MW and ar, CW 222, Peterson
—2, VI TTh and ar, CW 222, Robinson
80 Child Psychology (3 cr; prereq Psy 2)
IV MWF, ME 18, Palermo
95 Probs (1-3 cr; prereq 18 cr with B aver incl 80, Soc 45, Psy 70, ♯) Templin
131 Development of Personality, Social Behavior in the Child (3 cr; prereq sr, 12 cr psy)
III MWF, CW 222, Palermo

SCHOOL OF DENTISTRY

Dental Assisting (DA)

4 Bacteriology (1 cr; prereq 3)
8:00-9:00 T, Owre 12, Thorson

5 Pathology, Pharmacology, Anesthetics (1 cr; prereq 3)
9:00-10:00 T, Owre 12, Thorson

6 Prosthetics Lab (2 cr; prereq 3)
2:00-5:00 M, Owre 104, Tuckner

7 Clinic II (4 cr; prereq 3)
2:00-5:00 TWTh, 9:00-12:00 Th, Owre 310, Tuckner

9 Dental Radiography (½ cr; prereq 7)
III M, Owre 111, Petersen

Dental Hygiene (DH)

8 Dental Anatomy (2 cr; prereq 7)
Lect VI W, Owre 104, Hall
Lab VII-IX W, Owre 104, Hall

21 Dental Prophylaxis (2 cr)
Lect VI M, Owre 104, Jackson
—1, Lab II-III T, Owre 104, Jackson
—2, Lab VII-VIII T, Owre 104, Jackson
—3, Lab III-IV Th, Owre 104, Jackson

41 Dental Health Education (2 cr; prereq 40)
I T, Owre 104, Schendel

46 Dental Assisting (2 cr; prereq 45)

54 Dental Prophylaxis (2 cr; prereq 53)
—1, II-IV M, Clinic, Jackson
—2, II-IV T, Clinic, Schendel
—3, VII-IX T, Clinic, Schendel
—4, VII-IX W, Clinic, Jackson
—5, VII-IX M, Clinic, Jackson
—6, VII-IX F, Clinic, Jackson

58 Prosthetic Dentistry, Dental Lab (2 cr; prereq 57)
Lect I Th, Owre 104, Hall
Lab VII-IX Th, Owre 104, Hall

60 Oral Histology, Pathology (2 cr; prereq 56)
VI TTh, Owre 104, Gorlin

Dentistry (Dent)

51 Dental Anatomy (3 cr; prereq 50)
Lect I M, Owre 12, Hall
Lab II-IV MF, Owre 1, Hall

55 Development of Occlusion (2 cr; prereq regis Dent)
I WF, Owre 12, Nelson

61 Dental Prosthetics (4 cr; prereq 60)
Lect VI M, Owre 12, Hall
Lab VII-IX MF, II-IV W, Owre 1, Hall

76 Crown and Bridge Technic (4 cr; prereq 75)
Lect VI T, Owre 111, Serr
Lab VII-IX TTh, I-III T, Owre 1, Serr

85 Operative Dentistry (4 cr; prereq regis Dent)
Lect VI W, Owre 111, Wakely
Lab I-III ThS, VII-IX W, Owre 1, Wakely

111 Dental Prosthetics (1 cr; prereq 110)
VI M, Owre 111, Morstad

111C Dental Prosthetics Clinic (2 cr; prereq 110C) Morstad

116C Dental Prosthetics Clinic (2 cr; prereq 115C) Morstad

121C Crown and Bridge Clinic (2 cr; prereq 120C) Yock

126C Crown and Bridge Clinic (2 cr; prereq 125C) Yock

135 Oral Medicine (1 cr; prereq 132C)
1:00-2:00 W, Owre 113, Bartholdi

141C Operative Clinic (3 cr; prereq 140C) Jensen

146C Clinical Operative Dentistry (3 cr; prereq 145C) Jensen

148 Seminar: Restorative Dentistry (1 cr)
1:00-2:00 Th, Owre 113, Crawford, Jensen, Morstad, Yock

149 Mass Casualty, First Aid (2 cr)
1:00-2:00 MF, Owre 113, Jensen

156 Oral Surgery (2 cr; prereq 155)
8:00-9:00 TF, Owre 113, Clark

171 Pedodontics (1 cr; prereq 170)
1:00-2:00 Th, Owre 111, Wittich

176C Pedodontics Clinic (3 cr; prereq 172C) Wittich

181 Periodontics (1 cr)
I T, Owre 111, Schaffer

181C Periodontics Clinic (1 cr; prereq ¶181) Schaffer

186C Periodontics Clinic (1 cr; prereq 185C) Schaffer

198 Dental Jurisprudence (1 cr)
8:00-9:00 W, Owre 113, Brand

200 Adv Orthodontic Technics (ar cr) Steadman

201 Treatment Procedures in Orthodontics (ar cr) Steadman

202 Case Analysis (ar cr) Steadman

203 Treatment Planning (ar cr) Steadman

204 Adv Clinical Orthodontics (ar cr) Steadman

205 Osteology, Myology of the Head (ar cr) Steadman

206 Growth of the Head (ar cr) Steadman

207 Comparative Odontology (ar cr) Steadman

208 Seminar: Orthodontics (ar cr) Steadman

209 Probs, Research: Orthodontics (ar cr) Steadman

220 Adv Dental Anatomy (ar cr) Hall

230 Adv Oral Diagnosis (ar cr) Bartholdi

231 Adv Clinical Oral Diagnosis (ar cr) Bartholdi

232 Research: Oral Medicine (ar cr) Bartholdi

240 Adv Technical Restorative Dentistry (ar cr) Jensen, Wittich, Yock

2T Principles (3 cr, §2 or C\ or 50B, §old 9; prereq 1T)
—1, I MWF, ForH 185, Smith
—2, IV MWF, EE 237
—3, V MWF, VH 4
—4, VI MWF, ForH 185

40 Decision Making, Scientific Inference (3 cr; prereq Phil 40 or ♯)
VI MWF, VH 307, Hurwicz

65 Interm Economic Analysis: The Firm (3 cr, §165, §old 81 or 144; prereq 2)
—1, 8:30-10:00 TTh, VH 2, Maynes
—2, II MWF, MH 214, Richter
—3, III MWF, ForH 85, Buttrick
—4, 10:30-12:00 TTh, VH 113

66 Interm Economic Analysis: Income, Employment (3 cr, §166, §old 80 or 143; prereq 2 or ♯)
—1, 8:30-10:00 TTh, VH 6, Coen
—2, II MWF, VH 113, Krueger
—3, III MWF, EE 237, Krueger
—4, III MWF, VH 211, Richter (for students with calc)

67 Money, Banking (3 cr, §old 3, 57; prereq 2)
—1, I MWF, ForH 120
—2, III MWF, JohH 114
—3, IV MWF, JacH 104

68 Public Finance (3 cr, §168 or 178A, §old BA 58; prereq 2)
—1, I MWF, VH 4, Hady
—2, VII MWF, VH 207, Hady

69 Govt Regulation of Business (3 cr, §169, §old 85 or 175; prereq 65 or 165 for maj, law or pol sci or ♯ for others)
—1, III MWF, MMA 100, Simler
—2, IV MWF, VH 4, Simler

75 Interm Economic Analysis: Household, Policy (3 cr, §175, §old 82; prereq 65)
II MWF, VH 211, Boddy

90 Honors Course (3 cr, §old 97 or 98 or 99; prereq cons adv)

101B Decision Theory (3 cr, §old 101; prereq BA 5, 101A or ♯...Math 40 rec)
11:00-12:30 MW, ForH 75, Hurwicz

114 Balance of Payments Theory (3 cr, §old 145; prereq 66 or 67)
1:30-3:00 TTh, VH 1, Coen

121B Theory of Statistics I (3 cr, §old 122; prereq 121A, ¶Math 53 or ♯)
10:30-12:00 TTh, VH 6, Savage

152 Labor Movements (3 cr, §old 162; prereq BA 52 or 152)
I MWF, VH 205, Simler (for grads)

160 Comparative Economic Systems (3 cr, §old 84; prereq 2)
10:30-12:00 TTh, VH 307, Maynes

162 Union Govt, Policies (3 cr, §old 163; prereq BA 52 or 152)
2:00-3:30 TTh, VH 113, Seltzer (for undergrads)

166 Economic Analysis: Income, Employment (3 cr, §66, §old 80 or 143; prereq grad, 2 or ♯)
2:30-4:00 MW, VH 301, Buttrick

169 Govt Regulation of Market Behavior (3 cr, §69, §old 85 or 175; prereq grad, 65 or 165 for maj, law or pol sci or ♯ for others)
VIII-IX T, VH 211, Boddy

172 Public Policy: Labor Relations (3 cr, §old 164; prereq BA 52 or 152)
IV MWF, VH 307, Turnbull (for undergrads)

175 Economic Analysis: Household, Policy (3 cr, §75; prereq grad, 65 or 165)
II MWF, VH 211, Boddy

176A Theory of Employment, Natl Income, Price Level I (3 cr, §old 124; prereq 66 or 166)
VIII-IX Th, VH 205, Brownlee

178B Public Finance (3 cr, §old 192; prereq 178A ...or 68 with grade of B or ♯)
9:30-11:00 MW, VH 207, Heller

182 Economic Security (3 cr, §old 169; prereq BA 52 or 152)
VI-VII F, VH 205, Turnbull (for grads)

184 Probs of the Far East (3 cr, §old 179; prereq 2)
9:00-10:30 TTh, VH 211, Bronfenbrenner

185A Price Theory (3 cr, §old 103; prereq 65 or 165)
1:30-3:00 TTh, VH 2, Bronfenbrenner

190 Readings (ar cr, §old 160; prereq cons adv, instr)

195B Analytical Methods in Business Decision Making: B (3 cr, §old 138; prereq 195A or ♯)
7:30-9:30 pm W, ForH 75, Chipman

201B Econometrics B (3 cr; prereq 201A)
VIII-IX F, VH 210, Nerlove

215B Welfare Economics: B (3 cr, §old 215; prereq 215A) Hurwicz

277A Development of Monetary Theory (3 cr, §old 243; prereq 177)
VII-VIII M, VH 205, Smith

281B Adv Topics: Statistics (3 cr)
7:00-9:30 pm T, JohH 126, Richter

290 Research (ar cr, §old 299)

385 Seminar: Micro-Economics (1 cr, §old 214) Boddy

391B Seminar: Workshop in Econometrics (ar cr, †391A-391B-391C; prereq 391A)
VIII-IX T, VH 205, Chipman, Nerlove

393B Seminar: Workshop in Economic Development (ar cr, †393A-393B-393C; prereq 393A)
7:30-9:30 pm Th, VH 210, Bronfenbrenner, Buttrick

398B Seminar: Workshop in Public Finance, Fiscal Policy (ar cr, †398A-398B-398C; prereq 398A)
VII-VIII W, VH 205, Brownlee, Heller

129 Office Mgt, Records Admin (3 cr, §old 181E; prereq 36, 99 or ♯)
2:30-4:00 MF, VH 211, Donaldson

135 Income Tax Accounting (4 cr, §old 134; prereq 55D or 105A)
III MTWF, VH 2, Berryman

151 Statistics (3 cr, §5 or Soc 45, §old Econ 5A or 5B; prereq grad, Math 10)
II MWF, Z 313, Willis

155B Managerial Accounting (3 cr, §25-26 or 55B, §old Econ 25-26; prereq grad, 155A)
I MWF, VH 211, Meyers

156 The Modern Corporation (3 cr, §56, §old Econ 75 or 155; prereq grad)
IV MWF, VH 205, Sutton

158 Business Law: Contracts (3 cr, §58, §old 51; prereq grad)
Lect III T, Ph 150, Wright
Rec II TTh, VH 4, Wright

174 Transportation II: Traffic Mgt (3 cr, §old 174; prereq 54 or 154)
I MWF, VH 2, Nightingale

175B Data Processing (2 cr, §old 119; prereq 115B)
II MWF, VH 307, Meyers

177 Foreign Trade (3 cr, §old 177; prereq 57)
IV MWF, VH 6, Holloway

178 Business Law: Agency, Partnership, Corporation (3 cr, §78, §old 52; prereq grad, 158)
Lect III Th, Ph 150, Wright
Rec IV TTh, VH 4, Neville

182B Interm Manpower Mgt (3 cr, §old 168; prereq 72 or 172)
IV MWF, ME 321, Bellows

186 The Securities Market (3 cr, §old 148; prereq sr, 56 or 156)
2:00-3:30 TTh, VH 207, Stevenson

191A Statistical Methods (3 cr; prereq 51 or 161 or Econ 121A or ♯)
1:30-3:00 TTh, VH 205, Hastings

194B Adv Traffic Mgt II (3 cr; prereq sr, 174 or ♯)
IV MWF, VH 210, Nightingale

195A Internship: Public Accounting (ar cr, §old 198; prereq 125, ♯) Meyers

196A Topics: Finance (3 cr, §old 181B; prereq sr)
9:00-10:30 TTh, VH 205, Stevenson

197 Purchasing (3 cr, §old 111; prereq 57)
—1, I MWF, VH 306, Basil
—2, II MWF, Lib 4A, Basil

207 Advertising (3 cr, §77, §old 188; prereq 57, Psy 156)
VI MWF, VH 1, Lewis

213 Group Insurance (3 cr, §83, §old 131; prereq 153)
I MWF, VH 210, Williams

223 Property, Liability Insurance I (3 cr, §93, §old 116; prereq 153)
IV MWF, VH 207, Williams

227 Retail Mgt (3 cr, §107, §old 114; prereq 57)
2:30-4:00 MF, VH 2, Hancock

237C Sales Mgt II (3 cr, §117C, §old 180C; prereq 57)
2:30-4:00 MF, VH 6, Lewis

250 Executive Leadership (3 cr; prereq 2nd yr grad)
2:30-4:00 MF, VH 307, Basil

256 Govt, Business Enterprise I (3 cr; prereq Econ 69 or 169)
10:30-12:00 TTh, VH 205, Seltzer

258 Quantitative Approaches to Administrative Probs I (3 cr; prereq 151, 155A, 155B, Econ 65 or 165)
1:00-2:00 MWF, VH 210, May (beginning Feb 1)

265A Managerial Cost Accounting (3 cr, §55C or 115A or 115B, §old 130; prereq 26)
VI MWF, VH 2, Luneski

265B Corporate Statements (3 cr, §55D or 105C, §old 139; prereq 26)
I MWF, VH 1, K Heller

272 Topics: Industrial Relations (3 cr, §old 180D, 181D, 182D; prereq 72 or 176)
1:30-3:00 MW, VH 113, Turnbull

290A Readings: Industrial Mgt, Admin (ar cr, §old 160; prereq cons adv, instr)

290B Research: Industrial Mgt, Admin (ar cr, §old 299)

315 Seminar: Cost Accounting (3 cr, §old 258)
VIII-IX TTh, VH 210, Meyers

ECONOMICS (Econ)

B Scope, Methods, Application (3 cr)
IV MWF, CW 218, Smith

1 Principles (3 cr, §C or 1T or 50A, §old 6; prereq 3rd qtr fr)
—1, I MWF, VH 307, Coen (honors section: grade point avg of 3.0 or above)
—2, I MWF, FraH B1
—3, I MWF, JohH 115
—4, III MWF, WuH 201
—5, III MWF, ForH 20
—6, IV MWF, E 305
—7, V MWF, VH 207
—8, VI MWF, ForH 115
—9, VII MWF, ForH 115

1T Principles (3 cr, §1 or C or 50A, §old 8; prereq 3rd qtr fr, regis IT)
—1, I MWF, JohH 122, Coen
—2, IV MWF, MinMet 116
—3, VI MWF, JohH 122

2 Principles (3 cr, §C or 2T or 50B, §old 7; prereq 1)
—1, I MWF, ForH 15, Smith
—2, I MWF, ForH 85
—3, II MWF, ForH 120
—4, III MWF, MinMet 116
—5, IV MWF, FraH B25
—6, IV MWF, EE 137 (honors section: grade of B or above in Econ 1)
—7, V MWF, VH 113
—8, VI MWF, ForH 20
—9, VII MWF, ForH 120

—6, V T, VH 6
—7, V Th, VH 6

53 Insurance (3 cr, §153, §old Econ 50 or 107; prereq Econ 2)
—1, II MWF, VH 301, Fleischer
—2, III MWF, VH 301, Fleischer
—3, 10:30-12:00 TTh, VH 301, Fleischer

54 Transportation I: Principles (3 cr, §154, §old 71 or Econ 172; prereq Econ 2)
—1, II MWF, VH 1, Harper
—2, III MWF, VH 4, Harper

55A Accounting (4 cr, §24-25, §old 54)
VI MTWF, VH 6, Berryman

55B Accounting (4 cr, §25-26, §old 55; prereq 55A)
IV MTWF, VH 306, Luneski

55C Managerial Costs (3 cr, §115A or 115B, §old 66; prereq 26)
VI MWF, VH 2, Luneski

55D Analysis of Financial Statements (3 cr, §105C, §old 65 or 139; prereq 26)
I MWF, VH 1, K Heller

56 Corporation Finance (3 cr, §156, §old Econ 75 or 155; prereq 1)
—1, 9:00-10:30 TTh, VH 1, Nilsen
—2, II MWF, VH 4, Sutton
—3, 10:30-12:00 TTh, VH 1, Stevenson

57 Marketing (3 cr, §157, §old 77 or 185; prereq Econ 2)
—1, I MWF, VH 6, Harper
—2, II MWF, VH 2, Holloway
—3, II MWF, VH 6, Werner

58 Business Law: Contracts (3 cr, §158, §old 51; prereq Econ 2)
Lect III T, Ph 150, Wright
—1, I TTh, VH 4, Wright
—2, II TTh, VH 4, Wright

60 Business Policy, Mgt Control (3 cr, §160, §old 182G; prereq 3 qtr sr)
I MWF, VH 301, Glaskowsky

72 Modern Industrial Relations: Manpower Mgt (3 cr, §172, §old 167; prereq 52 or 152)
VI MWF, VH 207, Rhode

75A Accounting Lab (1 cr, §old 93; prereq 26)
VI-VII T, VH 306, Etnier

75B Cost Accounting Lab (1 cr, §old 94; prereq 115A)
—1, VI-VII Th, VH 306, Etnier
—2, VII-VIII W, VH 306, Etnier

76 Finance Mgt (3 cr, §276, §old 156; prereq 56 or 156)
I MWF, VH 207, Sutton

77 Advertising (3 cr, §207, §old 188; prereq 57, Psy 156)
VI MWF, VH 1, Lewis

78 Business Law: Agency, Partnership, Corporation (3 cr, §178, §old 52; prereq 58)
Lect III Th, Ph 150, Wright
—1, I TTh, VH 113, Eastlund
—2, I TTh, VH 301, Neville
—3, II TTh, VH 113, Eastlund
—4, II TTh, VH 301, Neville
—5, III T, ForH 20, IV Th, ForH 120, Eastlund
—6, IV TTh, VH 4, Neville

79B Admin Secretarial Studies (3 cr, §old Econ 41; prereq 79A)
IV MWF, VH 209, Peterson

80 Administrative Practices (3 cr, §old 181G; prereq sr)
—1, III MWF, VH 205, Glaskowsky
—2, VI MWF, VH 301, Glaskowsky

82 Modern Labor Relations (3 cr; prereq 52)
IV MWF, VH 113, Ross

83 Group Insurance (3 cr, §213, §old 131; prereq 53)
I MWF, VH 210, Williams

87 Credits, Collections (3 cr, §old 76; prereq 57)
II MWF, VH 205, Hancock

89B Tabulating Equipment Lab (2 cr, §old 91; prereq 5, 26)
Lect IV Th, VH 2, Hammond
—1, III-IV T, VH 211, Hammond
—2, V-VI T, VH 211, Hammond

93 Property, Liability Insurance I (3 cr, §223, §old 116; prereq 53)
IV MWF, VH 207, Williams

97 Market Analysis, Research I (3 cr, §217, §old 173; prereq 51, 57)
III MWF, VH 113, Hancock

99 Survey of Office Mgt (3 cr, §old 86; prereq Econ 2)
IV MWF, VH 211, Donaldson

105A Interm Accounting I (3 cr, §old 150A; prereq 26)
IV MWF, VH 2, Berryman

105B Interm Accounting II (3 cr, §old 150B; prereq 105A)
—1, IV MWF, VH 301, Lund
—2, VI MWF, VH 306, K Heller

107 Retail Mgt I (3 cr, §227, §old 114; prereq 57)
III MWF, VH 6, Werner

110 Systems, Procedures Analysis: Work Measurement (3 cr, §old 170; prereq 50)
10:00-11:30 TTh, MinMet 116, Gibson

113 Actuarial Science Principles: Personal Insurance (3 cr, §Math 21; prereq 53 or 153 or Math 20 or Math 40 or ♯)
II MWF, VH 210, Williams

115A Cost Accounting (3 cr, §55C, §old 152; prereq 26)
8:30-10:00 TTh, VH 306, Gibson

115B Cost Accounting (3 cr, §55C, §old 153; prereq 115A)
—1, II MWF, VH 306, Bentley
—2, III MWF, VH 306, Bentley

117 Sales Mgt I (3 cr, §237, §old 113; prereq 57)
IV MWF, VH 1, Lewis

117C Sales Mgt II (3 cr, §237C, §old 180C; prereq sr, 57)
2:30-4:00 MF, VH 6, Lewis

52 Topics (1 cr; prereq 1 or 3 or 19)
VIII-IX F, So 215
53 Topics (1 cr; prereq 52)
VIII-IX F, So 215
128 Soil Chemistry (3 cr; prereq 3 or 19 or 119)
8:00-9:30 TTh, So 115, MacGregor
129 **Chemical Analysis of Soils** (3 cr; prereq AgBi 2)
Lect VI MWF, So 115, MacGregor
Lab VII-VIII MWF, So 120
130 Problems (2-4 cr; prereq 1 or 3 or 19 or 119)
132 Soil Fertility (3 cr; prereq 3 or 19 or 119)
IV MWF, So 115, Caldwell
203 Seminar (1 cr)
IX T, So 215

UNATTACHED COURSES

Agricultural Journalism (AgJo)

53 Publicity (3 cr; prereq rhet comm req)
I TTh, AgBot 107, 1 hr ar, Swanson, McKay, Wolf

Biometrics (Biom)

101 Statistical Analysis II (4 cr; prereq 100)
IV MWF, McNH 48, Gates, lab ar

Food Technology (FTec)

52 Food Analysis (2 cr; prereq AgBi 2, 3)
VI-VIII TTh, SnH 102, Geddes, Glass
102 Food Technology (3 cr; prereq AgBi 5, 6 or ‡, Bact 53, phys)
II TThS, SnH 116, Jezeski, Liener
104 Frozen Food Processing, Storage (3 cr, §Hort 104; prereq AgBi 5 or 6 or 10, Bact 53 or ‡)
IV MWF, Hr 302, Winter
105 Frozen Food Probs (2-4 cr, §Hort 105; prereq 104 or ‡) Winter

Orientation (Orie)

1 **College Orientation Lectures** (1 cr)
—1, I T, AgEng 108, McFarland
—2, I W, AgBot 107

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

5 **Statistics** (4 cr, §151 or Soc 45, §old Econ 5A or 5B; prereq Math 10)
—1, I MTWF, EE 238, Hastings
—2, II MTWF, MurH 420
—3, III MTWF, MurH 420
—4, IV MTWF, Z 211
—5, V MTWF, VH 2
—6, VI MTWF, VH 4
24 **Accounting** (3 cr, §55A, §old Econ 24; prereq 3rd qtr fr)
—1, V MWF, VH 306, Bentley
—2, V MWF, VH 6
—3, VI MWF, FraH B25
—4, VI MWF, VH 211
—5, VII MWF, VH 4
25 **Accounting** (3 cr, §55B, §old Econ 25; prereq 24)
—1, I MWF, Z 211, Bentley
—2, III MWF, ME 321
—3, III MWF, EE 238
—4, IV MWF, EE 238
—5, V MWF, VH 1
—6, VI MWF, MurH 420
—7, VII MWF, E 227
26 **Accounting** (3 cr, §55B, §old Econ 26; prereq 25)
—1, VI MWF, MinMet 116, Bentley
—2, VII MWF, VH 1
32 Typewriting (1 cr, §old Econ 32)
II MTWThF, VH 209, Peterson
33 Interm Typewriting (1 cr, §old Econ 33; prereq 30 words a min, 32 or 1 yr HS type)
I MWF, VH 209, Stanley
34 Typewriting Procedure (2 cr, §old Econ 34; prereq soph, 33, 45 words a min or 2 yrs HS type)
III MWF, VH 209, Stanley
38 Shorthand (3 cr, †37-38-39, §old Econ 38; prereq 37 or 1 yr HS shorthand)
V MWF, VH 209, Donaldson
50 **Production Mgt** (3 cr, §150, §old 89 or 187; prereq Econ 2)
III MWF, MNH Aud, Wickesberg
51 **Business Statistics** (3 cr, §161, §old 74; prereq 5, soph with ‡)
—1, III MWF, VH 1, Willis
—2, 9:00-10:30 TTh, VH 207, Hastings
—3, 10:30-12:00 TTh, VH 207, Hastings
52 **Modern Industrial Relations: Labor Marketing** (3 cr, §152, §old Econ 73 or 161; prereq Econ 2)
Lect II TTh, NH 211, Heneman
—1, III T, VH 306
—2, III T, VH 4
—3, III Th, VH 306
—4, IV T, VH 2
—5, IV Th, ForH 160

108 Physiology of Economic Plants Lab (2 cr; prereq Bot 140 with lab, quant anal)
VIII-IX M, VIII W, AgBot 107, 3 hrs ar, Linck
111 Diseases of Field Crops (4 cr; prereq 1 or 51 or 120)
III-IV TThS, PP 103, 105, J Christensen, Fezer
114 Adv Forest Pathology (3 cr; prereq 1 or 51 or 120)
VI-VIII T, VII-VIII Th, PP 106, French
136 Physiology, Ecology of Weeds (3 cr; prereq 3)
I TThS, AgBot 302, Kommedahl, Linck
143 Methods (3 cr; prereq 1 or 51)
III-IV TThS, PP 106, Moore, Durbin
162 Temperature Relations of Crop Plants (3 cr; prereq 15 cr pl sci or ‡) Landon
204 Research (ar cr) J Christensen, others
208 Probs: Mycology (ar cr; prereq 105, 106, 107) J Christensen, others
213 Seminar (1 cr)
IX-X T, PP 401, J Christensen, others
218 Principles (3 cr; prereq 1 or 51, 156, Bact 53, 6 addtl cr pl path)
III-IV MWF, PP 401, Eide
251 Seminar: Agricultural Botany (1 cr)
IX Th, AgBot 302, J Christensen
254 Research Probs: Applied Plant Physiology (ar cr) Landon
260 Research Probs: Agricultural Botany (ar cr) J Christensen

POULTRY HUSBANDRY (PoHu)

1 Poultry Production (3 cr)
II MWF, PetH 110, Snetsinger
53 Poultry Feeding (2 cr; prereq 1)
VI TTh, McNH 44, Johnson
55 Problems (1-3 cr; prereq 6 cr, ‡)
102 Poultry Breeding (4 cr; prereq 1, Agro 30)
I MWF, PetH 200, Shoffner
214 Research: Poultry Husbandry (ar cr; prereq ‡)
215 Research: Poultry Nutrition (ar cr; prereq 9 cr agr biochem) Waibel, Johnson
216 Research: Poultry Breeding (ar cr; prereq 9 cr genetics) Shoffner
217 Seminar (1 cr; prereq ‡) Shoffner
218 Research: Poultry Products (ar cr; prereq ‡) Swanson

RHETORIC (Rhet)

1-2-3 Communications I, II, III (3 cr per qtr) Three days assigned from I MTWThF. All entering freshmen and students tranferring with fewer than nine credits of freshman English meet in Peters Hall Auditorium the first period MTW for the first week for diagnostic tests and sectioning. Students already tested during freshman week and students who have taken Rhetoric 1 or 2 will find section assignments posted on 2nd floor AgEng Bldg January 4.
22 **Public Speaking** (3 cr; prereq rhet comm req)
—1, II MWF, AgEng 307, Seeden
—2, III MWF, AgEng 307, Nichols
—3, III MWF, AgEng 317, Seeden
—4, IV MWF, AgEng 307, Cashman
—5, V MWF, AgEng 307, Cashman
—6, VI MWF, AgEng 307, Gill
—7, VII MWF, AgEng 307, Richardson
—8, III TThS, AgEng 307, Seeden
32 Novel, Short Story (3 cr; prereq rhet comm req)
V MWF, AgEng 306, Price
33 American Life in American Literature (3 cr; prereq rhet comm req)
II MWF, AgEng 306, Mondale
47 **Efficient Reading** (3 cr, SLA students see SLA bul)
—1, VI MWF, AgEng 315, Brown
—2, VI MWF, ForH 15 **(Mpls Campus)** Whipp
51 **Exposition** (3 cr; prereq rhet comm req)
—1, IV MWF, AgEng 306, Mixon
—2, V MWF, AgEng 317, Mondale
—3, VI MWF, AgEng 306, Mixon
—4, VII MWF, AgEng 306, Wright
—5, III TThS, AgEng 315, Brown
52 **Technical Writing** (3 cr; prereq 51)
III MWF, AgEng 105, Thurston
54 **Adv Public Speaking** (3 cr; prereq 22)
II MWF, TSH 220, Drake
56 **Discussion Methods** (3 cr, §old 12; prereq rhet comm req)
IV MWF, AgEng 109, Drake
60 Contemporary Life, Literature (3 cr; prereq rhet comm req)
IV MWF, AgEng 315, Wright
91 **American Speech for Foreign Students** (no cr)
IX MWF, AgEng 317, Gill
151 **Report, Thesis Writing** (3 cr; prereq 51 or ‡)
IX M, IX-X w, AgEng 306, Thurston
251 Seminar: Listening Comprehension (2 cr, §Spch 251)
VIII-IX W, AgEng 221, Nichols

SOILS (Soil)

1 **Soils, Soil Mgt** (4 cr)
Lect III MWF, GH 120, Burson
—1, Lab VI-VIII W, So 126
—2, Lab VI-VIII Th, So 126
—3, Lab VI-VIII F, So 126
20 **Interpretation of Soil Information** (3 cr; prereq 1 or 3 or 19)
Lect IV TTh, So 115, Grava
—1, Lab VI-VIII M, So 126
—2, Lab VI-VIII T, So 126

86 **Home Mgt Lab** (4 cr; prereq 85 or ¶...41 rec)
—1, I MTWThFS, Home Mgt House, Jeary, Nielsen
—2, I MTWThFS, Home Mgt House, Jeary, Nielsen

89 **Probs: Household Equipment** (2-4 cr; prereq 49 with B, MeAg 35, ‡)
III-IV T, McNH 124, 128, 3 hrs ar, Ehrenkranz

107 **Textile Analysis** (3 cr; prereq 50, AgBi 1A, AgBi 2 or OrCh 42)
VI-VIII MWF, McNH 304, Davison

116 Probs: Family Clothing (3 cr; prereq 3, 50)
IX-X T, McNH 201, Baumgartner

120 Art History (3 cr)
VIII MWF, McNH 350, Esteros

121 **Textile Design** (3 cr; prereq 23, 50 or ‡)
VI-VII MWF, McNH 433, Abell

122A **Interior Design Presentation** (2 cr; prereq 24, Art 20)
III-IV TTh, McNH 342, Forsyth

123 History of Home Furnishings (2 cr; 120 rec)
II TTh, McNH 360, Ludwig

126 **Special Problems in Crafts** (1-3 cr; prereq 25 or ‡)
II-IV TTh, McNH 433, Abell

141 Current Literature in Foods (3 cr; prereq sr, 40)
9:00-10:15 TTh, McNH 44, Gordon

170 **Nutrition Principles** (3 cr; prereq 31, 40, AgBi 1A, Phsl 4)
III MWF, McNH 44, Morse

171 **Maternal, Child Nutrition** (3 cr; prereq 170, HEEd 90)
III MW, McNH 48, III F, Bu 211, IV-V one day ar **(Mpls Campus)** Gormican

174 **Topics: Nutrition** (1 cr; prereq 170)
—1, V W, McNH 44, North
—2, V F, McNH 44, North

175 **Nutrition** (4 cr; prereq sr, 33, AgBi 2)
Lect II MWF, McNH 48, Morse
Lab VI-VIII T, McNH 254

178 **Clinical Probs: Nutrition** (2 cr; prereq 35 or ¶, 170)
Lect IV T, McNH 44, Gormican
—1, Lab VI-VIII T, U Hosp **(Mpls Campus)** Gormican
—2, Lab VI-VIII Th, U Hosp **(Mpls Campus)** Gormican

179 **Readings: Nutrition** (2 cr; prereq 170)
Leichsenring

180 **Adv Home Planning, Furnishing** (3 cr; prereq 24, 49...120 rec)
VI-VIII TTh, McNH 360, Ludwig

185 **Family Relationships** (3 cr; prereq 17, HEEd 90 or ‡)
II-III T, II Th, McNH 227, Bellinger

186 **Probs: Income Mgt** (3 cr; prereq 76 or ‡)
3:30-5:30 T, McNH 125, Bellinger, Jeary

187 **Readings: Family Relationships** (1-3 cr; prereq ‡) Bellinger

220 Readings: Related Art (1-3 cr; prereq ‡) Esteros

221 Probs: Textile Design (1-3 cr; prereq 121 or ‡)
VI-VII MWF, McNH 433, Esteros

227 Probs: Home Planning, Furnishing (1-3 cr; prereq 180 or ‡...122B rec) Ludwig

247 Probs: Food (3 cr; prereq 142, ‡) Noble

279 Seminar: Nutrition (1 cr; prereq ‡) Leichsenring

295 Probs: Home Economics (1-5 cr; prereq ‡) Bellinger, Davison, Ehrenkranz, Esteros, Ford, Leichsenring, Noble

296 Probs: Home Economics (1-5 cr; prereq 295) Bellinger, Davison, Ehrenkranz, Esteros, Ford, Leichsenring, Noble

HORTICULTURE (Hort)

6 Fruit Growing (3 cr; prereq Biol 3 or 3 cr bot)
III MWF, Hr 102, Andersen

36 Plant Propagation (3 cr; prereq soph, Biol 3 or 6 cr bot)
Lect III TTh, Hr 8, Widmer
Lab VI-VIII T

62 Probs: Landscape Design, Composition (2-4 cr; prereq sr, 61 or ‡) Phillips

104 Frozen Food Processing, Storage (3 cr, §FTec 104; prereq AgBi 5 or 6 or 10, Bact 53 or ‡)
IV MWF, Hr 102, Winter

105 Frozen Food Probs (2-4 cr, §FTec 105; prereq 104 or ‡) Winter

110 Crop Breeding (3 cr; prereq Agro 30)
III TThS, Hr 302, Wilcox

121 Small Fruit Culture (3 cr; prereq 6, hort maj or min or ‡)
II MWF, Hr 102, Andersen

191 Problems (2-4 cr; prereq ‡)

241 Organization of Research (2 cr) Snyder

242 Seminar (1 cr; prereq 9 cr)
IX W, Hr 301, Snyder

244 Adv Topics (2 cr; prereq 243) Snyder

247 Report: Special Topics (1-9 cr)

249 Research: Crop Breeding (ar cr) Currence, Hutchins, Wilcox

PLANT PATHOLOGY AND BOTANY (PlPa)

101 Nematodes in Relation to Plant Diseases (3 cr; prereq 1, 51 or 120, 6 cr zool or Biol 3 or ‡)
II TThS, PP 103, Taylor

102 Biology of Seeds (3 cr; prereq 15 cr pl sci or ‡)
VI-VII TTh, AgBot 302, Kommedahl

106 Mycology (3 cr; prereq 1 or 51 or 56)
VI-VIII TTh, PP 105, C Christensen, Anderson

127 Silviculture (2 cr; prereq 4, 5)
III TTh, GH 203, Hansen

136 Forest Economics (3 cr; prereq sr, 123, ‡)
VIII-IX T, VII Th, GH 203, Skok

140 Adv Forest Mgt (3 cr; prereq sr, 124)
I-II TTh, GH 201, Irving

145 Adv Silviculture (3 cr; prereq sr, 128)
Hansen

146 Adv Forest Aerial Photogrammetry (3 cr; prereq sr, 59 or ‡) Meyer

154 Adv Watershed Mgt (3 cr; prereq 104 or ‡)
VI-VII T, II TTh, GH 202, Duncan

175 Wood Pulp, Paper (3 cr, §old 113; prereq 76, org chem)
IX MWF, FP 204, Hossfeld

187 Adv Building Materials Merchandising (3 cr; prereq 87, BA 97)

199 Seminar (1 cr)
VIII-IX T, GH 201, Kaufert, Winsness

200 Research Probs: Silviculture (ar cr) Hansen, Duncan, Schantz-Hansen, B Brown

203 Research Probs: Forest Mgt (ar cr) Duncan, Irving, Schantz-Hansen, B Brown

205 Research Probs: Forest Economics (ar cr) Kaufert, Skok

207 Research Probs: Forest Products Engineering (ar cr) Hossfeld, Rees, Wallin, Kaufert

213 Research Probs: Forest Utilization (ar cr) Kaufert, Hossfeld, Rees, Wallin

218 Research Probs: Forest Measurements, Photogrammetry (ar cr) Brown, Meyer, Shiue

220 Probs: Forest-Tree Genetics (ar cr) Pauley

221 Probs: Forest Influences (ar cr) Duncan

222 Probs: Forest Policy (ar cr) Irving, Kaufert

224 Seminar (1 cr; prereq 223)
VIII-IX Th, GH 202

226 Seminar: Statistical Methods in Forestry Research (1 cr; prereq 6 cr in stat or ‡) Shiue

HOME ECONOMICS (HE)

1 **Choice, Care of Clothing** (3 cr, §GC 3C; not open to men, sr)
IV MWF, McNH 350, Baumgartner

3 **Clothing Construction A** (3 cr; prereq 3rd qtr fr, 1)
—1, III-IV MWF, McNH 327, Carlson
—2, VI-VIII TTh, McNH 327, Carlson

4 **Clothing Construction B** (3 cr; prereq soph, 3)
II-IV TTh, McNH 328, Gorham

17 **Personal, Family Living** (3 cr, not open to sr)
—1, III MWF, McNH 227, Bellinger
—2, IV MWF, McNH 227, Bellinger

20 **Related Art** (4 cr)
—1, II MTWF, McNH 350, Myren
—2, III MTWF, McNH 350, Myren

21 Color, Design (3 cr; prereq 20)
—1, VII-VIII MWF, McNH 359, Forsyth
—2, VI-VIII TTh, McNH 359, Abell

22 **Bgn Costume Design** (3 cr; prereq 1, 20 . . . 21 rec)
VI-VIII TTh, McNH 342, Forsyth

24 **Probs: Home Planning, Furnishing** (5 cr, §GC 3D, FL 15; prereq soph, 20 . . . 21, 49 rec)
—1, V-VI MWF, McNH 360, Esteros
—2, VII-VIII MWF, McNH 360, Myren

25 **Design Applied to Crafts** (3 cr; prereq 20 . . . 21 rec)
II-IV TTh, McNH 433, Abell

31 **Nutrition** (3 cr, §30 or GC 3B or PNurs 14, not open to HE sr)
—1, II MWF, McNH 125, North
—2, 10:00-11:15 TTh, McNH 125, North

35 **Nutrition II** (4 cr; prereq soph, 33)
Lect II MWF, McNH 44, Morse
Lab VI-VIII T, McNH 254, Morse

40 **Food Preparation** (5 cr; prereq 3rd qtr fr, 2 qtrs chem)
—1, Lect III TTh, McNH 48, Hanson
Lab III-IV MWF, McNH 157
—2, Lect VII TTh, McNH 48, Hanson
Lab VI-VII MWF, McNH 157

41 **Food Mgt, Marketing** (5 cr; prereq soph, 31, 40)
—1, Lect III TTh, McNH 150, Cassilly
Lab III-IV M, III-V W, McNH 150, 152, 156
Conf V M, McNH 44
—2, Lect IV TTh, McNH 150, Trammell
Lab III-IV M, III-V F, McNH 150, 152, 156
Conf V M, McNH 150
—3, Lect VII MW, McNH 150, Cassilly
Lab VII-IX T, VII-VIII Th, McNH 150, 152, 156
Conf IX Th, McNH 150

49 **Household Equipment** (3 cr; prereq soph, MeAg 35 or ‡)
—1, Lect VI MF, McNH 124, 128, Ehrenkranz
Lab VI-VII W, McNH 124, 128
—2, Lect VI TTh, McNH 124, 128, Ehrenkranz
Lab VII-VIII T, McNH 124, 128

50 **Textiles** (4 cr; prereq 3rd qtr soph, 1, InCh 5 or GC 7C)
—1, III-IV MWF, McNH 303, Gorham
—2, VI-VII MWF, McNH 303, Carlson

53 **Adv Clothing** (3 cr; prereq 4, 50 or ¶)
VI-VII MWF, McNH 328, Gorham

63 **Quantity Food Purchasing, Production** (5 cr; prereq 41, 3rd qtr soph)
Lect V TTh, McNH 201, Wilson
Lab I-IV TTh, Cafeteria

66 **Administrative Food Service Experience** (5 cr; prereq 65) Hitchcock

70 **Adv Food Preparation** (3 cr; prereq 40, AgBi 1A)
VI TTh, McNH 48, VII-VIII TTh, McNH 56, Trammell

85 **Home Mgt** (3 cr; prereq 40...41 rec)
VII MWF, McNH 201, Jeary

DAIRY HUSBANDRY (DyHu)

1 Dairying (3 cr, §DInd 1)
III MWF, DI 15, Morris, Williams

19 Dairy Cattle Management (1 cr; prereq ¶11)
VI-VIII Th, HH 9, Williams, Cole

122 Dairy Production II (4 cr; prereq 49, Agro 30)
VI-VII TTh, HH 210, Clifton

203 Research: Dairy Production (ar cr)

218 Nutrition, Feeding of Dairy Cattle (3 cr; prereq ♯)
II TThS, HH 9, Donker

DAIRY INDUSTRIES (DInd)

1 Dairying (3 cr, §DyHu 1)
III MWF, DI 15, Morris, Williams

3 Dairy Products Judging (1 cr, §old DyHu 10; prereq soph)
IX-X Th, DI 118, Thomas

50 Dairy Bacteriology (3 or 5 cr, §150, §old DyHu 50; prereq soph, Bact 53, ♯ to take lect only)
Lect VI MWF, DI 255, Olson
Lab VII-VIII MWF, DI 218, Olson

100 Seminar: Literature (2 cr; prereq sr, 3 courses)
V TTh, DI 122, Jezeski

102 Dry Milk Products (3 cr, §old DyHu 108; prereq 101)
I Th, DI 255, VI-VIII Th, DI 151, Coulter

104 Ice Cream, Frozen Dairy Foods (3 cr, §old DyHu 110; prereq 2, 50, AgBi 10)
IV TS, DI 255, VI-VIII T, DI 155, Thomas

150 Dairy Bacteriology (3 cr, §50, §old DyHu 150; prereq grad or ♯, Bact 53)
Lect VI MWF, DI 255, Olson
Lab VII-VIII MWF, DI 218, Olson

206 Research: Dairy Mfg (ar cr)

213 Research: Dairy Bacteriology (ar cr)

ENTOMOLOGY AND ECONOMIC ZOOLOGY (Ent)

52 **Entomology** (5 cr; prereq ♯ for soph, Biol 3)
Lect VII MWF, Z 313 **(Mpls Campus)** Price
—1, Lab V-VI MWF, Z 402 **(Mpls Campus)**
—2, Lab VIII-IX MWF, Z 402 **(Mpls Campus)**

56 **Forest Entomology** (4 cr; prereq Biol 3)
Lect VIII MWF, CofH 307, Hodson
—1, Lab VI-VII MWF, CofH 302
—2, Lab IX-X MWF, CofH 302

63 Mammalogy (4 cr; prereq Zool 22)
Lect II MWF, LsPav 203, Beer
—1, Lab I-II ThS, LsPav 203
—2, Lab IV-V ThS, LsPav 203

64 Fishery, Wildlife Populations (3 cr; prereq Biol 3, Bot 50 or For 5)
III MWF, AgEng 109, Marshall, Smith

65 Fishery, Wildlife Mgt (3 cr; prereq 64)
III TThS, LsPav 203, Marshall, Smith

118 Animal Ecology (3 cr; prereq 15 cr ent or zool, 3 cr animal or plant ecology, ♯)
VI T, VI-VII Th, CofH 307, Hodson

145 **Parasitic Protozoa** (3 cr; prereq 15 cr zool incl Biol 3, ♯)
Lect VI TTh, Z 211, Wallace
Lab VII-VIII TTh, Z 208

156 Adv Forest Entomology (3 cr; prereq 9 cr, ♯) Hodson

197 Introd Research (ar cr; prereq sr, △)

200 Seminar (1 cr)

241 Insect Embryology, Histology (4 cr; prereq 254, ♯ . . . Zool 59 rec)
Lect I MW, CofH 302, Cook
Lab II-IV MW

243 **Insect Physiology** (4 cr, §Zool 243; prereq 242)
Lect VI WF, CofH 8, Richards
Lab VII-IX WF

255 **Adv Entomology** (3 cr, §Zool 255; prereq 254)
Lect I TTh, Z 211 **(Mpls Campus)**, Mickel
Lab II-III TTh, Z 402 **(Mpls Campus)**

259 **Experimental Ecology Lab** (2 cr; prereq 118 or ¶) Hodson

276 Wildlife Mgt: Big Game (3 cr; prereq 63, 65, Zool 118, Bot 131 or ♯)
I TThS, CofH 307, Marshall

FORESTRY (For)

1A Conservation of Natural Resources (3 cr)
III MWF, GH 203, Kaufert

51 Logging (2 cr)
II TTh, GH 203, Hallgren, Miles

76 **Wood Structure, Identification** (2 cr, §old 54; prereq 75)
—1, VI-VII TTh, GH 211, Rees
—2, VI-VII MW

80 Timber Testing Lab (2 cr, §old 115; prereq 79)
I-II TTh, FP 9, Rees

85 Glued Wood Products (3 cr, §old 57; prereq 76 or ¶)
Lect IV TTh, FP 204, Wallin
Lab VIII-IX Th, GH 203

87 Building Materials Merchandising (3 cr, §old 58; prereq 123, 18 cr BA)
Lect II-III T, FP 204, Wallin
Lab II-III Th

101 Adv Dendrology (3 cr; prereq 4) Rees

104 Watershed, Range Mgt (4 cr; prereq 5 or ♯)
IV MTWF, GH 203, Duncan, Meyer

111 **Application of Statistical Methods** (3 cr; prereq 8 or ♯)
—1, VI-VIII WF, GH 206, R Brown
—2, VI-VIII TTh, GH 206

124 Forest Mgt (3 cr; prereq 123)
II MWF, GH 203, Irving

-3, VIII-IX W

7 **Farm Building Construction** (3 cr)
Lect VI TTh, AgEng 41, Pomroy
—1, Lab VII-IX T, AgEng 48, Pomroy
—2, Lab VII-IX Th, AgEng 48, Pomroy

23 **General Physics** (5 cr; prereq Math H)
Lect II MTWF, AgEng 101, Machmeier
—1, Lab I-II Th, AgEng 102, Machmeier
—2, Lab III-IV Th, AgEng 102, Machmeier

24 **Agricultural Physics I** (4 cr; prereq Math T, 10)
Lect I MWF, AgEng 101, Culmer
—1, Lab VI-VII Th, AgEng 102, Machmeier
—2, Lab IX-X Th, AgEng 102, Machmeier

25 **Agricultural Physics II** (4 cr; prereq 24)
Lect I TThS, AgEng 101, Culmer
—1, Lab II-III S, AgEng 102, Culmer
—2, Lab II-III T, AgEng 102, Culmer
—3, Lab VI-VII T, AgEng 102, Culmer
~~—4, Lab IX-X F, AgEng 102, Culmer~~

39 Rural Sanitation, Water Supply (3 cr; prereq 23, Math H)
IV MWF, AgEng 305, Allred

45 **Engines, Tractors** (3 cr; prereq 23)
Lect VI MW, AgEng 109, Solstad
—1, Dem VI F, AgEng 109, Solstad
—2, Dem VII F, AgEng 109, Solstad

45A **Engines, Tractors Lab** (1 cr; prereq 45 or ¶)
VIII-X F, AgEng 37, Solstad

55 Electricity (2 cr; prereq 23, Math H)
VI TTh, AgEng 101, Flikke

107 Drainage, Irrigation (3 cr; prereq Math H, Soil 1 or 3 or 19)
II MWF, AgEng 305, Allred

114 Probs: Farm Buildings (2-4 cr; prereq 3, 7, 14) Otis, Christopherson

AGRONOMY AND PLANT GENETICS (Agro)

1 Introduction (3 cr)
IV MWF, Agr 202, Smith

2 **Introduction to Laboratory** (1 cr; prereq ¶1)
—1, VI-VII T, Agr 104, Smith
—2, III-IV T, Agr 104, Smith

21 **Grain, Oil Seed Crops** (4 cr; prereq 1)
Lect VI MWF, Agr 202, Robinson
—1, Lab VII MF, Agr 104, Robinson
—2, Lab VII-VIII W, Agr 104, Robinson

30 Genetics (3 cr; prereq soph, Biol 3)
I MWF, HE 227, Lambert

77 Literature (1 cr; prereq sr, 9 cr)
IX W, Agr 408

121 **Grain, Oilseed Crops** (4 cr; prereq 1)
Lect VI MWF, Agr 202, Robinson
—1, Lab VII MF, Agr 104, Robinson
—2, Lab VII-VIII W, Agr 104, Robinson

132 Farm Crops Plant Breeding (4 cr; prereq 30)
VI-VIII TTh, Agr 202, Rinke

201 Research: Farm Crops (ar cr; prereq 121, 123) Behrens, Robinson, Schmid, Smith

202 Seminar: Farm Crops (1 cr; prereq 9 cr farm crops)
IX W, Agr 408

203 Adv Agronomy (3 cr; prereq 21, 23)
VIII-IX W, Agr 408, Behrens, Robinson, Schmid

240 Adv Genetics (3 cr; prereq 131)
II MWF, Agr 408, Snyder

241 Research: Plant Genetics (ar cr) Burnham, Rinke, Ausemus, Thomas, Lambert

246 Seminar: Genetics (1 cr)
VIII-IX F, Agr 408

248 Applied Statistics (3 cr; prereq Biom 101 or PubH 110)
V MWF, Agr 408, Thomas

251 Probs: Application of Statistics (ar cr; prereq 136) Thomas

261 Quantitative Inheritance (3 cr; prereq 131 or 248)
IV MWF, Agr 408, Sentz

ANIMAL HUSBANDRY (AnHu)

1 **Introduction** (4 cr)
II MTWThF, LsPav 100, Meiske, Jordan, Kolari

8 Breeds of Livestock (4 cr; prereq soph, 1)
II-IV TTh, West LsPav, Harvey

30 Meat Selection, Utilization (3 cr; prereq soph)
VI-VII MW, MSh 102, Aunan

37 Livestock Feeding II (3 cr; prereq 36)
III MWF, PetH 110, Smith

37A **Livestock Feeding II Lab** (1 cr; prereq 37 or ¶)
—1, VIII-IX T, LsPav 203, Smith, Greeley
—2, VIII-IX Th, LsPav 203, Smith, Soldevila

61 Current Topics (1 cr; prereq sr)
IX F, PetH 108, Harvey

62 Animal Breeding (3 cr, §162; prereq Agro 30)
IV MWF, PetH 110, Rempel

64 Sheep Production (3 cr, §164; prereq 37, 37A, 62 or ‡)
VI-VII TTh, LsPav 203, Jordan

162 Animal Breeding (3 cr, §62; prereq Agro 30)
IV MWF, PetH 110, Rempel

164 Sheep Production (3 cr, §64; prereq 37, 37A, 62 or ‡)
VI-VII TTh, LsPav 203, Jordan

206 Adv Livestock Feeding I (3 cr; prereq 37, AgBi 6)
VI MWF, PetH 108, Meade

209 Seminar: Animal Husbandry (1 cr)
IX M, PetH 108, Comstock

211 Experimental Methods (3 cr; prereq Agro 248)
IV MWF, PetH 108, Comstock

213 Research: Animal Husbandry (3-9 cr)

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

AGRICULTURAL BIOCHEMISTRY (AgBi)

2 **Quantitative Methods** (5 cr; prereq 8 cr inorg chem)
VI-IX MWF, SnH 116

3 Introduction (3 cr; prereq OrCh 42 or 62)
I TThS, SnH 113, Liener

103 Adv Dairy Chemistry (5 cr; prereq 10)
Lect IV MWF, SnH 113, Jenness
Lab VI-VIII TTh, SnH 102, Jenness

116 Adv Animal Nutrition (3 cr; prereq 6 . . . 120 rec)
III TThS, SnH 113, Schultze

118 Lab Probs: Biochemistry (3-5 cr; prereq ‡)

120 Proteins (3 cr; prereq 119 or ‡)
III MWF, SnH 113, Briggs

121 Carbohydrates (3 cr; prereq 119 or ‡)
II MWF, SnH 113, Smith

130 Proteins Lab (2 cr; prereq 2, ¶120)
VI-VIII TTh, SnH 202, Jenness

131 Carbohydrates Lab (2 cr; prereq 2, ¶121)
VI-VIII MW, SnH 202, Smith

203 Research Probs (2-5 cr; prereq ‡)

205 Topics: Literature (1-3 cr; prereq ‡)

208 Seminar: Cereal Chemistry (1 cr; prereq 108 or ‡) Geddes, Glass

213 Seminar: Dairy Chemistry (1 cr; prereq 103, ‡) Jenness

216 Seminar: Nutrition, Enzymes (1 cr; prereq 116, 123, ‡) Schultze, Liener, Kirkwood

219 Seminar: Colloids (1 cr; prereq 119, ‡) Briggs

220 Seminar: Proteins (1 cr; prereq 120, ‡) Briggs, Jenness

221 Seminar: Carbohydrates (1 cr; prereq 121, ‡) Smith

222 Seminar: Lipides (1 cr; prereq 122, ‡) Lundberg

224 Seminar (1 cr)
IX F, SnH 113, Geddes

AGRICULTURAL ECONOMICS (AgEc)

1 **Introduction** (3 cr)
—1, Lect II MW, DI 15, Hess
—2, Lect IV MW, DI 15, Hess
—1, Rec VI W, DI 118, Hess
—2, Rec I Th, AgEng 108, Elefson
—3, Rec II Th, AgEng 108, Elefson
—4, Rec IV Th, AgEng 108, Elefson
—5, Rec I F, DI 118, Elefson
—6, Rec II F, DI 118, Elefson
—7, Rec IV F, AgEng 108, Elefson

2 **Principles** (3 cr; prereq 1)
—1, Lect II TTh, DI 15, Hess
—2, Lect IV TTh, DI 15, Hess
—1, Rec VI Th, DI 255, Hess
—2, Rec VIII Th, DI 255, Thompson
—3, Rec IX Th, DI 255, Thompson
—4, Rec I F, DI 255, Thompson
—5, Rec II F, DI 255, Thompson
—6, Rec IV F, DI 255, Thompson
—7, Rec V F, DI 255, Thompson

25 **Accounting** (4 cr; prereq soph, regis AFHE)
Lect VII MWF, HH 109, Dahl
Lab VIII-IX W, HH 210, Dahl

40 Marketing Organization (3 cr; prereq soph, 2)
II MWF, AgEng 108, Fienup

80 Farm Accounting (3 cr; prereq soph with ‡)
I MWF, HH 109, Nodland

101 Statistical Methods for Social Sciences (4 cr; prereq Biom 100)
III MWF, HH 9, Learn, lab ar

131 Market Prices (3 cr; prereq 30)
3:00-4:15 TTh, HH 210, Cochrane

141 Dairy Marketing (3 cr; prereq 40)
II MWF, HH 210, Koller

143 Livestock, Poultry Marketing (3 cr; prereq 40)
IV MWF, HH 210, Fienup

170 Land Economics (3 cr; prereq 110 or ‡)
VII MWF, HH 100, Raup

180 Farm Accounting (3 cr, §80; prereq grad or ‡)
I MWF, HH 109, Nodland

221 Farm Mgt Research Methods (3 cr)
1:30-2:45 TTh, HH 109, Day

270 Seminar: Land Tenure (3 cr)
4:00-5:15 TTh, Raup, Bade

AGRICULTURAL ENGINEERING

Mechanized Agriculture (MeAg)

2 **Technical Drawing Probs** (1 cr, §3; prereq 1 yr HS mech draw)
III-IV T, AgEng 303, Christopherson

3 **Technical Drawing** (3 cr, §2)
III-IV MWF, AgEng 303, Christopherson

4 **Mechanical Training** (4 cr)
Lab VIII-IX MWF, AgEng 20, Olson
—1, Lect VI-VII M, AgEng 108, Olson
—2, Lect VI-VII W, AgEng 108, Olson
—3, Lect VI-VII F, AgEng 108, Olson

Choice of classes—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll. Many courses have a choice of laboratory or recitation periods, but only a single lecture period for all students taking the course. Occasionally there will be a choice of both lecture and laboratory or recitation periods. The choice of the laboratory or recitation section will determine the lecture section whenever the lecture sections have no identifying section number.

Examples:

—1, I TThS	Lect III MWF	Lect II T	—1, Lect II T
—2, II MWF	—1, Lab V-VI M	—1, Lab III-IV T	—2, Lect II Th
—3, IV TThS	—2, Lab V-VI W	—2, Lab III-IV Th	—1, Lab III-IV T
		Lect II Th	—2, Lab III-IV Th
		—3, Lab VI-VII T	—3, Lab VI-VII T
		—4, Lab VI-VII Th	—4, Lab VI-VII Th

Missing information—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

Changes—Changes made subsequent to publication of the *Class Schedule* are published in the Official Daily Bulletin, which appears in the *Minnesota Daily*. Room changes are posted on classroom doors.

Important Note to *STUDENTS*—

Accurate registration is your personal responsibility. You will receive credit in only those courses for which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel it on a regular cancellation form.

Colleges of the University reserve the right to cancel courses in which enrollment is not sufficient to warrant giving the course.

Do not register from the *Class Schedule* alone. Your college bulletin contains full course descriptions, college rules and requirements, and other information necessary for sound program planning.

110 Seminar (1 cr; prereq 102)
V-VI M, JacH 104, Dawson, others

111 Conference on Autopsies (1 cr; prereq 102)
V-VI T, JacH 104, Dawson

113 Surgical Pathology (ar cr; prereq 102)
Hebbel

201 Research (ar cr) Dawson

PEDIATRICS (Ped)

121 Clinical Diagnosis in Infancy, Childhood (1 cr; prereq 120)
8:00-8:50 W, Hosp EustisAmph, Anderson, others

124 Junior Clinical Clerkship (8 cr; prereq regis Med) Anderson, others

135 Senior Clinical Clerkship (3 cr; prereq regis Med) Anderson, others

200 Seminar (1½ cr)
3:45 T, Anderson, others

202 Clinic (ar cr; prereq ‡) Anderson, others

204 Residency (ar cr; prereq ‡) Anderson, others

206 Pediatric Special Interest (ar cr) Anderson, others

208 Research (ar cr; prereq ‡) Anderson, others

PHARMACOLOGY (Phcl)

10 Pharmacology for Nursing Students (2 cr, †9-10; prereq 9)
Lect VI Th, MH 214, Cranston
Lab VII-VIII Th, MH 101

56 Pharmacology of Official Medicinal Agents (3 cr; prereq 55)
IV MWF, WuH 201, White

101 Introduction (3 cr; prereq Phsl 106-107)
Lect VI ThF, VIII T, Owre 15, Bieter, Wright, Cranston (for Med students)

105 Gen, Experimental Pharmacology (6 cr; prereq 101)
Lect I MWF, 1:00-2:00 T, Owre 15, Wright
—1, Lab II-IV MW, MH 129, Wright (for Dent students)
—2, Lab VI-VIII MW, MH 101 (for Pharm students)

109 Problems (ar cr; prereq ‡)

112 Forensic Toxicology (6 cr; prereq 110) Wright

124 Special Systems (3 cr; prereq ‡) Wright

203 Research (ar cr; prereq 101, 102 or ‡)

PHYSICAL MEDICINE AND REHABILITATION (PMed)

2B Orientation to Physical Therapy, Rehabilitation (1 cr; prereq regis OT)
VIII T, Mayo 825, Moen

4 Orientation to Occupational Therapy (1 cr; prereq regis PT)
VI T, Hosp D138, Esch

58 Bandaging, Aseptic, Isolation Techniques (2 cr; prereq regis PT)
I-II TTh, Mayo 825, Pohtilla

60B Electrotherapy (3 cr; prereq 60A)
Lect III M, Mayo 825, Schoening
Lab III-IV WF, Allison

64 Senior Clinic (1 cr; prereq 63)
I T, Mayo 810, Kottke

68 Applied Anatomy (3 cr; prereq regis PT)
III T, II-III Th, Mayo 810, Knapp

70 Massage (3 cr; prereq regis PT)
Lect V M, Hosp D138, Kosiak
Lab III-IV TTh, Mayo 825

72 Theory of Occupational Therapy (3 cr; prereq 71)
Lect I TTh, Hosp D138, Esch
Lab I-II F

75 Techniques of Occupational Therapy (3 cr; prereq 74)
VII-VIII MWF, Hosp D138, Lepley, Eliason

80C Therapeutic Exercises (4 cr; prereq 80B)
Lect II T, I Th, Mayo 825, Mundale
Lab V-VI TTh

83 Muscle Function, Tests, Measurements (5 cr; prereq regis OT or PT)
—1, Lect VII TTh, Mayo 825 (for OT students) Pohtilla
Lab V-VI MWF, Mayo 825, Pohtilla, Lepley
—2, Lect VII TTh, Mayo 825, Pohtilla (for PT students)
Lab I-II MWF, Mayo 825, Pohtilla, Allison

88 Clinical Practice (3 cr; prereq 87)
I-III MWF, Moen

91 Conference (1 cr; prereq regis PT) Moen

92 Preliminary Hospital Practice in Occupational Therapy (3 cr; prereq regis OT)
Conf III F, Hosp D138, Eliason
Lab I-III MW

95 Clinical Affiliation (18 cr; prereq 94) Eliason

98 Probs Physical Therapy (3 cr; prereq 97)
V-VIII MWF, Skowlund

123 Senior Clerkship (1 cr; prereq regis Med)
1:00-3:00 pm MTThF, Mayo 810, Kottke

200 Service (ar cr) Kottke, Gullickson

203 Clinic: Poliomyelitis (ar cr)

204 Clinic: Peripheral Vascular Disease (ar cr)

205 Readings (1 cr)
I M, Mayo 860, Kottke

206 Conference (1 cr) Kottke

210 Research (ar cr) Kottke, Kubicek

220 Seminar (ar cr)
IV M, Hosp EustisAmph, Kubicek

PHYSIOLOGICAL CHEMISTRY (PhCh)

101 Physiological Chemistry (7 cr; prereq 100)
Lect IV MTWF, Owre 15
—1, Lab I-III MW, MH 201
—2, Lab I-III ThS, MH 201
—3, Lab VI-VIII WF, MH 201

102 Physiological Chemistry for Veterinary Medicine Students (6 cr; prereq org chem)
Lect IV MT, Owre 111, VI-VII Th, VetS 257
Lab VI-VIII M, I-III T, MH 201

105 Physiological Chemistry for Dental Students (6 cr; prereq 104)
Lect VI TWThF, Owre 12, Singer
Lab VII-IX TTh, MH 201

153 Problems (ar cr; prereq 101, ‡)

200 Seminar: Physiological Chemistry (1 cr)
V T, MH 214

205 Research (ar cr)

209 Quantitative Histochemistry (3 cr; prereq 101, histology or ‡)
VIII MWF, MH 128, Glick

212 Quantitative Histochemistry Lab (ar cr; prereq 101, ‡) Glick

236 Seminar: Radio-Isotope (1 cr, §Rad 236)

PHYSIOLOGY (Phsl)

51 Human Physiology for Nursing, Physical Therapy Students (6 cr; prereq 1 yr chem, zool)
Lect I MWThF, Owre 111, Hinshaw
—1, Lab VI-VIII Th, MH 101
—2, Lab II-IV S, MH 101
Conf II F, Owre 111

60 Human Physiology (6 cr; prereq physiol chem, human or mammalian anat)
Lect I MWThF, JacH 304, Grim
Lab II-IV Th, MH 101
Conf II F, JacH 304

101 Human Physiology for Dental Students (10 cr; prereq physiol chem, human or mammalian anat)
Lect IV MTWThFS, Owre 12
Lab I-III TF, VI-VIII TF, MH 101
Conf VI Th, JacH 104

112 Hemodynamic Measurements (3 cr; prereq ‡) Evans, Swanson

113 Probs: Physiology (ar cr; prereq 106-107)

202 Readings (ar cr)

203 Research (ar cr)

210 Topics: Permeability (ar cr; prereq 106-107, ‡) Lifson, Johnson, Grim

211 Topics: Heart, Circulation (ar cr; prereq 106-107, ‡) Visscher

212 Topics: Respiration (ar cr; prereq 106-107, ‡) Brown

215 Topics: Intermediary Metabolism (ar cr; prereq 106-107, ‡) Pilgeram

PSYCHIATRY AND NEUROLOGY (NPsy)

101 Neurology (1 cr, †3 qtrs; prereq regis Med or grad clin psy)
8:00-8:50 S, Hosp ToddAmph, Baker

103 Junior Clinical Clerkship (8 cr; prereq regis Med)

120 Basic Behavioral Science (1 cr, †3 qtrs; prereq regis Med)
VI T, Hosp ToddAmph

121 Behavior Pathology, Psychiatric Methods (1 cr, †2 qtrs for Med; prereq regis Med or grad clin psy)
VIII M, Hosp EustisAmph

145 Readings: Psychiatry (ar cr; prereq regis Med)

145X Readings: Neurology (ar cr; prereq regis Med)

146 Psychiatric Probs: Gen Medical Practice (ar cr; prereq regis Med) Kiesler

155 Therapeutics in Neurology (2 cr; prereq regis Med) Baker

201 Clinical Seminar for Psychologists (1 cr; prereq ‡)

202 Case Conference (1 cr; prereq ‡)

203 Psychometric Clerkship (ar cr; prereq ‡)

204 Seminar: Interm (1 cr; prereq ‡)

205 Seminar: Adv (1 cr; prereq ‡) Hathaway

208 Clinical Neurology (ar cr)

209 Research (ar cr)

212 Survey of Neuropathology (1 cr, §151 or Path 119)

214 Child Neurology (1 cr)

218 Neurological Language Disorders (1 cr) Schuell

220 Adv Clinical Neurology (1 cr)

221 Neurochemistry (1 cr)

223 Brain Tumors (1 cr)

225 Neuro-ophthalmology (2 cr)

226 Neurological-Neurosurgical Conference (1 cr, §Rad 163 or Surg 318)

228 Research: Neuropathology (ar cr)

230 Electroencephalography (1 cr)

231 Applied Electroencephalography, Myography (1 cr)

232 Applied Neuroroentgenology (1 cr)

233 Applied Neuropathology (1 cr)

238 Neurological Clinical Pathological Conference (1 cr)

240 Neuropathology Conference (1 cr)

251 Clinical In-Patient Psychiatry (ar cr; prereq MD degree)

252 Clinical Out-Patient Psychiatry (ar cr; prereq MD degree)

253 Clinical Child Psychiatry (ar cr; prereq MD degree)

254 Adv Clinical In-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)

255 Adv Clinical Out-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)

256 Adv Clinical Child Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
257 Special Assignments (1 cr; prereq 251, 252, 253, MD degree)
258 Research (ar cr; prereq MD degree or ‡)
261 Readings (1 cr; prereq MD degree or ‡)
262 Clinical Observation, Evaluation (1 cr; prereq MD degree or ‡)
265 Personality Development, Psychodynamics (1 cr; prereq MD degree or ‡)
266 Therapeutic Dynamics in Hospital Psychiatry (1 cr; prereq MD degree or ‡)
271 Readings: Psychoanalysis I (1 cr; prereq MD degree or ‡)
272 Sector Psychotherapy (1 cr; prereq MD degree or ‡) Glueck
273 Survey of Psychosomatic Medicine (1 cr; prereq MD degree or ‡) Magraw
274 Group Therapy (1 cr; prereq MD degree or ‡) Guzie
275 Collaborative Theory (1 cr; prereq MD degree or ‡)
281 Readings: Psychoanalysis II (1 cr; prereq MD degree or ‡) Hambidge
283 Seminar: Special Topics (1 cr; prereq MD degree or ‡)
291 Seminar: Current Literature (1 cr; prereq MD degree or ‡) Simon
292 Special Supervision in Psychotherapy (1 cr; prereq MD degree or ‡)
293 Probs in Teaching Psychiatry (ar cr; prereq MD degree or ‡) Kiesler
294 Seminar: Adv Critical Examination of Systems, Theories (1 cr; prereq MD degree or ‡) Hathaway

PUBLIC HEALTH (PubH)

2 **Personal, Public Health** (2 cr, §3 or 3A or 3B or 50 or GC 10C)
VI MW, Bo B6, Reiter
3 Personal Health (2 cr, §2 or 3A or 3B or 50 or GC 10C)
VI TTh, ScH 108, Thomson
50 Personal, Community Health (3 cr, §2 or 3 or 3A or 3B or 4 or 5 or 51 or 52 or 100 or GC 10C)
III MWF, C 100, Thomson
51 Community Hygiene (3 cr, §4 or 5 or 50 or 100; prereq 3 or 3A or GC 10C)
IV MWF, MMA 100, Cowan
52 **Home Nursing, Family Care** (1 cr; prereq HE students, 3B or 50 or ‡)
—1, VIII-IX T, MeH 01, Simons
—2, VIII-IX Th, MeH 01, Simons
53 Introduction (5 cr; prereq regis nurs or nurses, 3A or 50, bact)
IV MTWThF, MMA 125, Anderson, Thomson
58 Maternal, Child Health (3 cr; prereq nurses, 53, 62, 62A or 100, 100A or ¶53)
VI-VII M, VI F, Mayo 1205, Stocking
59 Health of School Child (2 cr; prereq 3A, 4 or 51...or GC 10C, 4 or 51 or 50 or 52 or 100 or ¶5)
III TTh, Owre 12
62A Public Health Nursing I (3 cr; prereq PubH nurs, ¶53, 65, 133, Soc 50)
—1, II-III, VI-VII Th, Mayo 1203, Blanchard
—2, II-III, VI-VII Th, Mayo 1260, Fredlund
—3, II-III, VI-VII F, Mayo 1238, Cline
62N Public Health Nursing (3 cr; prereq 100, regis Nurs)
—1, II-III, VI-VII Th, Mayo 1238, Pennebaker
—2, II-III, VI-VII F, Mayo 1260, E Anderson
—3, II-III, VI-VII F, Mayo 1203, Blanchard
63A Public Health Nursing II (3 cr; prereq regis PubH nurs, 62A, 65)
I MWF, Mayo 1250, Murphy
65 Field Practice in Public Health Nursing (12-15 cr; prereq 53 or 100A, 62 or 62A or 63, 133, Soc 50, C aver)
69 The Nurse in the School (3 cr; prereq 63, 63A, 53 or 100A or ‡)
VI-VII T, VI Th, Mayo 1205, Stocking
77 Dental Public Health (2 cr; prereq 76)
8:00-9:00 MTh, Owre 113, Jordan
92 Physiological Hygiene (4 cr, †91-92; prereq 91)
Lect IV MWF, Owre 113, Taylor
Lab VII T, MMA 100
100B Elements of Public Health II (1-6 cr; prereq 100A or ‡)
IV-V T, MMA 100, Anderson
101 Admin, Field Work (2 cr; prereq sr Med) Thomson
102A Environmental Sanitation (2 cr; prereq 100A or ¶, ‡)
I TTh, JacH 104, Bosch
103 Bacteriology (ar cr; prereq grad, Bact 102, 116, ‡)
I-II MWF, SBH Lab, Bauer
104 Epidemiology (3 cr; prereq 100A, 140 or 111)
II-III TTh, III S, MMA 100, Schuman
106 Administration (3 cr; prereq 100A)
I MWF, MMA 125, Anderson
108 Biostatistics (2 cr)
VI-VII TTh, Mayo 1250, Bearman
112A Public Health Engineering—Plan Examinations: Water Supplies (1 cr, §114; prereq engr degree, 102, ‡)
IV F, Mayo 1114, Bosch
113A Public Health Engineering—Field Investigations: Water Supplies (2 cr, §114; prereq engr degree, 102, ‡)
IV MW, Mayo 1205, Bosch
115 Food Sanitation (3 cr; prereq 100A, ‡)
VI-VIII F, Mayo 1115, Olson
118 Sanitary Biology (3 cr; prereq 117)
VI-IX MW, Mayo 1138, Olson
120 Biostatistics II (3 cr; prereq 110 with grade C, ¶121)
III MWF, Owre 12, Brown

121 **Biostatistics Lab II** (2 cr; prereq ¶120)
Lect III TTh, Owre 111, Iversen
—1, II MWF, AE 305
—2, IV MWF, AE 305
—3, VI MWF, AE 305
—4, VI-VIII T, AE 305

123 Topics (ar cr; prereq ‡)

133 Mental Health (3 cr; prereq 62 or 62A or PubH nurs or ‡)
—1, II MWF, Owre 12, Cline
—2, VI-VIII F, Mayo 1210, Williams

135 Conservation of Hearing (1 cr; prereq 62 or 62A)
II F, MH 128, Boies

137 Dental Health (1 cr; prereq 62 or 62A)
II M, MH 128, Jordan

152 Industrial Hygiene Engineering (3 cr; prereq ‡)
II MW, II-III F, Mayo 1205, Michaelsen

155 Introd to Air Pollution Probs (2 cr; prereq ‡)
III MW, I-II S, Mayo 1205, Paulus

163 Organization, Mgt of Hospitals (6 cr; prereq 162)
II-III MTWF, VI-VII F, I-II S, Mayo 1250, Stephan, Hamilton

166 Hospital Clerkship (5 cr)
VI-IX MW, I-IV Th, Mayo 1250, Stephan

169 Administrative Residency (ar cr) Stephan

170 Seminar: Public Health Nursing (2 cr; prereq health officers, others ‡)
VI-VII Th, Mayo 1210, Murphy

172 Studies: Public Health Nursing (3 cr; prereq 171) Murphy

174A Seminar: Admin, Supervision in Public Health Nursing (2 cr; prereq PubH nurs, 106, 171, 175)
II-III W, I TTh, Mayo 1220, Murphy

176 Adv Practice in Public Health Nursing (3 cr; prereq 175)
Lect VI-VII Th, Mayo 1220, Williams
—1, VI-VII M, Mayo 1238, Von Bergen
—2, VI-VII M, Mayo 1203, Cline
—3, VI-VII T, Mayo 1238, Von Bergen
—4, VI-VII T, Mayo 1203, Cline

178 Seminar: Mental Health (ar cr; prereq ‡)

182 Principles, Methods in Community Health Education (3 cr; prereq 181)
VI-VII MW, Mayo 1210, Grout

190 Field Work: Health Education (ar cr; prereq 183, 227) Grout

192 Physiology of Exercise (4 cr; prereq 92 or Bhsl 103, ‡) Taylor

195 Aspects of Cardiovascular Disease (3 cr; prereq ‡)
VII-VIII MW, StadGate 27, Keys, Grande

196 Nursing in Cardiovascular Disease (3 cr; prereq nurs degree) McIntyre

200 Research (ar cr)

201 Topics: Biometry (ar cr)

202 Seminar: Physiological Hygiene (1 cr)

205 Research Design in Biometry (3 cr; prereq 130)
II MF, Mayo 1220, II W, Mayo 1210, McHugh

206 Theory of Research Design in Biometry (2 cr; prereq calc, ¶205)
II TTh, Mayo 1220, McHugh

210 Seminar: Public Health (ar cr)
VIII-IX Th, MMA 100

211 Seminar: Biometry (ar cr)

212 Seminar: Public Health Engineering, Sanitation (ar cr; prereq ‡)
VI-VII Th, Mayo 1108, Bosch

213 Seminar: Epidemiology (ar cr; prereq ‡)
VI-VIII F, Mayo 1158, Schuman

214 School Health Programs (2 cr; prereq 107 or ‡)
IV MF, Mayo 1220, Stocking

218 Biomedical Measurement Problems, Assays (3 cr; prereq 120 or ‡)
I MWF, Mayo 1220, Johnson

219 Theory of Biomedical Measurement Problems, Assays (2 cr; prereq ¶218, ‡)
I TTh, MH 128, Johnson

220 Readings: Probs of Physiological Hygiene (ar cr; prereq ‡) Keys, others

227 Probs: Community Health Education Program (ar cr; prereq ‡) Grout

230 Field Practice: Environmental Sanitation (ar cr; prereq ‡) Bosch

251 Foundations of Biometry (2 cr; prereq 208, 219 or ‡)

290 Research: Physiological Hygiene, Related Areas (ar cr)

RADIOLOGY (Rad)

102 X-Ray Conference (1 cr; prereq ‡)
5:00-6:00 T, Hosp EustisAmph, Peterson, others

104 Radiological Physics I (2 cr; prereq 1st yr res)
4:00-5:00 T, Mayo C239, Mosser, Marvin, Loken

111 Medical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 M, Hosp ToddAmph, Peterson, others

121 Roentgen Diagnosis, Radiation Therapy (2 cr, †2 qtrs; prereq regis Med)
8:00-8:50 MF, Hosp ToddAmph, Peterson, others

124 Pediatric-Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 T, Hosp EustisAmph, Feinberg, Lester

127 Radiology Clerkship (1 cr; prereq regis Med)
1:00-3:00 MW, Mayo B239, Lester, others

135 Surgical Roentgenologic Conference for Graduate Students (1 cr)
9:00-9:50 S, Hosp ToddAmph, Carey, Peterson, others

163 Neurosurgical-Roentgenologic Conference for Graduate Students (1 cr)
1:00-2:30 F, Hosp ToddAmph, Peterson, others

185 Interpretation of Roentgenograms (1 cr; prereq regis Med, 121)
2:00-4:00 TTh, Mayo B236, Peterson, others

188A Roentgen Diagnosis of Diseases of Bones, Joints (1 cr; prereq regis Med)
4:00-5:00 Th, Mayo B239, Olfelt

200 Research: Roentgenology (ar cr) Peterson, others

201 Neuroradiology (2 cr)
7:00-9:00 pm T, MMA 100, Peterson

202 Cardiovascular Roentgenologic Conference (1 cr)
2:30-4:00 Th, Hosp EustisAmph, Lester

204 Tumor Clinic Conference (ar cr)
11:00-12:00 Th, Hosp ToddAmph, Mosser, others

205 Research: Radiation Therapy, Nuclear Medicine, Radiobiology (ar cr; prereq ‡) Mosser, others

206 Roentgenoscopy (3 cr) Peterson, others

207 Roentgen, Radium Therapy (ar cr) Mosser, others

209 Roentgen Diagnosis (3 cr) Peterson, others

210 Roentgen Technique (2 cr) Peterson, others

217 Roentgenologic Conference on Chest Diseases (1 cr)
4:00-5:30 F, Hosp ToddAmph, Greenspan

218 Seminar: Radiobiology (1 cr; prereq ‡) Mosser, others

220 Urologic-Roentgenologic Conference (1 cr)
5:00-6:00 M, Hosp EustisAmph, Baggenstoss, Creevy, Peterson

236 Seminar: Radioactive Isotope (1 cr, §PhCh 236)
12:30-1:20 W, Mayo C239, Mosser, Marvin, Loken

237 Radiological Physics II (2 cr; prereq 104)
4:00-5:00 F, Mayo C239, Marvin, Loken

238 Roentgen-Surgical Pathology Conference (1 cr)
4:00-6:00 Th, Hosp ToddAmph, Peterson, Lober, others

240 Radiation Therapy Conference (1 cr)
4:00-5:00 M, Mayo C239, Mosser, others

SURGERY (Surg)

129 Surgical Clinics for Juniors (1 cr, †3 qtrs; prereq regis Med)
V T, Hosp ToddAmph, Wangensteen, others

135 Junior Clinical Clerkship (8 cr; prereq regis Med) Wangensteen, others

136 Surgical Specialties (6 cr; prereq regis Med) Peyton, French, Reiser, Creevy, Moe, Arnesen

137 Gen Surgery Conference (1 cr; prereq regis Med)
VIII M, Mayo SurgLib, Aust

138 Clerkship in Fractures, Dislocations (2 cr; prereq regis Med) Hitchcock, MacLean

140 Orthopedic Surgery in Children (1 cr; prereq regis Med)
I W, Hosp ToddAmph, Moe

142 Orthopedic Surgery (1 cr; prereq regis Med)
I W, Hosp ToddAmph, Moe

145 Orthopedic Outpatient Clinic (1 cr; prereq regis Med) Moe

163 Neurosurgery Clerkship (1 cr; prereq regis Med) Peyton, others

170 Clinical Clerkship in Urology (1 cr; prereq regis Med) Creevy

173 Urology (1 cr, †2 qtrs; prereq regis Med)
I F, Hosp EustisAmph, Creevy

200 Out-Patient Clinic in Surgery (1 cr) Wangensteen, others

202 Applied Surgical Anatomy on Cadaver (1 cr)
VI M, Mayo SurgLib, JacH 305, Thal

203 Proctoscopy, Sigmoidoscopy (1 cr) Wangensteen, others

204 Tumor Clinic (1 cr) Wangensteen, others

205 Surgical Diagnosis (1 cr) Wangensteen, others

208 Surgical Service (1 cr) Wangensteen, others

211 Operative Surgery (1 cr) Wangensteen, others

214 Surgical Ward Conference (1 cr) Wangensteen, others

215 Roentgenological-Surgical Conference (1 cr)
II-IV S, Hosp ToddAmph, Wangensteen, others

216 Research: Surgery (1 cr) Wangensteen, others

217 Seminar: Surgery (1 cr) Wangensteen, others

218 Medical, Surgical Pathological Conference (1 cr)
IV W, Hosp ToddAmph, Wangensteen, others

219 Surgical Literature Conference (1 cr)
I Th, SurgLib, Wangensteen, others

220 Peripheral Vascular Surgery (1 cr) Wangensteen, others

221 Seminar: Surgery-Physiology (1 cr)
IX T, MMA 100, Wangensteen, others

250 Urological Surgery (4 cr) Creevy, others

251 Cystoscopy, Urological Diagnosis (4 cr) Creevy, others

252 Urological Conference (4 cr) Creevy, others

253 Research: Urology (4 cr) Creevy, others

254 Urological Seminar (3 cr) Creevy, others

255 Urological Radiological Conference (3 cr) Creevy, others

256 Urological Pathological Conference (3 cr) Creevy, others

305 Neurosurgical Diagnosis (3 cr) Peyton, others

311 Operative Neurosurgery (4 cr) Peyton, others

316 Neurosurgical Research (3 cr) Peyton, others

318 Neurosurgical Conference (1 cr) Peyton, others

405 Orthopedic Diagnosis (ar cr) Moe, others

408 Orthopedic Service (ar cr) Moe, others

411 Orthopedic Operative Surgery (ar cr) Moe, others

416 Orthopedic Research (ar cr) Moe, others

UNATTACHED COURSES

Biophysics (BPhy)

138 Seminar: Gen Physiology, Biophysics (ar cr)

170 Radiation (3 cr; prereq ‡)

204 Research: Biophysics, Physiology of Radiation (ar cr)

221 Research: Biophysics (ar cr)

222 Research: Biophysics (ar cr)

223 Research: Biophysics (ar cr)

Cancer Biology (CBio)

140 Seminar (1 cr)
12:30-1:30 Th, LyonL 271, Halberg

141 Problems (ar cr) Bittner

207 Research (ar cr) Bittner

COLLEGE OF PHARMACY

Pharmaceutical Chemistry (PhmC)

1 Inorganic Pharmaceutical Products (4 cr; prereq InCh 11)
Lect I MW, WuH 202, Soine
Rec I F, WuH 202, Soine
Lab VI-VIII MTh, WuH 301, Soine

54 Quantitative Pharmaceutical Chemistry (5 cr; prereq soph, 2, InCh 11)
Lect III MWF, WuH 202, DiGangi
Lab VI-VIII T, VII-IX W, WuH 1, DiGangi

162 Organic Medicinal Agents (3 cr; prereq 161)
V MWF, WuH 202, Gisvold

165 Analytical Methods (3 cr; prereq 164)
Lect IV W, WuH 301, DiGangi
Lab II-IV T, I-III Th, WuH 301, DiGangi

201 Seminar (1 cr) Gisvold

206 Adv Medicinal Chemistry (3-6 cr; prereq 205) Gisvold

213 Research Probs (ar cr; prereq OrCh 63 or ‡)

Pharmaceutical Technology (PhmT)

1B Orientation (1 cr)
I T, WuH 202, Hager, Miller

55 Pharmaceutical Preparations (4 cr; prereq 54)
Lect II MW, WuH 202, Hadley
Lab VII-IX MF, WuH 302, Hadley, Rippie

59 Prescription Compounding (6 cr; prereq 58)
Lect II MWF, IV Th, WuH 201, Netz
Lab VI-IX T, VI-VIII Th, WuH 205, Netz, Miller
Rec VI-VII T, VI Th, WuH 201, Netz

69 Hospital Pharmacy (3 cr; prereq 68)
Lect IV W, Mayo A355, Bruce
Lab II-IV T, I-III Th, Mayo D189, Bruce

167 Pharmaceutical Manufacturing (3-5 cr; prereq 166)
Lect IV W, WuH 104, Miller
Lab II-IV T, I-III Th, WuH 2A, Miller, Olson

201 Seminar (1 cr)

214 Research (ar cr) Miller

219 Extraction, Distribution, Partition Coefficients (3-5 cr; prereq 218) Miller

222 Heterogeneous Systems in Pharmacy (3-5 cr; prereq 221) Hadley

Pharmacognosy (Phcg)

2 Vegetable Drug Histology (3 cr; prereq 1)
Lect II WF, WuH 104, Fischer, Jonas
Lab VII-IX F, WuH 104, Fischer, Jonas

59 Biological Products (3 cr; prereq sr, Bact 53)
III MWF, WuH 104, Fischer

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AmSt)

91 Proseminar (3 cr; prereq 90)
VIII-IX M, FolH 10, Weber
201 Introduction (3 cr; prereq 200)
VIII-IX T, FolH 10, Kwiat, Noble
212 Seminar (3 cr; prereq 211)
VIII-IX W, FolH 10, Foster

ANTHROPOLOGY (Anth)

1A Introduction: Prehistoric Man, Culture (5 cr)
Lect IV MTWF, MNH Aud, Johnson
—1, I Th, ForH 85
—2, II Th, ForH 115
—3, III Th, ForH 115
—4, III Th, ForH 130
—5, IV Th, ForH 115
—6, IV Th, ForH 15
—7, IV Th, ForH 50

2A Introduction: Cultural Anthropology (5 cr)
Lect II MWThF, MNH Aud, Gibbs
—1, I T, ForH 85
—2, II T, ForH 115
—3, II T, ForH 185
—4, II T, ForH 20
—5, III T, ForH 115
—6, III T, ForH 130
—7, IV T, ForH 130

80 The American Indian (3 cr; prereq...2A or 100 rec)
II MWF, ForH 185, Johnson
118 Pre-Columbian Civilizations of Middle America (3 cr; prereq 1A or 100 or △)
VI MWF, ForH 85, Johnson
136 Prehistoric Archaeology of Old World (3 cr; prereq 1A or 100, △)
VI-VII TTh, ForH 15, Johnson
150 Contact of Cultures (3 cr; prereq 1A, 2A or 100)
IV MWF, ForH 30, Merrill
154 Ethnological Field Techniques (3 cr; prereq ♯)
VI-VII TTh, ForH 170, Gibbs
160 Law-ways of Primitive Man (3 cr; prereq 2A or 100...or none for law or other soc sci maj)
III MWF, ForH 120, Hoebel
164 Social Anthropology (3 cr; prereq 2A or 100)
IV MWF, ForH 170, Gibbs
165 **Culture, Personality** (3 cr; prereq sr, 2A or 100 or △...or none for PubH nurs, psy, soc, SW maj)
II MWF, ForH 20, Spencer
171 **Physical Anthropology** (4 cr)
Lect IV TTh, ForH S20, Murrill
Lab VI-VII TTh, ForH S20, Murrill
173 Human Biology (3 cr; prereq 1A or △)
III MWF, ForH 160, Murrill
181 Descriptive Linguistics (3 cr; prereq 2A or 100 or △)
III MWF, ForH 175, Spencer
200 Anthropology, Scientific Method (3 cr)
7:00-9:30 pm T, ForH 175, Hoebel
205 Seminar Anthropology (3 cr)
VIII-IX W, ForH 175

ART (Art)

1 Principles (5 cr, §50)
Lect III MWF, NH 45, Eitner, lab ar
2 **Ancient, Medieval Art** (3 cr; prereq 1)
III MWF, J 207b, Thomas
10 **Photography** (3 cr)
I-II MWF, J 2, Liebling
11 **Photography** (3 cr; prereq 10 or prac exper, △)
III-IV MWF, J 2, Liebling
20 Drawing (2 cr)
IV-V TTh, J 200a, Quirt
24 Drawing, Design I (3 cr; prereq 23)
—1, I-II MWF, J 104, Downs
—2, II-III TThS, J 200, Quirt
—3, III-IV MWF, J 104, Young
—4, IV-V MWF, J 4, Downs
—5, VI-VII MWF, J 104, Young
24A Drawing, Painting for Architects I (2 cr; prereq 23A)
—1, II-IV TTh, J 11, Rollins
—2, II-IV TTh, J 10, Smith
—3, III-V TTh, J 104, Kutzik
—4, VIII-IX TTh, J 104, Young
32 **Printmaking** (3 cr)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers
41 **Sculpture I** (3 cr; prereq 40)
—1, I-II MWF, HolB 154, Morton
—2, III-IV MWF, HolB 154, Morton
—3, I-II TThS, HolB 154, Haskin
—4, III-IV TThS, HolB 154, Haskin
45 **Ceramic Processes** (3 cr)
—1, I-II MWF, HolB 134, MacKenzie
—2, III-IV MWF, HolB 134, MacKenzie
50 Visual Arts (3 cr, §1)
III MWF, NH 45, Eitner
51 **Pic orial Design** (2 cr; prereq 25)
II-III MW, J 4, Booth
53 **Drawing II** (3 cr; prereq 52)
VI-VII MWF, J 11, Rollins
54 **Life Drawing** (3 cr; prereq 52, △)
VI-VII MWF, J 10, Rollins
55 **Life Drawing** (3 cr; prereq 54)
VI-VII MWF, J 10, Rollins
57 **Renaissance, Baroque Art: 1500-1650** (3 cr; prereq 1 or 50 or △)
IV MWF, J 207b, Waldfogel

60B Water Color (2 cr; prereq 20 or 23 or △)
III-IV MF, J 11, Rollins

61A Drawing, Painting for Architects II (2 cr; prereq 60A)
—1, VI-VIII T, II-IV S, J 4, Kinsey
—2, VI-VIII T, II-IV S, J 11, Munoz
—3, 6:00-9:00 pm TTh, J 4, Lind

61B Water Color (2 cr; prereq 60B)
III-IV MF, J 11, Rollins

62B Water Color (2 cr; prereq 61B)
III-IV MF, J 11, Rollins

67 Modern Art: Realism, Impressionism (3 cr; prereq 1 or 50 or △)
VI MWF, J 207b, Waldfogel

70 Oil Painting (3 cr; prereq 54)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

71 Oil Painting (3 cr; prereq 70)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

72 Oil Painting (3 cr; prereq 71)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

80 Sculpture II (3 cr; prereq 42)
VI-VII MWF, HolB 154, Morton

80A Direct Metal Sculpture, Constructions (3 cr; prereq 42 or △)
VI-VII MWF, HolB 154, Morton

81 Sculpture II (3 cr; prereq 80)
VI-VII MWF, HolB 154, Morton

81A Metal Sculpture in Relief, Repousse (3 cr; prereq 80A)
VI-VII MWF, HolB 154, Morton

82 Sculpture II (3 cr; prereq 81)
VI-VII MWF, HolB 154, Morton

82A Bronze Casting, Wax Modeling (3 cr; prereq 81A)
VI-VII MWF, HolB 154, Morton

84 Photography II (3 cr; prereq 83)
VI-VII MWF, J 2, Liebling

86 Art of the Film (3 cr; prereq 9 cr or 9 cr spch incl 31)
VIII-IX MW, VIII F, J 207a, Amberg

90 Printmaking (3 cr; prereq 32 or △)
VI-VIII TTh, J 203, Myers

91 Printmaking (3 cr; prereq 90)
VI-VIII TTh, J 203, Myers

92 Printmaking (3 cr; prereq 91)
VI-VIII TTh, J 203, Myers

94 Ceramic Design (3 cr; prereq 45 or △)
VI-VII MWF, HolB 134, MacKenzie

95 Ceramic Design (3 cr; prereq 94)
VI-VII MWF, HolB 134, MacKenzie

101 Hellenistic Through Early Christian (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
VII MWF, J 207a, Simon

112 Art of Japan (3 cr; prereq 9 cr art hist... or 9 cr hist or lit with △)
I MWF, J 207a, Copeland

117 Renaissance, Baroque Art in Italy, Spain (3 cr; prereq 116)
IV MWF, J 207a, Thomas

124 Film Workshop (3 cr; prereq 123)
VI-VII MWF, J 4, Downs

127 Renaissance, Baroque Art in the North (3 cr; prereq 126)
VII MWF, J 207b, Thomas

137 Art in the United States (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
V MWF, J 207b, Tselos

141 Scandinavian Painting (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
I MWF, J 207b, Nelson

147 European, American Architecture: 1850-1900 (3 cr; prereq 1 or 50, 9 cr art hist...or 9 cr hist or lit with △)
III MWF, J 207a, Tselos

150 Probs: Painting (ar cr; prereq 72, △)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

151 Probs: Painting (ar cr; prereq 150)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

152 Probs: Painting (ar cr; prereq 151)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

177 20th Century European, American Painting (3 cr; prereq sr, 1 or 50, 9 cr art hist...or 9 cr hist or lit with △)
V MWF, J 207a, Eitner

180 Probs: Sculpture (ar cr; prereq 82, 82A or △)
VI-VII MWF, HolB 154, Morton

181 Probs: Sculpture (ar cr; prereq 180)
VI-VII MWF, HolB 154, Morton

182 Probs: Sculpture (ar cr; prereq 181)
VI-VII MWF, HolB 154, Morton

190 Probs: Printmaking (ar cr; prereq 92 or △)
VI-VIII TTh, J 203, Myers

191 Probs: Printmaking (ar cr; prereq 190)
VI-VIII TTh, J 203, Myers

192 Probs: Printmaking (ar cr; prereq 191)
VI-VIII TTh, J 203, Myers

193 Adv Probs: Design (ar cr; prereq 9 up div cr in design, cons maj adv)

194 Adv Probs: Design (ar cr; prereq 193)

195 Adv Probs: Design (ar cr; prereq 194)

196 Readings: Art History, Criticism (3 cr; prereq sr, △)

197 Readings: Art History, Criticism (3 cr; prereq sr, △)

198 Readings: Art History, Criticism (3 cr; prereq sr, △)

200 Adv Probs: Studio Work (ar cr; prereq #)

201 Adv Probs: Studio Work (ar cr; prereq 200)

202 Adv Probs: Studio Work (ar cr; prereq 201)

216 Seminar: European, American Painting (3 cr; prereq 27 cr up div courses in art hist, #)
VIII-IX F, J 207b, Arnason

217 Seminar: European, American Painting (3 cr; prereq 216)
VIII-IX F, J 207b, Arnason
218 Seminar: European, American Painting (3 cr; prereq 217)
VIII-IX F, J 207b, Arnason
236 Seminar: Probs in Art History, Criticism (ar cr; prereq ‡) Tselos
237 Seminar: Probs in Art History, Criticism (ar cr; prereq 236) Tselos
238 Seminar: Probs in Art History, Criticism (ar cr; prereq 237) Tselos
250 Thesis Seminar (no cr; prereq cons adv) Booth
251 Thesis Seminar (no cr; prereq 250) Booth
252 Thesis Seminar (no cr; prereq 251) Booth

ASTRONOMY (Ast)

20 **Celestial Navigation** (5 cr)
III MTWThF, Ph 358, Luyten
52 Astrophysics (4 cr; prereq Math 53, Phys 50 or Phys 9, ‡)
II MTWF, Ph 358, Danby
105 Celestial Mechanics (3 cr; prereq 104)
V MWF, AE 209, Danby

BOTANY (Bot)

2 **Gen Botany** (3 cr, §2, §old NSci 8; prereq 1)
Lect III TTh, Bo B6, Frenkel
—1, Lab V-VI TTh, Bo 4
—2, Lab VII-VIII TTh, Bo 4
—3, Lab V-VI WF, Bo 4
12 **Plants Useful to Man** (4 cr)
—1, III MWF, Z 313, Lawrence
—2, V MWF, Z 313, Lawrence
53 **Plant Anatomy** (5 cr, §121; prereq 3 or 5 or Biol 3 or NSci 9)
Lect III MWF, Z 211, Hall
—1, Lab I-II MWF, Bo 209
—2, Lab IV-V MWF, Bo 209
—3, Lab VI-VII MWF, Bo 209
114 Angiosperm Phylogeny (3 cr; prereq 52 or ‡)
VI-VIII TTh, Bo 401, Morley
121 **Plant Anatomy** (5 cr, §53; prereq 10 cr bot or zool)
Lect III MWF, Z 211, Hall
—1, Lab I-II MWF, Bo 209
—2, Lab IV-V MWF, Bo 209
—3, Lab VI-VII MWF, Bo 209
133 Phytogeography (3 or 5 cr; prereq 50 or 130 or ‡)
Lect VI MWF, Bo 214, Lawrence, Martin
Lab VII-IX WF, Bo 214
165 **Pollen Analysis** (3 cr; prereq ‡)
VI-VIII TTh, Bo 202, Dahl
177 Photosynthesis (3 cr; prereq sr, 51 or 140, 20 cr chem or biochem, PCh 101, 102, 103 or ‡)
8:30-9:45 TTh, Bo 110, Frenkel, Roshal
198 Problems (1-5 cr; prereq 20 cr nat sci, ‡)
202 Research Probs: Morphology of Vascular Plants (ar cr) Hall
206 Research Probs: Taxonomy (ar cr) Ownbey, Morley
210 Research Probs: Paleobotany (ar cr) Hall
222 Research Probs: Ecology (ar cr) Lawrence, Martin
226 Research Probs: Plant Physiology (ar cr) Brown, Frenkel, Roshal
230 Research Probs: Cytology (ar cr) Dahl
234 Probs: Phycology (ar cr) Norris
241 Seminar: Morphology (1 cr) Hall
244 Seminar: Taxonomy (1 cr) Ownbey, Morley
247 Seminar: Paleobotany (1 cr) Hall
250 Seminar: Ecology (1 cr) Lawrence, Martin
253 Seminar: Plant Physiology (1 cr) Brown, Frenkel, Roshal
256 Seminar: Cytology (1 cr) Dahl
259 Seminar: Cryptogamic Plants (1 cr) Norris

CLASSICS

Classics (Clas)

24 Technical Terms of Science, Medicine, Humanities (3 cr, §124; prereq soph)
I MWF, FolH 308, D Swanson
43 Ancient Mythology in Relation to Literature, Art (2 cr; prereq soph)
VI MW, FolH 303, R Swanson
82 Aristophanes, Roman Drama in Translation (3 cr, §182; prereq 9 cr lit or △)
IV MWF, FolH 303, R Swanson
106 Study of Language (3 cr; prereq 56 or △)
VIII MWF, FolH 304, D Swanson
122 Greek Archaeology (3 cr)
VII MWF, FolH 303, McDonald
124 Technical Terminology (3 cr, §24)
I MWF, FolH 308, D Swanson
182 Aristophanes, Roman Drama in Translation (3 cr, §82; prereq grad, 9 cr lit or △)
IV MWF, FolH 303, R Swanson
192 Classical Literary Traditions (3 cr; prereq 9 cr lit)
VII MWF, FolH 203, DeWitt

Greek (Grk)

2 Bgn Greek (5 cr, †1-2; prereq 1)
Lect II MWThF, FolH 303, McDonald
—1, II T, FolH 205½, Jacobson
—2, III T, FolH 205½, Jacobson
52 Greek Tragic Drama (3 cr, §152; prereq 3)
IV MWF, FolH 304, D Swanson
152 Greek Tragic Drama (3 cr, §52; prereq 3)
IV MWF, FolH 304, D Swanson
172 Adv Reading (3 cr; prereq 171) Allen
212 Seminar: Greek Epic (3 cr)
4:15 Th, Lib 317, McDonald

Latin (Lat)

2 Bgn Latin (5 cr, †1-2; prereq 1)
Lect I MTWF, FolH 303, Forbes
—1, I Th, FolH 205½, Parker
—2, II Th, FolH 205½, Parker

52 Survey of Literature (3 cr, §152; prereq 51)
IV MWF, FolH 302, Forbes

152 Survey of Literature (3 cr, §52; prereq 151)
IV MWF, FolH 302, Forbes

172 Adv Reading (3 cr; prereq 53 or △)
II-III S, FolH 304, DeWitt

COMPARATIVE LITERATURE (CLit)

46 Nature of Literature (3 cr; prereq 45)
VI MWF, FolH 207, Falk

222 Seminar (ar cr; prereq 221) Falk

ENGLISH

English (Engl)

A Literature, Composition (5 cr, §1A or 1B or Comm 1; prereq classif 1 or 1A or 2)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MTWF, FolH 213
—2, Rec V MWThF, FolH 107

B Literature, Composition (5 cr, §2A or 2B or Comm 2; prereq A)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100 (for InCh 24 students only)
—1, Rec I MTWF, FolH 205
—2, Rec II MWThF, FolH 107
—3, Rec III MWThF, FolH 205
—4, Rec IV MTWF, FolH 205
—5, Rec V MTWF, FolH 205
—6, Rec VI MTWF, FolH 205
—7, Rec IV MTWF, FolH 2 (cons of dept)

1A Freshman English (4 cr, §A or 1B or Comm 1; prereq classif card 1 or 1A or 2)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MWF, JohH 205
—2, Rec V MWF, ChE 154

1B Freshman English (4 cr, §A or 1A or Comm 1; prereq classif card 1 or 1A or 2 or 3)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MWF, FolH 107
—2, Rec III MWF, Lib 4A
—3, Rec V MWF, ME 202
—4, Rec VI MWF, ME 202
—5, Rec VII MWF, FolH 305

2A Freshman English (4 cr, §B or 2B or Comm 2; prereq 1 A)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100 (for InCh 24 students only)
—1, Rec I MWF, FolH 5
—2, Rec II MWF, JohH 106
—3, Rec III MWF, FolH 5
—4, Rec IV MWF, FolH 5
—5, Rec V MWF, FolH 5
—6, Rec VI MWF, FolH 5
—7, Rec VII MWF, FolH 5

2B Freshman English (4 cr, §B or 2A or Comm 2; prereq 1B)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100 (for InCh 24 students only)
—1, Rec I MWF, E 225
—2, Rec II MWF, E 225
—3, Rec III MWF, E 225
—4, Rec IV MWF, E 225
—5, Rec V MWF, E 225
—6, Rec VI MWF, E 225
—7, Rec VII MWF, FolH 205
—8, Rec VIII MWF, FolH 201

21 **Introd Literature** (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
II MTWThF, FolH 204, Montgomery

22 **Introd Literature** (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
—1, III MTWThF, P 110, R Foster
—2, VI MTWThF, FolH 308, Buckley

38 **Modern Literature** (3 cr; prereq soph, C or 3A or 3B or Comm 3 or exemption)
—1, IV MWF, Bu 211, R Foster
—2, VII MWF, FolH 301, Myers

53 English Novel (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
II MWF, FolH 114, Frank

55 **Shakespeare: Early Plays** (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
—1, I MWF, FolH 207, Steinmann
—2, III MWF, FolH 207, Unger
—3, IV MWF, FolH 213, Myers
—4, V MWF, FolH 206, Wright

56 **Shakespeare: Later Plays** (3 cr; prereq 55 or △)
—1, I MWF, FolH 206, Youngblood
—2, II MWF, FolH 213, Hurrell
—3, III MWF, FolH 107, Buckley
—4, VI MWF, FolH 204, Youngblood
—5, VII MWF, FolH 207

67 Literature of the Bible (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
VI MWF, FolH 107, Jackson

72 **American Literature** (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
II MWF, FolH 9, Levenson

73 **American Literature** (3 cr; prereq 72 or ‡)
—1, II MWF, FolH 308, Hornberger
—2, VII MWF, FolH 308, C Foster

75 Chaucer (4 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
III MWThF, FolH 8, Jones

85 **Adv Technical Communication for Engineers** (3 cr; prereq C or 3A or 3B or exemption)
—1, II MWF, E 215
—2, II MWF, E 4
—3, IV MWF, E 215
—4, IV MWF, E 4
—5, VI MWF, E 215
—6, VI MWF, E 4
—7, VIII MWF, E 215

86 **Adv Technical Communication for Engineers** (3 cr; prereq 85)
—1, I MWF, E 215
—2, I MWF, E 4
—3, III MWF, E 215
—4, III MWF, E 4
—5, V MWF, E 215
—6, V MWF, E 4
—7, VII MWF, E 215
—8, VII MWF, E 4

102 Readings: Old English Prose, Verse (3 cr; prereq 100)
VII MWF, FolH 204, Brown

105 Hawthorne, Melville (3 cr; prereq 5 cr above C)
II MWF, FolH 206, Weber

110 Romantic Poets of Early 19th Century (3 cr; prereq 5 cr above C)
VI TTh, VII T, FolH 107, Jackson

121 Interpretation of Poetry (3 cr; prereq 120)
1:30-2:45 TTh, FolH 207, Tate

127 Drama: 1660-1900 (3 cr; prereq 5 cr above C)
IV MWF, FolH 206, Hurrell

138 19th Century Literature (3 cr; prereq 5 cr above C)
III MWF, FolH 206, Youngblood

140 Adv Chaucer (3 cr; prereq 75)
VI MWF, FolH 108, Clark

142 20th Century Literature (3 cr; prereq 5 cr above C)
VII MWF, FolH 9, O'Connor

155 American Novel (3 cr; prereq 5 cr above C)
II TThS, FolH 206, Bowron

157 American Poetry (3 cr; prereq 5 cr above C)
10:30-12:00 TTh, FolH 207, Levenson

165 Modern English (3 cr; prereq 5 cr above C)
VI MWF, FolH 206, Allen

177 Meter, Rhyme (3 cr; prereq 5 cr above C)
VII MWF, FolH 107, Jackson

185 Form, Idea in Dramatic Literature (3 cr; prereq 5 cr above C...56 rec)
VIII-IX T, FolH 304, Hurrell

188 18th Century Literature (3 cr; prereq 5 cr above C)
II MWF, FolH 207, Monk

195 Elizabethan Literature: Prose, Poetry, Drama (3 cr; prereq 5 cr above C)
II MWF, ForH 75, Brown

198 17th Century Literature (3 cr; prereq 5 cr above C)
IV MWF, FolH 305, Unger

204 History of English Language (3 cr, §166)
VI TTh, VII Th, FolH 103, Allen

211 17th Century Literature (3 cr; prereq 210)
VIII-IX M, FolH 103, Unger

217 Seminar: Linguistic and Philosophy of Language (3 cr, §Phil 191; prereq grad student in Engl or ling or phil)
VIII-IX Th, FolH 103, Steinmann, Garver

223 Origins, Early Development of American Literary Tradition (3 cr; prereq 222)
VIII-IX M, FolH 108, Hornberger

241 The Canterbury Tales (3 cr; prereq 240)
VIII-IX Th, FolH 302, Clark

246 English Literary Criticism (3 cr)
VIII-IX F, FolH 307, O'Connor

251 Modern Literature (3 cr; prereq 250)
VIII-IX M, FolH 305½, O'Connor

254 American Renaissance I: Emerson, Whitman, Melville (3 cr; prereq 253)
VIII-IX Th, FolH 108, C Foster

257 Spenser, Milton (3 cr)
VIII-IX M, FolH 302, Brown

278 American Realism (3 cr; prereq 277)
VIII-IX F, FolH 108, Hornberger

285 Dryden, His Age (3 cr; prereq 284)
VIII-IX W, FolH 108, Monk

291 Critical Theory (3 cr; prereq 290)
VIII-IX W, FolH 103, Tate

298 Independent Reading (3 cr; prereq MA degree)

English Composition (Comp)

X **Preparatory Composition** (0 cr)
—1, I MWF, FolH 10
—2, IV MWF, FolH 107
—3, V MWF, FolH 12
—4, VII MWF, FolH 2

27 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3)
—1, I MWF, FolH 12, Myers
—2, II MWF, FolH 205, Alford
—3, IV MWF, FolH 114, Fraser
—4, V MWF, FolH 305, Schneider
—5, V T, V-VI Th, FolH 204, Ferris
—6, VII MWF, FolH 213, Fraser

28 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3...27 rec)
—1, I MWF, FolH 305, Atkins
—2, III MWF, FolH 305, Atkins
—3, V MWF, FolH 113, Cody
—4, V T, V-VI Th, FolH 9, Huebner
—5, VI MWF, FolH 305, Cody

58 **Business Reports, Letters** (3 cr; prereq regis BA or ♯, C or 3A or 3B or Comm 3)
—1, II MWF, ForH 50, Haga
—2, IV MWF, ForH 50, Haga

102 **Writing of Fiction, Poetry** (3 cr; prereq 101)
VIII-IX M, FolH 307, Blum

201 Seminar: Writing (3 cr; prereq ‡)
VIII-IX T, FolH 208, Tate

GEOGRAPHY (Geog)

1 **Natural Resources** (5 cr)
Lect II MWThF, Owre 15, Barrett
—1, I T, ForH 60
—2, I Th, ForH 60
—3, III M, ForH 60
—4, III T, ForH 60
—5, III W, ForH 60
—6, III Th, ForH 60
—7, III F, ForH 60
—8, IV F, ForH 60
—9, V M, ForH 60
—10, V W, ForH 60
—11, V F, ForH 60
—12, VI F, ForH 60

4 **Human Geography** (5 cr)
Lect III MWF, Owre 15, Webb
—1, I MW, ForH 70
—2, I TTh, ForH 70
—3, II TTh, ForH 70
—4, II WF, ForH 70
—5, III TTh, ForH 70
—6, IV MW, ForH 70
—7, IV TTh, ForH 70
—8, V MW, ForH 70
—9, V TTh, ForH 70
—10, VI MW, ForH 70
—11, VI TTh, ForH 70
—12, VII MW, ForH 70

41 **Primary Production** (5 cr)
Lect VI MWThF, ForH 55, Lukermann
—1, I W, ForH 60
—2, VI T, ForH 60
—3, II T, ForH 60
—4, II Th, ForH 60
—5, IV T, ForH 60
—6, IV Th, ForH 60

70 **Cartography** (3 cr; prereq 5 cr or ‡)
VI-VII TTh, ForH 80, Porter

101 Western Europe (3 cr; prereq 10 cr or ‡)
VI MWF, ForH 285, Webb

107 Soviet Union (3 cr; prereq 10 cr or ‡)
V MWF, ForH 55, Borchert

113 Eastern United States (3 cr; prereq 10 cr or ‡)
IV MWF, ForH 85, Mather

117 Middle East (3 cr; prereq 10 or ‡)
III MWF, ForH 285, Lukermann

121 Southeast Asia (3 cr; prereq 10 cr or ‡)
II MWF, ForH 285, Broek

134 Adv Climatology (3 cr; prereq 133 or ‡)
VII MWF, ForH 285, Barrett

138 **Statistical Cartography** (3 cr; prereq 70 or ‡)
I-II TTh, ForH 80, Porter

143 Political Geography (3 cr; prereq 4 or ‡)
IV MWF, ForH 285, Broek

190 Readings (1-3 cr; prereq sr)

252 Seminar: Agricultural Geography (ar cr; prereq ‡)
VIII-IX M, ForH 261, Mather

254 Seminar: Population and Settlement in Western Europe (ar cr; prereq ‡)
VII-VIII Th, ForH 261, Webb

255 Seminar: Development of Geographic Thought (ar cr; prereq ‡)
VII-VIII T, ForH 261, Broek

301 Research Probs (ar cr)

GEOLOGY AND MINERALOGY (Geol)

A **Gen Geol Lab** (2 cr; prereq 1 or 8 or 51 or ¶)
—1, I-II MW, P 22
—2, III-IV MW, P 22
—3, VI-VII TTh, P 22
—4, III-IV TTh, P 22
—5, I-II TTh, P 22
—6, V-VI MW, P 22
—7, VII-VIII MW, P 22

B **Gen Geol Lab** (2 cr; prereq A, 2 or ¶2)
—1, VI-VII TTh, P 20
—2, III-IV TTh, P 20
—3, I-II TTh, P 20

1 **Gen Geology** (3 cr, §6)
—1, IV MWF, P 2, Thiel
—2, II MWF, P 110
—3, VII MWF, P 210, Gast

2 **Gen Geology** (3 cr; prereq 1 or 8 or 51)
—1, IV MWF, P 110, Sloan
—2, VI MWF, P 110, Sloan

6 **Geology for Engineers** (3 cr, §1; prereq 5)
I MWF, P 210, Schwartz

24 Mineralogy (4 cr; prereq 23)
Lect I MWF, P 110, Zoltai
—1, Lab VI-VII TTh, P 100
—2, Lab VII-VIII MW, P 100

102 Methods of Study of Sediments (3 cr; prereq 101, 106)
Lect VI T, P 210, Thiel
—1, Lab VII-VIII T, P 208
—2, Lab VI-VII Th, P 208

108 Stratigraphic Paleontology (3 cr; prereq 107)
VIII-IX F, P 105, Sloan

110 Economic Geology (3 cr; prereq sr, 125)
III MWF, P 210, Schwartz

119B Geomorphology of Western United States (3 cr; prereq 118 or 125)
II TTh, P 125, 1 hr ar, Wright

131 Petrology (4 cr; prereq 106)
Lect II MW, P 210, Phinney
Rec II F, P 210
—1, Lab VI-VII WF, P 200
—2, Lab ar

147 Soil Mineralogy (3 cr; prereq 146) Zoltai

151 Stratigraphy I (3 cr; prereq 25, 107)
I MWF, P 218, Swain

154 Geological Oceanography, Limnology (2 cr; prereq 101, 118 or ♯) Swain
166 Mineralography (3 cr; prereq sr, 111, 131) VI-VII MWF, P 207, Schwartz
170 Geologic Probs (1-3 cr)
176 Pleistocene Geology (3 cr; prereq 120) Wright
182 Isotopic, Nuclear Processes (3 cr; prereq 25, phys chem or ♯)
II-III MWF, P 218, Gast
251 Mineralogical Probs (ar cr; prereq 121, 161) Zoltai
263 Research: Igneous Petrology (3 cr; prereq 132) Phinney

GERMAN (Ger)

1C Bgn German (5 cr, §1A or 1B)
—1, III MTWThF, FolH 209
—2, V MTWThF, FolH 209

2A Bgn German: Conversational (5 cr, §2B or 2C; prereq 1A)
Lect I MWF, FolH 209½, Menze
Lab I TTh

2B Bgn German: Language, Culture (5 cr, §2A or 2C; prereq 1B)
Lect III MTWF, FolH 209½, Ramras
Lab III TTh

2C Bgn German (5 cr, §2A or 2B; prereq 1C or 1 yr HS Ger)
—1, Lect I MWF, FolH 209
Lab I TTh
—2, Lect II MWF, FolH 209½
Lab II TTh
—3, Lect IV MWF, FolH 209½
Lab IV TTh
—4, Lect V MWF, FolH 209½
Lab V TTh

4 Interm German (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
—1, IV MTWThF, FolH 209
—2, VI MTWThF, FolH 209½

51 Reading German: Bgn for Juniors, Seniors (3 cr, §2A or 2B or 2C; prereq 50)
—1, II MWF, FolH 209
—2, VII MWF, FolH 209

56 Reading, Analysis of Literary Texts (3 cr; prereq 4 or 4 yrs HS Ger)
IV MWF, FolH 108, Weiss
58 Composition (2 cr; prereq 4)
VI MF, FolH 209
62 Conversation (2 cr; prereq 4)
VI TTh, FolH 208
71 Lyric Poetry from Goethe to Rilke (2-3 cr; prereq 56...or 4, △)
IV TTh, FolH 208, Wood
74 Drama from Lessing to the Present (3 cr; prereq 56...or 4, △)
IV MWF, FolH 208, Menze
77 Prose of the 19th, 20th Century (2-3 cr; prereq 56...or 4, △)
III TTh, FolH 208
95 Survey of Literature (3 cr; prereq 3 cr above 69)
II MWF, FolH 208
134 Bibliography, Research Methods (1 cr; prereq sr, 11 cr above 69)
159 Readings (3 cr; prereq sr, 14 cr above 69)
164 Goethe (3 cr; prereq sr, 14 cr above 69)
VIII-IX Th, FolH 208, Ramras
177 19th Century Drama (3 cr; prereq sr, 14 cr above 69)
VIII-IX T, FolH 209, Wood

HISTORY (Hist)

1 Civilization of the Modern World (3 cr)
Lect II MW, ScH 108, Bamford
—1, II Th, ForH 30
—2, II F, FraH B1
—3, I T, ForH 130
—4, I Th, ForH 185
—5, I F, ForH 60
—6, IV W, ForH 244, Bamford (honors section, △)
—7, II F, ForH 60
—8, VI Th, ForH 30

2 Civilization of the Modern World (3 cr)
Lect II TTh, NH 45, Wright
—1, I M, MinMet 104
—2, I T, ForH 50
—3, I W, ForH 50
—4, I Th, ForH 50
—5, I F, ForH 50
—6, II M, ForH 70
—7, II F, VH 207
—8, III T, ForH 50
—9, III Th, ForH 50
—10, IV T, ForH 50
—11, VI M, ForH 60
—12, VI W, VH 205
—13, VI F, ForH 70
—14, VII T, ForH 50
—15, II W, ForH 60
—16, III W, ForH 70
—17, VI Th, ForH 50 (honors section, △)
—18, VI T, ForH 50
Lect III TTh, NH 45, Giesey
—19, I Th, ForH 160
—20, I T, ForH 160
—21, I F, ForH 30
—22, II M, FraH B25
—23, II Th, ForH 50
—24, III M, ForH 50
—25, IV Th, ForH 30
—26, VI W, ForH 60 (honors section, △)
—27, VII Th, ForH 50
—28, III W, Owre 111
Lect VI TTh, NH 45, Altholz
—29, I M, ForH 60
—30, I W, ForH 30
—31, I Th, ForH 130
—32, II W, ForH 30
—33, III T, ForH 160

—34, III Th, ForH 30
—35, IV F, ForH 70
—36, VI W, ForH 75 (honors section, △)

5 **English History** (3 cr)
Lect IV MW, FraH 101, Willson
—1, I M, ForH 30
—2, IV T, ForH 30
—3, IV T, ForH 115
—4, VI W, FolH 209
—5, VI F, ForH 30

12 **Medieval, Renaissance History** (3 cr; prereq art or mus maj or △)
IV MWF, ForH 115, Thompson

15 Ancient Civilization (3 cr, §15A; prereq 14)
VII TWTh, NH 211, Jones

15A Ancient Civilization with Readings (5 cr, §15; prereq 14A)
VII TWTh, NH 211, VII MF, ForH 130, Jones

18 Asia (3 cr, §60)
VI MWF, ForH 120, Stein

20 **American History** (3 cr; prereq soph)
Lect IV MW, ScH 108, Rutman
—1, VI T, ForH 130
—2, I Th, ForH 30
—3, I M, Psy 115
—4, II T, ForH 150
—5, II Th, ForH 160
—6, III T, ForH 15, Rutman (honors section, △)
—7, IV F, MurH 420

21 **American History** (3 cr; prereq soph)
Lect I MW, MNH Aud, Murphy
—1, I F, C 115, Murphy (honors section, △)
—2, I T, ForH 20
—3, VI T, ForH 30
—4, III W, ForH 30
—5, IV W, MinMet 120
—6, III Th, ForH 160
—7, I Th, ForH 20
—8, II Th, ForH 150
—9, II T, ForH 50
Lect II TTh, C 100, Noble
—10, I M, ForH 50
—11, VI M, ForH 30
—12, I T, ForH 30, Noble (honors section, △)
—13, III T, ForH 30
—14, IV T, ForH 15
—15, III W, ForH 50
—16, IV W, ForH 175
—17, VII W, ForH 50
—18, III Th, ForH 15
—19, VI Th, ForH 130
—20, I Th, Ph 145
—21, II M, ForH 15
Lect VI TTh, EE 335, Rutman
—22, III M, ForH 30
—23, II T, ForH 30
—24, VII T, ForH 30, Rutman (honors section, △)
—25, I W, FraH B25
—26, IV W, MurH 420
—27, VI F, VH 113

51 Ancient Civilization (3 cr, §15)
VII TWTh, NH 211, Jones

54 **Civilization of the Modern World** (3 cr, §2)
Lect II TTh, ForH 155, Altholz
—1, II M, ForH 60
—2, III M, ForH 70
—3, II F, ForH 30
—4, VI W, ForH 30

57 England (3 cr, §5)
Lect IV MW, FraH 101, Willson
Rec IV F, FraH B1

60 Asia (3 cr, §18)
VI MWF, ForH 120, Stein

71 **English Constitutional History** (3 cr; prereq prelegal soph, C avg or jr)
—1, II MWF, ForH 115, Hoyt
—2, I MWF, ForH 115, Thompson

87 American Colonies (3 cr)
II MWF, ForH 155, Tyler

94 American Diplomatic History (3 cr)
I MWF, ForH 155, Beatty

98 **Minnesota, the Northwest** (3 cr)
III MWF, ForH 155, Jordan

101B Rome (3 cr)
VIII MWF, ForH 185, Jones

104 Europe in the Middle Ages (3 cr)
III MWF, ForH 185, Hoyt

104A Renaissance, Reformation (3 cr)
1:30-3:00 TTh, ForH 120, Giesey

107A Europe in the 19th Century (3 cr)
1:30-3:00 TTh, ForH 115, Bowditch

110 Europe in the 20th Century (3 cr)
I MWF, Bo B6, Deutsch

113 Economic History of Europe (3 cr)
9:00-10:20 TTh, ForH 170, Bamford

126 Russia (3 cr)
IV MWF, ForH 55, Anderson

126A Eastern Europe, Middle East in 19th, 20th Centuries (3 cr; prereq 1-2-3)
III MWF, ForH 244, Anderson

129A Modern England: 1714 to Present (3 cr)
II MWF, ForH 150, Willson

135 **World War II** (3 cr)
II MWF, Bo B6, Deutsch

138 Early Natl Period in United States History (3 cr)
I MWF, ForH 170, Jordan

138A American History: 1850-1900 (3 cr)
III MWF, ForH 55, Loehr

141 Germany (3 cr; prereq 1-2-3 or Ger maj or ♯)
VI MWF, ForH 160, Wright

147 American Economic, Social History (3 cr)
II MWF, ForH 180, Loehr

147A The South (3 cr)
10:30-12:00 TTh, ForH 155, Noble

150 Social, Intellectual History of the United States (3 cr)
III MWF, ForH 115, Tyler

150A American Constitutional History (3 cr)
IV MWF, ForH 130, Murphy

155B South Asia, Especially India (3 cr)
10:30-12:00 TTh, ForH 170, Stein

158 Latin-American History (3 cr)
III MWF, ForH 170, Beatty

168 Readings: Works of Great Historians (2 cr; prereq sr)
VIII-IX T, ForH 244, Giesey

171 Readings: Ancient History (3 cr, †170-171-172; prereq 170) Jones

174 Readings: Medieval, Renaissance History (3 cr, †173-174-175; prereq 173)
VI-VII M, ForH 244, Hoyt

174A Readings: Medieval English History (3 cr, †173A-174A-175A; prereq 173A)
VI-VII Th, ForH 244, Thompson

177A Readings: Russian History (3 cr, †176A-177A-178A; prereq 176A)
VII-VIII F, ForH 256, Anderson

177B Readings: India (3 cr, †176B-177B-178B; prereq 176B)
VI-VII Th, ForH 160, Stein

177C Readings: Recent European History (3 cr, †176C-177C-178C; prereq 176C)
1:00-2:40 M, ForH 75, Deutsch

177D Readings: 19th Century European History (3 cr, †176D-177D-178D; prereq 176D)
VIII-IX W, ForH 256, Bowditch

180A History of European Commerce (3 cr)
VI-VII T, ForH 256, Bamford

183 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq 182)
VI-VII F, ForH 175, Willson

186A Readings: The West in American History (3 cr, †185A-186A-187A; prereq 185A)
VIII-IX W, ForH 244, Murphy

186B Readings: American Diplomatic History (3 cr, †185B-186B-187B; prereq 185B)
VI-VII M, ForH 467, Beatty

186C Readings: 20th Century American History (3 cr, †185C-186C-187C; prereq 185C)
VI-VII Th, ForH 60, Noble

186D Readings: 19th Century American History (3 cr, †185D-186D-187D; prereq 185D)
VI-VII W, ForH 256, Jordan

186E Readings: Probs of 18th Century (3 cr, †185E-186E-187E; prereq 185E)
VI-VII Th, ForH 256, Tyler

189A Readings: American History 1850-1900 (3 cr, †188A-189A-190A; prereq 188A)
VI-VII F, ForH 346, Loehr

201 Historical Bibliography, Criticism (2 cr, †200-201-202; prereq 200)
V TTh, ForH 115, Jones

211 Ancient History (3 cr, †210-211-212; prereq 210) Jones

214 Medieval History (3 cr, †213-214-215; prereq 213) Hoyt

221 Medieval English History (3 cr, †220-221-222; prereq 220) Thompson

224 English History, Tudor-Stuart Period (3 cr, †223-224-225; prereq 223) Willson

241 Nineteenth Century Europe (3 cr, †240-241-242; prereq 240) Bowditch

244 Recent European History (3 cr, †243-244-245; prereq 243) Deutsch

251 European Economic History (3 cr, †250-251-252; prereq 250) Bamford

254 Russian History (3 cr, †253-254-255; prereq 253) Anderson

261 Latin American History (3 cr, †260-261-262; prereq 260) Beatty

264 History of India (3 cr, †263-264-265; prereq 263) Stein

271 Probs of 18th Century: Early American Social, Intellectual History (3 cr, †270-271-272; prereq 270) Tyler

274 Nineteenth Century American History (3 cr, †273-274-275; prereq 273) Jordan

277 American History: 1850-1900 (3 cr, †276-277-278; prereq 276) Loehr

284 American Economic History (3 cr, †283-284-285; prereq 283) Loehr

291 The West in American History (3 cr, †290-291-292; prereq 290) Murphy

294 American Diplomatic History (3 cr, †293-294-295; prereq 293) Beatty

INTERDISCIPLINARY STUDIES IN GENERAL EDUCATION

Communication (Comm)

1 **Communication** (4 cr, §Engl A or 1A or 1B; prereq classif 1 or 1A or 2 or 3)
—1, II MTWF, TNM 115
—2, III MTWF, TNM 115
—3, V MTWF, TNM 107

2 **Communication** (4 cr, §Engl B or 2A or 2B; prereq 1)
—1, I MTWF, TNM 114
—2, II MTWF, TNM 114
—3, III MTWF, TNM 114
—4, IV MTWF, TNM 114
—5, V MTWF, TNM 114
—6, VI MTWF, TNM 114

3 **Communication** (4 cr, §Engl C or 3A or 3B; prereq 2)
V MTWF, TNM 106

Family Life (FL)

1 **Preparation for Marriage** (3 cr, §1A)
—1, II MWF, JohH 306, Torbett
—2, II T, II-III Th, JohH 306, Neubeck
—3, IV MWF, TNM 115, Hansen
—4, IV MWF, JohH 306, Torbett
—5, V MWF, JohH 306, Mandell

1A **Preparation for Marriage** (3 cr, §1; prereq up div or married students)
V MWF, TNM 115, Hansen

15 **The Home, Its Furnishing** (3 cr but cr added to SLA grad req)
II MWF, JohH 205, Ludwig

25 **Child Development, Adjustment** (3 cr, §CD 40 or 80, not open to NKP or psy maj)
III MWF, JohH 205, Grams

Humanities (Hum)

1 **Modern World I** (5 cr)
—1, II MTWThF, JohH 114, Siegelman
—2, II MTWThF, JohH 122, Ludwig
—3, IV MTWThF, ForH 20, Altholz
—4, V MTWThF, JohH 114, Ludwig
—5, VII MTWThF, JohH 114, Ames

1A **Age of Enlightenment** (3 cr)
III MWF, McNH 201 (StP Campus) Ramsland

2 **Modern World II** (5 cr; prereq 1)
—1, I MTWThF, JohH 114, Wright
—2, III MTWThF, FolH 204, Kwiat
—3, III MTWThF, FolH 9, Wood
—4, IV MTWThF, JohH 113, Vogelbaum
—5, V MTWThF, JohH 115, Kliger
—6, VII MTWThF, JohH 113, Ramsland

2A **Romanticism, Industrial Revolution** (3 cr; prereq 1A)
—1, I MWF, DI 15 (StP Campus) Drake
—2, II MWF, McNH 201 (StP Campus) Ramsland
—3, 1:30-2:50 TTh, DI 15 (StP Campus) Drake

3 **Modern World III** (5 cr; prereq 2)
IV MTWThF, JohH 122, Frank

4 **Modern World IV** (5 cr; prereq 1 or 2 or 3)
III MTWThF, JohH 113, Siegelman

12 **Roman, Medieval Heritage** (5 cr)
II MTWThF, JohH 313, Swanson

22 **American Life II** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
—1, II MWF, FolH 6, Kwiat
—2, III MWF, FolH 6, Weber
—3, IV MWF, FolH 6
—4, VI MWF, FolH 6, Rutman

24 **American Humanities** (3 cr; prereq 1A)
VI MWF, McNH 48 (StP Campus) Carr

52 **Modern World** (5 cr, §2)
—1, II MTWThF, JohH 115, Blum
—2, III-IV TTh, JohH 114, 1 hr ar, Ross
—3, VI MTWThF, JohH 113, Amberg

54 **Modern World** (5 cr, §4)
III-IV TTh, WeH 202, 1 hr ar, Berryman

62 **European Heritage** (5 cr, §12)
—1, II MTWThF, JohH 113, Vogelbaum
—2, III-IV TTh, JohH 115, 1 hr ar, Ames

72 **Humanities in the United States** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
VII MWF, FolH 6, Levenson

132 **Proseminar** (3 cr; prereq 131)
VII-VIII T, JohH 105, Berryman

Natural Science (NSci)

2 **Orientation** (5 cr, †1-2; prereq 1)
III MTWThF, Ph 166, Graubard, lab ar

5 **Physical World** (3 cr, †4-5; prereq 4)
VII MWF, C 225, Winter, lab ar

172 Development of Sciences (3 cr; prereq 1 yr of HS biol, 1 yr of HS phys sci or #)
IV MWF, Ph 143, Graubard

Personal Orientation (PO)

1 **How to Study** (2 cr but cr added to SLA grad req)
—1, I MWF, JohH 307, Wark
—2, II MWF, JohH 307, Carlson
—3, V MWF, JohH 307, Carlson
—4, VII MWF, JohH 307, Wark

11 **Choosing a Vocation** (2 cr but cr added to SLA grad req)
VI MWF, JohH 307, Hewer

Social Science (SSci)

1 **Introduction** (4 cr)
—1, II MWThF, ForH 85, Merrill
—2, III MWThF, FraH B1, Engelbourg
—3, V MWThF, JohH 113, Engelbourg
—4, VII MWThF, JohH 122, Blum

2 **Introduction** (4 cr; prereq 1)
—1, I MWThF, JohH 113, Engelbourg
—2, II MWThF, ForH 130
—3, II-III TTh, JohH 205, Kanun
—4, IV MWThF, JohH 205, Roshwald
—5, V MWThF, JohH 122, Brotz
—6, VI MWThF, JohH 115, Cooperman

3 **Introduction** (4 cr; prereq 2)
—1, III MWThF, JohH 122, Roshwald
—2, VI MWThF, JohH 114, Krueger

52 **Introduction** (4 cr, §2)
IV MWF, JohH 115, 1 hr ar, Blum

JOURNALISM (Jour)

11 **Reporting for Nonmajors** (3 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3 or Rhet 3)
VI MWF, MurH 212, Kildow

12 **Bgn News Photography** (3 cr; prereq soph)
VI-VIII TTh, MurH 20

13 **Journalistic Writing for Majors** (4 cr; prereq soph, C avg Engl C or 3A or 3B or Comm 3, typ 35 words/min or BA 32 or 33)
Lect IV T, MurH 308
—1, I-III TTh, MurH 212, Lindsay
—2, VI-VIII TTh, MurH 210, Sim

14 **Newspaper Reporting for Majors** (3 cr; prereq 13 with grade C or #, ¶Comp 27 or 28, typ 35 words/min or ¶BA 33)
—1, I-II MWF, MurH 212, Hage
—2, VI-VIII TTh, MurH 212, Charnley

18 **Prin Advertising** (3 cr; prereq 13, C avg, ¶Comp 27 or 28)
—1, II MWF, MurH 311, Mindak
—2, VI MWF, MurH 308, Winter

41 **Publications Editing** (3 cr; prereq soph, 11 or 13)
Lect IV M, MurH 420, Kildow
—1, Lab I-II TTh, MurH 206, Gompertz
—2, Lab VIII-IX TTh, MurH 207, Gompertz
—3, Lab IV-V WF, MurH 207
—4, Lab I-II TTh, MurH 207

53 **Picture Editing** (3 cr; prereq 41, 51 or ‡)
Lect I T, MurH 210
Lab II-III TTh, MurH 210

55 **Newspaper Make-up, Typography** (3 cr; prereq maj, 51, ¶56 or ‡)
Lect II MTWTh, MurH 308 (concur with 56)
—1, III-IV MW, MurH 206, 315, Wilson, Sim
—2, VI-VII WF, MurH 206, 315, Hvistendahl
—3, III-IV TTh, MurH 206, 315, Wilson
—4, VIII-IX TTh, MurH 206, 315, Hvistendahl

56 **Newspaper Editing** (3 cr; prereq 55 or ¶)
Lect II MTWTh, MurH 308 (concur with 55)
—1, III-IV MW, MurH 206, 315, Wilson, Sim
—2, VI-VII WF, MurH 206, 315, Hvistendahl
—3, III-IV TTh, MurH 206, 315, Wilson, Sim
—4, VIII-IX TTh, MurH 206, 315, Hvistendahl

59 **Adv Advertising Typography, Layout** (3 cr; prereq 54)
VI-VII TTh, MurH 315, 320, Wilson

73 **Magazine Writing** (3 cr; prereq 15 or 41, ‡)
VI MWF, MurH 311, Hage

74 **Magazine Editing** (3 cr; prereq 55, 73, ‡)
VII-VIII M, MurH 212, 1 hr ar, Charnley

79 **Advertising Copy Writing** (3 cr; prereq 41 or 51, 54, 65)
VII MWF, MurH 308, Wilson

85 **Television News, Public Affairs** (3 cr; prereq 84)
VI MWF, MurH 302, Lindsay

101 **Reporting Public Affairs** (3 cr; prereq sr, 51)
III MWF, MurH 311, Hage

115 Communications Analysis: Content, Audiences, Effects (3 cr; prereq BA 5 or Soc 45 or Psy 70 or ‡...Psy 167 rec)
III TTh, MurH 311, 1 hr ar, Carter

118 Adv Projects (1-3 cr; prereq sr, jour maj, B avg, ‡) Gerald

121 The Press in Dynamic Society (3 cr; prereq jour maj, 15 or 18...or others, ‡)
IV MWF, MurH 311, Gerald

125 Communication Systems of Free World (3 cr; prereq 15 cr soc sci...up div course intl rel or compar govt rec)
VII MWF, MurH 302, Nixon

131 Public Opinion, Propaganda (3 cr; prereq 130)
III MWF, MurH 308, Carter

141 **Interpretation of Contemporary Affairs** (3 cr; prereq 140)
—1, VI TTh, VII T, MurH 302, Gerald
—2, VI TTh, VII T, MurH 311, Nixon

161 **Advertising: Newspapers, Other Print Media** (3 cr; prereq 18, 54, 79 or ‡...or 41, 54, ‡)
9:30-11:00 TTh, MurH 302, Winter

162 **Advertising: Radio, Television Media** (3 cr; prereq 18, 79 or ‡)
III MWF, MurH 302, Mindak

164 **Current Advertising Developments, Probs** (3 cr; prereq 54, 79, 163 or ‡)
VII MWF, MurH 311, Mindak

213 Seminar: Mass Communication Theory (3 cr; prereq 113, ‡) Nixon

218 Seminar: Communications Analysis (3 cr; prereq 113 or 115, 200, stat or ‡) Jones

291 Probs: Mass Communications (3 cr; prereq ‡)

LIBRARY (Lib)

55 Administration (3 cr)
4:30-6:00 TTh, Lib 4A, Berninghausen

70 Selection Library Materials (3 cr)
6:30-9:00 M, Lib 4A, Zimmerman

154 The Public Library (3 cr; prereq 55)
II MWF, Lib 4B, Wezeman

155 College, University Library (3 cr; prereq 55)
1:00-2:30 TTh, Lib 4B, Shove

156 Special Libraries (3 cr; prereq 55)
1:30-3:30 M, Lib 4B, O'Leary

157 School Library Probs (3 cr; prereq 55)
IV MWF, Lib 4B, Zimmerman

160 Literature of Social Sciences (3 cr; prereq 62)
9:00-10:30 TTh, Lib 4A, Shove

168 Research Methods (3 cr; prereq ‡)
III MWF, Lib 4B, Simonton

172 Reading Guidance for Adolescents (3 cr; prereq 70)
VI MWF, Lib 4A, Zimmerman

173 Reading Guidance for Adults (3 cr; prereq 70)
IV MWF, Lib 4A, Wezeman

184 Cataloguing, Classification II (3 cr; prereq 83)
I MWF, Lib 4B, Simonton

MATHEMATICS (Math)

X **Preparatory Mathematics** (no cr; prereq △)
—1, I MTWThF, FolH 113
—2, V MTWThF, FolH 11
—3, VI MTWThF, FolH 114

H **Higher Algebra** (3 or 5 cr; prereq 1 yr elem alg)
—1, I MTWThF, FolH 2
—2, V MTWThF, FolH 308
—3, VI MTWThF, FolH 2
—4, IV MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

T **Trigonometry** (3 cr; prereq plane geom, H or HS higher alg)
—1, I MWF, FolH 110
—2, I TThS, FolH 110
—3, III MWF, FolH 2
—4, III TThS, FolH 2
—5, VI MWF, FolH 3
—6, III MWF, AgEng 103 **(StP Campus)** (for AFHE students)

C Trigonometric Computation (2 cr; prereq HS trig or T or ¶)
III TTh, FolH 3

5 **Foundations of Arithmetic** (3 cr; prereq 1 yr elem alg, 1 yr HS geom)
VI MWF, FolH 301, Carlson

10 **College Algebra** (5 cr; prereq plane geom or △, H or HS higher alg)
—1, I MTWThF, FolH 301
—2, II MTWThF, FolH 301
—3, V MTWThF, FolH 104
—4, VII MTWThF, FolH 109
—5, II MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)
—6, I MTWThF, FolH 4 (honors section)

20 **Investment** (5 cr; prereq 10)
IV MTWThF, FolH 104

21 **Life Insurance** (3 cr, §BA 113; prereq 20 or 40 or BA 53 or 153 or ♯)
II MWF, VH 210

40 **Mathematical Analysis I** (5 cr; prereq 10, T or ¶ or HS trig)
—1, II MTWThF, FolH 102
—2, III MTWThF, FolH 102
—3, V MTWThF, FolH 301
—4, VI MTWThF, FolH 105
—5, II MTWThF, FolH 4 (honors section)

40A **Mathematical Analysis I** (5 cr; prereq pre-acctg students, 10)
III MTWThF, FolH 301

53 **Mathematical Analysis II** (5 cr; prereq 40)
—1, I MTWThF, FolH 101
—2, IV MTWThF, FolH 301

54 **Mathematical Analysis III** (5 cr; prereq 53)
—1, III MTWThF, FolH 101
—2, VII MTWThF, FolH 105

55 **Interm Calculus** (3 cr; prereq 51 or 51A or 54)
—1, I MWF, FolH 104
—2, VI MWF, FolH 104

59 **Elem Differential Equations** (2 cr; prereq 50A or 51 or 53)
I TTh, FolH 104

62 **Theory of Equations** (3 cr; prereq 53 or ¶)
VI MWF, FolH 101

107 **Adv Calculus** (3 cr; prereq 52 or 55)
V MWF, FolH 101

108 **Adv Calculus** (3 cr; prereq 107)
II MWF, FolH 101, Storvick

111A **Development of Number System** (3 cr; prereq 51 or 51A or 54)
VII TTh, FolH 102, 1 hr ar, Bzoch

112B Mathematical Logic (3 cr; prereq 112A)
IV MWF, FolH 105, Orey

122 Theory of Statistics (3 cr; prereq 121)
IV MWF, FolH 101, Gelbaum

125A **Critical Reasoning in Mathematical Analysis** (3 cr; prereq 51 or 51A or 54)
III MWF, FolH 105, Olmsted

128 Mathematics of Social, Biological Sciences (3 cr; prereq 127)
VI MWF, FolH 102, Kalisch

131A **Adv Algebraic Theory** (3 cr; prereq 51 or 51A or 54)
VII MWF, FolH 101, Gil de Lamadrid

158 Methods of Applied Mathematics (3 cr; prereq 157)
II TThS, FolH 101, Spitzer

171 Modern Algebra (3 cr; prereq 170)
VI MWF, FolH 109, Jonsson

178B Introd to Probability (3 cr; prereq 178A)
11:30-12:45 TTh, FolH 101, Baxter

181A Topology of Cartesian Plane (3 cr; prereq 52 or 55)
II TTh, FolH 105, 1 hr ar, Slye

204 Adv Topics: Mathematical Statistics (3 cr; prereq 203)
1:30-3:00 TTh, FolH 101, Spitzer

207 Theory of Functions of Real, Complex Variables (3 cr; prereq 206)
II MWF, FolH 105, Gelbaum

252B Linear Spaces, Operator Theory (3 cr; prereq 252A)
VII MWF, FolH 102, Kalisch

259 Theory of Probability (3 cr; prereq 258)
III TTh, FolH 4, 1 hr ar, Baxter

293B Seminar: Stochastic Processes (2 or 3 cr; prereq 293A) Spitzer

MUSIC (Mus)

A Piano (no cr)
Ar, ScH 107, Weiser, Freed, Hunter

D Voice (no cr)
Ar, ScH 107, Schuessler, Knowles

1 **Fundamentals** (2 cr; prereq non-mus maj)
—1, I MTWTh, NMA 4, Oja
—2, II MTWTh, ScH 4, Oja
—3, V MTWTh, ScH 4, Oja
—4, VIII-IX TTh, NH 45, Fitzsimmons

1T **Theory** (3 cr)
V MTWThF, ScH 3, Collins

2T **Theory** (3 cr; prereq 1T)
—1, I MTWThF, ScH 3, Barry
—2, III MTWThF, ScH 3, Barry
—3, VI MTWThF, ScH 3, Argento
—4, VII MTWThF, ScH 3, Barry

4T **Theory** (4 cr; prereq 3T)
V MTWThF, ScH 103, Argento

5T **Theory** (4 cr; prereq 4T)
—1, II MTWThF, ScH 103, Malcolm
—2, III MTWThF, ScH 103, Malcolm
—3, VI MTWThF, ScH 103, Malcolm

7B **Ear Training** (2 cr; prereq 7A)
I TWThF, ScH 103, Malcolm

11 Piano (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Weiser, Freed, Hunter

11B Piano: Class Lessons (2 cr; prereq 11A)
Mu Hr IV T, ScH 108
—1, III MWF, MusEd 103, Duckworth (2-3 yrs piano training)
—2, V MWF, MusEd 103, Duckworth (no piano training)
—3, VI MWF, MusEd 103, Duckworth (1-2 yrs piano training)

12 Voice (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Schuessler, Knowles

12C Voice: Class Lessons (2 cr)
Mu Hr IV T, ScH 108
—1, V MWF, MusEd 104, Knowles
—2, VI MWF, MusEd 104, Knowles
—3, VII MWF, MusEd 104, Knowles
—4, IV MWF, MusEd 4, Abelson

13 Violin (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Druian

14 Viola (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Druian

15 Cello (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Jamieson

16 Double Bass (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch

17 Flute (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Opava

18 Oboe (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Angelucci

19 Clarinet or Saxophone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch, Williams, Handlon

20 Bassoon (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Santucci

21 Trumpet (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Adelstein

22 French Horn (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Speyer

23 Trombone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Stamm

24 Tuba (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Walton

25 Percussion (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Dahlgren

26 Harp (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Miller

27 Organ (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fleischer

32 Music Literature (2 cr)
II TTh, 1 hr ar, ScH 108, Ivory

35 History of Music (2 cr; prereq 34)
I MTWThF, ScH 104, Houle

39 Women's Glee Club (1 cr; prereq ♯)
VI MWF, NMA 4, Barry

41 Orchestra (1 cr; prereq ♯)
7:00 pm W, NMA Stage, sectionals ar, Oberg

43 Chorus (1 cr, †3 qtrs; prereq ♯)
—1, IV MWF, NMA 4, 5, 7:30 pm T, NH 45, Collins
—2, VIII MWF, NMA 5, NH 45, 7:30 pm T, NH 45, Collins

44S St Paul Campus Chorus (1 cr; prereq ♯)
4:30 MWF, CofH 225, Abelson

47 Concert Band (1 cr; prereq ♯)
—1, VIII MTTh, NMA 4, 5, Sperry
—2, VIII MWF, NMA 4, 5, Sperry
—3, VIII-IX TThF, NMA 4, 5, Sperry

49 Men's Glee Club (1 cr; prereq ♯)
V MWF, NMA 5, Abelson

50 Introduction (5 cr)
VI MTWThF, ScH 4, Houle

51 History of Musical Styles I (2 cr; prereq non-mus maj, 10 or 50)
VII-VIII TTh, ScH 104, Houle

61 Instrumental Ensemble (2 cr)
VII MWF, ScH 104, VII TTh, ScH 105, Oberg

67 Chamber Singers (2 cr; prereq ♯)
VII MWF, NMA 5, Collins

81 Adv Normal Piano (2 cr; prereq 80)
III TTh, MusEd 103, VII-VIII ar, MusEd 2, Duckworth

91 Adv Instrumental Ensemble (2 cr; prereq sr, 62)
VII MWF, ScH 104, VII TTh, ScH 105, Oberg

98 Counterpoint (2 cr; prereq 97)
III TTh, ScH 4, Fetler

100 Adv Applied Music (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

105 American Music (2 cr; prereq 104)
III TTh, ScH 104, Riedel

116 Vocal Literature (2 cr; prereq 12 cr in 12 or ♯)
II TTh, ScH 104, Schuessler

122 Adv Harmony (2 cr; prereq 121)
II TTh, ScH 3, Argento

128 Composition (2 cr; prereq 127)
II MW, ScH 2, 1 hr ar, Fetler

131A Late Romantic Music (3 cr; prereq 36 or ♯)
VII MWF, ScH 4, Houle

135 History of Church Music (2 cr; prereq 134)
VIII-IX T, ScH 103, Riedel

142 Orchestration (2 cr; prereq 141)
I TTh, ScH 4, Argento

148 Opera Workshop (2 cr)
6:00-8:00 pm M, 3:30-5:00 Th, ScH 4, Knowles

151 Musicology (3 cr; prereq 110 or ♯)
I MWF, ScH 4, Riedel
155 Middle Ages, Renaissance (2 cr; prereq 154)
VII TTh, ScH 4, Riedel
175 Training in Adv Musicianship (3 cr; prereq 6T)
IV MWF, ScH 103, Fetler
204 Applied Music (3 cr, †3 qtrs; prereq entr exam)
212 Problems (3-9 cr; prereq 110)
VIII W, ScH 2, Riedel, others
228 Seminar: Composition, Orchestration (3 cr; prereq 227)
VI MW, ScH 2, 1 hr ar, Dorati, Fetler

PHILOSOPHY (Phil)

1 **Probs of Philosophy** (5 cr, §1A; prereq 3rd qtr fr)
Lect II MWF, WeH 202, Mason
—1, Rec II TTh, JohH 307, Mason
—2, Rec III TTh, JohH 307, Mason
Lect IV MWF, WeH 202, Garver
—3, Rec III TTh, Lib 4a, Garver
—4, Rec IV TTh, JohH 313, Garver
2 **Logic** (5 cr, §2A)
Lect II MWF, CW 218, Maxwell
—1, Rec I TTh, JohH 115, Maxwell
—2, Rec II TTh, FolH 5, Maxwell
—3, Rec III TTh, JohH 105, Maxwell
Lect III MWF, WeH 202, Allen
—4, Rec II TTh, FolH 114, Allen
—5, Rec III TTh, JohH 106, Allen
—6, Rec IV TTh, Lib 4A, Allen
3 Ethics (5 cr; prereq 3rd qtr fr)
III MTWThF, Bu 120, Mason
10 **Science, Religion** (2 cr; prereq soph)
II MW, Owre 111, Luce
51 **History of Western Philosophy** (5 cr)
II MTWThF, P 2, Holmer
82 Science, Civilization (3 cr; prereq 81)
III MWF, JohH 106, Garver
106 American Philosophy from William James (3 cr; prereq 105 or ♯)
IV MWF, JohH 114, Luce
113 Plato (3 cr; prereq 112)
VI MWF, JohH 306, Allen
137 Kierkegaard, Scandinavian Philosophy (3 cr; prereq 50 or 51 or 52 or ♯)
VI MWF, JohH 205, Holmer
151 Aesthetics (3 cr; prereq ♯)
VII MWF, JohH 106, Donagan
157 Metaphysics (4 cr; prereq 50 or 51 or 52 or ♯)
IV MTWF, JohH 106, Brodbeck
165 Logic of Social Sciences II (3 cr; prereq 164)
VI MWF, JohH 313, Brodbeck
181 Psychology of Religion (3 cr; prereq 6 cr)
VII MWF, WeH 202, Mason
191 Seminar (3 cr; prereq 190)
194 Probs: Theology in Ancient Near East (3 cr; prereq △) MacKenzie
224 Seminar: Epistemology (3 cr; prereq 223)
231 Adv History of Philosophy (3 cr; prereq 230)
III MWF, JohH 105, Donagan
234 Seminar: Philosophy of Religion (3 cr; prereq 233)
245 Seminar: Philosophy of Psychology (3 cr; prereq 244)

POLITICAL SCIENCE (Pol)

A **State in Modern World** (3 cr, †A-B)
II MWF, JacH 104, Chase
B State in Modern World (3 cr, †A-B; prereq A)
III MWF, Bo B6, Lippincott
1 **American Govt, Politics** (3 cr, †1-2, §5)
II MWF, ChE 240, Backstrom
2 American Govt, Politics (3 cr, †1-2, §5; prereq 1)
IV MWF, NH 45, Christensen
5 American Govt, Politics (5 cr, §1-2)
VI MTWThF, MNH Aud, Hathaway
26 American Foreign Policy (3 cr)
VI MWF, Ph 133, Holt
81 State Govt, Politics (3 cr, §1-2 or 5)
VII MWF, ForH 160, Backstrom
85 Probs of World Politics (3 cr)
IV MWF, ForH 155, Mills
93 Honors Work (ar cr; prereq 18 cr, cons maj adv)
95 Major Paper (no cr; prereq pol sci maj)
102 American Constitution II (3 cr; prereq 101)
10:30-12:00 TTh, ForH 180, Chase
108 Legislative Organization, Procedure (3 cr; prereq 2 or 5 or ♯)
IV MWF, ForH 150, Short
117 Local Government (3 cr; prereq 116)
IV MWF, ForH 15, Backstrom
121 Municipal Admin (3 cr; prereq 2 or 5 or ♯)
8:30-10:00 TTh, ForH 15, Peterson
126 Govt, Economic Order I (3 cr; prereq 2 or 5)
10:30-12:00 TTh, ForH 185, Warp
132 Public Admin (3 cr; prereq 131 or ♯)
II MWF, ForH 160, Short
142 European Govt. Politics (3 cr, †141-142; prereq 141)
III MWF, ForH 150, Holt
146 Social Legislation, Social Institutions in Scandinavian Countries (3 cr; prereq 2 or 5 or Soc 1)
VI MWF, FolH 4, Thorson
154 Chinese Govt, Politics (3 cr)
IV MWF, ForH 160, Turner
156 Govt, Intl Relations in Latin America (3 cr; prereq 155)
II MWF, ForH 170, Christensen
158 Comparative Govt. Systems: Principles, Probs (3 cr; prereq 6 cr up div compar govt or ♯)
1:30-3:00 TTh, ForH 75, Holt

161 Probs of Democracy (3 cr; prereq B or 9 cr soc sci or ‡)
IV MWF, ForH 120, Cooperman

165 Development of Political Thought: Middle Ages (3 cr; prereq B or 9 cr soc sci or ‡)
I MWF, ForH 20, Roshwald

168 Political Behavior (3 cr; prereq 167)
1:30-3:00 TTh, ForH 185, Hoffman

176 Conduct of US Foreign Relations (3 cr, †176-177)
1:30-3:00 TTh, ForH 180, Wilson

181 Intl Law: Pacific Relations (3 cr, †180-181; prereq 180)
8:30-10:00 TTh, ForH 180, Baird

185 Intl Relations, Organization II (3 cr)
I MWF, ForH 180, Levi

197 Mediterranean Area in World Affairs (3 cr)
III MWF, ForH 130, Mills

205 Seminar: Administrative Law (3 cr; prereq 18 cr or ‡)
VI-VII W, ForH 175, Chase

211 Seminar: Public Admin (3 cr, †210-211-212, prereq 210)
VIII-IX T, Lib 13, Naftalin

217 Seminar: Comparative European Govt (3 cr; prereq 216)
VIII-IX W, ForH 75, Turner

226 Readings: Classics of Politics (3 cr; prereq 225)
VIII-IX T, ForH 346, Lippincott

234 Related Disciplines (3 cr; prereq 164-165-166, 227 or ‡) Lippincott

239 Seminar: History, System of Intl Law (3 cr; prereq 238)
VI-VII F, ForH 75, Takeuchi

243 Topics: Colonization (3 cr; prereq 242)
3:00-5:00 W, ForH 346, Mills

246 Seminar: East Asian Govt, Intl Relations (3 cr; prereq 245)
IV-V M, ForH 346, Levi

249 Seminar: Intl Organizations (3 cr; prereq 248)
IV-V F, ForH 346, Levi

PSYCHOLOGY (Psy)

1 **Gen Psychology** (3 cr, †1-2; prereq soph or 3rd qtr fr with B avg)
VII MWF, ScH 108, Dunnette

2 **Gen Psychology** (3 cr, †1-2; prereq 1)
—1, III MWF, ScH 108, Senders
—2, V MWF, ScH 108, Senders
—3, V MWF, NH 45, LaBerge
—4, VI MWF, ScH 108, Lofquist
—5, III MWF, Psy 115, Jenkins (honors section, ‡)

4 **Lab Psychology** (2 cr, †4-5; prereq 2 or ¶1-2)
Lect I T, Bo B6, Russell
—1, Lab II-III T, Psy 211, Russell, others
—2, Lab V-VI T, Psy 211
—3, Lab VII-VIII T, Psy 211
—4, Lab I-II Th, Psy 211
—5, Lab III-IV F, Psy 211

5 **Lab Psychology** (2 cr, †4-5; prereq 4)
—1, Lect V T, Bo B6, Russell, others
—2, Lect VII T, Bo B6
—1, Lab IX-X T, Psy 211, Russell, others
—2, Lab I-II W, Psy 211
—3, Lab III-IV W, Psy 211
—4, Lab V-VI W, Psy 211
—5, Lab VII-VIII W, Psy 211
—6, Lab IX-X W, Psy 211
—7, Lab III-IV Th, Psy 211
—8, Lab V-VI Th, Psy 211
—9, Lab VII-VIII Th, Psy 211
—10, Lab IX-X Th, Psy 211
—11, Lab I-II F, Psy 211

70 Psychological Measurement (3 cr; prereq 5)
VI MWF, FraH 102, Clark

102 Experimental Psychology (3 cr, †101-102; prereq 101)
VII MWF, Psy 115, LaBerge

126 **Individual Differences** (3 cr; prereq 125)
—1, II MWF, Psy 115, Paterson
—2, II MWF, MMA 100, Jenkins

129 Learning (3 cr; prereq 128)
IV MWF, FolH 308, D'Andrea

130 **Vocational, Occupational Psychology** (3 cr; prereq 5 or 5 cr in stat)
Lect III TTh, P 2, Paterson
—1, Lab V-VI F, Psy 211, Paterson, others
—2, Lab VII-VIII F, Psy 211

133 Motivation (3 cr, †132-133; prereq 132)
VI MWF, Psy 115, Russell

136 Occupational Counseling (2 cr; prereq sr, 9 cr or ‡)
VIII-IX M, Psy 115, Lofquist

140 Social Psychology (3 cr; prereq 5, 9 cr soc sci)
10:50-12:10 TTh, WuH 202, Kelley

144 Abnormal Psychology (3 cr, †144-145; prereq 9 cr or 6 cr, Zool 3 or 12 cr soc sci)
10:50-12:10 TTh, ForH 55, Lindzey

145 Abnormal Psychology (3 cr, †144-145; prereq 144)
9:30-10:45 TTh, WuH 202, Rosen

156 Psychology of Advertising (3 cr; prereq 2, prin of econ)
VII MWF, WuH 202, Longstaff

160 Personnel Work (3 cr; prereq 5 or 3 cr in stat, prin of econ or ‡)
VI MWF, WuH 202, Longstaff

167 Measurement of Opinions, Attitudes (3 cr; prereq sr, 70)
1:30-2:45 TTh, FolH 3, Dunnette

172 Clinical Psychology (3 cr, †171-172; prereq 171)
VI MWF, FraH B1, Meehl, others

190 Project (ar cr; prereq sr, ‡)

201 **Systematic Psychology** (3 cr; prereq 200)
VIII-IX Th, Psy 115, Lindzey, Jenkins

211 Research Probs (ar cr)

216 **Seminar: Areas of Psychology, Related Sciences** (ar cr)
—1, Ar, Neubeck
—2, Ar, Jenkins
—3, Ar, Hafner

219 Psychology of Personality (3 cr; prereq abnor psy, undergrad psy maj or ‡)
IV MWF, Psy 115, Rosen

228 Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 227)
IX-X alt F, Psy 109, Lofquist

231 Field Work: Psychometric, Applied Psychology (ar cr; prereq written cons)

236 Clinical Practice in Counseling (1-3 cr; prereq cons adv, ‡) Berdie

241 Seminar: Student Personnel Work (1 cr, prereq ‡) Williamson

244 Experimental Psychodynamics (3 cr; prereq 243) Russell

251 Adv Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 250)
IX-X alt F, Psy 109, Lofquist

258 Methods of Research in Group Behavior (3 cr, †257-258-259; prereq 257)
III-IV TTh, Psy 109, Schachter

266 Seminar: Adv Clinical Psychology (1 cr; prereq 265) Hathaway

270 Adv Psychological Measurement (3 cr)
VI MWF, FraH 102, Clark

276 Seminar: Student Personnel Work (1 cr; prereq 275) Volsky

291 Projective Techniques (3 cr; prereq 290)
VIII-IX T, Psy 115, Rosen

296 Seminar: Individual Differences, Applied Psychology (1 cr; prereq written ‡)
VIII-IX alt W, Psy 109, Paterson

299 Tabulating Equipment Lab (1 cr; prereq PubH 111) Clark

ROMANCE LANGUAGES

French (Fren)

1C **Bgn French: Standard** (5 cr, §1A or 1B)
—1, I MTWThF, CW 222, Erickson, Blodgett
—2, II MTWThF, FolH 109, Romaniak
—3, III MTWThF, ME 302, Gale

2A **Bgn French: Conversational** (5 cr, §2B or 2C; prereq 1A)
Dem III MTWThF, FolH 201, Renaud
—1, Lab I MTWThF, FolH 108, Lynch
—2, Lab II MTWThF, FolH 108, Green

2B **Bgn French: Language, Culture** (5 cr, §2A or 2C; prereq 1B)
—1, I MWF, FolH 6, Burks, I TTh, FolH 203, Kalb, Romaniak
—2, II MTWThF, FolH 110, Bieter
—3, III MWF, FolH 226, Falk, III TTh, FolH 108, Lampert
—4, III MWF, FolH 226, Falk, IV TTh, FolH 108, Lampert
—5, IV MTWThF, FolH 201, Christianson

2C **Bgn French: Standard** (5 cr, §2A or 2B; prereq 1C)
—1, II MTWThF, FolH 226, Brackney
—2, V MTWThF, FolH 201, Gale
—3, VI MTWThF, FolH 201, Blodgett

3C **Bgn French: Standard** (5 cr, §3A or 3B; prereq 2C)
V MTWThF, FolH 202, Erickson

4 **Interm French** (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Fren)
—1, II MTWThF, FolH 3, Vartanian
—2, IV MTWThF, FolH 8, Burks

20 Literary Texts (3 cr; prereq 4)
III MWF, FolH 203, Burks

51 **Reading French: Bgn Course for Juniors, Seniors** (3 cr; prereq 50)
V MWF, FolH 303, Burks

54 **Conversation, Pronunciation** (3 cr; prereq 4)
—1, III MTThF, FolH 103, Christianson
—2, IV MTThF, FolH 103, Sullivan
—3, V MTThF, FolH 103, Sullivan

61 Civilization, Culture (4 cr; prereq 60)
II MTWThF, FolH 202, Blinoff

66 Survey of Literature (3 cr; prereq 4)
VI MWF, FolH 10, Brackney

71 17th Century Literature (2 cr, §65; prereq 20)
IV TTh, FolH 203, Renaud

81 18th Century Literature (2 cr, §66; prereq 20)
III TTh, FolH 203, Vartanian

91 19th Century Literature (2 cr, §67; prereq 20)
IV MF, FolH 203, Blinoff

104 Syntax, Composition (2 cr; prereq 103)
III TTh, FolH 302, Sullivan

124 Montaigne, Pascal (3 cr; prereq sr with ‡)
VII T, VII-VIII Th, Fol H 203, Renaud

136 20th Century Literature (2 cr)
VII MF, FolH 202, Blinoff

156 19th Century Novel: Zola, Goncourt (3 cr; prereq sr with ‡)
VI MWF, FolH 203, Vartanian

176 Main Trends in Literary Criticism (2 cr; prereq sr with ‡)
VII-VIII W, FolH 208, Falk

205 Readings: Old Literature (2 cr; prereq 204)
VIII-IX T, FolH 302, Brackney

231 Research Methods, Materials (1 cr; prereq 230)
IV T, FolH 302, Grismer

260 Readings (ar cr; prereq 259)

Italian (Ital)

2 **Bgn Italian** (5 cr; prereq 1)
IV MTWThF, FolH 4, Nissen

5 Reading Knowledge of Italian (5 cr, §1; prereq Fren or Lat or Span)
VI MTWThF, FolH 302, Nissen

71 Modern Poetry: Leopardi, Carducci (3 cr; prereq 3 or 4...or 2 or 5, ♯)
III MWF, FolH 302, Nissen
162 16th Century (3 cr; prereq 161)
II MWF, FolH 103, Nissen
171 Modern Poetry: Leopardi, Carducci (3 cr; prereq grad, 1 course above 50)
III MWF, FolH 302, Nissen

Portuguese (Port)

2 Bgn Portuguese (3 cr; prereq 1)
II MWF, FolH 304, Floripe

Spanish (Span)

1C **Bgn Spanish: Standard** (5 cr, §1A or 1B)
—1, IV MTWThF, FolH 102, Liebberman, Lillo
—2, VI MTWThF, FolH 12, Rundorff
2A **Bgn Spanish: Conversational** (5 cr, §2B or 2C; prereq 1A)
Dem II MTWThF, FolH 201, Cuneo
—1, Lab I MTWThF, FolH 201, Adams
—2, Lab I MTWThF, FolH 304, Shamblin
2C **Bgn Spanish: Standard** (5 cr, §2A or 2B; prereq 1C)
—1, I MTWThF, FolH 202, Estelle
—2, III MTWThF, FolH 213, Floripe
—3, IV MTWThF, FolH 202, Pattison
—4, V MTWThF, FolH 8, Liebberman
3C **Bgn Spanish: Standard** (5 cr, §3A or 3B; prereq 2C)
VI MTWThF, FolH 8, Estelle
20 Interm Grammar, Composition (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
III MTWThF, FolH 109, Rundorff
21 Spanish, Spanish-American Literature, Culture (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
II MTWThF, FolH 302, Rundorff
54 **Composition, Conversation** (3 cr; prereq 53)
IV MWThF, FolH 10, Shamblin (maj only or ♯)
66 Spanish Literature: The Renaissance (3 cr, §68, 69; prereq soph, 21)
VII MWF, FolH 201, Grismer
68 Spanish Literature: Middle Ages through 18th Century (5 cr, §65, 66, 67; prereq soph, 21)
VI MTWThF, FolH 202, Floripe
71 Latin-American Civilization, Culture (3 cr; prereq 20 or 21 or ♯)
III MWF, FolH 202, Cuneo
75 Literature of Spanish America (3 cr; prereq 74)
II MWF, FolH 203, Irving
81 Spanish American Novel, Social Probs (2 cr; prereq jr or ♯, 6 qtrs)
III TTh, FolH 202, Cuneo
104 Syntax, Composition (1 cr; prereq 103)
V T, FolH 203, Pattison
116 17th Century Literature: The Novel (3 cr; prereq 65, 66, 67 or 68, 69)
VIII-IX Th, FolH 304, Grismer
162 Hispano-Arabic Culture (2 cr; prereq 161)
VIII-IX T, FolH 203, Irving
172 History of Language (1 cr, †171-172-173; prereq 171)
V Th, FolH 203, Grismer
175 Contemporary Literature: Prose (3 cr; prereq 65, 66, 67 or 68, 69)
VI MWF, FolH 304, Pattison
231 Research Methods, Materials (1 cr; prereq 230)
IV T, FolH 304, Grismer
242 Old Philology (2 cr; prereq 241)
VIII-IX M, FolH 203, Grismer
254 Seminar: Latin-American Literature (2 cr; prereq 253)
VIII-IX W, FolH 203, Irving
260 Readings (ar cr; prereq 259)

SCANDINAVIAN (Scan)

2 Bgn Norwegian (5 cr; prereq 1)
II MTWThF, FolH 8, Nelson
5 Adv Norwegian (3 cr; prereq 4)
III TTh and ar, FolH 12, Nelson
8 Bgn Swedish (5 cr; prereq 7)
II MTWThF, FolH 12, Lorenzen
11 Adv Swedish (3 cr; prereq 10)
III MWF, FolH 12, Lorenzen
22 Scandinavian Life Today, Yesterday (3 cr)
VII MWF, FolH 12, Thorson
161 Late 19th Century Novel (3 cr; prereq 6 or 12 or 8 cr lit) Gustafson
172 Strindberg, Drama in Revolt, Transition (3 cr; prereq 6 or 12 or 8 cr lit)
IV MWF, FolH 12, Gustafson
192 Readings (3 cr; prereq 6 or 12) Gustafson, Nelson
222 Dramatic Interpretative Probs in Strindberg (3 cr; prereq 221) Gustafson

SLAVIC AND ORIENTAL LANGUAGES

Chinese (Chin)

2 Bgn Chinese (5 cr; prereq 1)
VI MTWF, IV T, FolH 305½, Mather
52 Interm Chinese (3 cr; prereq 51)
I-II T, FolH 322, Gong
57 Composition (2 cr; prereq 56)
II Th, Lib 338, Gong
102 Adv Chinese (3 cr; prereq 101)
II WF, Lib 338, Mather
111 Literature in Translation (3 cr; prereq 110)
VII MWF, FolH 305½, Mather
162 Readings (1-3 cr; prereq 161) Mather

Japanese (Jap)

2 Bgn Japanese (5 cr; prereq 1)
III MTWThF, FolH 304, Copeland
52 Interm Japanese (3 cr; prereq 51)
II MWF, FolH 305½, Copeland
57 Composition (2 cr; prereq 56)
II TTh, FolH 305½, Copeland
102 Adv Japanese (3 cr; prereq 101)
IV MWF, FolH 305½, Copeland
162 Readings (1-3 cr; prereq 161) Copeland

Oriental (Ortl)

76 Asian Civilization: China (5 cr; prereq soph with ‡)
I MWF, JohH 105, Mather

Russian (Russ)

2 **Bgn Russian** (5 cr; prereq 1)
—1, III MTWThF, FolH 11, Nice
—2, VI MTWThF, FolH 11, Niemi
—3, I MTWThF, FolH 11, Alexeev
—4, VII MTWThF, FolH 11, Donchenko
52 Interm Russian (3 cr; prereq 51)
II MWF, FolH 11, Nice
57 Conversation (3 cr; prereq 56)
I MTTh, FolH 302, Alexeev
62 Composition (2 cr; prereq 61)
III TTh, FolH 305½, Alexeev
72 Readings in Literature (3 cr; prereq 71)
III MWF, FolH 305½, Niemi
102 Literature in Translation (3 cr; prereq 101)
V MWF, FolH 304, Niemi

Semitic (Sem)

52 Modern Spoken Arabic (3 cr; prereq 51)
I MWF, V MTWThF, FolH 305½, Irving

SOCIAL WORK (SW)

202 Topics (ar cr; prereq ‡)
207 Readings (ar cr; prereq ‡)
211 Field Instruction (ar cr; prereq 210, ¶265 or ¶275)
216 Field Instruction (ar cr; prereq 215)
221 Seminar for Clinical Field Instructors (ar cr; prereq superv students in field work)
I-II W, ForH 467, Boehm, Pernell
226 Social Policy, Programs II (2 cr; prereq 225)
I TTh, ForH 115, Newhouse
229 Social Policy, Programs V (2 cr; prereq 228)
III-IV Th, MurH 308, Newhouse
249 Concepts of Human Growth, Behavior in Practice II (3 cr; prereq 248, ¶211 or ‡)
VIII-IX T, VIII Th, ForH 115, Lewis, Mueller, Saloshin
252 Concepts of Human Growth, Behavior in Practice V (2 cr; prereq ¶216, 250)
IX-X Th, ForH 150, Weiner
263 Admin in Social Group Work (2 cr; prereq ¶216, 260, 278)
I-II T, ForH 346, Pernell
266 **Social Casework II** (2 cr; prereq ¶211, 265)
—1, III TTh, ForH 175, Whitmore
—2, IV TTh, ForH 175, Whitmore
269 **Social Casework V** (2 cr; prereq ¶216, 267)
—1, II-III T, ForH 467, Scott
—2, II-III T, ForH 447, Boehm
276 Social Group Work II (2 cr; prereq ¶211, 275)
IV-V T, ForH 467, Saloshin
279 Social Group Work V (2 cr; prereq 278)
IV-V T, ForH 447, Konopka
281A Use of Program in Groups I (2 cr; prereq 275)
IV-V Th, ForH 467, Pernell
285 Special Studies (ar cr)
V, VII Th, ForH 130, Francel
290 Seminar: Recent Research (ar cr)
I-II M, ForH 467, Scott
299 Seminar: Social Work (ar cr; prereq MSW degree)
3:00-5:00 Th, ForH 467, Kidneigh, Konopka

SOCIOLOGY (Soc)

1 **Introduction: Man in Modern Society** (3 cr)
—1, I MWF, ScH 108, Sirjamaki
—2, VII MWF, Bo B6, Forster
1A Man in Modern Society (3 cr; prereq regis AFHE)
II MWF, McNH 227 **(StP Campus)** Taylor
2 **American Community** (3 cr; prereq 1 or 1A or 3)
—1, II MWF, C 410, Martindale
—2, VII MWF, ForH 55, Brotz
—3, V MWF, ForH 130, Forster (honors section)
3 **Social Probs** (3 cr)
II MWF, NH 45, Johnson
14 Rural Sociology (3 cr)
VI MWF, ForH 150, Corwin
14A Rural Sociology for Agriculture Students (3 cr)
V MWF, Hs 102 **(StP Campus)** Taylor
45 **Social Statistics** (5 cr, ‡BA 5)
Lect VII MWF, ForH 85, Francis
—1, Lab III-IV TTh, ForH 85, Francis, others
—2, Lab VI-VII TTh, ForH 85, Francis, others
50 Theory, Practice of Social Work (5 cr; prereq 3)
III MTWThF, C 325, Cohn
53 **Criminology** (3 cr; prereq 1 or 1A or ‡)
—1, II MWF, ForH 55, Carroll
—2, VII MWF, ForH 180, Vold (honors section)
98 Tutorial, Honors Work (3 cr)
112 World Population Probs (3 cr; prereq 1 or ‡)
12:30-1:45 TTh, ForH 20, Francis

119 Modern Agencies for Control of Juvenile Delinquency (3 cr; prereq 53, 118)
10:30-11:45 TTh, ForH 150, Ellingston

120 Social Psychology (3 cr; prereq 1 or ‡)
8:30-9:45 TTh, ForH 55, Rose

122 Conflict (3 cr; prereq 1 or ‡)
IV MWF, ForH 180, Vold

124 Social Movement in Changing Society (3 cr; prereq 1 or ‡)
1:30-2:45 TTh, ForH 150, Rose

141 The Family (3 cr; prereq 1 or ‡)
IV MWF, FraH 102, Johnson

145 Urban Sociology (3 cr; prereq 1 or ‡)
III MWF, ForH 180, Sirjamaki

162 Rural Social Institutions (3 cr; prereq 1 or ‡)
VI MWF, C 225, Taves

171 Social Life, Cultural Change (3 cr; prereq 1 or ‡)
IV MWF, ForH 185, Martindale

180 Methods of Social Research (3 cr; prereq 45)
II TTh, VII T, ForH 120, Monachesi (for SW students only)

182 Statistical Methods (3 cr; prereq 45)
V MWF, ForH 160, Francis

201 Seminar: Research Probs in Crime, Social Conflict (2 cr)
VIII-IX W, ForH 467, Vold

221 Seminar: Social Psychology (2 cr)
VIII-IX T, ForH 467, Rose

224 Seminar: Research Probs of Modern Mass Society (2 cr)
VIII-IX M, ForH 467, Brotz

239 Seminar: Principles (3 cr, †238-239; prereq 238)
VI-VII M, ForH 175, Sirjamaki

261 Seminar: Rural Sociology (2 cr)
VI-VII Th, ForH 175, Taves

271 Seminar: Social Theory (2 cr)
VI-VII W, ForH 244, Martindale

285 Seminar: Statistical Theory in Relation to Social Theory, Practice (2 cr)
VI-VII F, ForH 467, Monachesi

298 Seminar (ar cr)

SPEECH AND THEATER ARTS (Spch)

5 **Fundamentals** (5 cr, §old 1-2; prereq soph or fr with △)
—1, I MTWThF, FolH 306
—2, II MTWThF, FolH 307
—3, III MTWThF, FolH 307
—4, IV MTWThF, FolH 307
—5, V MTWThF, FolH 307
—6, VI MTWThF, FolH 307
—7, VII MTWThF, FolH 307

6 **Fundamentals** (3 cr, §old 3; prereq 5)
—1, I MWF, WeH 306
—2, II MWF, WeH 306
—3, IV MWF, FolH 109
—4, III T, III-IV Th, FolH 306

9 Freshman Discussion, Debate (1 cr; prereq fr with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro

31 **Theater Arts** (4 cr)
II MWF, ShH 115, Ballet

32 **Bgn Acting: Creative Approach** (3 cr; prereq soph, 31)
—1, II MWF, ScH 19, Lenhoff
—2, III MWF, ScH 19, Rumley
—3, VI MWF, ScH 19, Manfull

33 **Bgn Acting: Technique** (3 cr; prereq 32)
II MWF, NH 304, Moulton

34 **Stagecraft: Construction, Painting** (3 cr; prereq soph, 31)
I MWF, II MF, ShH 110, Struthers

51 **Adv Public Speaking** (3 cr; prereq 5)
—1, II MWF, FolH 306, Scott
—2, IV MWF, FolH 306, Jensen

56 **Speech Writing, Platform Speaking** (3 cr; prereq 5 or ‡)
II MWF, FolH 305, Smith

65 **Radio, Television Speech** (3 cr; prereq 5)
II MWF, MurH 302, Bormann

66 **Radio, Television Drama** (3 cr; prereq 32, 65)
IV MWF, MurH 302, Snook

67 **Phonetics** (3 cr; prereq 5)
II MWF, FolH 409, Fletcher

69 **Radio, Television Production** (3 cr; prereq 65)
II T, II-III Th, FolH 308, Bormann

75 **Play Production in Secondary School** (3 cr; prereq 5, 32, 74)
IV MWF, ScH 110, Lenhoff

78 **Adv Acting** (3 cr; prereq 32)
IV MWF, NH 304, Graham

81 **Interpretative Reading** (3 cr; prereq 5)
—1, III-IV T, III Th, WeH 306, Fredricks
—2, VII MWF, WeH 306, Thompson

82 **Interpretative Reading** (3 cr; prereq 81)
—1, IV MWF, WeH 306, Thompson
—2, VI MWF, WeH 306, Fredricks

83 **Interpretative Reading** (3 cr; prereq 81)
III MWF, WeH 306, Thompson

91 **Scene Design** (3 cr; prereq 5, 31, 34)
III TThS, IV ThS, NH 304, Adey

97 Intercollegiate Oratory, Debate (1-3 cr; prereq soph with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro

102 **Argumentation, Persuasion** (3 cr; prereq 5, Psy 2, 10 cr soc sci)
—1, III MWF, FolH 306, Scott
—2, VI-VII T, VI Th, FolH 306, Howell

106 **Discussion** (3 cr; prereq 5)
VII MWF, FolH 306, Howell

112 **Stage Direction** (3 cr; prereq sr, 5, 90 or 91 or 92, △)
—1, III MWF, ShH 115, Whiting
—2, VII MWF, ShH 115, Whiting

131 **Creative Dramatics** (3 cr; prereq 5, 31 or elem educ maj or ‡...32 rec)
VI MWF, ShH 115, Graham

136 **Production of Television Drama** (3 cr; prereq 65, 66, 78, 111, 112, ‡) Ballet
141 **Anatomy, Physiology of Voice Mechanism** (3 cr; prereq 67 or ‡, Psy 5)
IV MWF, FolH 409, Fletcher
153 Audiometry, Hearing Aids (3 cr; prereq 152 or ‡)
III MWF, Mayo A675, Lassman
157 Clinical Practice in Audiology (3 cr; prereq 153, 155 or ‡) Lassman
162 **Speech Pathology** (3 cr, †162-163; prereq 61, 67, 161)
VI M, VI-VII T, FolH 409, Bryngelson
165 Clinical Methods, Practice in Speech Pathology (3 cr, §EdCI 175; prereq 164) Bryngelson, Henrikson, Starr
169 Speech, Language in Human Behavior (3 cr)
VI MWF, FolH 306, Henrikson
170 **Radio, Television Programming** (3 cr; prereq 65 or 66 or ‡)
V MWF, MurH 302
172 **History of Theater** (3 cr; prereq sr, 5, 31)
VI T, VI-VII Th, NH 304, Graham
178 Theater on Tour (3-6 cr; prereq sr, 12 cr above 50, cons fac comm) Whiting
182 Readings (ar cr; prereq 5, 6 addtl cr, ‡)
201 Seminar (1 cr; prereq ‡) Smith
204 Debate Coaching (2 cr; prereq 101, 102, 103) Howell, Scott
208 Seminar: Persuasion (3 cr; prereq 101, 102, 103, Psy 140) Howell
212 Seminar: Dramatic Theory (3 cr; prereq 171, 172, 173, 9 cr dram lit) Ballet
215 Seminar: Stage Direction (3 cr; prereq 214) Whiting
222 Seminar: Oral Interpretation of Literature (3 cr; prereq 105, 122) Thompson
242 Seminar: Radio Research (2 cr; prereq ‡) Ziebarth
251 Seminar: Listening Comprehension (2 cr; prereq undergrad maj spch, ‡)
VIII-IX W, AgEng 221 (**StP Campus**) Nichols
262 Seminar: Speech Pathology (3 cr; prereq 122, 163 or ‡) Henrikson, Bryngelson
268 Seminar: Experimental Phonetics (2 cr; prereq 67, 142) Fletcher
272 Seminar: Hearing (3 cr; prereq 271) Lassman
282 Seminar: Organic Disorders (2 cr; prereq 261, 262, 263, ‡) Henrikson
292 Research (ar cr)

ZOOLOGY (Zool)

2 **Gen Zoology** (3 cr, †1-2-3; prereq 1)
—1, Lect II TTh, Bo B6, Underhill
—2, Lect IV WF, Bo B6, Kerr
—1, Lab I-II MF, Z 101D, 107
—2, Lab III-IV MF, Z 101D, 107
—3, Lab V-VI MF, Z 101D, 107
—4, Lab VII-VIII MF, Z 101D, 107
—5, Lab I-II TTh, Z 101D, 107
—6, Lab III-IV TTh, Z 101D, 107
—7, Lab V-VI TTh, Z 101D, 107
—8, Lab VII-VIII TTh, Z 101D, 107
22 **Comparative Anatomy** (5 cr; prereq soph, 3 or Biol 3)
Lect III TTh, Z 313, Eddy
—1, Lab VI-VIII TTh, Z 3S
—2, Lab III-IV MWF, Z 3S
—3, Lab VI-VIII MW, Z 3S
52 **Entomology** (5 cr, §Ent 52; prereq 3 or Biol 3)
Lect VII MWF, Z 313, Price
—1, Lab V-VI MWF, Z 402
—2, Lab VIII-IX MWF, Z 402
57 **Ornithology** (3 cr, †57-58; prereq 3 or Biol 3)
Lect VII TTh, MNH 307, Warner
Lab VIII-IX TTh, MNH 307
59 **Gen, Comparative Embryology** (5 cr; prereq 3 or Biol 3)
Lect I TTh, Z 313, Spratt
Lab VI-VIII TTh, Z 201
Conf II or III S, Z 323
101 Zoological Techniques (ar cr; prereq grad)
118 Animal Ecology (3 cr, §Ent 118; prereq 15 or incl 3 or Biol 3, ‡)
VI T, VI-VII Th, CofH 307, Hodson (**StP Campus**)
138 Seminar: Biophysics (2 cr; prereq grad, ‡)
3:00-5:00 T, Z 313
145 **Parasitic Protozoa** (3 cr, §Ent 145; prereq 15 cr incl 3 or Biol 3, ‡)
Lect VI TTh, Z 211, Wallace
Lab VII-VIII TTh, Z 208
156 Biophysics (3 cr; prereq 28 cr betw phys, biol, ‡...phys chem, physiol rec)
Lect VI TTh, Ph 49, Schmitt
Lab VII-VIII TTh, Ph 49
160 **Cytology** (3 cr; prereq 15 cr incl 3 or Biol 3, ‡)
Lect II MF, Z 211, Gall
Lab III-IV MF, Z 204
171 Genetics of Speciation (3 cr; prereq 15 cr incl 83 or ‡)
VI MWF, Z 211, Merrell
198 Problems (ar cr; prereq 197)
202 Research: Entomology (ar cr; prereq 201) Mickel
212 Research: Ecology (ar cr; prereq 211) Eddy
218 Research: Physiology (ar cr; prereq 217) Richards
222 Research: Biophysics (ar cr; prereq 221) Schmitt
230 Research: Histology (ar cr) Olson
234 Research: Embryology (ar cr; prereq 233) Spratt
238 Research: Cytology (ar cr; prereq 237) Gall
243 **Insect Physiology** (4 cr, §Ent 243; prereq 242)
Lect VI WF, CofH 8, Richards (**StP Campus**)
Lab VII-IX WF
252 Research: Genetics (ar cr; prereq 251) Reed

255 **Adv Entomology** (3 cr, §Ent 255; prereq 254)
Lect I TTh, Z 211, Mickel
Lab II-III TTh, Z 402
262 Research: Parasitology (ar cr; prereq 261)
Wallace
292 Seminar (no cr; prereq 291)
297 Seminar: Research Fields (ar cr; prereq 296)

UNATTACHED COURSES

Biology (Biol)

2 **Gen Biol** (3 cr, †1-2-3, §Bot 2 or 5 or Zool 2, §old Zool 15 or NSci 8; prereq 1)
—1, Lect III TTh, MNH Aud, Kerr
—2, Lect IV TTh, NH 45, Olson
—3, Lect VII TTh, NH 45, Martin
—4, Lect V WF, Bo B6, Brown
—1, Lab I-II MF, Bo 1, 4, 5, Z 101
—2, Lab III-IV MF, Bo 1, 4, 5, Z 101
—3, Lab V-VI MF, Bo 1, 4, 5, Z 101
—4, Lab VII-VIII MF, Bo 1, 4, 5, Z 101
—5, Lab I-II TTh, Bo 1, 4, 5, Z 101
—6, Lab III-IV TTh, Bo 1, 4, 5, Z 101
—7, Lab V-VI TTh, Bo 1, 5, Z 101
—8, Lab VII-VIII TTh, Bo 1, 5, Z 101
2A **Gen Biol** (2 cr, †1A-2A-3A, §Bot 2 or 5 or Zool 2, §old Zool 15 or NSci 8; prereq 1A)
—1, Lect III TTh, MNH Aud, Kerr
—2, Lect IV TTh, NH 45, Olson
—3, Lect VII TTh, NH 45, Martin
—4, Lect V WF, Bo B6, Brown
—1, Dem I W, Z 101A
—2, Dem II W, Z 101A
—3, Dem III W, Z 101A
—4, Dem IV W, Z 101A
—5, Dem V W, Z 101A
—6, Dem VI W, Z 101A
—7, Dem VII W, Z101A
—8, Dem VIII W, Z 101A

Linguistics and Comparative Philology (Ling)

152 Honors Course (1-3 cr; prereq 151)

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING

Aeronautical Engineering (Aero)

5 **Aero-Space Survey, Laboratory** (1 cr; prereq 4)
VIII T, ME 110
20 **Flying: Theory, Practice** (2 cr)
V Th, ME 102
21 **Flying: Theory, Practice** (2 cr; prereq 20)
VI Th, ME 102
22 **Flying: Theory, Practice** (2 cr; prereq 21)
VI Th, ME 102
46 **Link Instrument Flying** (no cr; prereq ‡)
100A **Theoretical Aerodynamics I** (3 cr; prereq ITM 26A, Hydr 101)
III MWF, AE 209
102A **Theoretical Aerodynamics III** (3 cr; prereq 101A or 107)
IV MWF, ChE 240
116A **Structural System Analysis II** (3 cr; prereq 115A)
VI MWF, AE 211
131A **Aero-Space System Design** (4 cr; prereq 130A)
—1, VI-VIII MW, AE 317
—2, VI-VIII T, III-V Th, AE 317
159 **Aerodynamic Retardation** (3 cr; prereq 102 or 107 or ‡)
174 **Meteorology II** (3 cr; prereq 173) Mantis
194 **Probs: Aero-Space Engineering** (2-6 cr; prereq 193)
202 Aerodynamics of Compressible Fluid (3 cr; prereq 106 or ‡)
I T, I-II Th, AE 211
211 Topics: Gas Dynamics (3 cr; prereq 203, ITM 234 or ‡)
220 Astronautics (3 cr; prereq 201, ITM 152, 153 or ‡)
VI T, V-VI Th, AE 327
231 Aerodynamics, Flight Performance of Supersonic Missiles (3 cr; prereq 230)
II-III T, III Th, AE 211
272 Research (3-6 cr; prereq ‡)
273 Research (3-6 cr; prereq 272)
274 Research (3-6 cr; prereq 273)

Mechanics and Materials (MM)

27 **Rigid-Body Mechanics I** (3 cr; prereq ITM 25A, Phys 14)
—1, II MWF, Ex 193
—2, VI MWF, AE 327
28 **Rigid-Body Mechanics II** (3 cr; prereq 27, ITM 26A)
—1, III MWF, Ex 193
—2, VI MWF, AE 209
29 **Rigid-Body Mechanics III** (3 cr, §Phys 100; prereq 28)
—1, I MWF, Ex 193
—2, III MWF, AE 327
—3, IV MWF, Ex 193
—4, V MWF, Bu 120

—5, VI MWF, Ex 193
—6, VII MWF, Ex 193

40 **Deformable-Body Mechanics I** (3 cr; prereq 27)
—1, II MWF, AE 309
—2, VI MWF, AE 309

41 **Deformable-Body Mechanics II** (3 cr; prereq 40)
—1, I MWF, AE 209
—2, IV MWF, AE 309
—3, VII MWF, AE 209
—4, VIII MWF, AE 209

92 **Statics** (4 cr; prereq arch or combined engr-bus students, ITM 24A or 91)
I MTWTh, E 305

142 **Experimental Mechanics** (2 cr; prereq 40)
Lect V TTh, Bu 120
—1, Lab VI-VII M, Ex 130
—2, Lab VIII-IX M, Ex 130
—3, Lab I-II T, Ex 130
—4, Lab VI-VII T, Ex 130
—5, Lab VIII-IX T, Ex 130
—6, Lab VI-VII W, Ex 130
—7, Lab VIII-IX W, Ex 130
—8, Lab I-II Th, Ex 130
—9, Lab VI-VII Th, Ex 130
—10, Lab VI-VII F, Ex 130

151 **Fatigue of Materials, Structures** (3 cr; prereq 150)
III-IV TTh, AE 309

165 **Problems** (3 cr; prereq ‡)

181 **Deformable-Body Mechanics III** (3 cr; prereq 41 or 180)
10:30-12:00 TTh, Ex 25

196 **Probs: Adv Rigid-Body Dynamics** (3 cr; prereq 193 or ITM 162 or EE 150 or Phys 102)

211 Theory of Vibrations I (3 cr; prereq 193, ITM 147)
V MWF, Ex 22

222 Theory of Plasticity (3 cr; prereq 221)
VI MWF, Ex 22

227 Structural Instability (3 cr; prereq 180 or ITM 173)
9:00-10:30 TTh, Ex 193

241 Theory of Viscoelasticity (3 cr; prereq 180, 193)
9:30-11:00 TTh, Ex 22

265 Adv Topics (3 cr; prereq ‡)

295 Theory of Elasticity with Applications (3 cr; prereq 180)
VII MWF, Ex 25

298 Seminar (0-3 cr)

Agricultural Engineering (AgEn)

9 **Laboratory: Materials** (1 cr)
VIII-IX T, AgEng 101, Flikke, Larson

62 **Farm Structures** (3 cr; prereq MM 41 or ¶)
VI WF, AgEng 303, Otis, Pomroy

142 **Erosion Control** (3 cr; prereq 82, Hydr 103, Soil 19)
I MWF, AgEng 305, Larson

147 **Design, Mgt of Farm Machinery** (3 cr; prereq 72)
Lect VI TTh, AgEng 105, Strait
Lab VII-IX Th, AgEng 305, Strait

167 **Adv Farm Structures** (3 cr; prereq ME 160, CE 37)
Lect VI TTh, AgEng 303, Otis
Lab VII-IX Th, AgEng 303, Otis

170 **Agricultural Tractors** (3 cr; prereq ME 121, 150)
Lect II TTh, AgEng 105, Strait
Lab VII-IX T, AgEng 37, Strait

171 **Design of Agricultural Machinery** (3 cr; prereq 147, ME 121)
Lect VII M, AgEng 105, Strait
Lab VIII-X M, VII-IX W, AgEng 305, Strait

179 **Agricultural Process Engineering** (3 cr; prereq ME 160)
Lect IV TTh, AgEng 103, Hustrulid
Lab VII-IX F, AgEng 6, Hustrulid

180 **Agricultural Hydrology, Flood Control** (3 cr; prereq 142 or ¶)
III MWF, AgEng 105, Larson

192S **Probs: Soil Moisture** (2-6 cr; prereq ‡)

192P **Probs: Power, Machinery** (2-6 cr; prereq ‡)

192F **Probs: Farmstead Equipment, Operations** (2-6 cr; prereq ‡)

200 Seminar (1 cr; prereq ‡)

212 Adv Probs, Research (2-6 cr; prereq 191 or 192 or 193)

ARCHITECTURE (Arch)

12 **Architectural Drawing** (2 cr; prereq 11)
III-V TTh, E 417

52 **History** (4 cr; prereq 51)
II MTWF, E 305, Koeper

72 **Building Technology** (4 cr, §old 58; prereq 71)
III-IV TTh, E 305

75 **Building Technology** (4 cr; prereq 74)
III-IV TTh, AE 209

82 **Architectural Design I** (6 cr, †81-82-83; prereq 81)
Lect VI W, E 305
Lab VI-IX MThF, VII-IX W, E 411, Myers

91 **Architectural Design II** (6 cr, †91-92-93; prereq 83)
VI-IX MWThF, E 306, Bliss

92 **Architectural Design II** (6 cr, †91-92-93; prereq 91)
VI-IX MWThF, E 306, Bliss

93 **Architectural Design II** (6 cr, †91-92-93; prereq 92)
VI-IX MWThF, E 306, Bliss

102 **Tutorial Work in History** (2 cr; prereq 101) Koeper

105 **Seminar: Planning** (3 cr; prereq 104) Vivrett

110 **Planning Techniques** (ar cr; prereq 105) Vivrett

111 **Architectural Design III** (8 cr, †111-112-113; prereq 93, MM 93)
VI-IX MTWThF, E 315, 4 hrs ar, Cerny
112 **Architectural Design III** (8 cr, †111-112-113; prereq 111)
VI-IX MTWThF, E 315, 4 hrs ar, Cerny
113 **Architectural Design III** (8 cr, †111-112-113; prereq 112)
VI-IX MTWThF, E 315, 4 hrs ar, Cerny
121 **Architectural Design IV** (9 cr, †121-122; prereq 113, CE 41)
VI-IX MTWThF, E 315, 7 hrs ar, Vivrett
122 **Architectural Design IV** (9 cr, †121-122; prereq 121)
VI-IX MTWThF, E 315, 7 hrs ar, Vivrett
123 **Thesis** (12 cr; prereq 122)
36 hrs ar, E 405, Rapson
126 **Professional Relations** (3 cr; prereq 4th yr)
III-IV MF, E 302, Cavin
201 Research: History (ar cr; prereq 53) Koeper
232 Planning (ar cr; prereq 231)
252 Architectural Design VI (ar cr; prereq 251) Rapson

CHEMICAL ENGINEERING (ChEn)

102 **Principles** (5 cr; prereq 101)
Lect II TThS, ChE 240, Ranz
—1, Rec I MWF, ChE 158, Fredrickson
—2, Rec II MWF, ChE 154, Scriven
—3, Rec II MWF, ChE 158, Isbin
—4, Rec III MWF, ChE 154, Ranz
112 **Laboratory** (2 cr; prereq 102)
Conf III T, ChE 240
—1, Lab VI-IX M, ChE 3 fl, Fredrickson
—2, Lab VI-IX T, ChE 3 fl, Scriven
—3, Lab VI-IX W, ChE 3 fl, Garlid
—4, Lab VI-IX Th, ChE 3 fl, Madden
117 **Process Evaluation, Design** (3 cr; prereq 116)
VII-VIII T, VIII-IX Th, ChE 50, Preckshot
119 **Thermodynamics** (3 cr; prereq PCh 101)
Lect I TTh, ChE 240, Madden
—1, Rec II MW, ChE 150, Madden
—2, Rec VII WF, ChE 50
—3, Rec VII W, II F, ChE 150, Garlid
—4, Rec VIII MW, ChE 50, Dahler
122 **Biochemical Engineering** (3 cr; prereq 103, Bact 53 or ♯)
I TThS, ChE 150, Tsuchiya
131 **Chemical Reactor Analysis** (3 cr; prereq 120, PCh 109)
I MWF, ChE 240, Amundson
153 **Problems** (ar cr)
154 **Problems** (ar cr)
162 **Nuclear Reactor Design** (3 cr; prereq 161)
I MWF, ChE 150, Isbin
172 **Process Control** (3 cr; prereq 171)
Lect IV TTh, ChE 50, Ceaglske
—1, Lab VI-IX W, ChE 257, Ceaglske
—2, Lab VI-IX F, ChE 257, Ceaglske
202 Seminar (1 cr)
VI T, ChE 240, Isbin
209 Physical Rate Processes, Transfer Operations (3 cr; prereq 208) Ranz
215 Adv Mathematics for Chemical Engineers, Chemists (3 cr; prereq 214) Amundson
219 Adv Thermodynamics (3 cr; prereq 120 or ♯) Preckshot
222 Chemical Rate Processes, Reactor Design Principles (3 cr; prereq ♯) Dahler
226 Fluid Mechanics, Related Topics (3 cr; prereq 225)
I-II TTh, ChE 158, Aris
264 Survey (1 cr; prereq ♯)
302 Research (ar cr; prereq 301)

CHEMISTRY

Analytical Chemistry (AnCh)

51 **Quantitative Analysis: Gravimetric** (2 cr; prereq InCh 26)
VI MWF, C 325, Meehan
53 **Quantitative Analysis Lab** (3 cr; prereq 51 or ¶)
—1, VII-IX MWF, C 310, Meehan
—2, VI-IX T, VI-X Th, C 310
97 **Senior Thesis** (ar cr; prereq 4th yr)
101 **Quantitative Analysis** (5 cr; prereq InCh 26)
VI-IX MWF, C 310, Meehan
105 **Polarizing Microscope** (3 cr; prereq PCh 101)
Lect VI F, C 315, Sandell, lab ar
107 **Technical Analysis** (2 or 3 cr; prereq 51, 52, 53, 54) Sandell
132 **Electrometric Measurements, Titrations** (2 or 3 cr; prereq 51, 52, 53, 54, PCh 103)
Lect VI MW, C 315, Bruckenstein, lab ar
134 **Voltammetry, Amperometric Titrations** (2 cr; prereq 133 or ¶) Bruckenstein
136 **Seminar: Modern Probs** (1 cr; prereq 51, 52, 53, 54, PCh 103)
IV T, C 325, Kolthoff
140 **Water Analysis** (2 cr; prereq 51, 52, 53, 54) Sandell
141 **Instrumental Methods** (1-3 cr; prereq sr, 127)
VII-IX F, C 310, Bruckenstein
202 Topics (ar cr; prereq 51, 52, 53, 54) Kolthoff
236 Seminar: Research (ar cr; prereq 235)
VIII-IX Th, C 315, Kolthoff
262 Survey (1 cr; prereq ♯)
302 Research: Quantitative Analysis (ar cr)

Inorganic Chemistry (InCh)

4 **Gen Inorganic Chemistry** (5 cr, †4-5; prereq HS alg)
Lect V MWThF, C 100, Winter
—1, Lab VI-IX M
—2, Lab VI-IX T
—3, Lab VI-IX W
—4, Lab VI-IX Th
—5, Lab VI-IX F

5 **Gen Inorganic Chemistry** (5 cr, †4-5; prereq 4)
—1, Lect VI MWThF, C 100, Britton
Lab VI-IX T (for med, med tech, dent, SLA, ed students)
—2, Lect VII MTWF, C 100, Brasted
Lab VI-IX Th (for med, med tech, dent, SLA, nurs, nu ed, PubH nurs students)
—3, Lect VII TWF, C 325, Conroy
Quiz VII Th, C 100
Lab VI-IX M (VII M, C 410, Jan 4 only)
—4, Lect VIII TWThF, C 100, Bent
Lab VI-IX M (VIII M, MurH 105, Jan 4 only) (for AFHE, SLA students)

15 **Inorganic Chemistry** (4 cr, †14-15; prereq 14)
—1, Lect I MTWThF, C 100, Johnson
Lab VII-IX Th
—2, Lect I MTWThF, C 100, Johnson
Lab VII-IX F
—3, Lect IV MTWThF, C 225, Tobias
Lab VII-IX T
—4, Lect IV MTWThF, C 225, Tobias
Lab VII-IX W

24 **Chemical Principles** (5 cr, †24-25)
Lect V MWF, C 225, Hugus
Lab VI-VIII MW

25 **Chemical Principles** (5 cr, †24-25; prereq 24)
Lect II MWF, C 100, O'Connor
Lab I-III TTh

97 **Senior Thesis** (ar cr; prereq 4th yr)

104 **The More Representative Elements** (3 cr, grad 4 cr; prereq 103 or ‡)
III MWF, C 225, Brasted

113 **Mechanisms of Inorganic Reactions** (3 cr; prereq PCh 103)
VII MWF, C 215, Reynolds

135 **Seminar: Modern Probs** (1 cr; prereq PCh 103)
IV Th, C 215

204 Adv Inorganic Chemistry (4 cr; prereq 203 or ‡)
III MWF, C 215, Conroy

212 Topics (ar cr; prereq △)

221 Adv Lab Methods (ar cr; prereq ‡)

260 Survey (1 cr; prereq ‡)

302 Research (ar cr)

Organic Chemistry (OrCh)

61 **Organic Chemistry** (4 cr, †61-62; prereq 12 cr chem)
Lect IV MTWThF, C 100, Koelsch
—1, Lab VI-IX M, C 390
—2, Lab VI-IX T, C 390
—3, Lab VI-IX W, C 390
—4, Lab VI-IX Th, C 390
—5, Lab I-IV Th, C 390

62 **Organic Chemistry** (4 cr, †61-62; prereq 61)
Lect I MTWF, C 410, Kreevoy
Lab Conf V T, C 410
—1, Lab VI-IX T, C 390
—2, Lab VI-IX W, C 390
—3, Lab I-IV Th, C 390
Lect III MWThF, C 410, Noland
Lab Conf IV Th, C 410
—4, Lab VI-IX M, C 390
—5, Lab II-V T, C 390
—6, Lab VI-IX T, C 390
—7, Lab VI-IX Th, C 390

97 **Senior Thesis** (ar cr; prereq 4th yr)

101 **Interm Organic Chemistry** (3 cr; prereq 63, 64)
III MWF, C 215, Lauer

106 **Adv Organic Chemistry** (3 cr; prereq 63, 64)
II MWF, C 325, Smith

139 **Adv Laboratory** (2-5 cr; prereq 63, 64)
IX F, C 315, Noland, lab ar

140 **Adv Organic Chemistry** (3 cr; prereq 63, 64)
II MWF, C 225, Fenton

142 **Chemistry of Natural Products** (3 cr; prereq 63, 64)
III TThS, C 225, Leete

202 Seminar (1 cr)
7:45-8:45 pm W, C 325

239 Organic Research Techniques (2-5 cr; prereq OrCh maj) Parham

261 Survey (1 cr; prereq ‡)

302 Research (ar cr; prereq 102, △)

Physical Chemistry (PCh)

97 **Senior Thesis** (ar cr; prereq 4th yr)

102 **Physical Chemistry** (4 cr; prereq 101)
—1, IV MWFS, WuH 202, Wertz
—2, IV MWFS, C 410, Raw

105 **Laboratory** (1-2 cr; prereq 104, 102 or ¶)
Lect V M, C 325, Lipsky
—1, Lab VII-VIII M, VI-VIII W, C 190
—2, Lab VI-VIII T, VII-VIII Th, C 190
—3, Lab III-IV T, II-IV Th, C 190

108 **Physical Chemistry for Premedical Students** (3 cr, †107-108; prereq 107)
Lect IV MWF, C 325, Livingston
—1, Lab II-IV T, C 190
—2, Lab II-IV Th, C 190
—3, Lab VI-VIII F, C 190

115 **History of Chemistry** (3 cr)
VIII TTh, C 225, Reyerson

117 **Fundamentals of Reaction Kinetics** (3 cr; prereq 103)
IV MWF, C 111, Crawford

129 **Adsorption, Catalysis** (3 cr; prereq 128)
II MWF, C 111, Reyerson

133 **Colloid Chemistry Lab** (1-2 cr; prereq 128 or ¶) Reyerson

205 Atomistics (4 cr; prereq 204) Prager

217 Thermodynamics (4 cr; prereq 116)
III MWF, C 315, Mead

222 Seminar: Colloid (ar cr; prereq 221) Reyerson

251 Seminar: Physical Chemistry (1 cr)
7:30 pm W, C 225

254 Seminar: Molecular Spectroscopy (ar cr) Crawford

260 Seminar: Chemical Kinetics (ar cr) Livingston
263 Survey (1 cr; prereq ‡)
266 Seminar: Magnetochemistry (ar cr) Wertz
269 Seminar: Polymers (ar cr) Prager
275 Seminar: Quantum Mechanics (ar cr; prereq 274) Mead
291 Topics (ar cr)
302 Research (ar cr)

CIVIL ENGINEERING

Civil Engineering (CE)

2 **Laboratory** (1 cr; prereq 1)
—1, VII-IX T, EE 225
—2, VII-IX W, EE 225
—3, VII-IX Th, EE 225

19 **Surveying** (3 cr; prereq 18)
Lect I TTh, E 215
—1, Lab VI-IX M, E 217
—2, Lab VI-IX T, E 217
Lect I TTh, E 205
—3, Lab VI-IX W, E 217
—4, Lab VI-IX Th, E 217
Lect IV TTh, E 215
—5, Lab VI-IX F, E 217
—6, Lab I-IV S, E 217
Lect VII TTh, E 215
—7, Lab I-IV T, E 217
—8, Lab I-IV Th, E 217

32 **Structural Design** (3 cr; prereq 31, MM 40)
—1, Lect II MWF, E 227
—2, Lect II MWF, AE 211
—3, Lect VI MWF, E 227
—1, Lab VII-IX M, E 225
—2, Lab II-IV T, E 225
—3, Lab VII-IX T, TSCE 220
—4, Lab I-III Th, E 225
—5, Lab VII-IX F, E 225

39 **Structural Design: Steel, Timber** (3 cr; prereq 38)
—1, I MWF, ME 202
—2, III MWF, E 305

52 **Highways, Pavements** (3 cr; prereq 51)
—1, Lect V M, E 227, V F, ChE 240
—2, Lect V T, E 215, V F, ChE 240
—3, Lect V W, E 227, V F, ChE 240
—1, Lab VII-IX M, Ex 278
—2, Lab I-III T, Ex 278
—3, Lab VII-IX T, Ex 278
—4, Lab VII-IX W, Ex 278
—5, Lab I-III Th, Ex 278
—6, Lab VII-IX Th, Ex 278
—7, Lab VII-IX F, Ex 278

112 **Aerial Surveying, Photogrammetry** (3 cr; prereq 23 or ‡)
III MWF, E 217

131 **Structural Analysis** (2 cr; prereq 130)
—1, Lect VI T, E 227
Lab VII-IX T, E 227
—2, Lect VI Th, E 227
Lab VII-IX Th, E 227

137 **Structural Lab** (3 cr; prereq 141, ¶131)
Lect III TTh, Ex 193
—1, Lab VI-VIII T, Ex 265
—2, Lab VII-IX W, Ex 265

142 **Reinforced Concrete Design** (3 cr; prereq 130, 141)
—1, Lect I TTh, AE 19
—2, Lect II TTh, E 227
—1, Lab VIII-IX M, TSCE 220
—2, Lab VIII-IX T, E 229
—3, Lab VIII-IX Th, E 229
—4, Lab VIII-IX F, TSCE 220

147 **Foundations** (3 cr; prereq 141)
—1, I MWF, AE 19
—2, II MWF, AE 19

148 **Probs: Concrete** (2-3 cr; prereq 146)
VII-IX MW, Ex 93

159 **Soil Mechanics** (3 cr; prereq 53)
IV MWF, ChE 50

161 **Hydrology** (3 cr; prereq Hydr 101 or 103)
Lect III MW, E 227
—1, Lab I-III T, E 229
—2, Lab I-III Th, E 229
Lect III TF, E 227
—3, Lab VII-IX W, E 229
—4, Lab VII-IX F, E 229

170 **Water Supply** (3 cr; prereq 160)
Lect I MWF, EE 237
—1, Lab VII-IX M, E 229
—2, Lab VII-IX Th, TSCE 220
Lect VI MWF, AE 9
—3, Lab II-IV Th, TSCE 220

171 **Sewerage, Sewage Treatment** (3 cr; prereq 161, 170
Lect III MWF, EE 137
Lab VII-IX W, TSCE 220

174 **Sanitary Engineering Probs: Sewage, Industrial Wastes** (3 cr; prereq 171)
II MWF, Ex 250

177 **Seminar: Sanitary Engineering** (1 cr; prereq 5th yr)

235 Adv Theory of Structures (3-5 cr; prereq 132, 142)
II MWF, Ex 22

251 Adv Soil Mechanics Lab (3 cr; prereq 159 or ¶)

261 Water Plant Design (3-5 cr; prereq 173)

264 Sanitary Engineering Unit Operations (3 cr)

280 Research (3-5 cr; prereq ‡)

281 Research (3-5 cr; prereq 280)

282 Research (3-5 cr; prereq 281)

Hydromechanics (Hydr)

101 **Fluid Mechanics for Aeronautical, Electrical Engineering Students** (3 cr; prereq MM 27)
—1, I MWF, AE 211
—2, VI MWF, AE 15

103 **Fluid Mechanics** (5 cr; prereq MM 27)
—1, I MTWThF, E 227
—2, IV MTWThF, E 227
—3, V MTWThF, AE 19

—4, V MTWThF, AE 15
—5, VI MTWThF, AE 19
—6, VII MTWThF, AE 19

104 Fluid Mechanics Lab (1 cr; prereq 101 or 103 or ChEn 101 or ¶)
—1, III-IV M, Ex 138
—2, VI-VII M, Ex 138
—3, VIII-IX M, Ex 138
—4, II-III T, Ex 138
—5, VI-VII T, Ex 138
—6, III-IV W, Ex 138
—7, VI-VII W, Ex 138
—8, VIII-IX W, Ex 138
—9, II-III Th, Ex 138
—10, VI-VII Th, Ex 138
—11, VI-VII F, Ex 138

185 Adv Hydraulic Probs (2 cr; prereq 184)

190 Mechanics of Similitude, Dimensional Analysis (3 cr; prereq 101 or 103 or ‡)
3:00-4:30 WF, HL 307

191 Hydraulic Motors, Pumps (3 cr; prereq 187 or ‡)
1:15-2:45 WF, HL 307

294 Hydrodynamics (3 cr; prereq 293 or ‡)
8:00-9:30 TTh, HL 307

ELECTRICAL ENGINEERING (EE)

14 Laboratory (1 cr; prereq 12)
—1, VIII-IX M, EE 237
—2, VII-VIII T, EE 237
—3, VII-VIII Th, EE 237

37 Elements (3 cr; prereq 36)
—1, III MWF, ME 18
—2, 10:30-11:45 TTh, ME 18

37A Laboratory (1 cr; prereq ¶37)
—1, V-VI M, EE 118
—2, VIII-IX M, EE 118
—3, I-II T, EE 118
—4, III-IV T, EE 118
—5, VI-VII T, EE 118
—6, VI-VII W, EE 118
—7, I-II Th, EE 118
—8, III-IV Th, EE 118
—9, V-VI Th, EE 118
—10, IV-V F, EE 118

38 Elements (3 cr; prereq 37)
11:30-12:45 TTh, EE 335

38A Laboratory (1 cr; prereq 37A, ¶38)
—1, VIII-IX T, EE 118
—2, VIII-IX W, EE 118
—3, VII-VIII Th, EE 118
—4, VI-VII F, EE 118

40 Survey for Civil, Mining Engineering Students (4 cr; prereq 36)
Lect VII MWF, ME 110
—1, Lab IV-V M, EE 107
—2, Lab I-II W, EE 107
—3, Lab VI-VII W, EE 107
—4, Lab VIII-IX F, EE 107

53 Electrical Engineering (5 cr; prereq 51)
—1, II MTWThF, EE 137 (honors section)
—2, I MTWThF, EE 335
—3, III MTWThF, EE 335

54 Laboratory (1 cr; prereq 52, ¶53)
—1, V-VI Th, EE 216 (honors section)
—2, VI-VII M, EE 216
—3, VIII-IX M, EE 216
—4, I-II T, EE 216
—5, III-IV T, EE 216
—6, VI-VII T, EE 216
—7, VIII-IX T, EE 216
—8, VI-VII W, EE 216
—9, VIII-IX W, EE 216
—10, I-II Th, EE 216
—11, III-IV Th, EE 216
—12, VII-VIII Th, EE 216
—13, VI-VII F, EE 216

54A Prob Solving Lab (1 cr; prereq 52A, ¶53)
For EE 53, Lect 2 students only
—1, VI-VII M, EE 137
—2, IV-V T, EE 137
—3, VIII-IX T, EE 137
—4, IV-V Th, EE 137
—5, VI-VII Th, EE 137
For EE 53, Lect 3 students only
—6, I-II T, ME 208
—7, VI-VII T, EE 137
—8, VI-VII W, EE 137
—9, VIII-IX W, EE 137
—10, I-II Th, ME 208
—11, VIII-IX M, EE 137 (honors section)

57 Engineering Electronics (3 cr; prereq 51)
—1, II MWF, EE 335
—2, VI MWF, ChE 240
—3, VI MWF, EE 238 (honors section)

58 Engineering Electronics Lab (1 cr; prereq ¶57)
—1, I-II M, EE 205
—2, VI-VII M, EE 205
—3, VIII-IX M, EE 205
—4, I-II T, EE 205
—5, III-IV T, EE 205
—6, VI-VII T, EE 205
—7, VIII-IX T, EE 205
—8, VI-VII W, EE 205
—9, I-II Th, EE 205
—10, III-IV Th, EE 205
—11, VI-VII Th, EE 205
—12, III-IV F, EE 205
—13, VIII-IX F, EE 205
—14, VIII-IX W, EE 205 (honors section)

101 Summer Engineering Employment (1-3 cr; prereq 2 yrs engin, ‡)

102 Summer Engineering Employment (1-3 cr; prereq 101, ‡)

103 Summer Engineering Employment (1-3 cr; prereq 102, ‡)

123 Analysis of Electromagnetic Devices (3 cr; prereq 121)
—1, II MWF, EE 238 (honors section)
—2, III MWF, ChE 240
—3, VI MWF, EE 335

124 **Experimental Study of Electromagnetic Devices** (1 cr; prereq 122, ¶123)
—1, VIII-IX M, EE 107 (honors section)
—2, I-II T, EE 107
—3, III-IV T, EE 107
—4, VI-VII T, EE 107
—5, VIII-IX T, EE 107
—6, VIII-IX W, EE 107
—7, I-II Th, EE 107
—8, III-IV Th, EE 107
—9, V-VI Th, EE 107
—10 VII-VIII Th, EE 107

133 **Electronic Circuit Design** (3 cr; prereq 131)
Lect II TTh, EE 335
—1, Lab I-II M, EE 35
—2, Lab VIII-IX M, EE 35
—3, Lab III-IV T, EE 35
—4, Lab VI-VII T, EE 35
—5, Lab VIII-IX T, EE 35
—6, Lab I-II W, EE 35
—7, Lab VI-VII W, EE 35
—8, Lab VIII-IX W, EE 35
—9, Lab III-IV Th, EE 35
—10, Lab V-VI Th, EE 35
—11, Lab I-II F, EE 35
—12, Lab VI-VII F, EE 35

134 **Electric Machines** (3 cr; prereq 132)
Lect III TTh, EE 237
—1, Lab VII-VIII Th, EE 116
—2, Lab II-III F, EE 116

139 **Electric Power Control** (3 cr; prereq 138)
Lect IV TTh, EE 237
—1, Lab VI-VII M, EE 107
—2, Lab VIII-IX T, EE 107
—3, Lab V-VI Th, EE 107

144 **Engineering Acoustics** (3 cr; prereq 143)
VIII MWF, EE 238

151 **Thermodynamic Methods** (3 cr; prereq Phys 51 or ME 30, ITM 153, ♯)
3:30-4:45 T, 2:30-3:45 Th, EE 335

154 **Properties of Solids** (3 cr; prereq 153)
4:00-5:15 MW, EE 335

158 **Electronic Control** (3 cr; prereq 157)
Lect I TTh, ME 18
—1, Lab I-II M, EE 21
—2, Lab VI-VII M, EE 21
—3, Lab III-IV T, EE 21
—4, Lab VI-VII T, EE 21
—5, Lab VIII-IX T, EE 21
—6, Lab VI-VII W, EE 21
—7, Lab VIII-IX W, EE 21
—8, Lab III-IV Th, EE 21
—9, Lab V-VI Th, EE 21
—10, Lab VII-VIII Th, EE 21
—11, Lab VI-VII F, EE 21

162 **Networks** (3 cr; prereq 161)
—1, V MWF, EE 238 (honors section)
—2, II MWF, AE 209
—3, VII MWF, EE 335

162A **Networks Lab** (1 cr; prereq 161A, ¶162)
—1, VIII-IX M, EE 210
—2, I-II T, EE 210
—3, III-IV T, EE 210
—4, VIII-IX T, EE 210
—5, I-II W, EE 210
—6, V-VI W, EE 210
—7, I-II Th, EE 210
—8, III-IV Th, EE 210
—9, V-VI Th, EE 210 (honors section)
—10, VI-VII F, EE 210
—11, VIII-IX F, EE 210

165 **Communication Circuits** (3 cr; prereq 164)
Lect III TTh, EE 238
—1, Lab VI-VII M, EE 204
—2, Lab VIII-IX M, EE 204
—3, Lab VI-VII W, EE 204
—4, Lab IV-V Th, EE 204

168 **Electromagnetic Theory, Application** (3 cr; prereq 167)
Lect IV TTh, EE 238
—1, Lab VII-VIII M, EE 217
—2, Lab VIII-IX T, EE 217

174 **Physical Electronics** (3 cr; prereq 173)
Lect, Ar
Lab VI-VII Th, EE 204

179 **Nonlinear Active Circuits** (3 cr; prereq 178)
VI-VII TTh, EE 238

181C **High-Frequency Transistor Characteristics** (2 cr; prereq 181A, ♯)
7:00-7:50 am TTh, EE 335

184 **Electrical Lab** (1-3 cr; prereq ♯)

188 **Problems** (3 cr; prereq 187)
IV MWF, EE 335

192 **Active Network Theory** (3 cr; prereq 191)
VII MWF, EE 237

195 **Servomechanisms** (3 cr; prereq 194)
V MWF, EE 237

198 **Electrical Design of Machines I** (3 cr; prereq 197)

212 Network Analysis, Synthesis (3 cr; prereq 211)
V-VI TTh, EE 237

237 Solid State Theory (3 cr; prereq 236)
VIII-IX MW, ME 106

256 Analysis of AC Power-Systems Circuits (3 cr; prereq 255)

268 Theory of Communication (3 cr; prereq 267)
V MWF, AE 9

288 Electron Tube Analysis (3 cr; prereq 287)
VI MWF, EE 237

MATHEMATICS (ITM)

8 **Solid Geometry** (no cr; prereq plane geom)
V MWF, E 203

11 **College Algebra, Trigonometry I** (5 cr; prereq 9)
—1, I MTWThF, AE 9
—2, I MTWThF, AE 21
—3, II MTWThF, EE 237
—4, IV MTWThF, ChE 158
—5, IV MTWThF, AE 15
—6, V MTWThF, E 206
—7, VI MTWThF, AE 21

12 College Algebra, Trigonometry II (5 cr; prereq 11)
—1, I MTWThF, MinMet 116
—2, I MTWThF, AE 309
—3, I MTWThF, ChE 154
—4, I MTWThF, MinMet 120
—5, II MTWThF, AE 327
—6, II MTWThF, Ph 143
—7, II MTWThF, AE 15
—8, II MTWThF, E 106
—9, II MTWThF, AE 9
—10, II MTWThF, AE 227
—11, III MTWThF, ChE 50
—12, III MTWThF, ChE 150
—13, III MTWThF, AE 227
—14, III MTWThF, AE 21
—15, III MTWThF, AE 19
—16, IV MTWThF, AE 21
—17, IV MTWThF, AE 9
—18, IV MTWThF, Ex 22
—19, IV MTWThF, ChE 150
—20, V MTWThF, ChE 158
—21, V MTWThF, AE 227
—22, V MTWThF, AE 309
—23, VI MTWThF, ChE 150
—24, VI MTWThF, ChE 50
—25, VII MTWThF, E 106
—26, VII MTWThF, E 205

13A Calculus I: Analytic Geometry, Calculus (5 cr; prereq 8, 12)
—1, IV MTWThF, ChE 154
—2, V MTWThF, ChE 150
—3, V MTWThF, MinMet 124

24A Calculus II: Analytic Geometry, Calculus (5 cr; prereq 13A)
—1, II MTWThF, ChE 50
—2, II MTWThF, Ex 25
—3, IV MTWThF, AE 19
—4, IV MTWThF, AE 227
—5, V MTWThF, ChE 50
—6, VI MTWThF, E 203
—7, VI MTWThF, E 205

25A Calculus III: Analytic Geometry, Calculus (5 cr; prereq 24A)
—1, I MTWThF, ChE 50
—2, I MTWThF, AE 15
—3, I MTWThF, Ex 25
—4, II MTWThF, ChE 162
—5, II MTWThF, E 203
—6, II MTWThF, ChE 40
—7, II MTWThF, AE 21
—8, III MTWThF, ChE 158
—9, III MTWThF, AE 15
—10, III MTWThF, AE 9
—11, IV MTWThF, E 203 (honors section)
—12, IV MTWThF, E 106
—13, V MTWThF, E 106
—14, V MTWThF, E 205
—15, VI MTWThF, ChE 154
—16, VI MTWThF, E 106

26A Calculus IV: Differential Equations, Calculus (5 cr, §80; prereq 25A)
—1, V MTWThF, MinMet 116
—2, V MTWThF, AE 21
—3, VI MTWThF, Ex 25
—4, VI MTWThF, ChE 162

90 Engineering Statistics (3 cr; prereq 25 or 25A or ¶25A)
—1, I MWF, AE 227
—2, I MWF, ChE 162
—3, III MWF, AE 309

101B Orientation (2 cr)
VIII MW, E 104

133 Statistics with Applications (3 cr; prereq 132)
—1, V MWF, E 104
—2, V MWF, Ex 25

143 Vector, Matrix Theory with Applications (3 cr; prereq 142)
—1, I MWF, E 104
—2, II MWF, E 104

147 Vector Analysis (3 cr, §152, §old 154; prereq 25 or 25A)
I MWF, E 205

148 Differential Equations (3 cr, §150A; prereq 26 or 26A or 80)
—1, III MWF, E 205
—2, III MWF, ChE 162

150A Ordinary Differential Equations (3 cr, §148; prereq 26 or 26A or 80)
—1, IV MWF, ChE 40
—2, IV MWF, Ex 25

151A Calculus V: Interm (3 cr; prereq 26 or 26A or 80)
—1, IV MWF, E 205
—2, IV MWF, ChE 162

152 Calculus VI: Adv (3 cr, §147; prereq 151A)
—1, I MWF, E 203
—2, I MWF, E 106
—3, III MWF, ChE 40 (honors section)
—4, III MWF, E 104
—5, III MWF, E 106
—6, III MWF, E 206

155 Tensor Analysis with Applications (3 cr; prereq 147, 149 or 142, 152 or ‡)
V MWF, ChE 40

162 Analytical Dynamics (3 cr; prereq 161)
IV MWF, E 206, Koehler

165 Theory, Programming of Modern Digital Computers (3 cr, §165A; prereq 164)
VIII-IX MTh, E 106, Stein

165A Programming Modern Digital Calculators (3 cr, §165; prereq 25 or 25A)
VII MWF, E 206, Pope

174 Theory of Complex Variables (3 cr; prereq 26 or 26A)
—1, II MWF, E 205
—2, II MWF, E 206
—3, III-IV TTh, E 104

185 Numerical Analysis (3 cr; prereq 147, 148, 149, 184...or 152, 153, 184 or ‡)
III MWF, E 203

190B Combinatorial Topology (3 cr; prereq 190A)
VI MWF, E 206

197 Functions in Mathematical Analysis (3 cr; prereq 196)
III MWF, ChE 54, Fulks

199B Prob Course (3 cr; prereq ‡)
III-IV TTh, E 206

225 Lie Groups, Lie Algebras (3 cr; prereq 224)
I MWF, E 206, Yamabe

249 Reading, Research (1-3 cr; prereq 248)

262 Functions of a Complex Variable (3 cr; prereq 261)
IV MWF, E 104, Warschawski

268 Topics: Theory of Analytic Functions (3 cr; prereq 267)
VI MWF, E 104, Rohrl

275 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 274)
II MWF, ChE 54, Serrin

288 Hilbert Space, Functional Analysis (3 cr; prereq 287)
VI-VII TTh, E 104, Green

305 Adv Topics: Differential, Difference Equations (3 cr; prereq 304)
VII MWF, E 104, Markus

MECHANICAL ENGINEERING

Engineering Graphics (EG)

14 Engineering Graphics (3 cr; prereq solid geom)
Lect II MW, AE 215
—1, Lab I-II TTh, E 18
—2, Lab I-II TTh, TSCE 100
—3, Lab I-II TTh, TSCE 120
Lect VI MW, AE 215
—4, Lab V-VI TTh, E 18
—5, Lab V-VI TTh, TSCE 100
—6, Lab V-VI TTh, TSCE 120

15 Engineering Graphics (3 cr; prereq 14)
Lect I MW, AE 215, and indiv work
—1, Rec I F, E 201
—2, Rec I Th, E 201
—3, Rec I F, AE 215
Lect III MW, AE 215, and indiv work
—4, Rec III F, AE 215
Lect V MW, AE 215, and indiv work
—5, Rec V F, E 201
—6, Rec V Th, E 201
—7, Rec V F, AE 215
Lect VII MW, AE 215, and indiv work
—8, Rec VII F, AE 215
Lect I TTh, AE 215
—9, Rec I-II WF, E 18
—10, Rec I-II WF, TSCE 100
—11, Rec I-II WF, TSCE 120
Lect IV TTh, AE 215
—12, Rec III-IV WF, E 18
—13, Rec III-IV WF, TSCE 100
—14, Rec III-IV WF, TSCE 120
Lect V TTh, AE 215
—15, Lab V-VI WF, E 18
—16, Lab V-VI WF, TSCE 100
—17, Lab V-VI WF, TSCE 120
Lect VII TTh, AE 215
—18, Lab VII-VIII WF, E 18
—19, Lab VII-VIII WF, TSCE 100
—20, Lab VII-VIII WF, TSCE 120
Lect VIII MW, AE 215
—21, Lab VII-VIII TTh, E 18
—22, Lab VII-VIII TTh, TSCE 100
—23, Lab VII-VIII TTh, TSCE 120

16 Engineering Graphics (3 cr; prereq 15)
Lect IV MW, AE 215
—1, Lab III-IV TTh, E 18
—2, Lab III-IV TTh, TSCE 100

51 Graphic Representation, Computation (3 cr; prereq 15, ITM 11)
VI MWF, TNCE 120

55 Production Illustration (2 cr; prereq 16)
V-VI MWF, TNCE 100

Industrial Engineering (IE)

50 Elements, Mgt (3 cr, §old 150; prereq 3rd yr)
—1, II MWF, ME 18
—2, V MWF, ME 18

153 Methods Engineering, Work Measurement (3 cr; prereq 50 or ¶)
Lect II TTh, ME 202
—1, Lab VII-IX M, ME 180
—2, Lab VII-IX T, ME 180
—3, Lab VII-IX F, ME 180

154 Adv Methods Engineering, Work Measurement (3 cr; prereq 153)
Lect III TTh, ME 102
—1, Lab VII-IX W, ME 180
—2, Lab VII-IX Th, ME 180

163 Process Planning, Development (3 cr; prereq 50, ME 15, 16)
Lect II TTh, ME 106
Lab VII-IX M, ME 102

167 Materials Handling, Packaging (3 cr; prereq 153)
I MWF, ME 106

170 Production Planning, Control (3 cr; prereq 50)
IV MWF, ME 102

171 Quality Control (3 cr; prereq ITM 90 or 132 or ‡)
III MWF, ME 106

173 Engineering Economic Analysis (3 cr; prereq 50)
II MWF, ME 106

195 Applied Industrial Engineering (3 cr; prereq 15 cr)

196 Applied Industrial Engineering (3 cr; prereq 195)

198 Sequential Analysis of Industrial Data (3 cr; prereq ITM 133 or ‡)
VI MWF, ME 102

252 Adv Industrial Engineering (3 cr; prereq 251)

262 Probs: Production Engineering (3-5 cr; prereq 261)

272 Research (3-5 cr; prereq 271)

Mechanical Engineering (ME)

15 **Casting, Working, Welding Engineering Materials** (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 18
—1, Lab VII-IX T, ME 50
—2, Lab VII-IX Th, ME 50

16 **Cold Processing Materials** (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 202
—1, Lab VII-IX T, ME 171
—2, Lab VII-IX Th, ME 171

22 **Mechanisms of Automatic Machines** (3 cr; prereq 21)
Lect V TTh, ME 321
—1, Lab VII-IX T, ME 314
—2, Lab VII-IX Th, ME 314
—3, Lab VII-IX F, ME 314

23 **Dynamics of Machinery** (3 cr; prereq 22, MM 29)
Lect IV TTh, ME 321
—1, Lab VII-IX M, ME 314
—2, Lab VII-IX W, ME 314
—3, Lab VII-IX Th, ME 308

24 **Machine Design** (3 cr; prereq MM 41)
Lect III TTh, ME 321
—1, Lab VII-IX M, ME 308
—2, Lab VII-IX T, ME 308
—3, Lab VII-IX W, ME 308

30 **Thermodynamics** (3 cr, §old 130; prereq ITM 26A or ¶, Phys 14)
—1, I MWF, ME 18
—2, IV MWF, AE 209
—3, V MWF, ME 110
—4, VI MWF, ME 110

31 **Thermodynamics** (3 cr, §old 131; prereq 30)
—1, I MWF, ME 110
—2, II MWF, ME 110
—3, III MWF, ME 110
—4, IV MWF, ME 110

33 **Laboratory I** (2 cr; prereq 30 or ¶)
Lect II T, ME 321
—1, Lab VII-IX W, ME 370
—2, Lab VII-IX Th, ME 370
—3, Lab VII-IX F, ME 370

34 **Laboratory II** (2 cr; prereq 33)
Lect IV T, ME 110
—1, Lab VII-IX M, ME 370
—2, Lab VII-IX T, ME 370
—3, Lab VII-IX W, ME 370
—4, Lab VII-IX Th, ME 370

90 **Industrial Assignment** (4 cr, †90-91-92-93; prereq regis coop work-study program)

91 **Industrial Assignment** (4 cr, †90-91-92-93; prereq 90)

94 **Industrial Assignment** (3 cr, †90-91-92-93-94-95; prereq 93)

95 **Industrial Assignment** (3 cr, †90-91-92-93-94-95; prereq 94)

121 **Machine Design** (3 cr; prereq 24)
Lect II TTh, ME 110
—1, Lab VII-IX M, ME 325
—2, Lab VII-IX T, ME 325
—3, Lab VII-IX W, ME 325
—4, Lab VII-IX Th, ME 325
—5, Lab VII-IX F, ME 325

123 **Creative Engineering** (3 cr; prereq 4th yr)
Lect VI T, ME 302
Lab VII-IX TTh, ME 302

124 **Experimental Stress Analysis** (3 cr; prereq MM 41)
Lect III TTh, ME 351
Lab VII-IX M, ME 351

125 **Machine Design Lab** (2 cr; prereq 24)
—1, Lect VI M, ME 321
Lab VII-IX M, ME 357
—2, Lect VI T, ME 321
Lab VII-IX T, ME 357
—3, Lect VI W, ME 321
Lab VII-IX W, ME 357
—4, Lect VI Th, ME 321
Lab VII-IX Th, ME 357
—5, Lect VI F, ME 321
Lab VII-IX F, ME 357

133 **Heat Transmission** (3 cr; prereq 32, Hydr 101 or 103 or ¶...or Hydr 101 or 103, ‡)
—1, I MWF, ME 102
—2, VI MWF, ME 302

134 **Thermodynamics of Fluid Flow** (3 cr; 32, Hydr 103)
—1, II MWF, ME 202
—2, III MWF, ME 202
—3, IV MWF, ME 202

141 **Heat Power Engineering** (3 cr; prereq 32)
I MWF, ME 214

143 **Turbomachinery** (3 cr; prereq 134 or ¶)
—1, IV MWF, ME 214
—2, IV MWF, ME 106

146 **Combustion** (3 cr; prereq 133 or ¶)
—1, I MWF, ME 321
—2, II MWF, ME 321

147 **Heat Power Design** (3 cr; prereq 143, 146)
Lect VI T, ME 214
Lab VII-IX TTh, ME 214

150 **Internal Combustion Engines** (3 cr; prereq 32)
—1, V MWF, ME 321
—2, V MWF, ME 106

152 **Diesel, Free Piston Engines** (3 cr; prereq 150)
—1, II MWF, ME 302
—2, II MWF, ME 102

159 **Heat Power Lab** (2 cr; prereq 143, 146)
—1, VI-IX T, ME 480
—2, VI-IX W, ME 480
—3, VI-IX Th, ME 480

160 Psychrometrics, Air Conditioning (3 cr; prereq 133 or ¶)
—1, V MWF, ME 214
—2, VI MWF, ME 214

161 Heating, Air Conditioning Design (3 cr; prereq 160, 180)
Lect VI T, ME 208
Lab VII-IX TTh, ME 208

169 Air Conditioning, Refrigeration Lab (2 cr; prereq 34, 160, 180)
—1, VI-IX M, ME 362
—2, VI-IX T, ME 362
—3, VI-IX W, ME 362
—4, VI-IX Th, ME 362
—5, VI-IX F, ME 362

180 Mechanical Refrigeration (3 cr; prereq 32)
III MWF, ME 214

181 Adv Mechanical Refrigeration (3 cr; prereq 180)
II MWF, ME 214

194 Adv Problems (2-4 cr; prereq 5th yr, ME maj, 2.5 GPA, △)

198 Industrial Instrumentation, Automatic Control (3 cr; prereq EE 38 or ¶)
Lect I TTh, ME 110
—1, Lab I-III M, ME 359
—2, Lab IV-VI M, ME 359
—3, Lab VIII-X M, ME 359
—4, Lab VII-IX T, ME 359
—5, Lab VII-IX W, ME 359

225 Adv Applied Dynamics (3 cr; prereq 224)

229 Adv Vibration Engineering (3 cr; prereq 129)

231 Statistical, Non-equilibrium Thermodynamics (3 cr; prereq 230)
I MWF, ME 208

234 Convection (3 cr; prereq 233)
II MWF, ME 208

242 Adv Power Plants (3 cr; prereq 142)

247 Diffusion Flames (3 cr; prereq 146)
III MWF, ME 208

253 Adv Gas Turbines, Jet Propulsion (3 cr; prereq 157)
Lect V TTh, ME 208
Lab VII-IX M, ME 208

266 Adv Psychrometric Processing (3 cr; prereq 265)
IV MWF, ME 208

280 Theoretical Refrigeration (3 cr; prereq 180)
III MWF, ME 102

290 Research (ar cr; prereq △)

291 Research (ar cr; prereq 290)

296 Adv Servomechanisms (3 cr; prereq 199, ITM 174 or ¶)

METALLURGY (Met)

56 Physical Metallurgy (3 cr; prereq 3rd yr)
VII MWF, MinMet 116, Nicholson

90 Industrial Employment (2 cr; prereq ♯)

91 Industrial Employment (2 cr; prereq ♯)

154 Physical Metallurgy II (3 cr; prereq 53 or ♯)
II MWF, MinMet 116, Jerabek

154A Physical Metallurgy Lab (2 cr; prereq ¶154)
VI-IX Th, MinMet 410, Jerabek

158 Metal Fabrication (3 cr)
Lect VI TTh, MinMet 120, Nicholson
Lab VII-IX W, MinMet 410, Nicholson

159 Dental Physical Metallurgy (2 cr)
I TTh, Owre 15, Jerabek

162 Nuclear Metallurgy (1 cr; prereq 56 or ♯)
II Th, MinMet 120, Swalin

171 Probs: Physical Metallurgy (1-3 cr)

174 Modern Theory of Metals, Alloys (3 cr, §old 164A; prereq Phys 51 or ♯)
9:00-10:20 TTh, MinMet 124, Sivertsen

181 Thermodynamics of Alloys, Solid State Reactions (3 cr, §old 163B; prereq 180)
II MWF, MinMet 410, Swalin

208 Physical Metallurgy (ar cr)

214 Seminar: Physical Metallurgy (ar cr)

251 Kinetics of Solid State Reactions (3 cr; prereq 182 or ♯) Swalin

MINES AND METALLURGY

Metallurgical Engineering (MetE)

90 Industrial Employment (2 cr; prereq ♯)

91 Industrial Employment (2 cr; prereq ♯)

107 Prin Process Metallurgy (3-4 cr; prereq 106)
Lect III MWF, MinMet 124, Bitsianes
Lab VI-IX W, MinMet B25

111 Mineral Dressing (4 cr; prereq 110)
Lect III TTh, I Th, ChE 162, Cooke
—1, Lab VI-VIII T, MinMet 16, 22
—2, Lab VI-VIII F, MinMet 16, 22
—3, Lab ar

119 Practice (ar cr; prereq ♯)

122 Adv Mineral Dressing (3 cr; prereq 112)
VI M, VII MTh, MinMet 120, Cooke

125 Probs: Mineral Dressing (ar cr; prereq 112) Cooke

135 Unit Processes (3 cr; prereq 11)
II MWF, MinMet 124, Joseph

142 Probs: Process Metallurgy (ar cr; prereq 108) Joseph, Bitsianes

202 Research: Process Metallurgy (ar cr) Joseph, Bitsianes

205 Research: Mineral Dressing (ar cr) Cooke

211 Seminar (ar cr)
IV T, MinMet 104

Mining Engineering (MinE)

16 Mine Maps (1-2 cr; prereq 15A or 15B)
VI-IX T, MinMet 321, Yardley

90 Industrial Employment (2 cr; prereq ♯) Pfleider, others

91 Industrial Employment (2 cr; prereq 90) Pfleider, others

92 Industrial Employment (2 cr; prereq 91) Pfleider, others

112 **Development of Mineral Deposits** (3 cr; prereq 111 or ‡)
II MTWF, MinMet 104, Yardley
121 **Mine Plant Engineering** (3 cr; prereq 113, MM 28 or ‡)
IV-VI F, MinMet 120, VI-VIII Th, MinMet 104, Roberts, Fairhurst
132 **Rock Mechanics II** (3 cr; prereq 131)
IV MWF, MinMet 104, Fairhurst
142 **Surface Mining Engineering** (3 cr; prereq 112 or ‡)
II MWF, IV T, MinMet 120, Pfleider
144 **Adv Mining Engineering** (2 cr; prereq 141)
VI-VIII MW, MinMet 321, Pfleider, others
152 **Problems** (ar cr; prereq 113) Pfleider, others
180 **Geochemical Exploration** (3 cr; prereq ‡) Yardley
202 Seminar: Mineral Engineering (ar cr) Pfleider, others

Petroleum Engineering (PetE)

90 **Industrial Employment** (2 cr; prereq ‡) Lacabanne
91 **Industrial Employment** (2 cr; prereq 90) Lacabanne
112 **Oil Field Production** (3 cr; prereq 111 or ‡)
III MTWF, MinMet 104, Lacabanne
134 **Natural Gas Engineering** (2 cr; prereq 112 or ‡)
IV TTh, MinMet 124, Lacabanne
144 **Adv Petroleum Engineering** (2 cr; prereq MinE 141)
VI-IX M, VI-VIII WF, MinMet 321, Pfleider
153 **Petroleum Production Technology** (3 cr; prereq 152)
Lect V Th, MinMet 104, Lacabanne
—1, Lab VII-IX Th, VI-VIII F, MinMet 216, 220
—2, Lab ar
156 **Problems** (ar cr; prereq ¶144 or ¶145 or ‡) Lacabanne
202 Seminar: Petroleum, Natural Gas Engineering (ar cr; prereq 201)
IV T, MinMet 216, Lacabanne
206 Engineering Study: Oil Field (ar cr) Pfleider
208 Research Probs (ar cr) Lacabanne, Pfleider

PHYSICS (Phys)

1 **Physical Science** (3 cr; prereq HS alg, plane geometry)
IV MWF, Ph 133
1A Physical Science Lab (1 cr; prereq 1 or ¶)
2 **Physical Science** (3 cr; prereq 1)
III MWF, Ph 150, Wall
2A Physical Science Lab (1 cr; prereq 2 or ¶)
5 **Gen Physics: Heat, Electricity** (5 cr; prereq 4)
I MTWThF, Ph 166, Buchta
Lab sec assigned during first 2 days of class
8 **Gen Physics** (5 cr; prereq 7, ¶ITM 24A or Math 53)
II MTWThF, Ph 166, Freier
Lab sec assigned during first 2 days of class
11 **Gen Physics** (5 cr; prereq ¶ITM 11 or ¶Math T)
—1, V MTWThF, Ph 166
—2, VII MTWThF, Ph 150
Lab and rec sec assigned during first 2 days of class
12 **Gen Physics** (5 cr; prereq 11, ¶ITM 12 or ¶Math 10)
—1, I MTWThF, Ph 150
—2, III MTWThF, Ph 170
—3, VI MTWThF, Ph 150
Lab sec assigned during first 2 days of class
14 **Interm Physics** (4 cr; prereq 13, ¶ITM 24A or Math 53)
V MTWThF, Ph 150
14A Laboratory (1 cr; prereq ¶14)
50 **Interm Physics** (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54)
—1, II MTWThF, Ph 170, Ney (honors section)
—2, I MTWThF, Ph 133
—3, III MTWThF, Ph 133
—4, VI MTWThF, Ph 166
50A **Physics Lab** (1 cr; prereq ¶50)
—1, VI-VIII M, Likely (honors section)
—2, VI-VIII T, Likely (honors section)
—3, VI-VIII Th, Likely (honors section)
—4, VI-VIII F, Likely (honors section)
—5, Ar during first 2 days of class
102 **Mechanics, Electromagnetism** (4 cr; prereq 100 or MM 29)
—1, I MTWF, Ph 170, Zimmerman
—2, I MTWF, Ph 145
103 Theoretical Physics (3 cr; prereq 4th yr, 9 or 14, ¶diff equat or ‡)
II MWF, Ph 145, Cheston
109 Modern Physics (3 cr; prereq 107 or ‡)
VI MWF, ForH 180, Lee
110 Atomic, Nuclear Physics (3 cr; prereq 108)
VI MWF, Ph 145, Eisberg
116 Physical Investigation (3 cr; prereq △)
121 **Experimental Nuclear Physics I** (3 cr; prereq 50, 107)
—1, VI-IX TTh, Ph 250, Blair
—2, VII-X MF, Ph 250, Johnson
124 Thermodynamics, Statistical Mechanics, Theories of Structure of Matter (3 cr; prereq 123, ¶109)
IV MWF, Ph 236a, Werntz
134 Experimental Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
Lect VII T, Ph 145, Valasek
Lab VIII-X TTh, Ph 348
146 **Vacuum Tubes, Associated Circuits** (4 cr; prereq 144 or ‡)
Lect II MWF, Ph 133, Blair
—1, Lab VII M, Ph 256
—2, Lab VI T, Ph 256
—3, Lab VI W, Ph 256

—4, Lab VI Th, Ph 256
—5, Lab VII F, Ph 256
—6, Lab II S, Ph 256

183 Atomistics, Quantum Mechanics (3 cr; prereq 181)
IV MWF, Ph 145, Hill

192 Mathematical Physics (3 cr, †191-192-193; prereq 101, 103, 105, diff equat, adv calc)
III MWF, Ph 145, Hill

202 Dynamics of Fluid Motion (3 cr; prereq 201)
10:30-12:00 TTh, Ph 143, Hill

211 Quantum Mechanics (3 cr; prereq 210)
V-VI MWF, Ph 143, Yennie

217 Seminar: Contemporary Theoretical Physics (3 cr; prereq 216)
VII-VIII W, Ph 143

226 Adv Quantum Theory (3 cr; prereq 225)
V-VI MWF, Ph 143, Yennie

229 Nuclear Physics (3 cr; prereq 228)
III MWF, Ph 143, Bolsterli

238 Seminar: Radiofrequency Spectroscopy (ar cr; prereq 237)
VI-VII TTh, Ph 143, Lowe

250 Theory of Solid State of Matter (3 cr; prereq 249)
VIII-IX TTh, Ph 143, Sanders

253 Seminar: Nuclear Physics (ar cr; prereq 252)
VII-IX F, Ph 143, Porter

256 Seminar: Mass Spectroscopy (ar cr; prereq 255)
VIII-IX T, Ph 145, Nier

259 Seminar: Cosmic Rays (ar cr; prereq 258)

268 Atmospheric Physics (3 cr; prereq 267)
VI T, VI-VII Th, Ph 145

302 Research (ar cr)

UNATTACHED COURSES

General Engineering (GE)

70 Slide Rule (1 cr; prereq ITM 11 or ¶)
—1, VI T, AE 215
—2, VI Th, AE 215
—3, III T, AE 215
—4, III Th, AE 215

105 Engineering Library Techniques (1 cr)
VI T, E 206

Geophysics (GPhy)

91 Industrial Employment (2 cr; prereq 90) Mooney

109 Seismology (3 cr; prereq Geol 125, Phys 9 or 14)
III MWF, MinMet 120, Mooney

126 Seismic Exploration (2 cr; prereq Phys 14, Geol 125, ITM 25A)
III TTh, MinMet 120, Mooney

136 Problems (ar cr; prereq ♯) Mooney

COLLEGE OF VETERINARY MEDICINE

Veterinary Anatomy (VAna)

102 Comparative Anatomy (8 cr; prereq 101 or ♯)
Lect I MWF, VetS 257, Stromberg
Lab I-III M, VII-IX T, II-IV WThFS, VetS 141

106 Surgical Anatomy (1 cr; prereq 103, VMC 101, ♯)
VIII-IX M, VetS 257, Kitchell, Arnold

152 Microscopic Anatomy of Domestic Animals (4 cr; prereq 151)
Lect VI WF, VetS 257, Kitchell
Lab VII-IX WF, VetS 247, Stinson

190 Seminar (1 cr; prereq 101, 151, ♯) Kitchell

191 Special Studies (1-5 cr; prereq 151, ♯) Kitchell

Veterinary Bacteriology and Public Health (VBac)

103 Virology (4 cr; prereq 102, ♯)
Lect II MWF, VetS 229, Lindorfer, Loken, Pomeroy
Lab III-IV MW, III F, VetS 325

126 Public Health (3 cr; prereq 125)
VII MWF, VetC 125, Anderson, Olson, Schuman

128 Probs: Bacteriology, Public Health (ar cr; prereq 103, ♯) Anderson, Pomeroy, Lindorfer, Loken

130 Poultry Hygiene (3 cr; prereq Biol 3, PoHu 1, Bact 53)
VI MWF, VetS 325, Pomeroy

201 Adv Poultry Diseases (ar cr; prereq 131, ♯) Pomeroy

205 Adv Bacteriology (ar cr; prereq ♯) Pomeroy, Fenstermacher, Lindorfer

Veterinary Medicine and Clinics (VMC)

103 Large Animal Medicine (5 cr; prereq 102)
I, MTWThF, VetA 102, Sorensen

111 Clinics (5 cr; prereq 110)
II-IV MTWThF, I-III S, VetC 70, 125

115 Clinics (5 cr; prereq 114)
II-IV MTWThF, I-III S, VetC 55, 125

117B Clinical Conference (⅓ cr, †117A-117B-117C; prereq 117A)
IX W, VetC 125, Campbell
118B Clinical Conference (⅓ cr, †118A-118B-118C; prereq 118A)
IX W, VetC 125, Campbell
119 Jurisprudence, Business Methods (2 cr; prereq ‡)
VI TTh, VetC 125, Campbell
131 Infectious Diseases of Large Animals (5 cr; prereq ‡)
I MTWThF, VetC 125, Hoyt
201 Adv Veterinary Medicine (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen
202 Adv Diagnosis, Therapeutics of Animal Diseases (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen
203 Seminar (ar cr; prereq ‡) Hoyt, Mather, Sorensen
204 Medical Conference (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

Veterinary Obstetrics (VObs)

102 Animal Reproduction (4 cr; prereq 101, VMC 113, ‡)
VIII MTWF, VetC 125, Zemjanis
201 Probs: Animal Reproduction (ar cr; prereq ‡) Zemjanis

Veterinary Pathology and Parasitology (VPaP)

101 Parasitology (5 cr; prereq 151, ‡)
Lect I MWF, VI Th, VetS 229, Griffiths, Bemrick
—1, VII-IX T, VetS 225
—2, VII-IX Th, VetS 225
152 Special Pathology (5 cr; prereq 151, ‡)
Lect VI MWF, VetS 229, Sautter, Willigan, Nielsen, Ball
Lab VII-IX MW, VetS 225, 229
156 Diseases of Fur-Bearing Animals (2 cr; prereq 153, VMC 122, ‡)
VII TTh, VetC 125, Fenstermacher, Barnes
157 Veterinary Necropsies (1-3 cr; prereq 153, ‡) Sautter
158 Surgical Pathology (1-3 cr; prereq 153, ‡) Sautter
201 Adv Veterinary, Poultry Pathology (ar cr; prereq ‡) Sautter, Fenstermacher
202 Seminar: Pathology (1 cr; prereq 153, ‡) Sautter, Kernkamp
203 Neoplasms of Domestic Animals (ar cr; prereq ‡) Sautter
240 Adv Parasitology (ar cr; prereq 102, ‡) Griffiths
241 Probs: Parasitology (ar cr; prereq 102, ‡) Griffiths

Veterinary Physiology and Pharmacology (VPP)

51 Physiology of Domestic Animals (4 cr; prereq Biol 3, InCh 5)
VI-VII TTh, VetA 103, Sellers, Bergman
107 Animal Physiology (3 cr; prereq 105)
I TTh, VII F, VetA 103, Good, Sellers
108 Animal Physiology Lab (2 cr; prereq 106, ¶107)
II-IV TTh, TEH 103, Good, Sellers
153 Clinical Pharmacology (3 cr; prereq 152, ‡)
Lect VII MW, VetA 103, Stowe, Hammond
Lab VII-IX F, TEH 103, Stowe, Hammond

Veterinary Surgery and Radiology (VSR)

102 Special Surgery (5 cr; prereq 101, ‡)
Lect VI MWF, VetA 102, Arnold, Clifford, Gourley, Herschler
Lab VII-IX TTh, VetA 102
131 Heredity in Animal Disease (3 cr; prereq VMC 104, ‡)
VI MWF, VetC 125, Spurrell
210 Adv Radiology (2 cr; prereq 121, ‡) Spurrell
219 Fundamentals of Nuclear Medicine (3 cr; prereq ‡)
VIII-IX MThF, MH 214 (**Mpls Campus**) Spurrell, Marvin, Loken
220 Anesthesia (ar cr; prereq 103, ‡) Arnold, Clifford
225 Adv Small Animal Surgery (ar cr; prereq 103, ‡) Arnold, Clifford
230 Adv Large Animal Surgery (ar cr; prereq 103, ‡) Arnold, Usenik

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE (Air)

32 Air Science I: Foundations of Air Power (1 cr; prereq 31)
Drill I M or V M or VI M
—1, I TTh, A 12
—2, III TTh, A 12
—3, V TTh, A 12
—4, VI TTh, A 12

35 Air Science II: Foundations of Air Power (1 cr; prereq 34)
Drill I M or V M or VI M
—1, I WF, A 12
—2, III WF, A 12
—3, IV, WF, A 12

132 Air Science III: Air Officer Development (3 cr; prereq 131)
Drill I M or V M or VI M
—1, I TWThF, A 11
—2, III TWThF, A 11
—3, V TWThF, A 11

135 Air Science IV: Intl Relations, Air Force Officer (3 cr; prereq 134)
Drill I M or V M or VI M
—1, II TWThF, A 11
—2, IV TWThF, A 11

MILITARY SCIENCE AND TACTICS (Mil)

2 Military Science I (1 cr; prereq 1)
—1, I MWF, A 116A, Gessner
—2, II MWF, A 116A, Gessner
—3, III MWF, A 116A, Gessner
—4, V MWF, A 116A, Gessner
—5, VI MWF, A 116A, Gessner

5 Military Science II (1 cr; prereq 4)
—1, II MWF, A 201, Rutledge
—2, III MWF, A 201, Rutledge
—3, V MWF, A 201, Rutledge
—4, VI MWF, A 201, Rutledge

152 Military Science III (3 cr; prereq 151)
—1, I MTWThF, A 105, Elliott
—2, IV MTWThF, A 105, Elliott
—3, VI MTWThF, A 105, Elliott

155 Military Science IV (3 cr; prereq 154)
—1, II MTWThF, A 116, Carlton
—2, V MTWThF, A 116, Carlton

MORTUARY SCIENCE (Mort)

5 Restorative Art (1 cr, †4-5-6; prereq 4)
—1, VIII-IX T, NH 100, Gates
—2, VIII-IX Th, NH 100, Gates

8 Orientation in Funeral Service (1 cr)
I T, NH 213, Thorsell

9 Orientation in Funeral Service (1 cr)
I Th, NH 213, Slater

14 Mortuary Law (3 cr)
I MWF, ForH 160, Grayson

51 Anatomy (3 cr, †51-52; prereq Zool 3 or 15, Phsl 4)
Lect V TTh, JacH 304, Buckman
Lab VI-VII TTh, JacH 301, 302, 303, Buckman

54 Pathology (3 cr, †53-54; prereq 53)
II MW, JacH 304, II F, FraH B25, Gamble

57 Embalming Theory, Practice (3 cr, †56-57-58; prereq 56)
III MWF, JacH 304, Thorsell

59 Public Health, Minnesota Law, Regulations (2 cr; prereq △)
IV TTh, JacH 304, Larsen

61 Funeral Mgt (2 cr; prereq 11)
III TTh, P 218, Slater

63 Business Methods (2 cr; prereq Econ 24)
II TTh, MurH 311, Lund

64 Psychology of Funeral Service (2 cr; prereq GC 41, or Psy 1-2)
VII MW, JacH 104, Thorsell

70 Chemistry for Embalmers (3 cr, †70-71; prereq InCh 2)
Lect VI MW, C 115, Pervier
Lab VI-VII F, Pervier

NAVAL SCIENCE (Nav)

12 Sea Power (3 cr)
Drill IV T or Th, A 205
Lab III T or Th, A 205
—1, Lect III MWF, A 205, McCabe
—2, Lect IV MWF, A 205

22 Naval Weapons (3 cr)
Drill IV T
—1, Lect III MWF, A 202, Laing
—2, Lect V MWF, A 205
—1, Lab II T, A 202
—2, Lab III T, A 202

52 Naval Engineering: Introd to Navigation (3 cr)
Drill I or IV T
—1, Lect V MWF, A 12A, Loberger
—2, Lect VII MWF, A 12A
—1, Lab V T, A 12A
—2, Lab VII T, A 12A

55 Evolution of the Art of War II (3 cr)
Drill IV T
Lect VI MWF, A 205, Hollier
Lab VI Th, A 205

58 Naval Accounting: Basic Supply Afloat (3 cr)
Drill IV T, A 17
Lect IV MWF, A 202, Donnelly
Lab IV Th, A 202

62 **Naval Operations: Leadership** (3 cr)
Drill I or II T
—1, Lect III MWF, A 12A, Thiel
—2, Lect IV MWF, A 12A
—1, Lab III T
—2, Lab V T

65 **Amphibious Warfare II** (3 cr)
Drill IV T
Lect VII MWF, A 205, Hollier
Lab III Th, A 205

68 **Ships Store Afloat, Leadership** (3 cr)
Drill V T
Lect V MWF, A 202, Donnelly
Lab VI Th, A 202

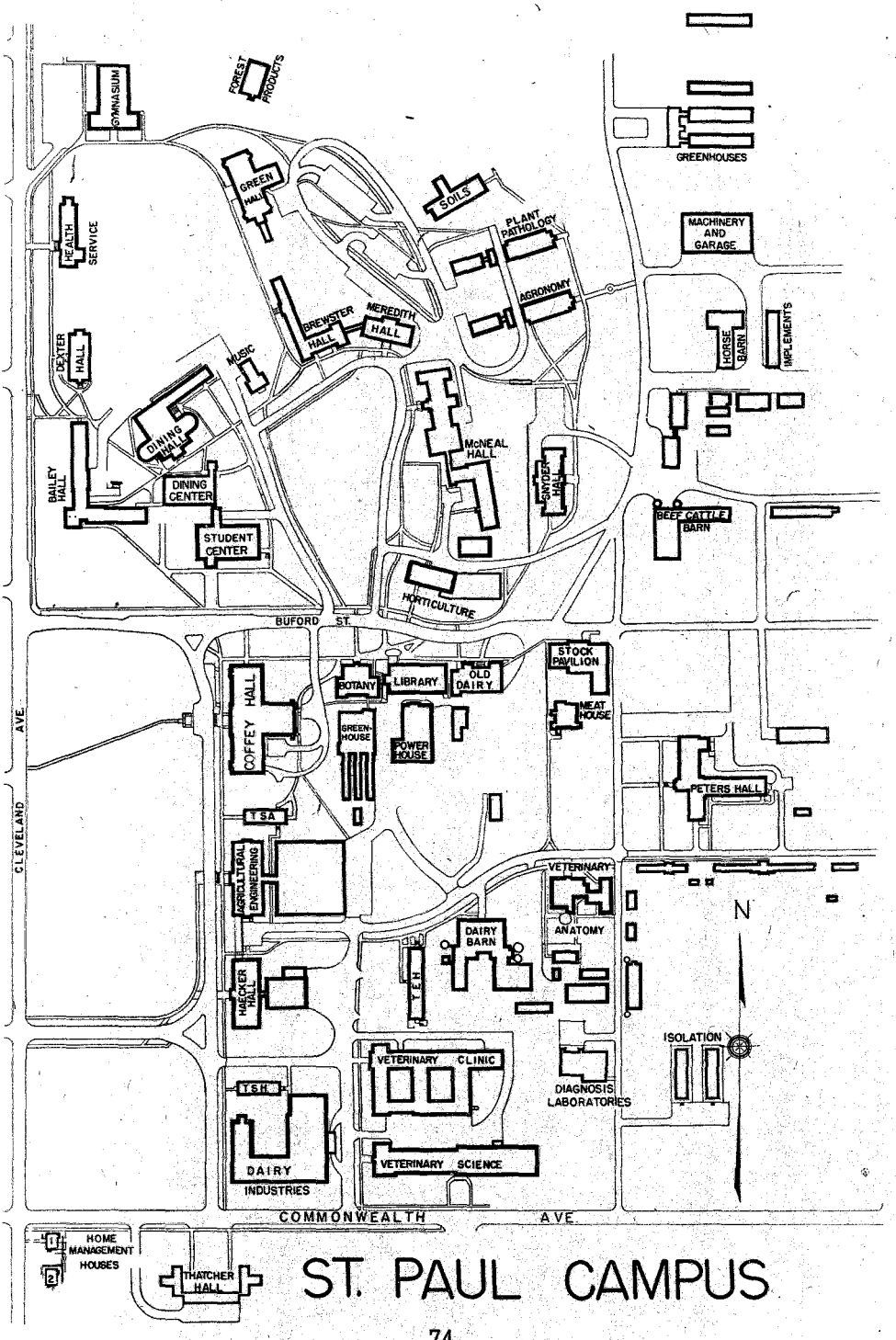
PHYSICAL EDUCATION FOR MEN (PEM)

Nonprofessional

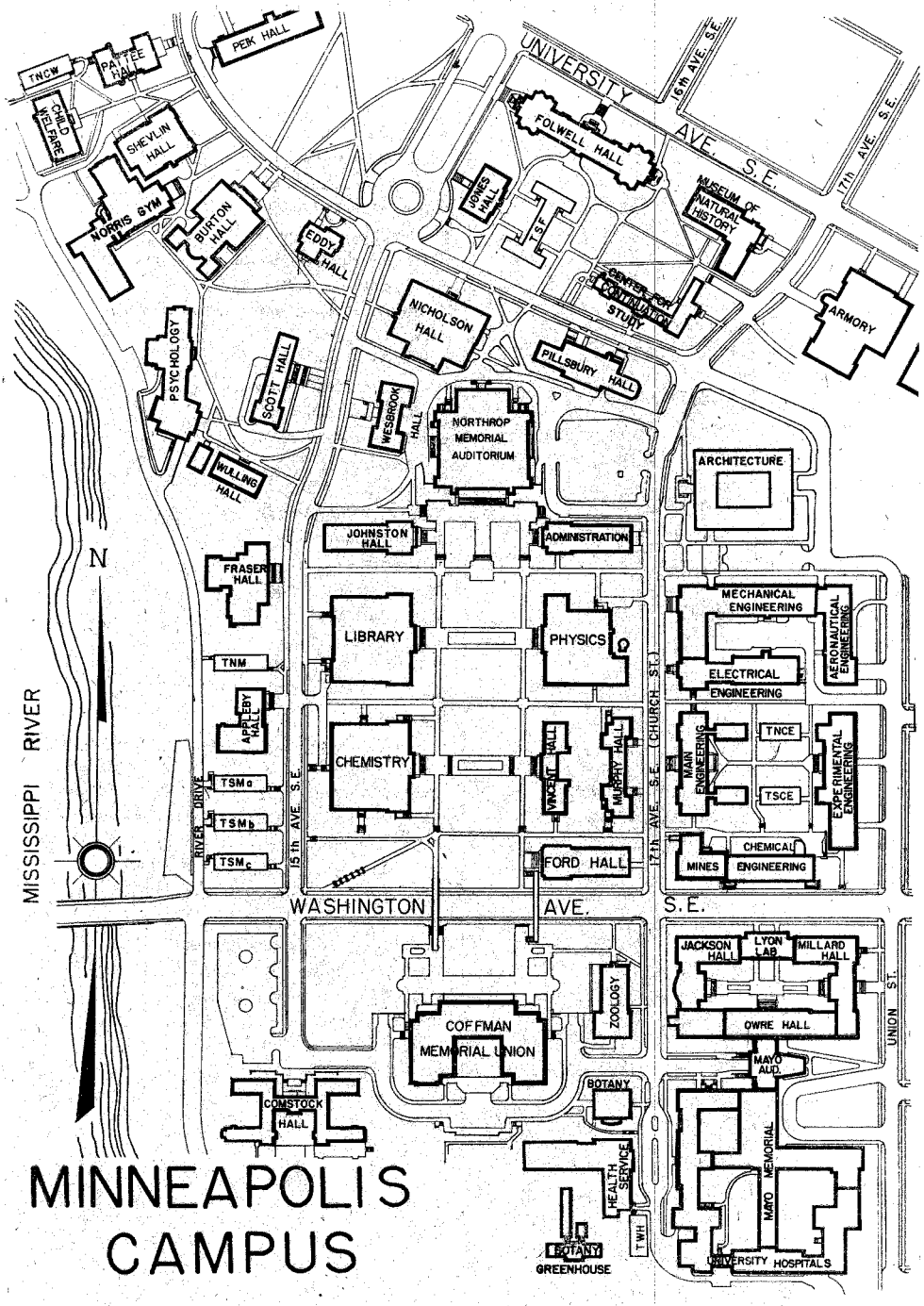
All classes meet the first day in CH Gymnasium

1B Sports Education (1 cr)
Swimming, Bgn
—1, II MWF, CH Pool, Boyce
—2, VII MWF, CH Pool, Thorpe
—3, 3:00-3:50 MWF, Gy Pool **(StP Campus)** McDonnell
—4, II-III T, II Th, CH Pool, Boyce
Bowling, Bgn
—5, I MWF, CMU, Sattervall
—6, II MWF, CMU, Sattervall
—7, 10:00-10:50 TTh, 1 hr ar, StCen **(StP Campus)** McDonnell
Handball
—8, 12:00-12:50 TTh, 1 hr ar, Gy 100 **(StP Campus)** Nowotny
Handball—Paddleball
—9, VII MWF, StadN, Lewis
Badminton, Bgn
—10, IV MWF, CH Gym, Fischer
Golf, Bgn
—11, VII MWF, StadS, Bolstad
—12, VIII MWF, StadS, Bolstad
—13, 12:00-12:50 MWF, Gy 100 **(StP Campus)** McDonnell
—14, II TTh, 1 hr ar, StadS, Bolstad
—15, III TTh, 1 hr ar, StadS, Bolstad
Adapted Activities
—16, III MWF, StadS, Osell
—17, IV MWF, StadS, Osell
—18, VIII MWF, StadS, Osell
Weight Lifting
—19, III T, III-IV Th, CH Gym, Aus
Skating, Bgn
—20, VI MWF, WmsA, Aus
Freshman Basketball
—21, CH Gym, Reed
Freshman Gymnastics
—22, App Gym, Piper
Freshman Ice Hockey
—23, WmsA, Ryman
Freshman Swimming
—24, CH Pool, Heusner
Freshman Wrestling
—25, StadN, Johnson

2B Sports Education (1 cr)
Swimming, Interm
—1, II T, II-III Th, CH Pool, Boyce
—2, VI MWF, CH Pool, Thorpe
—3, VI T, VI-VII Th, CH Pool, Thorpe
—4, VI-VII T, VI Th, CH Pool, Thorpe
Life Saving
—5, III MWF, CH Pool, Boyce
Archery
—6, 10:00-10:50 MWF, Gy 100 **(StP Campus)** McDonnell
—7, III MWF, FieldHse, Fischer
Gymnastics
—8, VII MWF, App Gym, Novak
Weight Lifting
—9, VIII MWF, CH Gym, Aus
—10, VI MWF, CH Gym, Novak
Volleyball
—11, III MWF, CH Gym, Novak
Tennis
—12, II MWF, CH GYM, Lewis
Square-Folk Dancing
—13, II TTh, NGW
Ballroom Dancing
—14, IV TTh, NGW
—15, VII TTh, NGW
Body Building
—16, VIII MWF, StadS, Osell
Basketball
—17, VII MWF, CH Gym, Fischer
Badminton, Adv
—18, III T, III-IV Th, CH Gym, Sattervall
Varsity Basketball
—19, WmsA, Kundla
Varsity Gymnastics
—20, App Gym, Piper
Varsity Ice Hockey
—21, WmsA, Mariucci
Varsity Swimming
—22, CH Pool, Heusner
Varsity Wrestling
—23, StadN, Johnson



ST. PAUL CAMPUS



MINNEAPOLIS CAMPUS

BUILDING ABBREVIATIONS

A, Armory
AE, Aeronautical Engineering
AgBot(StP), Agricultural Botany
AgEng(StP), Agricultural Engineering
Agr(StP), Agronomy
Bo, Botany
BoG, Botany Greenhouse
Bu, Burton Hall
C, Chemistry
CH, Cooke Hall
ChE, Chemical Engineering
CofH(StP), Coffey Hall
CW, Child Welfare
DI(StP), Dairy Industries
DinC(StP), Dining Center
DCB(StP), Dairy Cattle Barn
E, Main Engineering
EdH, Eddy Hall
EE, Electrical Engineering
Ex, Experimental Engineering
FieldHse, Fieldhouse
FP(StP), Forest Products
FolH, Folwell Hall
ForH, Ford Hall
FraH, Fraser Hall
GH(StP), Green Hall
Gy(StP), Gymnasium
HH(StP), Haecker Hall
HL, Hydraulic Lab (Hennepin Island)
HolB, Holman Bldg (2035 Univ Ave)
Hosp, University Hospitals
Hr(StP), Horticulture
J, Jones Hall
JacH, Jackson Hall
JohH, Johnston Hall
Lib, Walter Library
LsPav(StP), Livestock Pavilion
LyonL, Lyon Laboratories
Mayo, Mayo Memorial
McNH(StP), McNeal Hall (Home Economics)
ME, Mechanical Engineering
MeH(StP), Meredith Hall
MEx, Mines Experiment Station
MH, Millard Hall
MinMet, Mines and Metallurgy
MMA, Mayo Memorial Auditorium
MNH, Museum of Natural History
MSh(StP), Meat Shop
MurH, Murphy Hall
MusEd, Music Education
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
Owre, Owre Hall
P, Pillsbury Hall
PeikG, Peik Hall Gymnasium
PeikH, Peik Hall
PetH,StP), Peters Hall
Ph, Physics
PoH, Powell Hall
PP(StP), Plant Pathology
Psy, Psychology
Pt, Pattee Hall
SBH, State Board of Health
ScH, Scott Hall
ShH, Shevlin Hall
SnH(StP), Snyder Hall
So(StP), Soils
Stad, Stadium
TEH(StP), Temporary, East of Haecker Hall
TNCE, Temporary, North Court of Engineering
TNCW, Temporary, North of Child Welfare
TNM, Temporary, North of Mines (Appleby Hall)
TSCE, Temporary, South Court of Engineering
TSF, Temporary, South of Folwell
TSH(StP), Temporary, South of Haecker Hall
VCHH, Variety Club Heart Hospital
VetA(StP), Veterinary Anatomy
VetC(StP), Veterinary Clinic
VetS(StP), Veterinary Science
VH, Vincent Hall
WeH, Wesbrook Hall
WmsA, Williams Arena
WuH, Wulling Hall
Z, Zoology

OFFICE DIRECTORY

Admissions and Records, Office of:	
Minneapolis Campus	105Adm
St. Paul Campus	220CofH
Aeronautical Engineering	107AE
Agricultural Biochemistry	214SnH
Agricultural Economics	303HH
Agricultural Education	205Hr
Agricultural Engineering	200AgEng
Agricultural Journalism	107CofH
Agronomy and Plant Genetics	303Agr
Air Science	3A
American Studies	101TSF
Anatomy	201JacH
Anesthesiology	C596 Mayo
Animal Husbandry	122PetH
Anthropology	325ForH
Architecture	310E
Art	108J
Art Education	106J
Astronomy	358Ph
Bacteriology	1060 Mayo
Biology	104Z
Biophysics	48Ph
Botany	8Bo
Business Administration	109VH
Cancer Biology	274LyonL
Chemical Engineering	151ChE
Chemistry	139C
Child Development and Welfare	103CW
Civil Engineering	123E
Classics	310FolH
Comparative Literature	200AFolH
Dairy Husbandry	202HH
Dairy Industries	225DI
Dental Assisting	302 Owre
Dental Hygiene	106 Owre
Dentistry	136 Owre
Economics	221VH
Electrical Engineering	139EE
Engineering Graphics	125ME
English	219FolH
Entomology and Economic Zoology	300CofH
Food Technology	214SnH
Forestry	110GH
General College	106NH
General Education	204Bu
Geography	290aForH
Geology and Mineralogy	108P
Geophysics	207MinMet
German	210FolH
History	200ForH
Home Economics	200HE
Home Economics Education	117HE
Horticulture	111Hr
Industrial Education	103TNCW
Interdepartmental Courses, General Education	208JohH
Journalism	111MurH
Law	125FraH
Library	3Lib
Linguistics and Philology	311FolH
Mathematics (IT)	114E
Mathematics (SLA)	119FolH
Mechanical Engineering	125ME
Medical Technology	C205 Mayo
Medicine	C309 Mayo
Metallurgy	403MinMet
Military Science and Tactics	108A
Mines and Metallurgy	112MinMet
Mortuary Science	155NH
Music	107ScH
Music Education	214ScH
Naval Science	203A
Nursing	125 Owre
Obstetrics and Gynecology	A616Hosp
Ophthalmology	A684 Mayo
Orientation	202CofH
Otolaryngology	A605 Mayo
Pathology	110JacH
Pediatrics	1403 Mayo
Pharmacology	105MH
Pharmacy	101WuH
Philosophy	100WeH
Physical Education for Men	111CH
Physical Education for Women	101NGW
Physical Medicine	860 Mayo
Physics	148Ph
Physiological Chemistry	227MH
Physiology	424MH
Plant Pathology and Agricultural Botany	304PP
Political Science	395ForH
Poultry Husbandry	205PetH
Psychiatry and Neurology	B692 Mayo
Psychology	112Psy
Public Health	1325 Mayo
Radiology	B238 Mayo
Rhetoric	309AgEng
Romance Languages	200FolH
Scandinavian	13FolH
Slavic and Oriental Languages	322FolH
Social Work	400ForH
Sociology	400ForH
Soils	125So
Speech	309FolH
Student Counseling Bureau	101EdH
Surgery	B518 Mayo
Veterinary Medicine	301VetS
Zoology	108Z

FINAL EXAMINATIONS

Hours and days—The time of your examination is based on the hours and days the class is regularly scheduled, and the college under which the course is listed in the *Class Schedule*. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine . . . or to courses numbered over 200 which have no regularly scheduled classrooms.

In determining your proper final examination time from this schedule:

- Go by the lecture hours rather than the laboratory or recitation hours.
- Follow the MWF sequence if your class meets four or more days a week.
- Use the first full class hour if your class meets for more than one continuous hour.
- Use the common examination hour if your course is listed on the following page.

Classes meeting II Hour Saturday only will be examined 8:00-10:00 S March 12.

Classes meeting III-IV Hour Saturday only will be examined 10:30-12:30 S March 12.

Courses Listed Under Business Administration, General College, and Institute of Technology

Class Hours					Class Hours				
I	MWF	1:30- 3:30	W	Mar 16*	VI	MWF	1:30- 3:30	T	Mar 15*
I	TThS	1:45- 3:45	S	Mar 12	VI	TTh	4:00- 6:00	T	Mar 15
II	MWF	3:45- 5:45	F	Mar 11*	VII	MWF	8:00-10:00	F	Mar 11*
II	TThS	1:15- 3:15	M	Mar 14	VII	TTh	10:30-12:30	F	Mar 11
III	MWF	10:15-12:15	M	Mar 14*	VIII	MWF	6:45- 8:45 pm	M	Mar 14*
III	TThS	10:45-12:45	Th	Mar 17	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:00-10:00	W	Mar 16*	IX				
IV	TThS	10:45-12:45	S	Mar 12	X				
V	MWF	1:30- 3:30	Th	Mar 17*					
V	TTh	4:00- 6:00	Th	Mar 17					

Courses Listed Under Science, Literature, and the Arts, Education, Medical Sciences‡, Dentistry‡, and Unattached Departments**

Class Hours					Class Hours				
I	MWF	3:45- 5:45	W	Mar 16*	VI	MWF	1:30- 3:30	T	Mar 15*
I	TThS	1:45- 3:45	S	Mar 12	VI	TTh	4:00- 6:00	T	Mar 15
II	MWF	1:30- 3:30	F	Mar 11*	VII	MWF	8:00-10:00	F	Mar 11*
II	TThS	1:15- 3:15	M	Mar 14	VII	TTh	10:30-12:30	F	Mar 11
III	MWF	8:00-10:00	M	Mar 14*	VIII	MWF	6:45- 8:45 pm	M	Mar 14*
III	TThS	10:45-12:45	Th	Mar 17	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	10:15-12:15	W	Mar 16*	IX				
IV	TThS	10:45-12:45	S	Mar 12	X				
V	MWF	1:30- 3:30	Th	Mar 17*					
V	TTh	4:00- 6:00	Th	Mar 17					

Courses Listed Under Agriculture, Forestry, and Home Economics

Class Hours					Class Hours				
I	MWF	1:30- 3:30	W	Mar 16*	VI	MWF	1:30- 3:30	T	Mar 15*
I	TThS	1:45- 3:45	S	Mar 12	VI	TTh	4:00- 6:00	T	Mar 15
II	MWF	1:30- 3:30	F	Mar 11*	VII	MWF	8:00-10:00	F	Mar 11*
II	TThS	1:15- 3:15	M	Mar 14	VII	TTh	10:30-12:30	F	Mar 11
III	MWF	8:30-10:30	M	Mar 14*	VIII	MWF	6:45- 8:45 pm	M	Mar 14*
III	TThS	10:45-12:45	Th	Mar 17	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:30-10:30	W	Mar 16*	IX				
IV	TThS	10:45-12:45	S	Mar 12	X				
V	MWF	1:30- 3:30	Th	Mar 17*					
V	TTh	4:00- 6:00	Th	Mar 17					

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* Classes meeting four or more hours per week may give three-hour examinations provided the instructor notifies the Room Scheduling Office of his intention to do this. Three-hour examinations will be scheduled from 8:30-11:30 or 1:30-4:30 on the respective morning or afternoon the examination would otherwise be given (6:30-9:30 p.m. for VIII Hour classes).

‡ Courses offered primarily to students other than medical and dental students.

** Courses listed under Air Science, Military Science, Mortuary Science, Naval Science, and nonprofessional Physical Education for Men.

Common Examinations—All sections of the following courses are examined together at the time indicated.

BA 5—10:45-12:45 T	Mar 15	GC 32A—10:45-12:45 T	Mar 15
BA 24, 25, 26—4:00-6:00 S	Mar 12	Ger 1C, 2C, 4—8:15-10:15 Th	Mar 17
Biol 2, 2A—7:00-9:00 pm W	Mar 16	ITM 11, 26A—7:30-10:30 Th	Mar 17
Comm 1, 2—10:45-12:45 T	Mar 15	ITM 12, 24A—7:30-10:30 S	Mar 12
Comp X—10:45-12:45 T	Mar 15	ITM 13A, 25A—7:30-10:30 T	Mar 15
Econ 1, 2—7:00-9:00pm F	Mar 11	Math X, T, 55—8:15-10:15 S	Mar 12
EG 14—1:15-3:15 M	Mar 14	Math H, 10, 40, 53, 54—7:30-10:30 T	Mar 15
EG 15—10:45-12:45 Th	Mar 17	ME 30, 31—10:45-12:45 T	Mar 15
EG 16—1:45-3:45 S	Mar 12	MM 27, 28, 29—7:30-10:30 S	Mar 12
Engl A, 1A, 1B—10:45-12:45 T	Mar 15	MM 40, 41—7:30-10:30 T	Mar 15
Engl B, 2A, 2B—3:45-5:45 M	Mar 14	Psy 4, 5—7:00-9:00pm T	Mar 15
Fren 1C, 2B, 2C—7:30-10:30 Th	Mar 17	Span 1C, 2C—7:30-10:30 Th	Mar 17
GC 10A—8:15-10:15 Th	Mar 17	Zool 2—7:00-9:00pm W	Mar 16

Rooms—Examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Instructors note: Requests for special final examination rooms are submitted to the Office of Room Assignments and Scheduling by your department office on Form A123. These rooms will be scheduled beginning February 15.

Conflicts and Three Examinations in One Day—Report conflicts with examinations in other courses and situations involving three examinations in one day to your college office.

Changes in Final Examination Hours—All requests for adjustment of final examination hours should be made by March 4 to permit publication and orderly consideration of hardships. Additional common examinations may be requested on Form A163, which is available in department offices. The same form is used to request exceptions to official examination hours. Please note Regulations Regarding Examinations below.

University Schedule Committee Regulations Regarding Examinations

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the chairman of the University Scheduling Committee. This prohibition precludes also moving a final examination from a scheduled time to the last or earlier meetings of the class, except laboratory final examinations which cannot be held in accordance with the regular final examination schedule.

2. Instructors requesting any variation from the official final examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one day because of the change in hours being requested.

3. No variations from the University final examination schedule will be considered official until published in the Official Daily Bulletin.

4. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.

Recommended: In order to give students an opportunity for thorough review prior to final examinations, instructors are requested not to schedule quizzes or term papers to be due during the last week of class.

GRADES

Academic Staff—Grades are due in the Office of Admissions and Records within 90 hours after the examination. Winter quarter grades are due beginning March 15 with last day examination grades due by noon, Monday, March 21. Messenger service is provided. Please call Extension 6658 when grades are ready. Do not put reports in campus mail.

Students—Your Winter Quarter grade reports will be available Friday, March 25 as follows:

Agriculture, Forestry, Home Economics; Veterinary Medicine—in post office boxes, St. Paul Campus.

Business Administration; Education; General College; Graduate School; Institute of Technology; Medical School; Science, Literature, and the Arts; University College—at Admissions and Records Office.

Other Colleges—at the college offices except for Law grades which will not be reported until the end of the year.

On Monday, March 28, SLA grades will be in the Library basement study room and IT grades will be in the Mechanical Engineering lobby.

GRADING SYSTEM

1. There shall be four permanent grades, A (highest), B, C, and D (lowest), which shall be acceptable for the completion of a single course.

2. There shall be a permanent grade of F (failure) given when a student does not complete successfully the work of a course.

3. There shall be a temporary grade of I (incomplete) which may be assigned when there is not sufficient information immediately available to permit the assignment of a permanent grade. This would be the case if the student has not done all the work of the course or if the instructor does not know why a student, officially registered for his course, has not appeared or has left. If the instructor is able to ascertain that the student has no adequate excuse or if the student attended beyond the sixth week and was failing, F is the appropriate grade.

   An I which is not turned into a permanent grade or into a W (official cancellation with approval of the student's college) by the end of the sixth week of the next regular quarter of attendance shall become an F. (This does not apply to students in the Graduate School or to students in a Master's degree program in undergraduate colleges; their I grades remain until changed by the instructors to some other grade.) Permission to complete the work must be obtained from the instructor. He may set a makeup deadline of less than 6 weeks.

   An extension of time may be permitted for removal of I grades upon recommendation of the instructor concerned and with approval of the Scholastic Committee of the college in which the student is registered. If the petition is presented after the end of the sixth week of the next quarter of residence, a restoration of the mark of I and the completion of the required work would be considered in the nature of a special examination for which the special examination fee would be required.

4. There shall be a symbol W to indicate official cancellation from a course without grade. This shall be assigned in all cases of official cancellation during the first 6 weeks of classes irrespective of the student's standing. Whether cancellation is permitted is within the authority of the student's college to determine. After 6 weeks, W shall be posted only if the student is not failing at the time of official cancellation. W is a registration symbol, not a grade, and shall be posted by the Recorder on the basis of the student's registration activity as approved by the student's college.

5. A student who cancels officially or otherwise leaves a class after the sixth week of classes and is failing at the time shall receive an F.

6. There shall be a symbol X which may be reported in continuation courses in which a student is permitted to continue but in which a grade cannot usually be determined until the sequence is completed. The instructor shall submit a grade for each X when the student has completed the entire sequence.

7. In courses numbered 200 and higher, the permanent grade S (satisfactory) may be used to indicate satisfactory work for graduate students. In calculating grade point averages, it counts as a B.

8. In the Doctor of Medicine program, the permanent grade P (pass) may be used to indicate satisfactory work for Doctor of Medicine candidates. The student's standing will be calculated using more detailed evaluations available in the college office.

9. There shall be a registration symbol V (visitor) to indicate registration as an auditor or visitor.

10. There shall be a symbol T (transferred) indicating credits transferred from another institution, or from one college to another within the University when a revaluation is required. It shall be posted as a preceding supplement to the original grade.

11. For purposes of determining scholarship averages, grade points shall be assigned as follows:

Each credit of A	4 grade points
Each credit of B	3 grade points
Each credit of C	2 grade points
Each credit of D	1 grade point
Each credit of F	0 grade points

   A student's scholastic average—or grade point average—shall be the sum of grade points divided by the sum of credits passed and failed. In general, all credits must enter into the grade point average. If a course is repeated, usually both grades should enter into the computation of the grade point average. However, the faculty of a school or college may determine which credits and grade points are to be included in the average.

12. Any college or school may set special scholastic standards or other standards as a condition for registration in particular courses of study, for placing students on probation, for admission to the college or school, for promotion, for honors, for continued residence in the college or school, or for degrees, etc.

13. The official grade point average shall be calculated in accordance with paragraph 11 above regardless of when grades were earned.

STUDENT PROGRAM WORK SHEET

EXAMPLE:

Course	AgEc 1
Section	Sec 2
Room Bldg	109 HH
Instructor	Lowe

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
I					
II					
III					
IV					
V					
VI					
VII					
VIII					

COURSE FEES

All fees are per quarter unless otherwise indicated.

Students taking the following courses will pay course fees in addition to tuition as follows:

Civil Engineering (Summer)
$35.00 per term—23

Composition (SLA)
*21.00—X Preparatory Composition

English (Duluth)
*$21.00—X Preparatory English

Itasca Biological Station (Summer)
$10.00—Laboratory fee
*$25.00—Research Table Fee

Mathematics (IT)
*$21.00—8 Solid Geometry

Mathematics (SLA)
*$35.00—X Preparatory Mathematics

Modern Language Institute (Summer)
$40.00 per term—French (22, 58, 109); or German (22, 66, 107); or Spanish (22, 58, 109)

Music
$35.00 for 1 half-hour individual lesson per week; $70.00 for 2 half-hour lessons or 1 hour-lesson per week—A, D (no cr) ¶¶
$35.00 (2 cr) for 1 half-hour individual lesson per week; $70.00 (4 cr) for 2 half-hour lessons or 1 hour-lesson per week—11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 100 ¶¶
$50.00—for 2 half-hour individual lessons per week or 1 hour lesson per week—13B (Summer)
$25.00—60B, 61B, 62B (Summer)
$70.00—for 1 hour-lesson per week—204 ¶¶
$10.00—Piano for Children, ages 6-16

Music Education
225E—Same as Music 11-27, 100 ¶¶

Physical Education (men)
Towel and locker fee for students using PE facilities for activity, $2.50 per quarter payable at department
Uniforms (optional for class of recreation activity) $2.00 per quarter payable at department

Physical Education (women)
$3.25 (maximum $6.50 per quarter—All nonprofessional courses except Horseback Riding, 20A, 20B, 20C, 21A, 21B, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 40D, 41A, 41B, 42A, 45, 54, 76, 87, 88

Public Health
$100.00—169, 190
$185.50—231, 232
*$200.00—230 (September field course)

Rhetoric (AFHE)
*$7.00 per credit for more than 6 credits in Rhet 1

DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry cards are $10; Agricultural Biochemistry, Pharmacy, and Physiological Chemistry cards are $5.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be credited to your matriculation deposit at the end of the course.

You must present your deposit card to be assigned a laboratory desk. Veterans (P.L. 346, 16, 894) will receive information from their instructor concerning deposit cards and laboratory assignments.

SPECIAL FEES

Supplement to *General Information Bulletin.*

Matriculation Deposit
$5.00—required of students in all colleges including the Graduate School. Students who overdraw or seriously deplete their accounts are required to pay a supplementary deposit of $10.00 to reinstate their accounts.

Music Practice Room
$1.00 per qtr for one; $2.00 for two, 50 cents for each addtl hr per week—all instruments except organ
.20 per hr—small organ
.40 per hr—large organ

Record Service Fee
$1.00—Deducted from matriculation deposit. This fee provides three certified copies of student records. When more than three copies of records are requested, a charge of $1 will be made for each additional copy.

Speech and Hearing Clinic—Students
$5.00 per qtr—spec clinical treatment

Speech and Hearing Clinic—Nonstudents
Articulatory cases, per 10 weeks—$15.00 for one, $25.00 for two, $30.00 for three, $35.00 for four, $40.00 for five lessons per week.
Stuttering, per session—$100.00 for full time remediation

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* In lieu of tuition.
¶¶ Number of lessons are doubled per Summer Session term for courses listed in these sections.

OTHER FEES

Tuition Fee

School or College	Quarter Fee		Credit Hour Fee	
	Resident	Non-resident	Resident	Non-resident
Agriculture, Forestry, Home Economics; Business Administration; Dental Hygiene; Duluth; Education; General College; Institute of Technology; Public Health (except Hospital Administration); Science, Literature, Arts	$ 71	$180	$6.00	$15.00
Dentistry and Graduate Work; Medical School and Graduate Work; Hospital Administration	130	255	11.00	21.25
Graduate School, more than 6 credits	71	180	No credit hour fee provided	
6 credits or less, or thesis only	35.50	90		
Law School and Graduate Work; Medical Technology; Physical and Occupational Therapy	85	180	7.25	15.00
Mortuary Science	100	180	8.50	15.00
Nursing, Basic and Practical	71	105	6.00	8.75
Nursing Administration	71	180	6.00	15.00
Other programs	85	180	7.25	15.00
Pharmacy and Graduate Work	76	185	6.50	15.50
University College	Tuition of college in which work is taken			
Veterinary Medicine and Graduate Work	110	245	9.25	20.50

Incidental Fee

Institute of Technology ..... $17.85 per quarter

Other colleges, including Duluth ..... 17.00 per quarter

Foreign Student Health Fee

Required of all noncitizens ..... $5.00 per quarter

COURSES TALLIED IN COLLEGE OFFICES

Aeronautical Engineering
All courses under 200—E 136

Agricultural Biochemistry
2—CofH 220

Agricultural Economics
1 (lect and rec), 2 (lect and rec), 25—CofH 220

Agricultural Engineering
All courses under 200—E 136

Agronomy and Plant Genetics
2, 21, 121—CofH 220

Air Science
All courses—A 1

Analytical Chemistry
All courses under 200—E 136

Animal Husbandry
1, 37A—CofH 220

Anthropology
1A, 2A, 165, 171—JohH 210

Architecture
All courses under 200—E 136

Art
All courses under 193 except 1, 50—JohH 210
24A, 61A—E 136

Art Education
17, 18, 19, 53, 84—Bu 206

Astronomy
20—JohH 210

Bacteriology and Immunology
53—CofH 220 for AFHE, Mayo C205 for Med Tech, WuH 101 for Pharm, Owre 125 for Nurs, Mayo 1325 for PubH Nurs, Mayo 860 for PT and JohH 210 for other students

Biology
2 (lect and lab), 2A (lect and lab)—CofH 220 for AFHE, Owre 125 for Nurs, and JohH 210 for other students

Botany
2—CofH 220 for AFHE, WuH 101 for Pharm, and JohH 210 for other students
12, 53, 121, 165—JohH 210

Business Administration
5, 25, 26—JohH 210
24—WuH 101 for Pharm, and JohH 210 for other students
All other courses under 200 except 32, 33, 34, 38, 79B, 195A—VH 107

Chemical Engineering
All courses under 200—E 136

Child Development and Welfare
40—JohH 210

Civil Engineering
All courses under 200 (lect and lab for 32, 52, 142)—E 136

Communication
All courses—JohH 210

Curriculum and Instruction
60, 61, 62, 63, 64, 65, 66, 109, 110—Bu 206

Economics
IT, 2T—E 136
1—WuH 101 for Pharm, and JohH 210 for other students
All other courses under 200 except 90, 190—VH 107 for BA, and JohH 210 for other students

Education
55A, 55B, 75B—Bu 206

Educational Psychology
116A, 125, 142, 150, 151, 217, 217A, 233, 253, 281—Bu 206

Electrical Engineering
All courses under 200—E 136

Engineering Graphics
All courses—E 136

English (SLA)
A (lect and rec), B (lect and rec), 1A (lect and rec), 1B (lect and rec), 2A (lect and rec), 2B (lect and rec)—E 136 for IT, and JohH 210 for other students
21, 22, 38, 55, 56, 72, 73—JohH 210
85, 86—E 136

English Composition
All courses under 200—JohH 210
58—VH 107

Entomology and Economic Zoology
52, 56, 145, 243, 255, 259—CofH 220

Family Life
All courses—JohH 210

Forestry
76, 111—CofH 220

French
1C, 2A, 2B, 2C, 3C, 4, 51, 54—JohH 210

General College
7A, 7C, 10A, 10B, 26A—CofH 220 for AFHE, and NH 106 for other students
All other courses—NH 106

General Engineering
All courses—E 136

Geography
1, 4, 41, 70, 138—JohH 210

Geology and Mineralogy
A, 1—CofH 220 for AFHE, and JohH 210 for other students
B, 2—JohH 210
6—E 136

Geophysics
All courses—E 136

German
1C, 2A, 2B, 2C, 4, 51—JohH 210

History
1, 2, 5, 12, 20, 21, 54, 71, 98, 135—JohH 210

History and Philosophy of Education
180—Bu 206

Home Economics
1, 20, 22, 31, 40—CofH 220 for AFHE, and JohH 210 for other students
All other courses under 200 except 116, 120, 123, 141—CofH 220

Humanities
1A, 2A, 24A—CofH 220
All other courses—JohH 210

Hydromechanics
All courses under 200—E 136

Industrial Education
1—Bu 206
2, 8, 12, 16, 21, 50, 55—TNCW 103

Industrial Engineering
All courses under 200—E 136

Inorganic Chemistry
4—CofH 220 for AFHE, Owre 125 for Nurs, E 136 for IT, and JohH 210 for other students
5—CofH 220 for AFHE, and JohH 210 for other students
24, 25—WuH 101 for Pharm, E 136 for IT, and JohH 210 for other students
All other courses under 200—E 136

Italian
2—JohH 210

Journalism
11—CofH 220 for AFHE, and JohH 210 for other students
12, 13, 14, 18, 41, 53, 55, 56, 59, 73, 74, 79, 85, 101, 141, 161, 162, 164—JohH 210

Mathematics (IT)
All courses under 200—E 136

Mathematics (SLA)
H, T, 10—CofH 220 for AFHE, and JohH 210 for other students
X, 5, 20, 21, 40, 40A, 53, 54, 55, 59, 62, 107, 108, 111A, 125A, 131A—JohH 210

Mechanical Engineering
All courses under 200—E 136

Mechanics and Materials
All courses under 200—E 136

Mechanized Agriculture
2, 3, 4, 7, 23, 24, 25, 45, 45A—CofH 220

Metallurgy
All courses under 200—E 136

Metallurgical Engineering
All courses under 200—E 136

Military Science and Tactics
All courses—A 106

Mining Engineering
All courses under 200—E 136

Mortuary Science
All courses—NH 150

Music
1, 1T, 2T, 4T, 5T, 7B, 11B, 12C, 35, 43, 50—JohH 210

Music Education
4, 5, 6, 50B, 51, 52—Bu 206

Natural Science
All courses except 172—JohH 210

Naval Science
All courses—A 203

Organic Chemistry
61—JohH 210
62—WuH 101 for Pharm, and E 136 for other students
All other courses under 200—E 136

Orientation
1—CofH 220

Personal Orientation
All courses—JohH 210

Petroleum Engineering
All courses under 200—E 136

Philosophy
1, 2—E 136 for IT, and JohH 210 for other students
10, 51—JohH 210

Physical Chemistry
108—JohH 210
All other courses under 200—E 136

Physical Education for Men
1B (secs 1, 2, 4, 5, 6, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25)—JohH 210
1B (secs 3, 7, 8, 13)—CofH 220
2B (secs 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23)—JohH 210
2B (sec 6)—CofH 220
4A, 5B, 52, 59—Bu 206

Physical Education for Women
B (non-professional), (secs 1, 7, 22, 39)—CofH 220, and JohH 210 for other sections
25, 45, 70, 91—Bu 206

Physics
1, 2, 5—JohH 210
8, 11, 12, 14, 50, 50A, 102, 121, 146—E 136

Political Science
A, 1—JohH 210

Psychology
1, 2—CofH 220 for AFHE, E 136 for IT, Owre 125 for Nurs, and JohH 210 for other students
4, 5 (lect and lab), 126, 130, 201, 216—JohH 210

Public Health
2—CofH 220 for AFHE, and JohH 210 for other students
52—CofH 220
121—JohH 210

Rhetoric
47—CofH 220 for AFHE, and JohH 210 for other students
22, 51, 52, 54, 56, 91, 151—CofH 220

Russian
2—JohH 210

Social Science
1, 2, 3—E 136 for IT, and JohH 220 for other students
All other courses—JohH 210

Social Work
266, 269—JohH 210

Sociology
1—CofH 220 for AFHE, Owre 106 for DH, E 136 for IT, and JohH 210 for other students
2—E 136 for IT, and JohH 210 for other students
3, 45, 53—JohH 210

Soils
1, 20, 129—CofH 220

Spanish
1C, 2A, 2C, 3C, 54—JohH 210

Speech and Theater Arts
5, 6, 31, 32, 33, 34, 51, 56, 65, 66, 67, 69, 75, 78, 81, 82, 83, 91, 102, 106, 112, 131, 136, 141, 162, 170, 172—JohH 210

Zoology
2 (lect and lab)—CofH 220 for AFHE, Owre 106 for DH, Owre 125 for Nurs, and JohH 210 for other students
22, 52, 57, 59, 145, 160, 243, 255—JohH 210

CALENDAR

December

25 Holiday (Christmas Day)

28 Winter quarter fees due for students in residence fall quarter

29-30 Registration for new students

January

1 Holiday (New Year's Day)

4 Registration continues. Fees due for new students in all undergraduate colleges

4 Winter quarter classes begin

8 Last day for registration and payment of fees for the Graduate School, and teachers in service

JANUARY

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

February

4 Senate meeting, 3:30 p.m.

12 Holiday (Lincoln's Birthday)

22 Holiday (Washington's Birthday)

22-28 University of Minnesota Week

25 Charter Day Convocation, 11:30 a.m., IV hour classes excused

March

10 Senate meeting, 3:30 p.m.

11-17 Final examination period

17 Spring quarter fees due for students in residence winter quarter in undergraduate colleges

17 Commencement, 8:30 p.m.

19 Winter quarter closes

MARCH

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

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REGISTRATION DATES

Students in attendance fall quarter must register during the period set for their college and pay fees by December 28.

Students returning to the University who were not in attendance fall quarter may register during the period set for their college or on December 29, 30, January 4 with fees due January 4.

Orientation and registration for new students will be on December 29 and 30 with fees due January 4.

Agriculture, Forestry, Home Economics
(220 Coffey)
Seniors, Nov. 23, 24
Juniors, Nov. 25, 30
Sophomores, Dec. 1, 2, 3
Freshmen, Special Students, Dec. 4-10

Business Administration (107 Vincent)
Issue of Material, Nov. 23 (7:45 a.m.-12, 1:30-4:30)
Tally, Nov. 24, 25

Dental Hygiene (106 Owre)
Nov. 23, 24, 25

***Dentistry** (149 Owre)
Dec. 29, 30, Jan. 4

Education (206 Burton)
Nov. 23-Dec. 10

General College (106 Nicholson)
Sat., Nov. 21 (7:30 a.m.-12:30 p.m.)
Students registering this day will turn in material to Admissions and Records on Monday, Nov. 23
Wed., Nov. 25 (8 a.m.-5 p.m.); classes will not meet)
Nov. 30-Dec. 4 (classes meet as usual)
Returning students: Dec. 7-18

Graduate School (316 Johnston)
Nov. 23-Jan. 8 (Fees due Jan. 8)

***Law** (125 Fraser)
Dec. 29, 30, Jan. 4

Medical Technology (C-205 Mayo)
Nov. 23-Dec. 4

***Medicine** (1360 Mayo)
Dec. 29, 30, Jan. 4

Mortuary Science (156 Nicholson)
Nov. 23, 24, 25

Nursing (125 Owre)
Nov. 23-Dec. 4

Occupational Therapy (860 Mayo)
Nov. 23-Dec. 4

Pharmacy (101 Wulling)
Nov. 23-Dec. 4

Physical Therapy (860 Mayo)
Nov. 23-Dec. 4

Public Health (1325 Mayo)
Nov. 23-Dec. 10

Science, Literature, and the Arts
Lower Division (216B Johnston)
Upper Division (223 Johnston)
Special students (214 or 225 Johnston)
Issue of material starts Nov. 19
Tally starts Nov. 23
Students should complete registration by Dec. 10 because advisers will not be available after that date.

Technology, Institute of
Engineering and Architecture (133 Main Engineering)
Chemistry (127 Chemistry)
Mines and Metallurgy (112 Mines and Metallurgy)
Physics (148 Physics)
Nov. 23-Dec. 3

University College (225 Johnston)
Dates same as for Science, Literature, and the Arts

***Veterinary Medicine** (220 Coffey)
Dec. 29, 30 and Jan. 4

Education and Graduate students taking Saturday classes only may also register on Sat., Jan. 9 at 206 Burton

* Students in these colleges have normally already registered for the entire year.

University of Minnesota

CLASS SCHEDULE

Spring Quarter

1960

Minneapolis and St. Paul Campuses

including

- Registration instructions, page 2
- Final examination schedule, page 78
- Courses tallied in college offices, page 84
- Course fees, page 82
- Calendar, page 86

Every Student Is Held Accountable for Information Contained Herein and Should Save This Bulletin for Future Reference.

Courses Are Listed Under the Departments Which Offer Them. Consult Index on Page 87.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office.
Follow the instructions given you by your college. Registration dates for each college are listed on the back cover.

Step 2—Get class reservation cards for courses tallied in the college offices.
Courses which are tallied in college offices are listed on page 84.

Step 3—New students (who have not already done so) go to the University Health Service and make an appointment for your physical examination. Required of all undergraduate students taking 6 credits or more and of all graduate students except "teachers in service" taking less than 6 credits.

Step 4—Turn in your registration permit, class reservation cards, and approved registration blank at your record window in the Office of Admissions and Records to obtain statement of fees. New students, in addition, must present physical examination appointment slip (if required) and turn in University Relations mailing slips, Dean of Students information card, and religious census card.

Step 5—Pay your fees to the bursar.
Every fee statement must be receipted, even when no payment is required, before you are considered officially registered.

Fees for students in residence winter quarter in undergraduate colleges are due March 17.

Fees for new students in undergraduate colleges are due March 25.

Fees for students in the Graduate School are due April 1.

Change of registration—Have your "cancel-add" blank approved by your college office, get necessary class reservation cards for courses you are adding as in step 2 above, and present to your college window in the Office of Admissions and Records. You will get a supplementary fee statement or fee refund statement as necessary.

Withdrawal from the University—Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. All-University property such as library books, military, athletic or band equipment, laboratory material, locker keys or locks, athletic tickets, etc., must be turned in before you leave. P.L. 346, 16, and 894 veterans must also notify 102 Administration Building.

Accounts Paid By Various Agencies

If you have authorization for the University to bill a donor for your tuition and fees you must have your fee statement approved at window 18 in the Office of Admissions and Records (or room 200 Coffey Hall, St. Paul Campus) and *receipted by the bursar*. Failure to have your fee statement receipted before the last date for payment will necessitate a "late fee."

Veterans and War Orphans

P.L. 550 veterans and P.L. 634 war orphans—You must register and pay fees like every other student. Your business with the Veterans Administration is separate, and you must attend to it on your own responsibility. The University assists you by certifying that your claims for payment are justified. You initiate this business at window 18 on the first floor of the Administration Building (or room 220 Coffey Hall, St. Paul Campus). Do the following:

Make application to the Veterans Administration for benefits on or before your first day of classes. You don't get paid unless you do apply. A Certificate of Education and Training comes to you from the Veterans Administration about a month after you apply. Turn this in as soon as you complete your registration at one of the above addresses.

If you are returning for another session, your previous training period under either law having been officially interrupted, you have to make out a reentrance form to notify the Veterans Administration that you wish to return to training status. Do this at one of the above addresses.

Make a report of your attendance every month. During the first five days of each month, fill out the Certification of Attendance Form and turn it in at one of the above addresses. The Admissions and Records Office adds to this form a certification of the amount of work you are doing and sends it on to the Veterans Administration, which in turn sends you a check at your home address. If you want full benefits, take 14 credits per quarter as an undergraduate or 12 credits in the Graduate School.

P.L. 16, 346, and 894 veterans—Have your fee statement approved at window 18 in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), and then receipted by the bursar. Present the receipted statement and your course list to room 102 Administration Building to obtain an order for books and supplies. (The $5 matriculation fee is not chargeable to the Veterans Administration.)

Additional information and assistance with problems concerning any of the above laws may be obtained at room 102 Administration Building.

Graduate School Fees for Staff Members

All academic appointees giving 25 per cent or more of full time service and all 75 per cent time or more civil service appointees, when enrolled in the Graduate School, will pay tuition at the Graduate School resident rate, regardless of source of fund, resident status, or curriculum pursued. Similar staff members when enrolled in the final year of a Master's degree curriculum in an undergraduate college will pay tuition at the respective college resident rate. If you are a non-resident, entitled to resident fee privileges under these regulations, tell the fee statement clerk that you are a staff member when you turn in your approved registration blank at your college window in the Admissions and Records Office.

If You Are Graduating This Year

For the June Commencement, you must file a form called "Application for Degree" at the appropriate window in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), preferably with your spring quarter registration material. A graduation fee of $10 is due April 25 for spring quarter graduation.

If you expect to graduate anytime within the year (through August 1961), file your formal Application for Degree now. Shortly thereafter you will receive a balance sheet which shows whatever requirements for the degree you still must complete.

Foreign Students

Your first action upon arriving at the University should be to show your passport at the Foreign Student Adviser's Office, 302 Eddy Hall. There you will be given full information about federal, state, and local regulations, and about housing, finance, health and personal problems. Following this, you register in the same manner as all other students.

HOW TO USE THIS BULLETIN

Bold face titles—You must obtain a class reservation card to enroll in courses which appear with **bold face** titles. Instructions on where to get these class reservation cards precede the index at the back of this bulletin.

Prerequisites—Before you can enroll in some courses, you must have completed or be concurrently enrolled in certain other courses or possess some particular qualification or class standing. These requirements are known as prerequisites. If no prerequisites are listed, there are none, except insofar as the course number indicates a class standing requirement.

Class standing requirements, unless otherwise noted, are indicated by the course number:

1-49 for freshmen and sophomores
50-99 for juniors, seniors, and fifth-year students
100-199 for juniors, seniors, fifth-year students, and graduate students
200 and over for graduate students only

A minimum of prerequisite information is shown. For example, when courses which must be taken in sequence are prerequisites, only the last course of the sequence is listed. A comma always means "and"; while a semi-colon indicates that there are alternative prerequisites.

Example: prereq 2 or 5, Psy 1 (you must have had Psychology 1 plus either course 2 or 5)
Example: prereq C...or Comp 6 or Comm 3, 5 addtl cr...or 5 cr in 21-22-23 (you must have had either course C...or 5 credits in the same department plus either Composition 6 or Communication 3...or 5 credits from either course 21, course 22, or course 23)

When no departmental designation precedes the course number listed as a prerequisite, that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.

Work equivalent to a prerequisite course (having the same content) is ordinarily accepted in lieu of that prerequisite. You will also note that the instructor may, in some instances, waive prerequisites at his discretion. See your college bulletin for further information.

Symbols—The following symbols are used throughout this bulletin:

† To receive credit, all courses listed after the dagger must be completed.
‡ Students may enter any quarter.
§ No credit if credit received for equivalent course after the symbol.
¶ Means "concurrent registration in."
♯ Means "consent of instructor."
△ Means "consent of department or school offering the course."

Hours and days—Class hours are identified by Roman numerals, and continue for 50 minutes after the beginning time shown below:

Hour	I	II	III	IV	V	VI	VII	VIII
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00

A class listed I-III TTh meets the first through the third hours Tuesdays and Thursdays, the hyphen always indicating "through." Days of the week are abbreviated M, T, W, Th, F, and S.

Building name abbreviations—Refer to the index for page reference.

Choice of classes—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll. Many courses have a choice of laboratory or recitation periods, but only a single lecture period for all students taking the course. Occasionally there will be a choice of both lecture and laboratory or recitation periods. The choice of the laboratory or recitation section will determine the lecture section whenever the lecture sections have no identifying section number.

Examples:

—1, I TThS	Lect III MWF	Lect II T	—1, Lect II T
—2, II MWF	—1, Lab V-VI M	—1, Lab III-IV T	—2, Lect II Th
—3, IV TThS	—2, Lab V-VI W	—2, Lab III-IV Th	—1, Lab III-IV T
		Lect II Th	—2, Lab III-IV Th
		—3, Lab VI-VII T	—3, Lab VI-VII T
		—4, Lab VI-VII Th	—4, Lab VI-VII Th

Missing information—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

Changes—Changes made subsequent to publication of the *Class Schedule* are published in the Official Daily Bulletin, which appears in the *Minnesota Daily*. Room changes are posted on classroom doors.

Important Note to *STUDENTS*—

Accurate registration is your personal responsibility. You will receive credit in only those courses for which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel it on a regular cancellation form.

Colleges of the University reserve the right to cancel courses in which enrollment is not sufficient to warrant giving the course.

Do not register from the *Class Schedule* alone. Your college bulletin contains full course descriptions, college rules and requirements, and other information necessary for sound program planning.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

AGRICULTURAL BIOCHEMISTRY (AgBi)

1A Biochemistry (5 cr; prereq InCh 5)
Lect II MTThF, HH 100
—1, II W, SnH 116
—2, II W, SnH 310
—3, II W, LsPav 203
—4, II W, McNH 201
—5, II W, AgBot 107

5 Plant Biochemistry (3 cr; prereq 3)
I MWF, SnH 113, Kirkwood

6 Animal Biochemistry (3 cr; prereq 3)
II MWF, Agr 202, Schultze

10 Dairy Chemistry (5 cr; prereq 3)
Lect VI MWF, SnH 113, Jenness
Lab VII-IX WF, SnH 102

105 Plant Biochemistry (3 cr; prereq 3)
I MWF, SnH 113, Kirkwood

106 Animal Biochemistry (3 cr; prereq 3)
II MWF, Agr 202, Schultze

108 Wheat, Wheat Products (3 cr; prereq 5)
IV MWF, SnH 113, Geddes

110 Flour Lab Methods (3-5 cr; prereq 2, 108 or ¶)
VI-IX MWF, SnH 208, Geddes, Glass

117 Lab Probs: Animal Nutrition (3 cr; prereq 116, ♯) Liener

118 Lab Probs: Biochemistry (3-5 cr; prereq ♯)

122 Lipides (3 cr; prereq 119 or ♯)
II WF, SnH 113, VI W, SnH 116, Lundberg

123 Enzymes (3 cr; prereq 120 or ¶120 or ♯.. PCh 107, 108 rec)
III MWF, SnH 116, Kirkwood

132 Lipides Lab (2 cr; prereq 2, ¶122)
VI-VIII MW, SnH 202, Lundberg

133 Enzymes Lab (2 cr; prereq 2, ¶123)
VI-VIII TTh, SnH 202, Kirkwood

203 Research Probs (2-5 cr; prereq ♯)

205 Topics: Literature (1-3 cr; prereq ♯)

208 Seminar: Cereal Chemistry (1 cr; prereq 108 or ♯) Geddes, Glass

213 Seminar: Dairy Chemistry (1 cr; prereq 103, ♯) Jenness

216 Seminar: Nutrition, Enzymes (1 cr; prereq 116, 123, ♯) Schultze, Liener, Kirkwood

219 Seminar: Colloids (1 cr; prereq 119, ♯) Briggs

220 Seminar: Proteins (1 cr; prereq 120, ♯) Briggs, Jenness

221 Seminar: Carbohydrates (1 cr; prereq 121, ♯) Smith

222 Seminar: Lipides (1 cr; prereq 122, ♯) Lundberg

224 Seminar (1 cr)
IX F, SnH 113, Geddes

AGRICULTURAL ECONOMICS (AgEc)

1 **Introduction** (3 cr)
Lect II MW, DI 15, Hess
—1, Rec II Th, DI 255, Elefson
—2, Rec III Th, DI 255, Elefson
—3, Rec II F, DI 255, Elefson
—4, Rec III F, DI 255, Elefson

2 **Principles** (3 cr; prereq 1)
—1, Lect II TTh, DI 15, Hess
—2, Lect IV TTh, DI 15, Hess
—1, Rec IV Th, DI 255, Thompson
—2, Rec V Th, DI 255, Thompson
—3, Rec VII Th, DI 255, Thompson
—4, Rec IX Th, DI 255, Thompson
—5, Rec I F, AgEng 108, Thompson
—6, Rec II F, AgEng 108, Thompson
—7, Rec IV F, DI 255, Thompson

12 **Farm Management I** (3 cr; prereq 2)
III MWF, HH 109, Nodland

30 Agricultural Prices (3 cr; prereq soph, 2)
VII MWF, HH 109, Learn

82 Farm Mgt II (3 cr; prereq 12)
9:00-10:15 TTh, HH 109, Jensen

107 Farm Work Simplification (3 cr; prereq 2)
VIII-IX MWF, HH 210, Engene

108 Agricultural Policy (3 cr, §old 8)
II MWF, HH 109, Berg

147 Marketing Accounting (4 cr; prereq 25)
IV MWF, HH 210, Koller

150 Adv Farm Finance (3 cr; prereq 50)
1:30-2:45 TTh, HH 210, Dahl

172 World Agriculture (3 cr)
1:30-2:45 WF, HH 210, Raup

211 Production II (3 cr; prereq Econ 165, AgEc 110 or ♯)
VIII-IX MW, HH 100, Jensen

226 Seminar: Farm Management (3 cr)
3:00-4:15 TTh, HH 210, Jensen, Engene

235 Methods of Price Analysis (3 cr; prereq 191)
10:00-11:15 TTh, HH 210, Cochrane, Learn

AGRICULTURAL ENGINEERING

Mechanized Agriculture (MeAg)

3 **Technical Drawing** (3 cr, §2)
III-IV MWF, AgEng 303, Christopherson

4 **Mechanical Training** (4 cr)
Lect VI-VII M, AgEng 108, Olson
—1, Lab VIII-IX MWF, AgEng 20, Olson
—2, Lab VI-VIII TTh, AgEng 20, Olson
Lect VI-VII W, AgEng 108, Olson
—3, Lab VIII-IX MWF, AgEng 20, Olson

—4, Lab VI-VIII TTh, AgEng 20, Olson
Lect VI-VII F, AgEng 108, Olson
—5, Lab VIII-IX MWF, AgEng 20, Olson
—6, Lab VI-VIII TTh, AgEng 20, Olson

7 **Farm Building Construction** (3 cr)
Lect VI TTh, AgEng 41, Pomroy
—1, Lab VII-IX T, AgEng 48, Pomroy
—2, Lab VII-IX Th, AgEng 48, Pomroy

12 **Machinery** (3 cr)
Lect V TTh, AgEng 109, Solstad
—1, Dem III Th, AgEng 49, Solstad
—2, Dem IV Th, AgEng 49, Solstad

12A **Machinery Lab** (1 cr; prereq 12 or ¶)
VII-VIII Th, AgEng 49, Solstad

14 Farm Buildings (3 cr)
I MWF, AgEng 303, Christopherson

25 **Agricultural Physics II** (4 cr; prereq 24)
Lect I MWF, AgEng 101, Culmer
—1, Lab III-IV T, AgEng 102, Culmer
—2, Lab VI-VII T, AgEng 102, Culmer
—3, Lab VI-VII M, AgEng 102, Culmer

35 **Household Physics** (5 cr)
Lect II MWF, AgEng 101, Culmer
—1, Lab I-II TTh, AgEng 102, Culmer
—2, Lab VIII-IX MW, AgEng 102, Culmer
—3, Lab VIII-IX TTh, AgEng 102, Culmer

42 **Surveying** (4 cr; prereq 3, Math T)
Lect VI TTh, AgEng 103, Machmeier
Lab VII-IX TTh, AgEng 305, Machmeier

45 **Engines, Tractors** (3 cr; prereq 23)
Lect VI MW, AgEng 109, Solstad
—1, Dem VI F, AgEng 109, Solstad
—2, Dem VII F, AgEng 109, Solstad

45A **Engines, Tractors Lab** (1 cr; prereq 45 or ¶)
—1, VIII-X F, AgEng 49, Solstad
—2, VIII-X M, AgEng 49, Solstad

108 Probs: Soil, Water Conservation (4 cr; prereq 106 or 107)
VI-IX MW, AgEng 305, Manson

114 Probs: Farm Buildings (2-4 cr; prereq 3, 7, 14) Otis, Christopherson

124 Machinery, Mechanical Power Mgt (3 cr; prereq 9 cr incl 12, 23) Schwantes, Flikke

125 Topics: Agricultural Physics (3 cr; prereq Phys 50 or inte calc, 25) Hustrulid

130 **Farm Shop Mgt** (3 cr; prereq AgEd maj, 4, 3 addtl cr, AgEd 91)
Lect VII TTh, AgEng 35, Marvin
Lab VIII-IX TTh, AgEng 20, Marvin

AGRONOMY AND PLANT GENETICS (Agro)

1 Introduction (3 cr)
IV MWF, Agr 202, Smith

2 **Introduction to Laboratory** (1 cr; prereq ¶1)
—1, III-IV T, Agr 104, Smith
—2, VI-VII T, Agr 104, Smith

22 Grain, Hay Grading (3 cr; prereq 1)
I-II MWF, Agr 104, Lambert

24 Identification, Judging (1 cr; prereq soph, 1)
VIII-IX Th, Agr 104, Schmid

122 Grain, Hay Grading (3 cr; prereq 1)
I-II MWF, Agr 104, Lambert

134 Adv Forage Crops (4 cr; prereq 27)
Lect VI MWF, Agr 202, Schmid
Lab VII MWF, Agr 104, Schmid

201 Research: Farm Crops (ar cr; prereq 121, 123) Behrens, Robinson, Schmid, Smith

241 Research: Plant Genetics (ar cr) Burnham, Rinke, Ausemus, Thomas, Lambert

242 Seminar: Plant Breeding (1 cr)
VIII-IX F, Agr 408

243 Methods in Plant Breeding (3 cr; prereq 132, 240)
II MWF, Agr 408

253 Methods: Plant Genetics (3 cr; prereq 252)
I MWF, Agr 408, Burnham

255 Topics: Genetics (2 cr; prereq 252 or △)

ANIMAL HUSBANDRY (AnHu)

1 **Introduction** (4 cr)
II MTWThF, Center LsPav, Kolari, Meiske

9 Livestock Judging (3 cr; prereq 8)
II-IV MWF, Center LsPav, Jordan

31 Meats (3 cr; prereq 1, 30)
VI-VIII TTh, MSh 102, Aunan

65 **Beef Cattle Production** (3 cr, §165; prereq 37, 37A, 62 or ‡)
Lect I TTh, LsPav 203, Harvey
—1, Lab II-IV T, LsPav 203
—2, Lab II-IV Th, LsPav 203

107 Meat Probs (3 cr; prereq 53) Aunan

165 **Beef Cattle Production** (3 cr, §65; prereq 37, 37A, 62 or ‡)
Lect I TTh, LsPav 203, Harvey
—1, Lab II-IV T, LsPav 203
—2, Lab II-IV Th, LsPav 203

204 Adv Animal Breeding III (3 cr; prereq 162, Agro 261)
VI T, VI-IX Th, PetH 108, Comstock

207 Adv Livestock Feeding II (3 cr; prereq 37, AgBi 6)
VI MWF, PetH 108, Meade

210 Seminar: Animal Husbandry (1 cr)
VIII M, PetH 108, Scaletti

213 Research: Animal Husbandry (3-9 cr)

DAIRY HUSBANDRY (DyHu)

1 Dairying (3 cr, §DInd 1)
III MWF, DI 15, Morris, Williams

5 Practice (3 cr; prereq soph, △) Williams

9 **Dairy Cattle Judging** (1 cr; prereq soph)
—1, VI-VIII F, HH 9, Williams, Caruolo
—2, VI-VIII T, HH 9, Williams, Caruolo

19 Dairy Cattle Management (1 cr; prereq ¶11)
VI-VIII Th, HH 9, Williams, Cole

51 Classification, Evaluation of Dairy Cattle (2 cr; prereq 9)
VI-VIII TF, DCB, Williams, Cole

123 Dairy Production III (4 cr; prereq 19, 49)
VI-VIII TTh, HH 102, Graham, Williams
149 **Reproduction, Artificial Insemination** (3 cr, §49; prereq grad or ‡)
II-IV TTh, HH 102, Graham
204 Research: Dairy Production (ar cr)
220 Lactation (3 cr)
VI-VII TTh, HH 24, Petersen
221 Dairy Cattle Management (3 cr; prereq ‡)
II MWF, HH 9, Williams, Cole

DAIRY INDUSTRIES (DInd)

1 **Dairying** (3 cr, §DyHu 1)
III MWF, DI 15, Morris, Williams
2 Dairying Lab (2 cr, §old DyHu 2; prereq 1)
VI-IX T, DI 10, 15, Thomas
20 Household Microbiology (4 cr, §old DyHu 20; prereq 3rd qtr fr, ‡)
VI MF, DI 15, VI-VII W, DI 218, Olson
103 Market Milk (3 cr, §old DyHu 109; prereq 2, 50, AgBi 10)
IV MW, DI 255, VI-VIII Th, DI 155, Thomas
106 Cheese (3 cr, §old DyHu 112; prereq 2, 50, AgBi 10)
IV TS, DI 255, VI-VIII T, DI 150, 151, Morris
107 Technical Control of Dairy Products (3 cr, §old DyHu 113; prereq sr, 50, 105 or 106, AgBi 10)
I-III TTh, DI 155, 218, Jezeski, Richardson
130 Adv Dairy Products Judging (1 cr, §old DyHu 130; prereq 3)
IX-X Th, DI 95A, 95B, Thomas
151 Adv Dairy Bacteriology (3 cr, §old DyHu 151; prereq sr, 50, 105 or 106)
II-III MWF, DI 218, Jezeski
207 Research: Dairy Mfg (ar cr)
214 Research: Dairy Bacteriology (ar cr)

ENTOMOLOGY AND ECONOMIC ZOOLOGY (Ent)

1 Insect Life (3 cr)
V MWF, PetH 110, Holdaway
1A **Insect Life Lab** (1 cr; prereq 1 or ¶)
VII-IX T, CofH 302, Holdaway
21 Beekeeping (3-5 cr)
VI-VIII MWF, CofH 307, Haydak
50 Economic Entomology (5 cr; prereq 1 or Biol 3)
Lect VI MWF, CofH 302, Peterson
Lab VII-VIII MWF
67 Forest Wildlife Mgt (2 cr; prereq 64) Marshall
114 Apiculture (3 cr; prereq 9 cr)
I MW, CofH 307, Haydak
140 Biological Microscopy (4 cr; prereq sr, 15 cr ent or bot or zool, ‡)
Lect VI WF, CofH 8, Richards
Lab VII-IX WF
146 **Helminthology** (3 cr; prereq 15 cr zool incl Biol 3, ‡)
Lect VI TTh, Z 211, Wallace
Lab VII-IX WF
166 Wildlife Mgt (3 cr; prereq 63, 65, Bot 50, Zool 58 or ‡)
Lect V TTh, CofH 307, Beer, lab ar
171 Techniques in Fishery Biology, Mgt (3 cr; prereq 65, 119, 121 or ‡)
Lect VI TTh, CofH 302, Waters
Lab VII-VIII TTh, CofH 20
197 Introd Research (ar cr; prereq sr, △)
236 Gen Ecology of Insects (3 cr; prereq 118)
Lect VI TTh, CofH 307, Hodson
Lab VII-VIII TTh, CofH 15
244 Insect Microbiology (4 cr; prereq ‡..242-243 rec)
Lect I TTh, CofH 8, Brooks
Lab II-IV TTh
256 Adv Entomology (3 cr, §Zool 256; prereq 255)
Lect I TTh, Z 211 (**Mpls Campus**), Mickel
Lab I-III S, Z 402 (**Mpls Campus**)
257 Insecticides, Their Action (3 cr; prereq 15 cr incl 50 or ‡, inorg, org chem)
IV MWF, CofH 307, Cutkomp
258 Insecticides Laboratory (2 cr; prereq 257 or ¶)
I-III MW, CofH 18, Cutkomp
274 Wildlife Mgt: Upland Game (3 cr; prereq 65, Zool 58, 118, Bot 50 or ‡)
Lect I TTh, Beer, lab ar

FORESTRY (For)

4 Dendrology (4 cr; prereq Biol 3 or ¶ or bot)
Lect IV MWF, GH 120, Rees, lab ar
8 **Timber Estimating, Forest Surveys** (3 cr; prereq 7)
Lect IV TTh, GH 120, R Brown
—1, Lab VI-VIII T, GH 206
—2, Lab VI-VIII W, GH 206
10 **Farm Forestry** (3 cr; prereq not open to forestry majors)
Lect IV TTh, GH 203, Scholten
—1, Lab VI-VIII M, GH 203
—2, Lab VI-VIII T, GH 203
47 Forest Economy (2 cr; prereq AgEc 2 or ‡)
III TTh, GH 203, Skok
55 Fire Protection (2 cr)
I TTh, GH 203, Irving
60 Forest Engineering (2 cr; prereq MeAg 42) Miles, B Brown
61 Forest Recreation (1 cr) Duncan
62 Forest Policy (1 cr; prereq 124) B Brown
82 Wood Preservation (3 cr, §old 125; prereq 76, org chem)
Lect III TTh, FP 204, Kaufert, Kelso, lab ar
86 Wood Fiber, Particle Prod (3 cr, §old 57; prereq 85 or ¶)
Lect IV TTh, FP 204, Wallin
Lab VIII-IX Th, FP 204

88 Building Cost Estimating (3 cr, §old 120; prereq 78, MeAg 7, Ind 9)
VII-IX W, FP 204, Wallin
128 Silviculture (6 cr, §128-129; prereq 127)
B Brown
131 Forest Policy (3 cr; prereq sr)
I MWF, GH 201, Irving, Skok
133 Forest Mgt, Utilization (2 cr; prereq 124)
B Brown
134 Forest Inventory, Photographic Interpretation (3 cr; prereq 59, 111 or Biom 90)
Meyer
137 Forest Tree Seed (2 cr; prereq Biol 3 or bot)
Lect III TTh, GH 201, Hansen, Duncan, Bakuzis, lab ar
147 Forest Economy (2 cr; prereq AgEc 2 or ‡)
III TTh, GH 203, Skok
149 Adv Forest Measurements (3 cr, §old 112; prereq 111 or ‡)
R Brown
176 Timber Engineering (4 cr, §old 116; prereq 79)
VI MWF, VII-VIII MF, FP 204, Rees
177 Wood Chemistry (3 cr, §old 142; prereq 76, org chem)
II MWF, FP 204, Hossfeld
178 Woody Tissue Microtechnique (4 cr, §old 119; prereq 76 or ‡)
Lect IX T, FP 210, Hossfeld
Lab VI-VIII TTh, FP 210, Shiue
182 Adv Wood Preservation (3 cr; prereq 82)
Kaufert
184 Adv Wood Chemistry (2 cr; prereq 177, AgBi 2)
Hossfeld
200 Research Probs: Silviculture (ar cr)
Hansen, Duncan, Schantz-Hansen, B Brown
203 Research Probs: Forest Mgt (ar cr)
Meyer, Duncan, Irving, Schantz-Hansen, B Brown, Shiue
205 Research Probs: Forest Economics (ar cr)
Kaufert, Skok
207 Research Probs: Forest Products Engineering (ar cr)
Hossfeld, Rees, Wallin
213 Research Probs: Forest Utilization (ar cr)
Kaufert, Hossfeld, Rees, Wallin
218 Research Probs: Forest Measurements, Photogrammetry (ar cr)
R Brown, Meyer, Shiue
220 Probs: Forest-Tree Genetics (ar cr)
Pauley
221 Probs: Forest Influences (ar cr)
Duncan
222 Probs: Forest Policy (ar cr)
Irving, Kaufert
225 Seminar (1 cr; prereq 224)
VIII-IX Th, GH 202
227 Seminar: Statistical Methods in Forestry Research (1 cr; prereq 226)
Shiue

HOME ECONOMICS (HE)

1 **Choice, Care of Clothing** (3 cr, §GC 3C; not open to men, sr)
II MWF, McNH 350, Baumgartner
3 **Clothing Construction A** (3 cr; prereq 3rd qtr fr, 1)
—1, III-IV MWF, McNH 327, Carlson
—2, VI-VII MWF, McNH 327, Carlson
4 **Clothing Construction B** (3 cr; prereq soph, 3)
II-IV TTh, McNH 328, Gorham
17 **Personal, Family Living** (3 cr, not open to sr)
V MWF, McNH 227, Gallagher
20 **Related Art** (4 cr)
IV MTWF, McNH 350, Myren
21 **Color, Design** (3 cr; prereq 20)
—1, III-IV MWF, McNH 359, Abell
—2, VI-VII MWF, McNH 359, Abell
—3, VI-VIII TTh, McNH 359, Forsyth
24 **Probs: Home Planning, Furnishing** (5 cr, §GC 3D, FL 15; prereq soph, 20...21, 49 rec)
—1, III-IV MWF, McNH 360, Forsyth
—2, VI-VII MWF, McNH 360, Myren
25 **Design Applied to Crafts** (3 cr; prereq 20... 21 rec)
III-V TTh, McNH 433, Abell
28 **Construction, Refinishing of Home Furnishings** (3 cr; prereq ‡)
VI-VIII TTh, McNH 433, Myren
30 **Nutrition** (2 cr, §31 or GC 3B or PNurs 14; prereq ‡ for HE maj; others, none)
VII MW, FraH B25 (**Mpls Campus**), North
31 **Nutrition** (3 cr, §30 or GC 3B or PNurs 14, not open to HE sr)
III MWF, McNH 48, North
40 **Food Preparation** (5 cr; prereq 3rd qtr fr, 2 qtrs chem)
—1, Lect III TTh, McNH 48, Hanson
Lab III-IV MWF, McNH 157
—2, Lect VII TTh, McNH 48, Hanson
Lab VI-VII MWF, McNH 157
41 **Food Mgt, Marketing** (5 cr; prereq soph, 31, 40)
—1, Lect III TTh, McNH 150, Cassilly
Lab III-IV M, III-IV W, McNH 150, 152, 156
Conf V M, McNH 48
—2, Lect IV TTh, McNH 150, Trammell
Lab III-IV M, III-V F, McNH 150, 152, 156
Conf V M, McNH 150
49 **Household Equipment** (3 cr; prereq soph, MeAg 35 or ‡)
—1, Lect VI MF, McNH 124, 128, Ehrenkranz
Lab VI-VII W, McNH 124, 128
—2, Lect VI TTh, McNH 124, 128, Ehrenkranz
Lab VII-VIII T, McNH 124, 128
50 **Textiles** (4 cr; prereq 3rd qtr soph, 1, InCh, 5 or GC 7C)
III-IV MWF, McNH 303, Gorham
53 **Adv Clothing** (3 cr; prereq 4, 50 or ¶)
VI-VII MWF, McNH 328, Gorham
63 **Quantity Food Purchasing, Production** (5 cr; prereq 41, 3rd qtr soph)
Lect V TTh, McNH 201, Hitchcock
Lab I-IV WF, Cafeteria

65 **Food Service Organization, Mgt** (3 cr; prereq 63)
9:00-10:15 TTh, McNH 201, Hitchcock

66 **Administrative Food Service Experience** (5 cr; prereq 65) Hitchcock

71 **Demonstrations** (1 cr; prereq 3rd qtr jr, 41)
VI-VIII F, McNH 150, Cassilly

76 **Nutrition of the Family** (4 cr, §170, 171; prereq 31, 40, phsl or hum biol)
II MTWTh, McNH 48, North

79 **Probs for Dietitians** (3 cr; prereq regis HE, 170)
II MWF, McNH 44, Gormican

85 **Home Mgt** (3 cr; prereq 40...41 rec)
VII MWF, McNH 201, Jeary

86 **Home Mgt Lab** (4 cr; prereq 85 or ¶...41 rec)
—1, I MTWThFS, Home Mgt House, Jeary, Nielsen
—2, I MTWThFS, Home Mgt House, Jeary, Nielsen

88 **Food Quality Evaluation** (3 cr; prereq 70)
Lect VI TTh, McNH 44, Noble
Lab VII-VIII T, McNH 56

89 **Probs: Household Equipment** (2-4 cr; prereq 49 with B, MeAg 35, ♯) Ehrenkranz

120 **Art History** (3 cr)
VIII MWF, McNH 350, Forsyth

122B **Interior Design Probs** (3 cr; prereq 120, 122A, 123 or ♯...180 rec)
II-IV TTh, McNH 360, Ludwig

125 **Adv Costume Design** (3 cr; prereq 3, 22 or ♯)
VI-VIII TTh, McNH 342, Esteros

126 **Special Problems in Crafts** (1-3 cr; prereq 25 or ♯)
III-V TTh, McNH 433, Abell

127 **Purchasing Home Furnishings** (3 cr; prereq 24, 50)
VI-VIII TTh, McNH 360, Ludwig

146 **Probs: Food** (3 cr; prereq sr, 142)
Lect VI MW, McNH 44, Trammell
Lab VII-VIII MW, McNH 56

155 **Experimental Studies in Clothing Construction** (3 cr; prereq 53, tchg exp)
IX-X T, McNH 327, Carlson

171 **Maternal, Child Nutrition** (3 cr; prereq 170, HEEd 90)
III MW, McNH 44, III F, ForH 50, IV-V one day ar (**Mpls Campus**), Leichsenring

173 **Diet Therapy** (4 cr; prereq 170...35 rec)
Lect 10:30-11:45 TTh, McNH 44, Gormican
Lab VI-VII F, McNH 144

177 **Digestion, Metabolism** (3 cr; prereq 35)
VI-VIII MW, McNH 303, Morse

178 **Clinical Probs: Nutrition** (2 cr; prereq 35 or ¶, 170)
Lect V M, McNH 44, Gormican
—1, Lab VI-VIII T, U Hosp (**Mpls Campus**), Gormican
—2, Lab VI-VIII Th, U Hosp (**Mpls Campus**), Gormican

185 **Family Relationships** (3 cr; prereq 17, HEEd 90 or ♯)
II-III T, II Th, McNH 227, McGinnis

187 **Readings: Family Relationships** (1-3 cr; prereq ♯) McGinnis

188 **Evaluation of Food Quality** (3 cr; prereq 142, AgBi 2, Biom 90 or 100)
Lect VI TTh, McNH 44, Noble
Lab VII-VIII T, McNH 56

190 Colloquium: Family Relationships (1 cr; prereq 185 or 15 cr child dev or psy or soc)
IX Th, McNH 213, McGinnis

202 Animal Fibers (2 cr; prereq adv textiles, ♯) Davison

204 Plant, Other Cellulosic Fibers (2 cr; prereq bot, adv textiles, ♯) Davison

208 Microanalysis of Textile Fibers (ar cr; prereq bot, zool, adv textiles, ♯)
VI-VII TTh, McNH 303, Davison

209 Seminar: Textiles, Clothing (1 cr; prereq ♯) Davison

220 Readings: Related Aft (1-3 cr; prereq ♯) Esteros

221 Probs: Textile Design (1-3 cr; prereq 121 or ♯) Esteros

227 Probs: Home Planning, Furnishing (1-3 cr; prereq 180 or ♯...122B rec) Ludwig, Esteros

279 Seminar: Nutrition (1 cr; prereq ♯) Morse

295 Probs: Home Economics (1-5 cr; prereq ♯) Bellinger, Davison, Ehrenkranz, Esteros, Ford, Leichsenring, Noble

296 Probs: Home Economics (1-5 cr; prereq 295) Bellinger, Davison, Ehrenkranz, Esteros, Ford, Leichsenring, Noble

HORTICULTURE (Hort)

1 Gen Horticulture (3 cr)
III MWF, Hr 102, Snyder

10 **Ornamental Horticulture** (3 cr)
III MWF, Hr 8, 1 hr ar, Phillips

16 Greenhouse Mgt (3 cr; prereq Biol 3 or 6 cr bot)
Lect IV TTh, Hr 8, Widmer
Lab VI-VIII F

22 **Plant Materials: Spring, Summer Aspects** (3 cr; prereq Biol 3 or 6 cr bot)
VI-VIII MW, Hr 8, Johnson

32 Vegetable Growing (3 cr; prereq Biol 3 or 6 cr bot)
II MWF, Hr 102, Turnquist

40 **Horticultural Practices** (2 cr; prereq soph, 6 or ♯)
—1, VI-IX W, Hr 8, Weir
—2, VI-IX F, Hr 8, Weir

51 Garden Flowers (3 cr; prereq Biol 3 or 6 cr bot) Phillips

61 Planting Composition (3 cr; prereq 60 or ♯)
VI-VIII MF, Hr 303, Phillips

62 Probs: Landscape Design, Composition (2-4 cr; prereq sr, 61 or ♯) Phillips

105 Frozen Food Probs (2-4 cr, §FTec 105; prereq 104 or ‡) Winter
154 Commercial Floriculture: Spring Crops (3 cr; prereq 16)
Lect III TTh, Hr 8, Widmer
Lab VI-VIII T
192 Problems (2-4 cr; prereq ‡)
247 Report: Special Topics (1-9 cr)
249 Research: Crop Breeding (ar cr) Currence, Hutchins, Wilcox

PLANT PATHOLOGY AND BOTANY (PlPa)

1 **Plant Pathology** (5 cr, §51; prereq soph, 9 cr pl sci incl 6 cr bot or Biol 3)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105, Moore
—2, Lab VI-VII MWF, PP 105, Moore
3 Weeds, Seeds (3 cr; prereq 6 cr bot or Biol 3)
III-IV TThS, AgBot 107, Kommedahl
107 Mycology (3 cr; prereq 1 or 51 or 56)
VI-VIII TTh, PP 105, C Christensen, Anderson
115 Diseases of Vegetable Crops (3 cr; prereq 1 or 51 or 120)
Lect II MF, PP 103, Eide
Lab II-IV W, PP 105, Eide
119 Plant Disease Control (3 cr; prereq 1 or 51 or 120)
III-V TTh, PP 103, 105, King
120 **Plant Pathology for Adv Students** (3 cr, §1 or 51; prereq 14 cr pl sci or ‡)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105, Moore
—2, Lab VI-VII MWF, PP 105, Moore
137 Animal Diseases, Poisonous Plants (3 cr, §VMC 137; prereq ‡)
Lect VII M, AgBot 107, Kommedahl
Lab VIII-IX M, AgBot 106, Kommedahl
161 Technology of Fruits, Vegetables (3 cr; prereq 15 cr pl sci or ‡) Landon
205 Research (ar cr) J Christensen, others
209 Probs: Mycology (ar cr; prereq 105, 106, 107) J Christensen, others
213 Seminar (1 cr)
IX-X T, PP 401, J Christensen, others
217 Ecology of Plant Pathogens (3 cr; prereq 1 or 51 or 120, 156)
Lect III-IV W, PP 401, J Christensen, Wilcoxson
Lab II-IV F, PP 105
251 Seminar: Agricultural Botany (1 cr)
IX Th, AgBot 302, J Christensen, others
254 Research Probs: Applied Plant Physiology (ar cr) Landon, Rowell
260 Research Probs: Agricultural Botany (ar cr) J Christensen, others

POULTRY HUSBANDRY (PoHu)

1 Poultry Production (3 cr)
IV MWF, PetH 110, Snetsinger
51 Hatchery Mgt (3 cr; prereq 1, Biol 3)
VI-VII TTh, PetH 200, Kinney
55 Problems (1-3 cr; prereq 6 cr, ‡)
153 Adv Poultry Nutrition (3 cr; prereq 1, AgBi 3)
IV MWF, PetH 108, Waibel
214 Research: Poultry Husbandry (ar cr; prereq ‡)
215 Research: Poultry Nutrition (ar cr; prereq 9 cr agr biochem) Waibel, Johnson
216 Research: Poultry Breeding (ar cr; prereq 9 cr genetics) Shoffner
217 Seminar (1 cr; prereq ‡) Waibel
218 Research: Poultry Products (ar cr; prereq ‡) Swanson

RHETORIC (Rhet)

1-2-3 Communications I, II, III (3 cr per qtr) Three days assigned from I MTWThF. All entering freshmen and students transferring with fewer than nine credits of freshman English meet in Peters Hall Auditorium the first period MT for the first week for diagnostic tests and sectioning. Students already tested during freshman week and students who have taken Rhetoric 1 or 2 will find section assignments posted on 2nd floor AgEng Bldg March 28.
22 **Public Speaking** (3 cr; prereq rhet comm req)
—1, II MWF, AgEng 307, Cashman
—2, III MWF, AgEng 307, Nichols
—3, III MWF, AgEng 317, Seeden
—4, IV MWF, AgEng 307, Wright
—5, V MWF, AgEng 307, Seeden
—6, VII MWF, AgEng 307, Richardson
—7, III TThS, AgEng 307, Cashman
26 **Original Writing** (3 cr; prereq rhet comm req)
IV MWF, AgEng 315, Thurston
28 **Literature of Theater** (3 cr; prereq rhet comm req)
VIII MWF, TSH 230, Brown
32 Novel, Short Story (3 cr; prereq rhet comm req)
V MWF, AgEng 306, Price
33 American Life in American Literature (3 cr; prereq rhet comm req)
II MWF, AgEng 306, Mondale
47 **Efficient Reading** (3 cr, SLA students see SLA bul)
—1, VI MWF, AgEng 315, Brown
—2, VI MWF, ForH 15 (**Mpls Campus**), Whipp
51 **Exposition** (3 cr; prereq rhet comm req)
—1, IV MWF, AgEng 306, Mixon
—2, V MWF, AgEng 317, Mondale

—3, VI MWF, AgEng 306, Mixon
—4, VII MWF, AgEng 306, Wright
—5, III TThS, AgEng 315, Brown

52 **Technical Writing** (3 cr; prereq 51)
III MWF, AgEng 306, Thurston

54 **Adv Public Speaking** (3 cr; prereq 22)
II MWF, TSH 220, Drake

56 **Discussion Methods** (3 cr, §old 12; prereq rhet comm req)
—1, IV MWF, AgEng 109, Cashman
—2, VII MWF, AgEng 109, Cashman

151 **Report, Thesis Writing** (3 cr; prereq 51 or ‡)
IX M, IX-X W, AgEng 306, Thurston

251 Seminar: Listening Comprehension (2 cr, §Spch 251)
VII-IX Th, AgEng 221, Nichols

SOILS (Soil)

3 Forest Soils (3 cr; prereq soph, InCh 5)
III MWF, GH 120, Arneman

3B **Forest Soils Lab** (1 cr; prereq 3 or ¶)
—1, VI-VIII M, So 126, 115
—2, VI-VIII T, So 126, 115

19 **Interm Soils** (4 cr; prereq InCh 5)
Lect IV MWF, So 115, Arneman, Martin
—1, Lab VI-VIII M, So 126, 115
—2, Lab VI-VIII T, So 126, 115

21 Soils of Minnesota (3 cr; prereq 1 or 3 or 19)
Lect I TTh, So 115, Arneman, Farnham
Lab VI-VIII Th, So 132

22 Soil Conservation (3 cr; prereq 1 or 3 or 19)
Lect II TTh, So 115, MacGregor
Lab VI-IX T, So 132

119 **Interm Soils** (4 cr, §19; prereq InCh 5)
Lect IV MWF, So 115, Arneman, Martin
—1, Lab VI-VIII M, So 126, 115
—2, Lab VI-VIII T, So 126, 115

121 Soils of Minnesota (3 cr, §21; prereq 1 or 3 or 19)
Lect I TTh, So 115, Arneman, Farnham
Lab VI-VIII Th, So 132

123 Fertilizers (3 cr; prereq 3 or 19 or 119 or ‡)
II MWF, So 115, Caldwell

127 **Soil Microbiology** (4 cr, §Bact 103; prereq Bact 53, 8 cr org chem, ‡)
Lect I MWF, So 115, Schmidt
Lab II-III MF, So 120

130 Problems (2-4 cr; prereq 1 or 3 or 19 or 119)

131 **Physical Chemistry of Soils** (3 cr; prereq phys chem or ‡)
Lect VI TTh, So 115, Rust
Lab VII-VIII TTh, So 322

UNATTACHED COURSES

Agricultural Journalism (AgJo)

53 Publicity (3 cr; prereq rhet comm req)
I MWF, AgBot 107, Swanson, Wolf, McKay

Biometrics (Biom)

90 Statistics (3 cr; prereq col alg or ‡)
II MWF, McNH 48, Gates

201 Experimental Design (3 cr; prereq 101) Sentz

Food Technology (FTec)

105 Frozen Food Probs (2-4 cr, §Hort 105; prereq 104 or ‡) Winter

Orientation (Orie)

1 College Orientation Lectures (1 cr)
I T, CofH 307, McFarland

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

1 **Business, American Economy** (3 cr; prereq no previous BA)
I MWF, ScH 108, Kozelka

5 **Statistics** (4 cr, §151 or Soc 45, §old Econ 5A or 5B; prereq Math 10)
—1, I MTWF, EE 238, Hastings
—2, II MTWF, ForH 15
—3, III MTWF, Z 211
—4, IV MTWF, Z 211
—5, V MTWF, VH 1
—6, VI MTWF, FraH B25

24 **Accounting** (3 cr, §55A, §old Econ 24; prereq 3rd qtr fr)
—1, I MWF, ForH 150, Bentley
—2, II MWF, MinMet 116
—3, III MWF, EE 238
—4, IV MWF, EE 238
—5, V MWF, VH 2

25 **Accounting** (3 cr, §55B, §old Econ 25; prereq 24)
—1, V MWF, VH 6, Bentley
—2, VI MWF, ForH 150
—3, VI MWF, Z 211
—4, VII MWF, VH 6

26 **Accounting** (3 cr, §55B, §old Econ 26; prereq 25)
—1, I MWF, MurH 311, Bentley
—2, II MWF, Lib 4A
—3, III MWF, ForH 130

—4, IV MWF, Lib 4A
—5, V MWF, VH 113
—6, VI MWF, MurH 311

28 **Business Law** (3 cr, §58, §old Econ 28; prereq soph or jr with 6 cr, regis AFHE or IT or Pharm, cons adv)
I MWF, C 225, Eastlund

32 Typewriting (1 cr, §old Econ 32)
I MTWThF, VH 209, Stanley

33 Interm Typewriting (1 cr, §old Econ 33; prereq 30 words a min, 32 or 1 yr HS type)
VI MWF, VH 209, Peterson

34 Typewriting Procedures (2 cr, §old Econ 34; prereq soph, 33, 45 words a min or 2 yrs HS type)
II MWF, VH 209, Stanley

36 Office Procedures (3 cr, §old Econ 36; prereq soph, 34 or ♯)
V MWF, VH 211, Stanley

39 Shorthand (3 cr, †37-38-39, §old Econ 39; prereq 38, 34 or ¶ or 2 yrs HS shorthand)
V MWF, VH 209, Donaldson

50 **Production Mgt** (3 cr, §150, §old 89 or 187; prereq Econ 2)
III MWF, VH 1, Wickesberg

51 **Business Statistics** (3 cr, §161, §old 74; prereq 5, soph with ♯)
—1, III MWF, VH 207, Willis
—2, 9:00-10:30 TTh, VH 1, May
—3, 10:30-12:00 TTh, VH 1, May

52 **Modern Industrial Relations: Labor Marketing** (3 cr, §152, §old Econ 73 or 161; prereq Econ 2)
Lect II TTh, C 410, Heneman
—1, III T, VH 113, Mohr
—2, III T, MurH 311
—3, III Th, VH 113
—4, IV T, VH 6
—5, IV T, VH 113
—6, IV Th, VH 6
—7, V T, VH 113
—8, V Th, VH 113

53 **Insurance** (3 cr, §153, §old Econ 50 or 107; prereq Econ 2)
—1, II MWF, VH 2, Fleischer
—2, II MWF, VH 4, Williams
—3, III MWF, VH 301, Fleischer
—4, 10:30-12:00 TTh, VH 4, Fleischer

54 **Transportation I: Principles** (3 cr, §154, §old 71 or Econ 172; prereq Econ 2)
—1, II MWF, VH 6, Nightingale
—2, III MWF, VH 4, Harper
—3, IV MWF, VH 1, Harper

55B **Accounting** (4 cr, §25-26, §old 55; prereq 55A)
VI MTWF, VH 6, K Heller

55C **Managerial Costs** (3 cr, §115A or 115B, §old 66; prereq 26)
IV MWF, VH 207, Bentley

55D **Analysis of Financial Statements** (3 cr, §105C, §old 65 or 139; prereq 26)
I MWF, VH 301, Burns

56 **Corporation Finance** (3 cr, §156, §old Econ 75 or 155; prereq 1)
—1, 9:00-10:30 TTh, VH 207, Stevenson
—2, II MWF, VH 301, Stevenson
—3, 10:30-12:00 TTh, VH 207, Nilsen

57 **Marketing** (3 cr, §157, §old 77 or Econ 185; prereq Econ 2)
II MWF, VH 1, Hancock

58 **Business Law: Contracts** (3 cr, §158, §old 51; prereq Econ 2)
Lect III T, ForH 55, Wright
—1, I TTh, VH 4, Wright
—2, II TTh, VH 4, Wright

60 **Business Policy, Mgt Control** (3 cr, §160, §old 182G; prereq 3 qtrs sr)
—1, I MWF, ForH 160, Glaskowsky
—2, III MWF, VH 307, Glaskowsky
—3, VI MWF, VH 307, Glaskowsky

72 **Modern Industrial Relations: Manpower Mgt** (3 cr, §172, §old 167; prereq 52 or 152)
VI MWF, VH 1, Rhode

75A **Accounting Lab** (1 cr, §old 93; prereq 26)
—1, VI-VII Th, VH 306, Etnier
—2, VII-VIII W, VH 307, Etnier

75B **Cost Accounting Lab** (1 cr, §old 94; prereq 115A)
VI-VII T, VH 306, Etnier

76 **Finance Mgt** (3 cr, §276, §old 156; prereq 56 or 156)
I MWF, VH 6, Stevenson

77 **Advertising** (3 cr, §207, §old 188; prereq 57, Psy 156)
IV MWF, VH 2, Lewis

88 **Business Law: Sales, Negotiable Instruments** (3 cr, §188, §old 53; prereq 58)
Lect III Th, Ph 150, Wright
—1, I TTh, VH 6, Eastlund
—2, I TTh, VH 301, Neville
—3, II TTh, VH 6, Neville
—4, III T, IV Th, VH 306, Neville

89A **Calculating Equipment Applied to Business Data** (1 cr, §old 96; prereq 26, bus ed or office mgt maj)
III-IV F, VH 210, Peterson

89B **Tabulating Equipment Lab** (2 cr, §old 91; prereq 5, 26)
Lect III T, VH 210, Hammond
—1, IV-V Th, VH 210, Hammond
—2, V-VI T, VH 307, Hammond

92 **Industrial Relations Employment Security** (3 cr; prereq 52)
IV MWF, VH 307, Heneman

97C **Marketing Research II** (3 cr, §217C, §old 181C; prereq sr, 97)
10:30-12:00 TTh, VH 307, Holloway

99 **Survey of Office Mgt** (3 cr, §old 86; prereq Econ 2)
IV MWF, VH 113, Donaldson

103 **Property, Liability Insurance II** (3 cr, §243, §old 117; prereq 53...93 rec)
IV MWF, VH 211, Williams

105B Interm Accounting II (3 cr, §old 150B; prereq 105A)
IV MWF, VH 306, K Heller

105C Interm Accounting III (3 cr, §55D, §old 150C; prereq 105A)
VI MWF, VH 301, Meyers

107 Retail Mgt I (3 cr, §227, §old 114; prereq 57)
I MWF, VH 207, Hancock

115B Cost Accounting (3 cr, §55C, §old 153; prereq 115A)
8:30-10:00 TTh, VH 2, Gibson

117 Sales Mgt I (3 cr, §237, §old 113; prereq 57)
II MWF, VH 207, Lewis (for undergrads)

125 Auditing Principles, Procedures (4 cr, §old 118; prereq 105B, 105C or ¶)
Lect VI TTh, VH 301, Lund
—1, Lab I-II TTh, VH 307, Lund
—2, Lab VII-VIII TTh, VH 307, Lund

135 Income Tax Accounting (4 cr, §old 134; prereq 55D or 105A)
III MTWF, VH 6, Berryman

139 Office Mgt, Analysis of Office Functions (3 cr, §old 182E; prereq 99)
2:00-3:30 TTh, VH 211, Donaldson

147 Adv Advertising Procedure (3 cr, §old 194; prereq 77 or 207)
III MWF, VH 211, Longstaff

149 Practice Course (ar cr, §old 183E) Peterson

152 Principles of Industrial Relations: Labor Marketing (3 cr, §52, §old Econ 73 or 161; prereq grad, 2)
Lect II TTh, C 410, Heneman
Rec V T, VH 6, Mohr

158 Business Law: Contracts (3 cr, §58, §old 51; prereq grad)
Lect III T, ForH 55, Wright
Rec II TTh, VH 4, Wright

160 Mgt Organization, Business Policy (3 cr, §60, §old 182G; prereq grad)
VI MWF, VH 2

161 Business Statistics (3 cr, §51, §old 112; prereq grad, 151)
II MWF, VH 205, Willis

170 Top Mgt Organization, Control (3 cr, §old 157; prereq sr)
8:00-9:30 MW, VH 113, Schleh (for undergrads)

171 Statistical Methods, Sample Surveys (3 cr; prereq 51 or 161)
10:30-12:00 TTh, VH 211, Hastings

173 Senior Topics: Insurance (3 cr, §old 182H; prereq 6 cr insur, jr with ♯)
III MWF, VH 205, Williams

174 Transportation II: Traffic Mgt (3 cr, §old 174; prereq 54 or 154)
I MWF, VH 205, Harper

175C Controllership Functions, Procedures (3 cr, §old 136; prereq 115B)
II MWF, VH 306, Jackson

184B Intl Transportation: Water, Air (3 cr, §old 147; prereq 54 or 154)
I MWF, VH 211, Nightingale

185B Auditing, Public Accounting (3 cr, §old 135; prereq 125)
1:30-3:00 TTh, VH 2, Berryman

188 Business Law: Sales, Negotiable Instruments (3 cr, §88, §old 53; prereq grad, 158)
Lect III Th, Ph 150, Wright
Rec II TTh, VH 6, Neville

191B Statistical Methods (3 cr; prereq 191A or ♯)
1:30-3:00 TTh, VH 113, Hastings

194C Gen Transportation Mgt (3 cr, §264; prereq 194B, ♯)
IV MWF, VH 205, Nightingale

196B Topics: Finance (3 cr, §old 182B)
9:00-10:30 TTh, VH 205, Sutton

202 Organization, Staffing (3 cr, §old 180D, 181D, 182D; prereq 72 or 172)
I MWF, VH 307, England

207 Advertising (3 cr, §77, §old 188; prereq 57, Psy 156)
IV MWF, VH 2, Lewis

217 Market Analysis, Research (3 cr, §97, §old 173; prereq 51 or 151, 57 or 157)
2:00-3:30 TTh, VH 210, Holloway

217C Marketing Research II (3 cr, §97C, §old 181C; prereq 97 or 217)
10:30-12:00 TTh, VH 307, Holloway

237 Sales Mgt (3 cr, §117, §old 113; prereq 57)
2:00-3:30 MF, VH 211, Lewis

243 Property, Liability Insurance II (3 cr, §103, §old 117; prereq 153..93 rec)
IV MWF, VH 211, Williams

257 Govt, Business Enterprise II (3 cr; prereq 256)
2:00-3:30 TTh, VH 205, Seltzer

259 Quantitative Approaches to Administrative Probs II (3 cr; prereq 258)
1:00-2:30 MF, VH 205, May

260 Policy Formulation, Admin (3 cr; prereq 2nd yr grad)
2:30-4:00 MF, VH 307

265A Managerial Cost Accounting (3 cr, §55C or 115A or 115B, §old 130; prereq 26)
IV MWF, VH 207, Bentley

265B Corporate Statements (3 cr, §55D or 105C, §old 139; prereq 26)
I MWF, VH 301, Burns

276 Finance Mgt (3 cr, §76, §old 156; prereq 56 or 156, 55D or 105A, 105C)
10:30-12:00 TTh, VH 205, Sutton

290A Readings: Industrial Mgt, Admin (ar cr, §old 160; prereq cons adv, instr)

290B Research: Industrial Mgt, Admin (ar cr, §old 299)

306 Seminar Business Finance (3 cr, §old 236)
2:00-4:00 T, Ph 236A, Sutton

317 Seminar: Marketing Mgt (3 cr; prereq 57 or 157)
3:00-5:00 M, VH 205, Holloway

345A Adv Accounting Probs (3 cr, §old 261)
VIII-IX T, VH 306, Jackson

350 Seminar: Production (3 cr; prereq 100)
III-IV W, VH 210, Basil

360 Seminar: Industrial Mgt (3 cr, §old 281; prereq 260)
III-IV M, VH 210, Basil

382 Seminar: Current Industrial Relations Research (3 cr, §old Econ 252)
VIII-IX M, VH 210, Bellows

ECONOMICS (Econ)

C **Economic Analysis** (3 cr, §1-2 or 1T-2T, §old 8-9; prereq B or 50A, 50B)
IV MWF, Owre 12

1 **Principles** (3 cr, §C or 1T or 50A, §old 6; prereq 3rd qtr fr)
—1, I MWF, ForH 15, Coen
—2, I MWF, MurH 308
—3, I MWF, VH 210 (honors section: HPR of 3.0 or over)
—4, II MWF, C 111
—5, II MWF, MurH 420
—6, III MWF, ForH 15
—7, III MWF, MinMet 116
—8, IV MWF, MinMet 116
—9, IV MWF, E 305
—10, V MWF, VH 4
—11, V MWF, VH 207
—12, VI MWF, ForH 20
—13, VII MWF, VH 1

2 **Principles** (3 cr, §C or 2T or 50B, §old 7; prereq 1)
—1, I MWF, ForH 85, Smith
—2, II MWF, MurH 308, Smith
—3, III MWF, ForH 20
—4, III MWF, EE 137 (honors section: grade of B or over in Econ 1)
—5, IV MWF, ForH 180
—6, V MWF, VH 301
—7, VI MWF, VH 306

2T **Principles** (3 cr, §2, §C or 50B, §old 9; prereq 1T)
—1, IV MWF, ForH 20, Smith
—2, VI MWF, ForH 85, Smith

65 **Interm Economic Analysis: The Firm** (3 cr, §165, §old 81 or 144; prereq 2)
—1, 8:30-10:00 TTh, VH 113, Meyers
—2, II MWF, Bu 211, Richter
—3, III MWF, VH 113, McKinnon

66 **Interm Economic Analysis: Income, Employment** (3 cr, §166, §old 80 or 143; prereq 2 or ♯)
—1, II MWF, EE 237, Merrill
—2, III MWF, VH 2, Bronfenbrenner
—3, III MWF, EE 237, Smith

67 **Money, Banking** (3 cr, §old 3, 57; prereq 2)
—1, I MWF, VH 1, Knudtson
—2, IV MWF, VH 4, Hanrahan

68 **Public Finance** (3 cr, §168 or 178A, §old BA 58; prereq 2)
—1, I MWF, VH 4, Hady
—2, IV MWF, VH 301, Hady

69 **Govt Regulation of Business** (3 cr, §169, §old 85 or 175; prereq 65 or 165 for maj, law or pol sci or ♯ for others)
—1, I MWF, VH 306, Dewald
—2, IV MWF, VH 6, Simler
—3, VI MWF, VH 207, Simler

75 **Interm Economic Analysis: Household, Policy** (3 cr, §175, §old 82; prereq 65)
I MWF, VH 2, Buttrick

90 Honors Course (3 cr, §old 97 or 98 or 99; prereq cons adv)

103 **Economic Development** (3 cr, §old 120; prereq 65, 66 or ♯)
III MWF, VH 306, Krueger

104 **International Economics** (3 cr, §old 176; prereq 2)
VI MWF, VH 4, Coen

120 **Consumption** (3 cr, §old 178; prereq 2)
VI MWF, VH 113, Maynes

121C **Theory of Statistics II** (3 cr, §old 123; prereq 121B, Math 53 or ♯)
10:30-12:00 TTh, VH 2, Savage

157 **Business Cycles** (3 cr, §old 149; prereq 66, 67)
II MWF, VH 113, Smith

162 **Union Govt, Policies** (3 cr, §old 163; prereq BA 52 or 152)
10:30-12:00 TTh, TSMb 211, Seltzer (for grads)

164 **Economy of USSR** (3 cr, §old 127; prereq 2)
10:30-12:00 TTh, VH 301, Boddy

165 **Economic Analysis: The Firm** (3 cr, §65, §old 81 or 144; prereq 2, ♯)
IV MWF, C 115, Buttrick

175 **Economic Analysis: Household, Policy** (3 cr, §75; prereq grad, 65 or 165)
I MWF, VH 2, Buttrick

176B **Theory of Employment, Natl Income, Price Level II** (3 cr, §old 125; prereq 176A)
VIII-IX Th, VH 1, Brownlee

181C Topics: Statistics (3 cr, §old BA 182F; prereq 121C or ¶121C or ♯)
2:00-3:30 TTh, VH 4, Savage

185B **Market Structure** (3 cr, §old 104; prereq 185A or ♯)
2:00-3:30 TTh, VH 1, Boddy

185C **Income Distribution** (3 cr; prereq 65, 66)
9:00-10:30 TTh, VH 306, Bronfenbrenner

190 Readings (ar cr, §old 160; prereq cons adv, instr)

198 **Fiscal Policy** (3 cr, §old 195; prereq 20 cr soc sci incl pub finan, 66, 67)
VII-VIII M, VH 113, Richter

201C Econometrics C (3 cr; prereq 201B)
2:30-5:00 M, VH 2, Nerlove

224 Intl Trade, Economic Welfare (3 cr, §old 196; prereq 104, 165 or 185A...114 rec)
III MWF, JohH 313, Coen

235 Mathematical Economics (3 cr, §old 216; prereq 101A, Math 40, 53 or ♯)
2:00-3:30 TTh, VH 207, Hurwicz

277B Development of Monetary Theory (3 cr, §old 244; prereq 277A)
VIII-IX F, VH 210, Henderson
290 Research (ar cr, §old 299)
368A Seminar: Public Finance (3 cr, §old 233)
VIII-IX T, VH 210, Heller
385 Seminar: Micro-Economics (1 cr, §old 214)
Boddy
391C Seminar: Workshop in Econometrics (ar cr, †391A-391B-391C; prereq 391B)
7:30-9:30 pm M, VH 210, Chipman, Nerlove
393C Seminar: Workshop in Economic Development (ar cr, †393A-393B-393C; prereq 393B)
VII-VIII W, VH 205, Bronfenbrenner, Buttrick
398C Seminar: Workshop in Public Finance, Fiscal Policy (ar cr, †398A-398B-398C; prereq 398B)
7:30-9:30 pm W, ForH 75, Brownlee, Heller

SCHOOL OF DENTISTRY

Dental Assisting (DA)

8 Health Care (1 cr; prereq 7)
1:00-2:00 Th, Owre 104, Tuchner
9 Dental Radiography (½ cr; prereq 7)
2:00-5:00 M, Owre 202, Petersen
10 Office Management (1 cr; prereq 7)
9:00-10:00 T, Owre 111, Thorson
11 Clinics III (5 cr; prereq 7)
10:00-12:00 T, 2:00-5:00 TWTh, 9:00-12:00 Th, Owre 310, Tuchner
12 Lab Procedures (1 cr; prereq 7)
2:00-5:00 M, Owre 104, Wakely, Tuchner

Dental Hygiene (DH)

9 Dental Anatomy (2 cr; prereq 8)
Lect VI F, Owre 104, Hall
Lab VII-IX W, Owre 104, Hall
22 Dental Prophylaxis (2 cr; prereq 21)
Lect I F, Owre 104, Jackson
—1, Lab II-III M, Clinic, Jackson
—2, Lab II-IV T, Clinic, Schendel
—3, Lab II-III F, Clinic, Jackson
42 Dental Health Education (2 cr; prereq 41)
I T, Owre 104, Schendel
47 Dental Assisting (2 cr; prereq 46)
1:00-2:00 Th, Owre 104
55 Dental Prophylaxis (2 cr; prereq 54)
—1, 2:00-5:00 T, Clinic, Schendel
—2, 9:00-12:00 W, Clinic, Jackson
—3, 2:00-5:00 W, Clinic, Jackson
—4, 2:00-5:00 Th, Clinic, Jackson
59 Prosthetic Dentistry, Dental Lab (3 cr; prereq 58)
Lect I Th, Owre 104, Hall
Lab II-IV TTh, Owre 104, Hall
62 Dental Radiology (2 cr)
I W, Owre 104, Petersen

Dentistry (Dent)

52 Dental Anatomy (3 cr; prereq 51)
Lect VI T, Owre 12, Hall
Lab VII-IX T, I-III F, Owre 1, Hall
62 Dental Prosthetics (3 cr; prereq 61)
Lect I M, Owre 12, Hall
Lab II-IV M, VII-IX Th, Owre 1, Hall
72C Dental Prosthetics Clinic (2 cr; prereq 70)
Lect I S, Owre 111, Morstad
Clinic II-IV S, Clinic, Morstad
77 Crown and Bridge Technic (4 cr; prereq 76)
Lect 1:00-2:00 M, Owre 12, Serr
Lab VI-IX M, II-IV WTh, Owre 1, Serr
80 Oral Diagnosis (1 cr; prereq regis Dent)
1:00-2:00 T, Owre 111, Bartholdi
81 Radiodontics (1 cr; prereq regis Dent)
1:00-2:00 Th, Owre 12, Petersen
86 Operative Dentistry (4 cr; prereq 85)
Lect 1:00-2:00 F, Owre 12, Wakely
Lab II-IV T, VII-X WF, Owre 1, Wakely
90 Anesthesia (1 cr; prereq regis Dent)
1:00-2:00 W, Owre 12, Holland
112C Dental Prosthetics Clinic (2 cr; prereq 111C) Morstad
117C Dental Prosthetics Clinic (2 cr; prereq 116C) Morstad
118 Seminar: Restorative Dentistry (1 cr)
8:00-9:00 Th, Owre 113, Morstad
122 Crown and Bridge (1 cr; prereq 120)
8:00-9:00 T, Owre 111, Yock
122C Crown and Bridge Clinic (2 cr; prereq 121C) Yock
127C Crown and Bridge Clinic (2 cr; prereq 126C) Yock
132C Radiodontics Clerkship (1 cr) Petersen
136 Oral Medicine (1 cr; prereq 135)
8:00-9:00 F, Owre 113, Bartholdi
137C Oral Diagnosis Clinic (1 cr; prereq 80 or 130) Bartholdi
142 Operative Dentistry (2 cr; prereq 140)
8:00-9:00 Th, Owre 111, Jensen

142C Operative Clinic (3 cr; prereq 141C) Jensen
147C Clinical Operative Dentistry (2 cr; prereq 146C) Jensen
150 Exodontics (1 cr; prereq 90)
8:00-9:00 W, Owre 111, Clark
157C Oral Surgery, Hospital Clinics (3 cr; prereq 156) Clark
172C Pedodontics Clinic (1 cr; prereq 171) Wittich
177C Pedodontics Adolescent Clinic (1 cr; prereq 176C) Wittich
182 Periodontics (1 cr)
8:00-9:00 F, Owre 111, Schaffer
182C Periodontics Clinic (1 cr; prereq 181C) Schaffer
196 Practice Mgt (1 cr; prereq regis Dent)
8:00-9:00 T, Owre 113, Thorson
197 Professional Orientation (1 cr)
8:00-9:00 W, Owre 113, 1:00-2:00 W, Owre 111, Crawford
200 Adv Orthodontic Technics (ar cr) Steadman
201 Treatment Procedures in Orthodontics (ar cr) Steadman
202 Case Analysis (ar cr) Steadman
203 Treatment Planning (ar cr) Steadman
204 Adv Clinical Orthodontics (ar cr) Steadman
205 Osteology, Myology of the Head (ar cr) Steadman
206 Growth of the Head (ar cr) Steadman
207 Comparative Odontology (ar cr) Steadman
208 Seminar: Orthodontics (ar cr) Steadman
209 Probs, Research: Orthodontics (ar cr) Hall
220 Adv Dental Anatomy (ar cr) Hall
230 Adv Oral Diagnosis (ar cr) Bartholdi
231 Adv Clinical Oral Diagnosis (ar cr) Bartholdi
232 Research: Oral Medicine (ar cr) Bartholdi
240 Adv Technical Restorative Dentistry (ar cr) Jensen, Wittich, Yock
243 Adv Clinical Restorative Dentistry (ar cr) Jensen, Wittich, Yock
247 Research Probs: Restorative Dentistry (ar cr) Jensen, Wittich, Yock, Crawford
250 Adv Oral Surgery (ar cr) Clark
251 Seminar: Oral Surgery (1 cr) Clark
252 Research: Oral Surgery (ar cr) Clark
253 Probs: Oral Surgery (ar cr) Clark
261 Adv Dental Radiographic Technique (ar cr) Petersen
262 Research: Oral Pathology (ar cr) Gorlin
263 Seminar: Dental Research (1 cr) Gorlin
264 Clinical Oral Pathology Conference (1 cr) Bartholdi, Gorlin, Clark
280 Adv Periodontics Clinic (ar cr) Schaffer
281 Adv Periodontics Lectures (3 cr) Schaffer
282 Research: Periodontics (ar cr) Schaffer
283 Seminar: Periodontics (1 cr) Schaffer
284 Supporting Structures of the Teeth (3 cr) Schaffer

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AgEd)

56 Rural Education Through Extension Methods (3 cr; prereq soph)
IV MWF, Hr 302, Christensen

82 Teaching in Secondary School (4 cr; prereq 81, Ed 55B or ¶)
Lect IV MWF, Hr 301, Kitts
Lab VII-VIII T, Hr 301, Kitts

91 Supervised Teaching Experience (6 cr; prereq sr, 82, ‡) Kitts

104 Planning Programs (2 cr; prereq last qtr undergrad regis or ‡)
IV TTh, Hr 301, Peterson

156 Rural Education Through Extension Methods (3 cr, §56; prereq grad or ‡)
IV MWF, Hr 302, Christensen

221 Field Probs (3 cr) Peterson, Kitts, Swanson

232 Research (ar cr; prereq 15 cr educ) Peterson, Kitts, Swanson

291 Seminar (ar cr) Peterson, Kitts, Swanson

ART EDUCATION (ArEd)

17 **Pictorial Expression for Elem Education** (3 cr)
—1, I-II MWF, TSF 259, Cherry
—2, III-IV MWF, TSF, 259, Cherry
—3, VIII-IX MWF, TSF 259, Cherry
18 **Design Activities for Elem Education** (3 cr)
—1, III-IV MWF, TSF 256, Hegg
—2, VI-VII MWF, TSF 256, Hegg
—3, VIII-IX MWF, TSF 256, Hegg
19 **Functional Arts, Crafts in Elem Education** (3 cr)
—1, I-II MWF, TSF 256, Wold
—2, VI-VII MWF, TSF 259, Cherry
54 **Adv Weaving** (3 cr)
VI-VII MWF, TSF 203, Smits
58 Principles, Experiences (5 cr; prereq 14)
III-IV MTWThF, J 109, Hastie, Wold
84 **Teaching in Elem School** (3 cr; prereq 6 cr from 17, 18, 19)
Lect VII TTh, P 210, Gayne
—1, Lab VI TTh, J 109, Gayne
—2, Lab VIII TTh, J 109, Gayne

84A Teaching in Elem School (3 cr; prereq 3A students)
I-II S, TSF 256, Wold
88 Student Teaching, Supervision (3 cr, †86-87-88; prereq sr, 56, 57, Ed 55A, 55B, ¶88A) Hastie, Wold
88A Teaching, Supervision (2 cr, †86A-87A-88A; prereq sr, 56, 57, Ed 55A, 55B, ¶88)
IX-X T, J 109, Gayne
295 Problems (ar cr; prereq cons maj adv) Gayne, Hastie
296 Seminar (1 cr)
IX-X Th, J 109, Gayne, others

CHILD DEVELOPMENT AND WELFARE (CD)

40 Child Training (3 cr, §HEEd 90; prereq soph, Psy 2)
VI TTh and ar, CW 218, Grams
80 **Child Psychology** (3 cr; prereq Psy 2)
—1, IV MWF, CW 218, Stevenson
—2, VII MWF, CW 218, Palermo
90 Child Rearing (3 cr; prereq Psy 2)
IV TTh, CW 222, Robinson
95 Probs (1-3 cr; prereq 18 cr with B aver incl 80, Soc 45, Psy 70, ♯) Templin
125 Experimental Child Psychology (3 cr; prereq sr, 80, Psy 5, 12 cr educ psy or psy or soc)
I-II TTh, CW 206, Palermo
132 Adolescent Development (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
II MWF, CW 218, Hurst
140 Behavior Probs (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
I MWF, CW 222, Grams
142 Psychology of Atypical Children (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
I-II TTh, CW 222, Templin
144 Psychology of the Gifted Child (3 cr; prereq 80, 9 cr educ psy or psy or soc or HE)
III MWF, CW 206, Anderson
155 History (2 cr; prereq 130, 131)
III TTh, CW 206, Anderson
222 Seminar: Current Research (ar cr)
VIII-IX alt W, CW 206, Roff
225 Seminar: Developmental Theory (1 cr; prereq 224) Anderson
227 Multiple Factor Analysis (2 cr; prereq 3 qtrs stat, ment meas)
VIII-IX M, CW 202, Roff
232 Seminar: Recent Literature (1 cr)
VIII-IX alt W, CW 206, Palermo
234 Research Methods (2 cr; prereq 233)
VII-VIII TTh, CW 202, Roff
238 Seminar: Human Development (2 cr; prereq 237)
VI-VII alt TTh, CW 206, Stevenson
242 Practicum: Behavior Probs (ar cr; prereq 140, ♯) Hafner
249 Treatment of Disturbed Children (3 cr; prereq 248)
IX-X MF, CW 206, Wirt
250 Internship: Professional Work (ar cr; prereq △)
272 Readings, Research: Child Development (ar cr; prereq MA plan B students or ♯)
275 Technique, Field Work: Parent Education (ar cr; prereq 274) Grams
292 Practicum: Psychological Appraisal of Children (ar cr; prereq ♯) Robinson
295 Projective Methods with Children, Adolescents (3 cr; prereq ♯)
VII-VIII M and ar, CW 206, Hurst

GENERAL EDUCATION

Curriculum and Instruction (EdCI)

56 Methods, Observation in Kindergarten (3 cr; prereq 55 or ¶)
VII TTh, CW 218, Headley
58 Core Curriculum Foundations (1 cr; prereq ♯)
VII-VIII M, Bu 103, Bossing
59 Methods, Observation in Nursery School (2 cr)
VI TTh and ar, Psy 115, Robinson
60 **Teaching Reading in Elem School** (3 cr; prereq Ed 75A)
—1, II MWF, Bu 120, Clymer
—2, VI MWF, Bu 120, Bond
61 **Teaching Social Studies in Elem School** (3 cr; prereq Ed 75B)
—1, II MWF, CW 222, Mullins
—2, VII MWF, CW 222, Mullins
—3, VI-VII T, VI Th, CW 222, Mullins
62 **Teaching Arithmetic in Elem Schools** (3 cr; prereq Ed 75A)
—1, IV MWF, Pt 202, Stochl
—2, VI MWF, Pt 202, Stochl
63 **Children's Literature** (2 cr)
—1, IX-X T, Bu 120, Odland
—2, VI TTh, Bu 120, Odland
64 **Teaching English in Elem School** (3 cr; prereq Ed 75A)
—1, VI MWF, Bu 211, Chase
—2, VII MWF, JohH 115, Barrett
65 **Teaching Science in Elem School** (3 cr; prereq Ed 75A, 10 cr nat sci)
—1, VII-VIII M, VII W, Bu 211, Goossen
—2, IX-X T, IX Th, Bu 211, Goossen
66 **Treatment of Learning Difficulties** (3 cr; prereq 60, 62A, ¶student tchg)
IX-X W, Pt 202, Balow
101 **Driver Education** (3 cr)
I-IV S, ForH 20, Gebhard
103 Teaching Science in Elem School (3 cr; prereq sr, Ed 75B or tchg exper)
III-IV S, FolH 101, Goossen

105 Audio-Visual Materials in Education (3 cr; prereq sr)
I-II Th, NH 211, 1 hr ar, Pearson

109 **Audio-Visual Materials, Equipment Lab** (3 cr; prereq 105 or ¶ or ♯)
Lect VI-VII T, WeH 306, Pearson
—1, VIII-IX T, WeH 206, Pearson
—2, VI-VII Th, WeH 206, Pearson

110 **Practicum: Laboratory School Teaching, K-6** (ar cr; prereq cons adv)

113 High School Curriculum (3 cr; prereq Ed 55B)
III-IV S, Bu 120, Winter

114 Development of Core Curriculum (3 cr)
IX-X T, JohH 205, Bossing

120 Education of Blind Children in the Secondary Schools (3 cr)
IX-X M, Pt 202, Kenmore

122 Literature for Adolescents (3 cr; prereq Ed 55B or jr-sr HS tchg exper)
I-II S, FolH 204, Kegler

125 **Occupational Information Lab** (3 cr; prereq ♯)
3:45-5:15 T, 3:45-6:15 Th, Bu 125, Tennyson

131 Adv Teaching Technical Business Subjects (3 cr)
IX-X Th, Bu 103, Price

135 Group Procedures in Guidance (3 cr; prereq EPsy 133 or ♯, 9 cr educ)
III MWF, Bu 125, Tennyson

138 Training Store, Office Supervisors (3 cr)
4:00-6:20 T, Bu 103, Meyer

141 Co-operative Part-Time Work Experience Programs (3 cr)
4:00-6:20 W, Bu 103, Meyer

142 Business, Distributive Programs for Adults (3 cr)
IX-X W, Bu 123, Kenmore

143 Teaching, Supervision of Reading in Elem School (3 cr; prereq 9 cr educ)
I-II S, CW 222, Clymer

144 Teaching Reading in Secondary Schools (3 cr; prereq 9 cr educ)
IX-X M, Bu 211, 1 hr ar, Chase

145 Reading Difficulties (3 cr; prereq 143 or 144)
IX-X W, Bu 120, 1 hr ar, Bond

149 Teaching, Supervision of Arithmetic in Elem School (3 cr; prereq 9 cr educ)
4:00-5:30 TTh, Pt 202, Stochl

150 Supervision, Improvement of Instruction (3 cr; prereq 9 cr educ)
III-IV S, Pt 202, Curtin

151 Diagnosis, Treatment of Learning Difficulties (3 cr)
IX-X M, CW 222, Clymer

153 Supervision, Teaching of English in Elem Schools (3 cr; prereq Ed 75B)
III-IV S, CW 218, 1 hr ar, Archer

155 Materials Lab for Social Studies Teachers (3 cr; prereq ♯)
IX-X W, JohH 313, West

156 Trends in Business Education (3 cr)
III-IV S, Bu 103, Price

163 Plastic Materials, Story Telling, Social Studies for Young Children (3 cr)
IX-X W, CW 106, Headley

171 Curriculum Lab Practice (0-3 cr; prereq 170A or 170B, ♯) Bossing, Goossen

174 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 164; prereq Spch 163) Bryngelson

175 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 165; prereq 174) Bryngelson

176 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 166; prereq 175) Bryngelson

182 Education of Partially Seeing Children (3 cr; prereq 115, 178)
IX-X W, JohH 205, Kenmore

192 Mathematics Lab (3 cr; prereq grad or tchg exper)
IX-X Th, PeikH 315, Johnson

193C High School Mathematics: Content, Teaching Techniques (4 cr; prereq 193B)
I MW, Bu 123, V-VI TTh, Pt 202, Johnson

199E Internship (ar cr)

201 Probs: Teaching Social Studies (3 cr; prereq 155 or 168, 204 or ♯) Morse, McCune, West, Stovall

205 Probs: Audio-Visual Education (ar cr; prereq ♯) Pearson

215 Probs: School Health Education Program (ar cr; prereq ♯) Grout

222 Seminar: Current Probs in Techniques of High School Instruction (ar cr; prereq Ed 55B, sr methods)
IX-X W, PeikH 225, Bossing, Keller, Winter

225 Probs: Secondary School Supervision (ar cr; prereq ♯) Keller, Lane, Popper

226 Seminar: Elem School Probs (2 cr)
IX-X Th, Bu 120

227 Probs: Rural Education (ar cr; prereq EdAd 117) Archer

228 Probs: Higher Education, Teacher Education (ar cr; prereq ♯) Eckert

238 Probs: Distributive Education (ar cr; prereq ♯) Meyer

239 Probs: Business Education (ar cr; prereq ♯) Price

252 **Effective College Teaching** (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
—1, I-II T, I Th, Bu 123, Eckert
—2, I-II S, Bu 123, Eckert

254 Directed Experience in College Instruction (ar cr; prereq ♯) Eckert

261 Probs: Improvement of Instruction (ar cr; prereq ♯) Archer, Goossen, Curtin, Mullins

266 Supervision of High School Instruction (3 cr; prereq EPsy 193 or 293 or ♯)
I-II S, FolH 102, 1 hr ar, Thompson

271 Probs: Curriculum Construction (3-6 cr; prereq ♯)

273 Probs: Reading (ar cr; prereq 143 or 144 or ♯) Bond, Clymer, Chase, Odland, Reynolds, Balow

284 Probs: Student Teaching (3-9 cr; prereq ‡) Davies
286 Professional Education of Teachers (3 cr; prereq 285 or ‡)
III-IV S, FolH 102, Davies
296 Probs: Teaching English (ar cr) Kegler

Education (Ed)

55B Introd Secondary School Teaching (5 cr; prereq 55A or ‡)
Lect I MWF, NH 45, Mork
—1, II TTh, CW 218, Gardner
—2, II TTh, Pt 202, Bicak
—3, III TTh, CW 218, Gardner
—4, III TTh, Bu 125, Bicak
—5, VI TTh, JohH 205, Olstad
—6, VI TTh, Bu 211, Jackson
—7, VII TTh, Pt 202, Olstad
—8, VII TTh, Bu 211, Jackson
55N Introd Teaching Nursing (5 cr; prereq Psy 2)
VI-VIII T, VI-VII Th, ForH 20, Lantz
75A Introd Elem School Teaching (5 cr, §old 71B; prereq Psy 2)
Lect VI MWF, Ph 166, Odland
—1, III-IV TTh, Bu 123, Barrett
—2, III-IV TTh, Pt 202, Balzer
—3, VI-VII TTh, Bu 123, Dykstra
81 Education for Public Health Nurses (3 cr, not open to educ degree cand; prereq PubH 62, 100, 133)
II MWF, Mayo 1210, Grout

Educational Administration (EdAd)

118 The Community School (3 cr; prereq sr)
IX-X W, Bu 211, 1 hr ar, Archer
167 Junior High School (3 cr; prereq sr, 9 cr educ)
IX-X T, JohH 313, 1 hr ar, Bossing
210 Financial Aspects of Public School Business Admin (3 cr; prereq 227)
I-II S, Bu 120, 1 hr ar, Hooker
215 Elem School Principalship (3 cr)
III-IV S, Pt 202, 1 hr ar, Curtin
218 Recent Literature in Secondary Education (ar cr)
IX-X W, PeikH 225, Bossing, Keller, Winter
228 Probs: Educational Admin (1-3 cr; prereq 225) Domian, Hooker, Lane, Popper
230 Public Relations for Schools (3 cr; prereq 225)
III-IV S, Bu 211, 1 hr ar, Popper
235 Seminar: Educational Admin (no cr)
IX-X M, JohH 114, Bossing, Domian, Hooker, Keller, Lane, Popper
236 Field Study (0-10 cr; prereq ‡) Domian, Hooker, Lane, Popper
265 Admin of Noninstructional Activities in Secondary School (3 cr)
4:30-6:00 TTh, Bu 123, Lane
270A Probs: Elem Educ (ar cr; prereq ‡) Archer, Bond, Clymer, Curtin, Goossen, Mullins
270B Probs: Secondary Educ (ar cr; prereq ‡) Bossing, Domian, Hooker, Lane, Popper
290 Financing Higher Education (3 cr; prereq ‡)
III-IV S, FolH 103, 1 hr ar, Keller

Educational Psychology (EPsy)

117 Measurement (3 cr; prereq 116 or 216 or Psy 70)
VIII MWF, Bu 123, Lathrop
133 Procedures in Student Personnel Work (3 cr; prereq 9 cr educ)
I-II S, Bu 125, Soldahl
140 Instruments, Techniques of Measurement (3 cr; prereq sr, 110 or 117)
VIII MW, VIII-IX F, Bu 125, Edson
143 Adv Individual Mental Testing (3 cr; prereq 142, ‡)
VIII MWF, Pt 202, Reynolds, Hodges
148 Clinical Diagnosis of Reading Difficulties (3 cr; prereq EdCI 145)
I-II S, Pt 202, Balow
150 Clinical Practice in Remedial Teaching (3 cr; prereq EdCI 145 or 151, ‡) Balow
151 Clinical Practice in Educational Diagnosis (3 cr; prereq 142, EdCI 145, ‡)
VI-VIII MWF, Pt 108, Reynolds, Balow, Capobianco, Force, Hodges
152 Introd to School Psychological Services (3 cr)
4:00-5:30 TTh, CW 222, Hodges
182 Education of Exceptional Children (3 cr; prereq Ed 55B or 75B)
I-II S, CW 218, Force
184 Education of Mentally Retarded Children in the Elem Schools (3 cr; prereq 182 or ‡)
III-IV S, CW 222, Capobianco
218 Statistical Methods (3 cr)
II MWF, Bu 123
218A Statistical Methods Lab (2 cr)
—1, I-II TTh, Bu 251, Collier
—2, III-IV TTh, Bu 251, Collier
219 Design, Analysis of Statistical Investigations (3 cr; prereq 218, ‡)
III MWF, Bu 123
219A Design, Analysis of Statistical Investigations Lab (2 cr; prereq 218, ‡)
VI-VII TTh, Bu 251, Collier
233 Probs: Guidance, Personnel Work (1-9 cr)
—1, VI-VII M, Bu 125, Dugan
—2, ar, Edson, Hagenah, Snoke
240 Probs: Measurement (3 cr) Hoyt
243 Probs: Statistics for Students in Education, Psychology (3 cr)
251 College Student Personnel Work (1-3 cr; prereq 250 or 1 course higher educ)
V-VI W, Bu 103, Snoke

253 **Research Probs** (ar cr; prereq ‡)
—1, VI-VII M, Bu 125, Dugan
—2, Ar, Hoyt
—3, I T, Pt 104, Hodges
—4, Ar
254 Measurement, Evaluation in Higher Education (3 cr)
III-IV S, Bu 123, 1 hr ar, Johnson
259 Personality Theory in Mental Hygiene (3 cr)
I-II S, Bu 211, Torrance
260 Seminar (no cr)
280 Practicum in Group Leadership (3 cr; prereq ‡) Flanders
281 **Practice in Personnel Work** (3 cr; prereq 226 or ‡)
—1, VI-VII Th and ar, EdH 204, Hagenah
—2, Ar, Snoke
282 **Practice in High School Personnel Work** (3 cr; prereq ‡) Dugan, Tennyson, Soldahl
289 Survey of Special Education Probs (3 cr; prereq 182, ‡)
IX-X W, Bu 125, Capobianco
292 Recent Literature (3 cr; prereq ‡) Hoyt
294 Recent Theory, Research: Human Learning (3 cr; prereq ‡)
III MWF, JohH 126, Mork

History and Philosophy of Education (HEd)

180 **The School, Society** (3 cr; prereq sr)
—1, VII-VIII T, VII Th, Bu 120, R Beck
—2, III MWF, CW 218, C Beck
—3, IV MWF, Bu 120, C Beck
—4, VIII M, VIII-IX W, CW 218, C Beck
182 Comparative Philosophies of Education (3 cr)
IX-X M, Bu 120, R Beck
241 Problems (ar cr; prereq ‡) R Beck

HOME ECONOMICS EDUCATION (HEEd)

90 Child Training (3 cr; prereq soph, Psy 2)
IV MW, McNH 201, 1 hr ar, Fonaroff
91 Observation, Materials, Teaching (5 cr; prereq HE 4, 21, 41, Ed 55B, ¶93)
VIII MWF, IX W, McNH 103, Kafka
92 Teaching Probs (2 cr; prereq sr, 91, 93, ¶94, ¶192, ¶194A)
II MW, I-II F, McNH 102, Wantoch
93 Supervised Teaching (3 cr; prereq HE 4, 21, 41, Ed 55B)
94 Supervised Teaching (6 cr; prereq 93)
95 Field Experience for Home Agents (6 cr; prereq 91, 93, △, cons dir agric ext) Ford
190 Readings (1-3 cr; prereq ‡) Ford, Brown, Holmblade
192 Evaluation in Home Economics (2-3 cr; prereq sr, 91, 93, Ed 55B)
III-IV TTh, McNH 129, Brown
193A Curriculum: Secondary Level (3 cr; prereq 94 or ‡)
IX-X T, McNH 102, Holmblade
194A Adult Education (3 cr; prereq 91, 93)
III-IV MWF, McNH 129, Ford
194B Adult Education (3 cr; prereq sr, ‡)
IX-X W, McNH 129, 1 hr ar, Ford
197 Organization, Methods of Related Art Teaching (1-3 cr; prereq sr, 91, HE 180)
IX-X Th, Esteros
293 Problems (1-9 cr; prereq ‡...294 rec) Esteros, Ford, Holmblade, Brown

INDUSTRIAL EDUCATION (Ind)

1 Handicrafts (3 cr)
I-III TTh, TNCW 218, Gierke
3 Wood Processing II (3 cr)
I-II MWF, TNCW 1, Miletich
4 Wood Processing III (3 cr)
5 Wood Processing IV (3 cr)
6 Industrial Arts Teaching (5 cr)
VII-IX TTh, VII W, PelkH 32, Randleman
9 Building Construction Drafting (3 cr; prereq 7)
VI-VII MWF, TNCW 201, Gierke
12 Craftwork (3 cr)
III-IV MWF, TNCW 218, Flug
15 Graphic Arts I (3 cr)
II-IV TTh, TNCW 14, Flug (OT students only)
20 Electricity, Electronics (3 cr)
VI-VII MWF, TNCW 15, Kavanaugh
23 Applied Electronics I (3 cr)
24 Applied Electronics II (3 cr)
25 Metal Processing I (3 cr)
26 Metal Processing II (3 cr)
27 Metal Processing III (3 cr)
28 Metal Processing IV (3 cr)
29 Metal Processing V (3 cr)
30 Small Gas Engines (3 cr)
50 Industrial Practices, Processes (3 cr; prereq 35)
VI-VIII T, TNCW 116, Widdowson
60A Student Teaching (3 cr, †60A-60B-60C; prereq 5, 55 or 100, 2.5 HPR) Kuhl
60B Student Teaching (3 cr, †60A-60B-60C; prereq 60A) Kuhl
60C Student Teaching (3 cr, †60A-60B-60C; prereq 60B) Kuhl
60D Student Teaching (3 cr, prereq 60C) Kuhl
90 Independent Study (3 cr; prereq sr col or ‡)
VIII W, TNCW 113, Gierke
91 Independent Study (3 cr; prereq 90)
VIII W, TNCW 113, Gierke
92 Independent Study (3 cr; prereq 91)
VIII W, TNCW 113, Gierke
110 Vocational Guidance (3 cr; prereq Ed 55B)
IX-X Th, TNCW 113, Nelson
115 Supervision (3 cr; prereq 36 or 105)
IX-X M, TNCW 113, Widdowson

135 Course Construction (3 cr, §40)
IX-X T, TNCW 113, Kavanaugh
200 Research Probs (3, 6 or 9 cr)
III-IV M, TNCW 103, Nelson, Kavanaugh

METHODS AND STUDENT TEACHING (EdT)

50 Junior Practicum in Special Education (3 or 6 cr; prereq jr, ‡) Kenmore, Capobianco, Force

51B Teaching: Nursing (6 cr; prereq 51A)
I TTh, VIII-IX Th, ForH 175, Dunning, Weise

52 Student Teaching (ar cr; prereq spec meods course or tchg exper) Davies, others

53A Teaching Handicapped Children (6 cr; prereq ‡)
IX M and ar, Chase, others

53B Teaching Handicapped Children (6 cr; prereq ‡)
IX M and ar, Chase, others

54A Student Teaching: Elem School (6 cr)
IX M and ar, Chase, others

54B Student Teaching: Elem School (6 cr; prereq 54A)
IX M and ar, Chase, others

60 Student Teaching: Library Science (3 cr; prereq sr, Ed 55B, Lib 53, 62, 74, 171, 172) Zimmerman

67 Student Teaching: Mathematics (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶67C, Math 60 or ¶)
4:00-5:40 M and ar (for off-campus) Johnson, Goralski, others

67C Teaching Secondary School Mathematics (1 cr, †67A-67B-67C; prereq 67B)
4:00-5:40 W, CW 222, Johnson (for majors only)

67M Teaching Secondary School Mathematics (3 cr; prereq minor only)
4:00-5:40 TTh, PeikH 325, Johnson (for minors only)

68 Student Teaching: Science (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶68C)
4:00-5:40 M and ar (for off-campus) Boeck, Goralski, others

68C Teaching Secondary School Science (1 cr, †68A-68B-68C; prereq 68B)
4:00-5:40 W, PeikH 175, Boeck (for majors only)

68M Teaching Secondary School Science (3 cr; prereq minor only)
4:00-5:40 TTh, PeikH 165, Boeck (for minors only)

69 Student Teaching: Social Studies (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶69C)
4:00-5:40 M and ar (for off-campus) West, Goralski, others

69C Teaching Social Studies in Secondary School (1 cr, †69A-69B-69C; prereq 69B)
4:00-5:40 T, PeikH 175, West (for majors only)

70 Student Teaching: Modern Languages (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶70C)
4:00-5:40 M and ar (for off-campus) Birkmaier, Goralski, others

70C Teaching Modern Languages (1 cr, †70A-70B-70C; prereq 70B)
4:00-5:40 Th, PeikH 225, Birkmaier (for majors only)

71 Student Teaching: Latin (3-9 cr, †9 cr; prereq sr, ¶71C)
4:00-5:40 M and ar (for off-campus) Goralski, others

71C Teaching Latin (1 cr, †71A-71B-71C; prereq 71B)
4:00-5:40 Th, PeikH 225, Birkmaier (for majors only)

72 Student Teaching: Distributive Education (3-9 cr, †9 cr; prereq ¶80) Meyer

73 Student Teaching: Business Subjects (3-9 cr, †9 cr; prereq ¶90C) Price

75 Student Teaching: Language Arts (3 cr, UHS; 6 cr, off-campus, †9 cr; prereq sr, ¶75C)
4:00-5:40 M and ar (for off-campus) Kegler, Goralski, others

75C Teaching Language Arts in Secondary Schools (1 cr, †75A-75B-75C; prereq 75B, Lang Arts maj with Engl core, Engl maj)
4:00-5:40 T, PeikH G-55, Osborne

75D Teaching Language Arts in Secondary Schools (1 cr; prereq sr, Lang Arts maj with spec core, Spch maj)
4:00-5:40 W, FolH 306, Smith

75M Teaching Language Arts in Secondary Schools (3 cr; prereq Engl, Lang Arts min, maj other than Spch)
4:00-5:40 TTh, PeikH 275, Kegler

76M Teaching Language Arts in Secondary Schools (3 cr; prereq spch min, maj other than Engl)
4:00-6:30 T, PeikH G-55, Osborne

77 Student Teaching: Nursery School (4 cr; prereq cons maj adv)
IX M and ar, CW 12, Moore

78 Student Teaching: Kindergarten (6 cr; prereq cons maj adv)
IX M and ar, CW 218, Sorensen, others

79 Student Teaching: Primary Grades (6 cr; prereq cons maj adv)
IX M and ar, CW 218, Sorensen, others

80 Teaching Typewriting, Bookkeeping (2 cr; prereq Ed 55B or ¶)
IX-X M, Bu 103, Price

84A Practice, Field Work in Recreation Leadership (2 cr; prereq recr maj)
V T, CH 214, Giles

84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
V T, CH 214, Giles
84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
V T, CH 214, Giles
85A Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq sr, recr maj or min)
V W, CH 214, 6 hrs ar majors, 3 hrs ar minors, Giles
85B Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85A)
V W, CH 214, 6 hrs ar majors, 3 hrs ar minors, Giles
85C Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85B)
V W, CH 214, 6 hrs ar majors, 3 hrs ar minors, Giles
90C Teaching Distributive Education Subjects (2 cr, †90A-90B-90C; prereq 90B)
V TTh, Bu 103, Meyer
93A Methods of Teaching for Core Majors (3 cr; prereq sr)
IX-X M, Bu 125, Bossing

MUSIC EDUCATION (MuEd)

4 Applied Instrumental Technique (2 cr; prereq mus educ maj)
VI TWThF, MusEd 200, Fitzsimmons
5 Applied Instrumental Technique (2 cr; prereq 4)
V MTWTh, NMA 16, Prescott
6 Applied Instrumental Technique (2 cr; prereq 5)
VII MTWTh, NMA 4, Prescott
7 Applied Instrumental Technique (2 cr; prereq 6)
VII TWThF, MusEd 102, Fitzsimmons
50A Teaching in Primary Grades (2 cr; prereq ♯)
V WF, MusEd 200, 1 hr ar, Peck
51 Teaching Music (2 cr; prereq Mus 1)
—1, I MWF, ScH 4, Peck
—2, V MWF, ScH 104, Ellefson
—3, VIII MWF, ScH 104, Ellefson
52 Teaching Music (2 cr; prereq 51 or ♯)
—1, III MWF, ScH 104, Abelson
—2, VI MWF, ScH 104, Berryman
59 Choral Literature, Conducting (2 cr sr, 1 cr others)
V MTTh, NMA 4, Caswell
60 Supervision, Teaching (3 cr; prereq sr, 50B, 53, Ed 55B, ♯)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory
61 Supervision, Teaching (3 cr; prereq 60)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory
62 Supervision, Teaching (3 cr; prereq 61)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory
64 Band Organization (3 cr; prereq 6, ♯)
VI MWF, NMA 5, Prescott
67 Teaching Instrumental Music in Elem School (2 cr; prereq ♯)
III MWF, NMA 4, Ivory
68 Teaching Instrumental Music in Secondary Schools (2 cr; prereq sr, 65)
III TTh, NMA 4, Ivory
103 Psychological Foundations (3 cr; prereq sr, ♯)
IX-X M, ScH 4, Caswell
224 Research Probs (3-9 cr; prereq elem stat)
VIII W, ScH 214, Caswell, Ivory

PHYSICAL EDUCATION

Undergraduate Courses for Men (PE M)

4C Track Fundamentals (1 cr)
VI-VII TTh, FieldHse, Kelly
5C **Stunts, Contests, Softball, Baseball** (1 cr)
III-IV TTh, App Gym, Ostrander, Siebert, Sattervall
6C **Aquatics** (1 cr)
V MWF, CH Pool, Thorpe
7C Recreational Games (1 cr)
II-III TTh, CH Gym, Piper, Osell, Anderson, Novak
8 **Tennis, Golf** (1 cr)
IV-V TTh, StadS, Bolstad, Lewis
9B **Square, Ballroom Dancing** (1 cr)
V TTh, NGW, Piper
11C Survey of Recreation Activities (1 cr; prereq 11B)
V T, CH 214, Starr
23C Recreation Leadership (1 cr; prereq 23B)
VI T, CH 214, Starr
45 **Camp Craft** (2 cr)
V-VII Th, CH 215, Ostrander
46 Camp Leadership (2 cr)
VII MW, CH 206, Osell, Ostrander
58 Leadership in Community Recreation (3 cr; prereq 57)
IV MWF, CH 215, Giles
60A Prevention, Care of Injuries (3 cr; prereq 51)
IV MWF, CH 206, Stein
60B Athletic Training Lab (1 cr; prereq 60A)
Stein
61 History of Physical Education (3 cr)
I MWF, CH 206, Donnelly
63 Organization, Admin (3 cr; prereq 32 or 101, 55)
III MWF, CH 215, Piper
64B Leadership in Nature Recreation (2 cr; prereq 64A)
V-VII T, CH 206, Chapman
65 Adapted Physical Education (3 cr; prereq 51, Anat 57)
II MWF, CH 206, Osell
67 Football Coaching (2 cr; prereq 4A or 1 yr squad exper)
I MWF, CH 215, Nash

73 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T, CH 206, Ostrander
74 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T, CH 206, Ostrander
75 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T, CH 206, Ostrander
76 Directed Teaching-Block Plan (9 cr, not open to students who have taken 73, 74, 75; prereq 55, Ed 55B)
I T, CH 206, Ostrander
96 Admin of Intramural Sports (2 cr)
V MWF, CH 215, Mueller

Undergraduate Courses for Women (PE W)

C Nonprofessional Physical Education

Aquatics (activity rating 1)
Swimming, Bgn
—1, V TTh, Gy Pool (StP Campus) (1 cr)
—2, II MWF, NGW 3, 51 (1½ cr)
—3, VI MWF, NGW 3, 51 (1½ cr)
Swimming, Adv Bgn
—4, VIII MWF, NGW 4, 51 (1½ cr)
—5, III MWF, NGW 51 (1½ cr)
—6, VI TTh, NGW 51 (1 cr)
Swimming, Interm
—7, III TTh, NGW 4, 58 (1 cr)
—8, VII TTh, NGW 58 (1 cr)
Swimming, Adv and Diving
—9, IV MWF, NGW 3, 58 (1½ cr)
Swimming, Adv and Synchronized
—10, VII MWF, NGW 3, 58 (1½ cr)
ARC Sr Life Saving
—11, V MWF, NGW 3, 58 (1½ cr)
Water Safety Instructor's Course
—12, VIII MWF, NGW 58, 201 (1½ cr)

Body Building
Posture, Individual Exercise (activity rating 1, 2, 3)
—13, II MWF, NGW 153A, 201 (1½ cr)
—14, VI TTh, NGW 153A (1 cr)
—15, II TTh, NGW 153A (1 cr)
—16, V MWF, NGW 153A (1½ cr)
—17, IV MWF, NGW 153A (1½ cr)
Conditioning Exercises (activity rating 1, 2)
—18, VIII TTh, NGW 153 (1 cr)

Individual Sports
Archery, Elem, Interm (activity rating 1, 2, 3)
—19, VI TTh, NGW 60 (1 cr)
—20, VII TTh, NGW 4, 60 (1 cr)
Fencing (activity rating 1, 2)
—21, VI TTh, NGW 153, 201 (1 cr)
Golf, Elem (activity rating 1, 2, 3)
—22, II TTh, Gy 100 (StP Campus) (1 cr)
—23, III TTh, Gy 100 (StP Campus) (1 cr)
—24, III MWF, NGW 4, 60 (1 cr)
—25, IV MWF, NGW 4, 60 (1½ cr)
—26, V MWF, NGW 4, 60 (1½ cr)
—27, VI MWF, NGW 4, 60 (1½ cr)
—28, III TTh, NGW 60 (1 cr)
Golf, Interm
—29, IV TTh, NGW 3, 60 (1 cr)
—30, V TTh, NGW 3, 60 (1 cr)
Golf, Adv
—31, Ar
Riding, Elem (activity rating 1, 2)
—32, VI Th, NGW 3 (1 cr)
—33, VII Th, NGW 3 (1 cr)
Tennis, Elem (activity rating 1, 2)
—34, IV TTh, Gy 100 (StP Campus) (1 cr)
—35, I MWF, NGW 4, 151 (1½ cr)
—36, II MWF, NGW 4, 151 (1½ cr)
—37, III MWF, NGW 4, 151 (1½ cr)
—38, II TTh, NGW 4, 151 (1 cr)
—39, III TTh, NGW 151 (1 cr)
—40, VI TTh, NGW 4, 151 (1 cr)
Tennis, Interm Adv (activity rating 1, 2)
—41, IV TTh, NGW 4, 151 (1 cr)
—42, V TTh, NGW 151, 201 (1 cr)

Rhythms
Folk, Square Dance (activity rating 1, 2)
—43, VIII TTh, NGW 151, 201 (1 cr)
Modern Dance, Elem (activity rating 1, 2)
—44, IV MWF, NGW 153 (1½ cr)
Modern Dance, Interm (activity rating 1, 2)
—45, VII MWF, NGW 151 (1½ cr)
Ballroom Dance, Elem (activity rating 1, 2, 3)
—46, I TTh, NGW 4, 151 (1 cr)
—47, VII TTh, NGW 151, 201 (1 cr)

Team Sports (activity rating 1, 2)
Softball
—48, II TTh, NGW 60 (1½ cr)

Professional Courses

22A Folk, Ballroom Dance (1 cr)
V TTh, NGW 153, 153A, 1 hr ar
22B **Golf** (1 cr)
—1, VII MWF, NGW 60
—2, VIII MWF, NGW 60
22C **Tennis** (1 cr)
—1, IV MWF, NGW 151, Tenney
—2, V MWF, NGW 151, Tenney
25 **ARC First Aid: Standard, Adv** (2 cr)
—1, III MWF, NGW 153A, 201 (phys educ maj only)
—2, V MWF, NGW 153, 201
40C Stunts, Tumbling, Apparatus (1½ cr)
VII MTWThF, NGW 153, 153A
42A Senior Life Saving (1 cr; prereq 41A)
VI MWF, NGW 58
45 **Physical Education Activities for the Elem School** (2 cr; prereq elem educ maj only)
—1, III MWF, NGW 153, 153A
—2, VIII MWF, NGW 153, 153A
49 Teaching Team Sports (2 cr)
I MTWTh, NGW 60, 153, 153A, 201, Hauptfuehrer

54 Camp Leadership (3 cr)
IV MWF, NGW 201, Tinker

70 **Teaching Health, Physical Education in the Elem School** (3 cr; prereq 3rd qtr soph, elem educ maj)
—1, III TTh, IV T, NGW 153, 153A, 201, Bockstruck, Slocum
—2, VI MWF, NGW 153, 153A, 201, Bockstruck, Slocum

77 Teaching Aquatics (2 cr; prereq 42A)
II MTWThF, NGW 58

80 History, Trends in Dance (3 cr; prereq ‡)
I MWF, NGW 3, Michel

90A Student Teaching (3 cr; prereq sr, Ed 55B, phys educ maj)
III TTh and ar, NGW 3, Jaeger

90C Student Teaching (3 cr; prereq 90B)
III F and ar, NGW 3, Jaeger

90E Student Teaching (2-3 cr; prereq 4 qtr student teachers) Jaeger

93 Student Teaching for Minors (2 cr; prereq Ed 55B, phys educ min)
III TTh and ar, NGW 4, Hauptfuehrer

94 Student Teaching: School Health Education (2 cr; prereq sr, 83, ‡)
III Th and ar, NGW 202, Slocum

95 Administration (3 cr; prereq sr)
III MW, NGW 3, Baker

Advanced Courses for Men and Women (PE)

104 Teaching Physical Education for Handicapped Child (3 cr; prereq sr, ‡)
III-IV S, NGW 3, 1 hr ar, Wilson

112 Programming in Recreation (3 cr; prereq PE M 58)
VI MWF, CH 206, Chapman

114 Admin of School Health Education Program (3 cr; prereq sr, PE W 83, PubH 50 or ‡)
4:00-5:30 TTh, NGW 3, Slocum

118E Probs: Teacher Education in Health, Physical Education, Recreation (ar cr; prereq ‡) Baker, Jaeger, Slocum, Wilson

121 Recreation Methods (3 cr; prereq EdT 84C)
II T, II-III Th, CH 206, Chapman, Fitzgerald

124 Supervision (3 cr; prereq ‡)
4:00-5:30 MW, NGW 4, Jaeger

135 **Tests, Measurements** (3 cr; prereq sr, EPsy 60)
—1, 4:00-5:30 MW, NGW 3, Wilson
—2, III MWF, CH 214, Stish

142 Leadership in Hospital Recreation (3 cr; prereq 141)
III MWF, CH 206, Chapman

221 Seminar: Physical Education (no cr)
Baker, Jaeger, Slocum, Wilson

224 Research Probs: School Health Education, Physical Education, Recreation (ar cr; prereq 236, 135 or EPsy 116 or ‡) Baker, Chapman, Donnelly, Fitzgerald, Heusner, Jaeger, Slocum, Stish, Wilson

234 Curriculum in Physical Education (3 cr; prereq 63, 101)
I-II S, CH 214, Donnelly

242 Community Organization for Recreation (3 cr; prereq ‡)
II-III T, CH 214, 1 hr ar, Fitzgerald

261A Seminar: Contemporary Probs (3 cr; prereq 236, ‡)
4:00-5:30 MW, CH 214, Stish

GENERAL COLLEGE (GC)

1A **Individual Adjustment** (4 cr)
II-III TTh, FolH 6, King

1B **Vocational Planning** (5 cr; prereq ‡ or cons couns)
V-VI MWF, NH 120, Long

2A **Psychology in Modern Society** (5 cr)
—1, II MTWThF, FraH 102, Burris
—2, VII MTWThF, FraH 102, Horton

2B **Fields of Applied Psychology** (5 cr; prereq 2A)
IV MTWThF, NH 213, Burris

2C **Psychology of Human Development** (3 cr)
II MWF, Owre 12, Wahlstedt

3A **Home Life: Marriage, Family Living** (5 cr)
—1, II MTWThF, P 210, Anderson
—2, IV MTWThF, P 210, Anderson
—3, VII MTWThF, WeH 202, Sudia

3C **Clothing Selection, Purchase, Care** (3 cr)
VII MWF, JohH 205, Baumgartner

3E **Income Mgt: Individual, Household Buying** (2 cr)
II MW, FraH B1, Kafka

5A **Functions, Problems of Philosophy** (3 cr)
I MWF, ME 18, Capitan

5B **Functions, Problems of Logic** (3 cr)
—1, III MWF, Bu 211, Capitan
—2, VIII MWF, NH 209, Benson

5C **Probs of Ethics** (3 cr)
V MWF, FraH 20, Capitan

6C **Related Physical Sciences** (5 cr; prereq 6B Wtr Qtr '60 or 7D)
III MTWThF, P 2, M Harris

7A **Physical Science: Elements of Physics** (5 cr, §6A)
II MTWThF, Ph 150, Schwabacher

7B **Physical Science: Elements of Light, Astronomy** (5 cr, §6C)
III MTWThF, Ph 170, Policoff

7C Physical Science: Elements of Chemistry (5 cr, §6B prior to Wtr Qtr '60)
V MTWThF, Ph 170, Stoppel

7D Physical Science: Elements of Geology (5 cr, §6C)
I MWF, P 210, I TTh, P 110, M Harris

7E Physical Science: Modern (3 cr; prereq phys and chem, one in col)
IV MWF, Ph 133, Schwabacher

8A Applied Mathematics (5 cr)
—1, I MTWThF, NH 207, 1 hr ar, Policoff
—2, III MTWThF, NH 207, 1 hr ar, Stoppel
—3, V MTWThF, NH 207, 1 hr ar, Kehle
—4, VI MTWThF, NH 207, 1 hr ar, Baldwin
—5, VIII MTWThF, NH 207, 1 hr ar, Baldwin

8B Applied Mathematics (5 cr; prereq 8A)
—1, III MTWThF, NH 122, Rassweiler
—2, IV MTWThF, NH 122, McCutcheon
—3, VI MTWThF, NH 122, Mandeville

9A Statistics (5 cr)
—1, II MTWThF, NH 207, Giese
—2, VII MTWThF, NH 207, McCutcheon

10A Human Biology: Fundamental Similarities in Living World (3 cr)
I MWF, NH 211, lab ar, Jefferson

10B Human Biology: Living Machinery in Man (3 cr; prereq 10A)
—1, II MWF, NH 211, Dearden
—2, V MWF, NH 211, Dearden

10C Human Biology: Healthful Living (3 cr)
—1, III MWF, NH 211, Jefferson
—2, VII MWF, NH 211, Dearden

12 Nature Study (3 cr)
VII-VIII MW, NH 216, Jefferson

16A Bookkeeping, Accounting Lab (3 cr)
—1, II-III WF, FraH B25, Donnelly (for DA students only)
—2, II-III TTh, FraH B25, Donnelly

16B Bookkeeping, Accounting Laboratory (3 cr; prereq 16A or ‡)
IV-V TTh, FraH B25, Donnelly

17C Small Business Operation (3 cr)
VII MWF, P 2, Nilsen

18C Retailing, Selling (5 cr; prereq 18B or ‡)
—1, II M, II-III TTh, Bu 103, Crisp
—2, II M, II-III WF, Bu 103, Crisp

18D Salesmanship (3 cr)
I MWF, WeH 202, Crisp

19A Probs of Business Transactions (5 cr)
—1, I MTWThF, NH 122, Giese
—2, V MTWThF, NH 122, Wallace
—3, VII MTWThF, NH 122, Wallace

19B Probs of Investment Transactions (5 cr; prereq 19A or ‡)
IV MTWThF, NH 207, Larson

20A Practical Law (5 cr)
—1, II MTWThF, NH 122, Newcomb
—2, IV MTWThF, Psy 115, Newcomb

21 Gen Arts (3 cr)
—1, III MWF, NH 111, Caswell
—2, VI MWF, NH 111, Gates

22C Creative Personalities of Our Time (3 cr)
IV MWF, NH 111, Safer

23A Art Lab (3 cr)
—1; I-II MW, NH 102, 1 hr ar, MacInnes
—2, III-IV WF, NH 102, 1 hr ar, Gates
—3, VI-VII TTh, NH 102, 1 hr ar, MacInnes

23B Commercial Art (3 cr)
II-III TTh, NH 102, Safer

24C Music Today: Contemporary American Developments (3 cr)
—1, I-II TTh, NH 111, Caswell
—2, III-IV TTh, NH 111, Seecamp
—3, VI-VII TTh, NH 111, Caswell

25A Chorus: Techniques, Performance (2 cr)
II MWF, NH 111, Caswell

26A Photography (3 cr)
I-III T, I-II Th, J 2, Agar

26B Photography (3 cr; prereq 26A or exper, ‡)
IV-V TTh, J 2, Agar

28B French Language, Civilization (5 cr; prereq 28A or ‡)
II MTWThF, NH 213, Finnberg

29A World Literature I (5 cr)
I MTWThF, Bu 211, Sheldon

29B World Literature II (5 cr)
VI MTWThF, P 2, Rice

29D Contemporary Books, Periodicals (5 cr, §old 29D, old 29E)
IV MTWThF, FolH 301, Kurak

29F Reading Poetry (3 cr)
VIII MWF, NH 213, Kivits

30A Reading, Vocabulary Development (5 cr)
—1, I MTWThF, NH 216, Stockdale
—2, VI MTWThF, NH 216, Kurak

31A Writing Lab: Personal Writing (3 cr)
—1, I-II M, I WF, JohH 309, McBride
—2, I-II TTh, JohH 309, McBride
—3, II-III M, II WF, NH 216, Trachtenberg
—4, V-VI M, V WF, JohH 309, Stockdale
—5, VII-VIII TTh, NH 209, Kurak

31B Writing Lab: Organizing Ideas (3 cr; prereq 31A)
—1, I-II M, I WF, WeH 302, Gilbert
—2, I-II TTh, NH 309, Burrows
—3, III-IV M, IV WF, NH 209, Hansen
—4, III-IV M, IV WF, WeH 302, Rice
—5, V-VI M, V WF, WeH 302, Burrows
—6, V-VI TTh, WeH 302, Hansen
—7, VI-VII WF, WeH 302, Rathburn

31C Writing Lab: Communicating in Society (3 cr; prereq 31B)
—1, III-IV TTh, NH 209, Finnberg
—2, III-IV WF, NH 216, Kivits
—3, VI-VII WF, JohH 309, Sheldon

31D Writing Lab: Business Writing (3 cr; prereq 31A...31B rec)
—1, I-II M, I WF, NH 209, Keeler (for DA students only)
—2, I-II TTh, WeH 302, Bergstrom
—3, II-III TTh, NH 216, Reisman
—4, II-III WF, JohH 309, McBride
—5, III-IV M, IV WF, JohH 309, Rathburn
—6, IV-V TTh, NH 216, Burrows

—7, V-VI M, V WF, NH 209, Kivits
—8, V-VI TTh, NH 209, Rathburn

31E Writing Lab: Individual Writing (3 cr; prereq 31A, ♯)
III-IV TTh, WeH 302, Bergstrom

31F Writing Lab: Research Writing (3 cr; prereq 31B)
—1, II-III WF, NH 209, Sheldon
—2, VI-VII WF, NH 209, Reisman

32A Oral Communication: Basic Prin (3 cr)
—1, I MWF, JohH 105, Manfull
—2, II MWF, JohH 126, Hagen
—3, III MWF, JohH 105, Blue
—4, VII MWF, NH 107, Benson
—5, VII MWF, JohH 105, Hagen

32B Oral Communication: Applications of Speech (3 cr; prereq 32A)
—1, I MWF, NH 107, Hagen
—2, V MWF, NH 107, Benson

32C Oral Communication: Speech Organization (3 cr; prereq 32A)
—1, II MWF, JohH 105, Manfull
—2, III-IV TTh, NH 107, Blue

32D Oral Communication: Group Discussion (3 cr; prereq 32A)
V-VI TTh, NH 107, Amram

32E Oral Communication: Business Speech (3 cr; prereq 32A)
III MWF, NH 107, Hagen

33B Oral Communication: Creative Speech Activities (3 cr; prereq 32A, ♯)
I-II TTh, NH 107, Amram

37 Social Trends, Probs (5 cr)
III MTWThF, WuH 202, Stovall

38A Geography (5 cr)
VI MTWThF, NH 213, Steinhauser

38B Conservation, Utilization of Natural Resources (5 cr)
I MTWThF, NH 213, Steinhauser

39 Anthropology (3 cr)
—1, V MWF, P 2, Tefft
—2, VII MWF, Bu 120, Tefft

40 Problems of Contemporary Society (5 cr)
II MTWThF, MH 214, McCune

41A Man in Society (5 cr)
VI MTWThF, P 218, Stovall

43A Background of Modern World (5 cr)
VI MTWThF, NH 211, Jones

43B Historical Biography (3 cr)
I MWF, P 2, Moen

43C The Far East (5 cr)
III MTWThF, NH 213, Matsumoto

44B Current History (2 cr)
—1, V TTh, P 110, Matsumoto
—2, VII TTh, NH 213, Matsumoto

45A Growth of American Democracy (5 cr)
II MTWThF, C 225, F Harris

45B Impact of Science, Technology on American History (5 cr)
IV MTWThF, NH 211, McCune

46A Probs of Natl Govt (3 cr)
IV MWF, WuH 202, Menke

46B Probs of State Govt (3 cr)
VII MWF, NH 213, F Harris

46D Probs of Intl Relations (5 cr)
VIII MTWThF, NH 211, Jones

LAW SCHOOL (Law)

100 Agency, Partnerships (3½ cr)
I MT, II Th, FraH 101, Gradwohl

101 Contracts (2 cr)
—1, VII MT, FraH B1, Kinyon
—2, VII MT, FraH 20, Hogg
—3, III MT, FraH 101, Kinyon

105 Legal Accounting (2 cr)
Lect II MWF, FraH 101, Waterbury
Lab VIII T, FraH 101, Waterbury

107 Property I (3 cr)
III WThF, FraH 101, Cound

108 Torts (2 cr)
VI MTW, FraH 101, McCoid

110 Constitutional Law (2½ cr)
I ThF, FraH 101, Lockhart

COLLEGE OF MEDICAL SCIENCES

ANATOMY (Anat)

4 Elem Anatomy (5 cr; prereq MedT, 5 yr nurs, OT, pharm, PT students, Zool 3 or Biol 3A)
Lect I MTWF, MMA 125, Buckman
Lab VIII-IX TTh, JacH 301, 302, 303

57 Anatomy for Physical Education Students (4 cr)
Lect III MWF, JacH 304
Lab IV MWF, JacH 301, 302, 303

102 Head, Neck (6 cr; prereq 59)
Lect VI MWF, JacH 304, Felts
Lab VII-IX MWF, JacH 306, 307, 308

104 Human Histology (3 cr, †103-104; prereq 103)
Lect I TTh, IV Th, JacH 102, Carpenter, Heggestad
—1, Lab II-III TTh, JacH 212, 213, 214, 215
—2, Lab VII-VIII TTh, JacH 212, 213, 214, 215

111 Human Neurology (5 cr; prereq 104 or Zool 150)
Lect I MWF, JacH 102, Hartmann, Davidson
—1, Lab II-IV MF, JacH 212, 213, 214, 215
—2, Lab II-IV WS, JacH 212, 213, 214, 215

155 Adv Anatomy (ar cr; prereq ‡) Hartmann, Lazarow, Morgan, Sundberg, Wells

167 Seminar: Hematology (1 cr; prereq 166) Sundberg

203 Research (ar cr; prereq ‡) Hartmann, Lazarow, Morgan, Sundberg, Wells

207 Seminar: Anatomy (1 cr; prereq ‡) Lazarow, others

ANESTHESIOLOGY (Anes)

165 Clinical Anesthesia (2 cr; prereq regis Med) Van Bergen, others

265 Gen Anesthesia (12 cr)
IX M, MMA 100, Van Bergen, others

266 Regional Anesthesia (4 cr)
X M, MMA 100, Van Bergen, others

267 Preoperative, Postoperative Evaluation (2 cr)
X W, MMA 100, Van Bergen, others

268 Seminar (2 cr)
IX W, MMA 100, Van Bergen, others

269 Research (ar cr) Van Bergen, others

BACTERIOLOGY AND IMMUNOLOGY (Bact)

53 Gen Bacteriology (5 cr; prereq soph with C aver in prereq courses, 10 cr chem, 4 cr biol sci or ‡)
Lect VII MWF, MMA 100, Tankersley, Deal
Lab VIII-IX MWF, Mayo A205

100 Bacteriology for Dental Students (6 cr; prereq regis Dent or Grad)
Lect I TThS, Owre 12, Crowell
Lab II-IV TThS, Mayo A205

102 Medical Bacteriology (4 cr; prereq 116, not open to med students)
Lect VI TTh, MMA 125, Watson
Lab VII-IX TTh, Mayo A205

103 Soil Microbiology (4 cr, §Soil 127; prereq 53, 8 cr org chem, ‡)
Lect I MWF, So 115, Schmidt
Lab II-III MF, So 150

123 Bacterial Metabolism (3 cr; prereq 122, biochem or ‡)
III TThS, MMA 100, Lichstein

152 Problems (ar cr; prereq grad, ‡)

153 Gen Bacteriology (3 cr, §53; prereq grad, 10 cr chem, 4 cr biol sci or ‡) Tankersley, Deal

201 Research (ar cr) Watson

202 Diagnostic Microbiology (ar cr; prereq bact maj, ‡) Syverton, Bridges

203 Seminar (1 cr)
V W, Mayo 1050, Bradley

204 Adv Bacteriology (ar cr; prereq 122 or ¶, ‡) Lichstein

205 Adv Bacteriology (ar cr; prereq 204) Lichstein

LABORATORY MEDICINE (LMed)

102 Clinical Lab Medicine (3 cr; prereq regis Med, PhCh 100, Path 101 or ¶)
Lect VI M, VIII Th, Hosp EustisAmph, Evans, others
—1, III-IV F
—2, I-II F

235 Adv Clinical Lab Medicine (ar cr; prereq Anat 166) Evans

236 Research: Clinical Lab Probs (ar cr) Evans

Medical Technology (MedT)

12 Orientation (1 cr; prereq 11)
VIII W, MMA 100, Hovde

32 Case Presentations (1 cr; prereq 31)
V Th, Hosp EustisAmph, Hovde

52 Clinical Diagnosis by Lab Methods (3 cr; prereq 51)
II MTW, Hosp EustisAmph, Rausch

60 Blood Grouping, Cross Matching (2 cr)
Lect VI F, MH 214, Otten
Lab VII-IX F, Mayo B209, Ruspino

61 Clinical Microscopy (2 cr)
Lect VI M, Owre 111, Hanauer
—1, Lab VII-VIII M, Mayo B209, Hanauer
—2, Lab I-II F, Mayo B209, Hanauer

62 Clinical Chemistry (3 cr)
Lect VI W, MMA 100, Freier
—1, Lab VII-IX W, Mayo B209, Freier
—2, Lab II-III Th, Mayo B209, Freier
70A Lab Methods in Clinical Chemistry A (10 cr) Peterson
70B Lab Methods in Clinical Chemistry B (5 cr) Freier
73 Electrocardiography, Basal Metabolism Testing (2 cr) Halsted
75 Clinical Hematology (5 cr) Gonyea
80 Clinical Microbiology (9 cr) Blanz
82 Blood Bank Techniques (4 cr) Otten
85 Histologic Techniques (4 cr) McMasters
90 Applied Lab Methods (2 cr)
I W, Mayo C295, Rausch
98 Adv Lab Techniques (4 cr) Gonyea
111 Adv Clinical Lab Techniques (5 cr) Hovde
131 Elements of Admin (3 cr) Hovde
145 Development (1 cr) Rausch
150 Topics: Bacteriology (ar cr) Bridges
152 Topics: Hematology (ar cr) Gonyea

MEDICINE (Med)

101 Physical Diagnosis (2 cr; prereq Med, Anat 100, Phsl 106-107)
1:30-2:30 Th, Hosp ToddAmph, Watson, others
104 Internal Medicine (1 cr per qtr, †3 qtrs; prereq 101, 102)
8:00-8:50 T, Hosp ToddAmph, Watson, others
110 Medicine Clinic (no cr; prereq regis Med)
4:30-5:30 W, MMA 125, Watson, others
111 Junior Clinical Clerkship (8 cr; prereq regis Med)
9:00-12:00, 1:00-3:00 MTWThF
112 Senior Clerkship: Internal Medicine (6 cr; prereq regis Med)
9:00-12:00, 1:00-3:00 MTWThF
124 Senior Clerkship: Dermatology (2 cr; prereq regis Med)
2:30-3:30 MW, 1:30-3:30 F, Hosp Eustis-Amph, Lynch, others
201 Clinical Medicine (ar cr) Watson, others
202 Diseases of Cardiovascular Apparatus (ar cr) Watson, others
203 Research: Medicine (ar cr) Watson, others
205 Diseases of Chest (ar cr) MacDonald
206 Clinical Conference (1 cr)
9:00-9:50 F, Hosp ToddAmph, Watson, others
207 Clinical Pathological Conference (1 cr)
11:00-11:50 W, Hosp ToddAmph, Dawson, Watson, others
208 Clinical Radiological Conference (1 cr)
9:00-9:50 M, Hosp ToddAmph, Peterson, Watson
210 Seminar: Infectious Disease (1 cr) Spink
212 Pigment Metabolism (1 cr)
4:30-5:30 Th, Hosp ToddAmph, Schwartz
225 Clinical Dermatology (ar cr) Lynch, others
226 Dermatology (ar cr) Lynch, others
227 Histopathology of Skin (ar cr) Lynch, others
228 Research: Dermatology, Syphilology (ar cr) Lynch, others

NURSING

Nursing (Nurs)

50 Medical, Surgical Nursing (12 cr)
I-III, VI-VIII T, III, VI-VIII Th, PoH Amph, Peterson, Brennan
52 Nurse-Patient Relationships (1½ cr; prereq regis Nurs)
I-II Th, PoH 2309, Peterson, Brennan, others
54 Pathology (2 cr)
I-III, VI-VIII T, III, VI-VIII Th, PoH Amph, Coe
56 Operating Room Nursing (6 cr) Ellison
58 Orthopedic Nursing (2 cr)
1:30-3:30 MTWTh, PoH 1326, Kume
59 Gynecologic Nursing (4 cr)
1:30-3:30 MTWTh, PoH 1326, Shrimpton
60 Maternal, Child Nursing (12 cr)
III TTh, PoH 1326, VI-VII T, MH 116, Whitney
61 Maternal, Child Nursing (12 cr; prereq 60)
VI-VIII MTWTh, PoH 2309, Cook, Geis
66 Neuropsychiatric Nursing (4 cr)
VI-VII TTh, IV MTWTh, PoH 2317, Lediger
67 Care of Neuropsychiatric Patients (8 cr)
VI-VII W, VI-VIII M, PoH 2317, Lediger
98 The Nursing Profession (3 cr)
—1, IV MWF, Owre 113, Fritz
—2, VI MWF, MMA 125, Fritz
151C Medical Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, MH 116, Coe
Lab I-III TTh, MH 116, Coe
152C Obstetric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, PoH 1326, Whitney
Lab I-II TTh, PoH 1326
153C Operating Room Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, Owre 111, Ellison
Lab I-III TTh, Owre 112, Ellison
154C Pediatric Nursing (6 cr; prereq CD 40 or 80 or 132 or 140 or ¶ or ‡)
Lect 10:30-11:30 MWF, PoH 2317, Cook, Geis
Lab 8:30-11:30 TTh, MH 108
155C Psychiatric Nursing (6 cr; prereq Psy 144 or NPsy 171A or ¶ or ‡)
Lect III MW, MH 128, III F, ForH 467, Lediger
Lab I-III TTh, MH 128, Lediger
157C Surgical Nursing (6 cr)
Lect III MWF, Owre 111, Peterson
Lab I-III TTh, PoH 1404, Peterson
165 Work Simplification in Nursing (4 cr)
VI-VIII TTh, MH 128, Grainger

Nursing Administration (NuAd)

110 Field Practice (10-15 cr)
I-IV M, Owre 116, Grainger
160 Ward Admin (3 cr; prereq 170)
VI MWF, MH 113, Grainger
167B Studies, Experience in Ward Admin (3 cr; prereq 167A)
II TTh, Owre 116, Grainger
170 Nursing Service Admin (3 cr, not open to students in MMA prog)
V MWF, MH 128, Walseth
177 Practicum (15 cr; prereq 175, ‡)
VI-VIII F, MH 116, II-III F, PoH 2309, Walseth
199D Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡)
I-IV F, MH 128, Harris
199S Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡)
VI-IX F, MH 128, Harris

Nursing Education (NuEd)

69 Conditions, Trends in Nursing (3 cr)
—1, IV MWF, Owre 113, Fritz
—2, VI MWF, MMA 125, Fritz
168 Evaluation of Achievement (3 cr; prereq sr, Ed 55N or NuAd 173 or ‡)
II MWF, MH 116, Holm
171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51B or ‡)
VII MWF, MH 116, Harrington
198E Adv Teaching (6 cr; prereq 197E)
II-IV, VI-VIII F, ForH 244, Harrington

Practical Nursing (PNurs)

3 Elements of Nursing Care (8 cr)
III-IV M, 1:00-2:30 MW, PoH Amph, 11:00-12:00 TWTh, PoH 2309, Hansen, Taylor
11 Child Care (3 cr)
1:00-2:20 F, 8:30-10:00 M, PoH Amph, Moncure

OBSTETRICS AND GYNECOLOGY (Obst)

123 Gynecology (1 cr; prereq regis Med)
8:00-8:50 T, Hosp EustisAmph, McKelvey, others
124 Introduction (1 cr; prereq regis Med)
4:30-5:30 Th, Bo B6, McKelvey, others
135 Clinical Clerkship (6 cr; prereq regis Med)
McKelvey, others
201 Adv Obstetrics, Gynecology I (ar cr) McKelvey, others
202 Adv Obstetrics, Gynecology I (ar cr; prereq 201) McKelvey, others
203 Adv Obstetrics, Gynecology I (ar cr; prereq 202) McKelvey, others
204 Adv Obstetrics, Gynecology I (ar cr; prereq 203) McKelvey, others
205 Adv Obstetrics, Gynecology II (ar cr; prereq 204) McKelvey, others
206 Adv Obstetrics, Gynecology II (ar cr; prereq 205) McKelvey, others
207 Adv Obstetrics, Gynecology II (ar cr; prereq 206) McKelvey, others
208 Adv Obstetrics, Gynecology II (ar cr; prereq 207) McKelvey, others
209 Adv Obstetrics, Gynecology III (ar cr; prereq 208) McKelvey, others
210 Adv Obstetrics, Gynecology III (ar cr; prereq 209) McKelvey, others
211 Adv Obstetrics, Gynecology III (ar cr; prereq 210) McKelvey, others

OPHTHALMOLOGY (Opth)

100 Ophthalmology (½ cr, †3 qtrs; continuation of 100w)
8:00-8:50 alt M, Hosp EustisAmph, Harris, others
106 Clerkship: Diseases of Eye (2 cr; prereq regis Med)
9:00-12:00 MTWThF, Hosp OPD, Harris, others
122 Medical, Neurological Ophthalmology (2 cr; prereq ‡) Schwartz, Lindberg
201 Clinical Ophthalmology (6 cr)
9:00-12:00 MTWThF, Hosp OPD, Harris, others
202 Ocular Muscles (1 cr)
4:00-5:00 Th, Todd Room, Fink, others
204 Surgery of Eye (3 cr)
7:30-10:00 MTTh, Hosp OR, Harris, others
205 Pathology of Eye (2 cr)
1:30-4:00 Th, Todd Room, Monahan
207 Neuro-ophthalmology, Disease of the Fundus (1 cr)
4:45-6:00 F, ToddAmph, Wendland, Baker
220 Basic, Applied Ophthalmology (2 cr)
8:30-12:00 S, Hosp OPD, Harris, others

OTOLARYNGOLOGY (Otol)

103 Laryngology (1 cr; prereq 102)
104 Clinic, Conferences in Diseases of Ear, Nose, Throat (2 cr)
230 Clinical Otology (3 cr)
231 Clinical Rhinology, Laryngology (3 cr)
232 Surgery of Ear, Nose, Throat (3 cr)
238 Pathology of Ear, Nose, Throat (1 cr)
241 Seminar (1 cr)

PATHOLOGY (Path)

60 Pathology for Physical Therapists (3 cr; prereq regis PT)
VII TWTh, Mayo 815

100 Pathology for Dental Students (8 cr; prereq regis Dent)
Lect I MTWThF, JacH 104, Dawson
Lab II-III MF, VII-VIII TTh, JacH 106, 107, 108
104 Autopsies (ar cr; prereq 102) Dawson
105 Diseases of Kidney (3 cr; prereq 102)
VII-VIII MW, JacH 104, Hebbel
110 Seminar (1 cr; prereq 102)
V-VI M, JacH 104, Dawson
111 Conference on Autopsies (1 cr; prereq 102)
V-VI T, JacH 104, Dawson
113 Surgical Pathology (ar cr; prereq 102) Hebbel
201 Research (ar cr) Dawson

PEDIATRICS (Ped)

122 Diseases of Infancy, Childhood, Their Treatment (1 cr; prereq 121)
8:00-8:50 W, Hosp EustisAmph, Anderson, others
124 Junior Clinical Clerkship (8 cr; prereq regis Med) Anderson, others
135 Senior Clinical Clerkship (3 cr; prereq regis Med) Anderson, others
200 Seminar (1½ cr) Anderson, others
202 Clinic (ar cr; prereq ‡) Anderson, others
204 Residency (ar cr; prereq ‡) Anderson, others
206 Pediatric Special Interest (ar cr) Anderson, others
208 Research (ar cr; prereq ‡) Anderson, others

PHARMACOLOGY (Phcl)

10 Pharmacology for Nursing Students (2 cr, †9-10; prereq 9)
Lect IV T, Owre 113, Cranston
Lab VII-VIII Th
57 Pharmacology of Official Medicinal Agents (3 cr; prereq 56)
IV MWF, WuH 201, White
102 Gen, Experimental Pharmacology (10 cr; prereq regis Med, 101)
Lect II MTWThF, MMA 125, Bieter, Wright, Cranston, others
—1, Lab VII-IX MW, MH 101, 129, 136
—2, Lab VII-IX TF, MH 101, 129, 136
106 Gen Pharmacology (2 cr; prereq 105)
1:00-2:00 TTh, MMA 100, Wright
108 Prescription Writing for Dental Students (1 cr; prereq 101, 106)
1:00-2:00 F, Owre 111, Wright
109 Problems (ar cr; prereq ‡)
162 Biological Assay of Drugs (3 cr; prereq 101 or ‡)
Lect I F, White
Lab I-III TTh, WuH 8, White
203 Research (ar cr; prereq 101, 102 or ‡)
204 Adv Pharmacology (1 cr; prereq 101 or ‡)
205 Gen Discussions (1 cr; prereq 101 or 102, ‡)

PHYSICAL MEDICINE AND REHABILITATION (PMed)

1 Introd to Occupational Therapy (1 cr)
VII T, Hosp D138, Hansen
2A Orientation to Physical Therapy, Rehabilitation (1 cr; prereq soph)
I Th, Mayo 810, Moen
5 Therapeutic Recreation (2 cr; prereq prereq regis OT)
VI TTh, Hosp D138, Hansen
55 Process of Rehabilitation (2 cr; prereq regis OT)
VI MW, Hosp D138, Hansen
61 Physical Medicine, Rehabilitation Applied to Medical Sciences (5 cr; prereq regis OT or PT)
I MTWThF, Mayo 825, Kottke, others
63 Junior Clinic (1 cr; prereq regis OT or PT)
II W, Hosp EustisAmph, Gullickson
73 Theory of Occupational Therapy (3 cr; prereq 72)
Lect VII TTh, Mayo 825, Eliason
Lab VI-VII F, Hosp D138, Eliason
76 Techniques of Occupational Therapy (3 cr; prereq 75)
I-III TTh, Hosp D138, Lepley, Esch
77 Study of Physical Disabilities (5 cr)
Lect V MWF, Hosp D138, Lepley, Esch
Lab II-III MF, Hosp D138, Lepley, Esch
78 Prin, Practice of Occupational Therapy (3 cr; prereq regis OT) Eliason
80A Therapeutic Exercises (4 cr; prereq regis PT)
Lect II-III M, Mayo 825, Mundale, Knapp
Lab II-III TTh, Mayo 825, Mundale
84 Rehabilitation Procedures (3 cr; prereq regis OT or PT)
—1, Lect II F, Mayo 825, Pohtilla (for PT students)
Lab V-VI TTh, Mayo 825, Pohtilla
—2, Lect III W, Hosp D138, Allison (for OT students)
Lab VI-VII MW, Mayo 825, Allison, Lepley
87 Clinical Practice (3 cr; prereq regis PT) Moen
89 Clinical Practice (18 cr, §old 91) Moen
90 Conference (1 cr; prereq regis PT)
IX F, Mayo 810, Kottke
93 Orientation to Pre-Vocational Therapy (2 cr; prereq sr OT)
VII MW, Hosp D138, Hansen
96 Clinical Affiliation (18 cr; prereq 95) Eliason
97 Introd Scientific Research (2 cr; prereq sr, regis OT or PT)
III WF, Mayo 825, Skowlund
103 Clinic: Physical Therapy (ar cr; prereq grad) Kottke
123 Senior Clerkship (1 cr; prereq regis Med) Kottke
125 Clinic: Physical Medicine, Rehabilitation (1 cr; prereq regis Med, ‡) Kottke

161 Clinical Medicine in Rehabilitation (5 cr)
I MTWThF, ForH 120, Kottke, others
200 Service (ar cr) Kottke
203 Clinic: Poliomyelitis (ar cr) Kottke
205 Readings (1 cr) Kottke
206 Conference (1 cr) Kottke
210 Research (ar cr) Kottke
220 Seminar (ar cr)
IV M, Hosp EustisAmph, Kubicek

PHYSIOLOGICAL CHEMISTRY (PhCh)

50 Physiological Chemistry for Dental Hygiene, Nursing Students (4 cr, §30)
VI MTWTh, MH 214, Carlson
103 Physiological Chemistry for Veterinary Medicine (6 cr; prereq 102)
Lect IV TTh, MH 214, VI-VII F, VetS 257 (**StP Campus**), Caster
Lab I-III TTh, MH 201
153 Problems (ar cr; prereq 101, ‡)
200 Seminar: Physiological Chemistry (1 cr)
V T, MH 214
205 Research (ar cr)
208 Adv Lab Technique (3 cr; prereq 101, ‡)
IX MWF, MH 214
212 Quantitative Histochemistry Lab (ar cr; prereq 101, ‡) Glick
236 Seminar: Radio-Isotope (1 cr, §Rad 236)
V W

PHYSIOLOGY (Phsl)

4 Human Physiology (4 cr; prereq 1 qtr chem, 1 qtr zool)
VII-VIII TTh, Owre 12, King
106 Human Physiology for Medical Students (7½ cr, †106-107; prereq regis Med or Grad, neuroanat, org chem, zool)
Lect VI MTTh, IX WF, Owre 15
Conf VI T, ChE 40
—1, Lab II-IV, VI-VIII W
—2, Lab II-IV, VI-VIII F
112 Hemodynamic Measurements (3 cr; prereq ‡) Swanson, Evans
113 Probs: Physiology (ar cr; prereq 106-107)
202 Readings (ar cr)
203 Research (ar cr)
210 Topics: Permeability (ar cr; prereq 106-107, ‡) Lifson, Johnson, Grim
211 Topics: Heart, Circulation (ar cr; prereq 106-107, ‡) Visscher, Cavert
214 Topics: Clinical Physiology (ar cr; prereq 106-107, ‡)
215 Topics: Intermediary Metabolism (ar cr; prereq 106-107, ‡) Pilgeram

PSYCHIATRY AND NEUROLOGY (NPsy)

101 Neurology (1 cr, †3 qtrs; prereq regis Med or grad clin psy)
8:00-8:50 S, Hosp ToddAmph, Baker
103 Junior Clinical Clerkship (8 cr; prereq regis Med)
120 Basic Behavioral Science (1 cr, †3 qtrs; prereq regis Med)
121 Behavior Pathology, Psychiatric Methods (1 cr, †2 qtrs for Med; prereq regis Med or grad clin psy)
145 Readings: Psychiatry (ar cr; prereq regis Med)
145X Readings: Neurology (ar cr; prereq regis Med)
146 Psychiatric Probs: Gen Medical Practice (ar cr; prereq regis Med) Kiesler
155 Therapeutics in Neurology (2 cr; prereq regis Med)
201 Clinical Seminar for Psychologists (1 cr; prereq ‡) Schofield
202 Case Conference (1 cr; prereq ‡)
203 Psychometric Clerkship (ar cr; prereq ‡)
204 Seminar: Interm (1 cr; prereq ‡)
205 Seminar: Adv (1 cr; prereq ‡) Hathaway
208 Clinical Neurology (ar cr)
209 Research (ar cr)
212 Survey of Neuropathology (1 cr, §151 or Path 119)
219 Electronics of Neurological Instrumentation (1 cr)
220 Adv Clinical Neurology (1 cr)
226 Neurological-Neurosurgical Conference (1 cr, §Rad 163 or Surg 318)
228 Research: Neuropathology (ar cr)
230 Electroencephalography (1 cr)
231 Applied Electroencephalography, Myography (1 cr)
232 Applied Neuroroentgenology (1 cr)
233 Applied Neuropathology (1 cr)
238 Neurological Clinical Pathological Conference (1 cr)
251 Clinical In-Patient Psychiatry (ar cr; prereq MD degree)
252 Clinical Out-Patient Psychiatry (ar cr; prereq MD degree)
253 Clinical Child Psychiatry (ar cr; prereq MD degree)
254 Adv Clinical In-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
255 Adv Clinical Out-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
256 Adv Clinical Child Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
257 Special Assignments (1 cr; prereq 251, 252, 253, MD degree)
258 Research (ar cr; prereq MD degree or ‡)
262 Clinical Observation, Evaluation (1 cr; prereq MD degree or ‡)
266 Therapeutic Dynamics in Hospital Psychiatry (1 cr; prereq MD degree or ‡)

268 Behavior Theory (1 cr; prereq MD degree or ‡)
271 Readings: Psychoanalysis I (1 cr; prereq MD degree or ‡) Hambidge
272 Sector Psychotherapy (1 cr; prereq MD degree or ‡) Glueck
273 Survey of Psychosomatic Medicine (1 cr; prereq MD degree or ‡) Magraw
274 Group Therapy (1 cr; prereq MD degree or ‡) Guzie
275 Collaborative Theory (1 cr; prereq MD degree or ‡)
281 Readings: Psychoanalysis II (1 cr; prereq MD degree or ‡) Hambidge
283 Seminar: Special Topics (1 cr; prereq MD degree or ‡)
291 Seminar: Current Literature (1 cr; prereq MD degree or ‡) Simon
292 Special Supervision in Psychotherapy (1 cr; prereq MD degree or ‡)
293 Probs in Teaching Psychiatry (ar cr; prereq MD degree or ‡) Kiesler
294 Seminar: Adv Critical Examination of Systems, Theories (1 cr; prereq MD degree or ‡) Hathaway

PUBLIC HEALTH (PubH)

2 Personal, Public Health (2 cr, §3 or 3A or 3B or 50 or GC 10C)
VI TTh, Bo B6, Reiter
3 Personal Health (2 cr, §2 or 3A or 3B or 50 or GC 10C)
VI MW, NH 45, Thomson
4 Health Probs of Community (2 cr; prereq 3 or 3A or GC 10C)
I TTh, NH 45, Thomson
5 Individual, Public Health (3 cr, §2 or 3 or 3A or 3B or 4 or 50 or 51; prereq ¶59)
I MWF, Owre 15, Thomson
52 **Home Nursing, Family Care** (1 cr; prereq HE students, 3B or 50 or ‡)
—1, VIII-IX T, MeH 01, Simons
—2, VIII-IX Th, MeH 01, Simons
53 Introduction (5 cr; prereq regis nurs or nurses, 3A or 50, bact)
VI MTWThF, ChE 162, Anderson, Thomson
57 Health of Infant, Child (2 cr; prereq 4 or 50 or 51 or 52 or 100A)
VII TTh, JacH 304, Stocking
58 Maternal, Child Health (3 cr; prereq nurses, 53, 62, 62A or 100, 100A or ¶53)
VII-VIII M, VII F, Owre 113, Stocking
62A Public Health Nursing I (3 cr; prereq PubH nurs, ¶53, 65, 133, Soc 50)
—1, II-III, VI-VII F, Mayo 1203, Fredlund
—2, II-III, VI-VII F, Mayo 1238, Pennebaker
—3, II-III, VI-VII F, Mayo 1205, Anderson
62N Public Health Nursing (3 cr; prereq 100, regis Nurs)
—1, II-III, VI-VII Th, Mayo 1203, Cline
—2, II-III, VI-VII Th, Mayo 1205, Pennebaker
—3, II-III, VI-VII Th, St Cloud, Blanchard
63A Public Health Nursing II (3 cr; prereq regis PubH nurs, 62A, 65)
I TWF, Mayo 1205, Murphy
65 Field Practice in Public Health Nursing (12-15 cr; prereq 53 or 100A, 62 or 62A or 63, 133, Soc 50, C aver) Murphy
69 The Nurse in the School (3 cr; prereq 63, 63A, 53 or 100A or ‡)
VII-VIII T, VII Th, Owre 113, Stocking
75 Environmental Sanitation (3 cr; prereq 3 cr)
IV MWF, Owre 111, Bond
76 Public Health for Dental Students (1 cr; prereq regis Dent)
I W, Owre 12, Jordan
90 Medical Statistics I (2 cr; prereq regis Med or ‡)
Lect III M, IV F, MMA 100, Bearman, Wrighton
—1, VII-VIII F, Mayo 1220
—2, VII-VIII M, Mayo 1220
100 Preventive Medicine, Public Health (6 cr; prereq Med students)
I MTWThFS, MMA 100, Anderson, Thomson, Schuman
100C Elements of Public Health III (1 cr; prereq 100B or ‡)
IV-V M, MMA 100, Anderson
101 Admin, Field Work (2 cr; prereq sr Med) Thomson
103 Bacteriology (ar cr; prereq grad; Bact 102, 116, ‡)
I-II MWF, SBH Lab, Bauer
105 Epidemiology (3 cr; prereq 104)
II TThS, Mayo 1220, Schuman
107A Maternal, Child Health Program (1 cr, §107; prereq 106 or ‡)
I F, MH 214
109 Institutional Sanitation (3 cr; prereq hosp admin maj or ‡, 100A)
I-II T, II Th, Mayo 1250, Bosch
112C Public Health Engineering—Plan Examinations: Swimming Pools, Plumbing (1 cr, §114; prereq engr degree, 102, ‡) Bosch
113C Public Health Engineering—Field Investigations: Swimming Pools, Plumbing (2 cr, §114; prereq engr degree, 102, ‡) Bosch
116 Public Health Engineering Admin (2 cr, §114; prereq ‡)
III TTh, Mayo 1108, Bosch
119 Sanitary Biology (3 cr; prereq 118)
VI-IX TF, Mayo 1138, Olson
122 Admin Probs (3 cr; prereq 106)
II MWF, Owre 113, Anderson
123 Topics (ar cr; prereq ‡)
125 Education (2 cr; prereq ‡)
VI-VII F, MinMet 124, Grout
125A Public Health Education (1 cr; prereq hosp admin maj) Grout

126 Occupational Health Program (3 cr; prereq 100A, InCh 5 or ‡)
VI-MWF, VH 210, Foker

130 Biostatistics III (3 cr; prereq 120 with grade C, ¶131)
III MWF, Owre 12, Brown

131 **Biostatistics Lab III** (2 cr; prereq ¶130)
Lect III TTh, Owre 12, Iversen
—1, Rec II MWF, AE 305, Iversen
—2, Rec IV MWF, AE 305, Iversen
—3, Rec VI MWF, AE 305, Iversen
—4, Rec VI-VIII T, AE 305, Iversen

132 Mental Health Program (1 cr; prereq 106 or ‡)
I W, Z 313, Williams

139 Adv Field Practice: Block Placement (ar cr; prereq mental health trainees only, ‡) von Bergen

141 Social, Economic Aspects of Medical Care (3 cr; prereq ‡)

142 Medical Economics (2 cr; prereq regis Med)

150 Life Table Techniques, Follow-up Studies (3 cr; prereq ‡)
I MWF, Mayo 1220, Johnson

154 Control of Radiation Hazards (ar cr; prereq ‡)
Lect IV TTh, Mayo 1220, Michaelsen
Lab VI-VII W, Mayo 1120

156 Air Pollution Surveys (2 cr; prereq 155, ‡)
VI-IX M, Mayo 1205, Paulus

164 Organization, Mgt of Hospitals (6 cr; prereq 163)
VI-VII MTWThF, Mayo 1250, Stephan, Hamilton

167 Mgt Probs in Hospital Admin (6 cr; prereq ¶164)
II-III MWFS, III-IV TTh, Mayo 1250, Hamilton

169 Administrative Residency (ar cr) Stephan

170A Public Health Nursing (1 cr, §170 or 171; prereq 108 or ¶106 or ‡)
I M, Mayo 1250, Murphy

172 Studies: Public Health Nursing (3 cr; prereq 171) Murphy

174B Seminar: Consultation, Trends in Public Health Nursing Education (2 cr; prereq PubH nurs, 174A)
VI-VII T, Mayo 1220, Murphy, Blanchard

177 Adv Practice in Public Health Nursing (3 cr; prereq 176)
Lect VI-VII Th, Mayo 1220, Williams
—1, VI-VII M, Mayo 1238, von Bergen
—2, VI-VII M, Mayo 1203, Cline
—3, VI-VII W, Mayo 1238, von Bergen
—4, VI-VII W, Mayo 1203, Cline

178 Seminar: Mental Health (ar cr; prereq ‡) Williams

183 Principles, Methods in Community Health Education (3 cr; prereq 182)
VI-VII MW, Mayo 1210, Grout

200 Research (ar cr)

201 Topics: Biometry (ar cr) Bearman

202 Seminar: Physiological Hygiene (1 cr)

207 Research Design in Biometry (3 cr; prereq 130)
II MWF, Mayo 1220, McHugh

208 Theory of Research Design in Biometry (2 cr; prereq calc, ¶207)
II TTh, Mayo 1210, McHugh

210 Seminar: Public Health (ar cr)
VIII-IX Th, MMA 100

211 Seminar: Biometry (ar cr) Bearman, others

212 Seminar: Public Health Engineering, Sanitation (ar cr; prereq ‡)
VI-VII Th, Mayo 1108, Bosch

213 Seminar: Epidemiology (ar cr; prereq ‡)
VI-VIII F, Mayo 1158, Schuman

215 Maternal, Child Health (ar cr; prereq MD degree, ‡)

220 Readings: Probs of Physiological Hygiene (ar cr; prereq ‡) Keys, others

227 Probs: Community Health Education Program (ar cr; prereq ‡) Grout

241 Epidemiology of Noncommunicable Diseases (3 cr; prereq 104)
III TThS, Mayo 1220, Schuman

252 Foundations of Biometry (2 cr; prereq 208, 219 or ‡) Bearman, others

290 Research: Physiological Hygiene, Related Areas (ar cr) Keys, others

RADIOLOGY (Rad)

102 X-Ray Conference (1 cr; prereq ‡)
5:00-6:00 T, Hosp EustisAmph, Peterson

104 Radiological Physics I (2 cr; prereq 1st yr res)
4:00-5:00 T, Mayo C-239, Marvin, Loken

107 Biophysics (1 cr; prereq regis Med)
VI F, MMA 100, Marvin, Loken

111 Medical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 M, Hosp ToddAmph, Peterson, Berger

121 Roentgen Diagnosis, Radiation Therapy (1 cr, †2 qtrs; prereq regis Med)
8:00-8:50 F, Hosp ToddAmph, Peterson, others

124 Pediatric-Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 T, Hosp EustisAmph, Lester, Feinberg

127 Radiology Clerkship (1 cr; prereq regis Med)
1:00-3:00 MW, Mayo B-239, Lester

135 Surgical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 S, Hosp ToddAmph, Carey

163 Neurosurgical-Roentgenologic Conference for Graduate Students (1 cr)
1:00-2:00 F, Hosp ToddAmph, Peterson

185 Interpretation of Roentgenograms (1 cr; prereq regis Med, 121)
2:00-4:00 TTh, Mayo B-236, Peterson, others

200 Research: Roentgenology (ar cr) Peterson

201 Neuroradiology (2 cr)
7:00-9:00 pm T, MMA 125, Peterson
202 Cardiovascular Roentgenologic Conference (1 cr)
2:30-4:00 Th, Hosp EustisAmph, Lester, others
204 Tumor Clinic Conference (ar cr)
IV Th, Hosp ToddAmph, Mosser, others
205 Research: Radiation Therapy, Nuclear Medicine, Radiobiology (ar cr; prereq ‡) Mosser, others
206 Roentgenoscopy (3 cr) Peterson, others
207 Roentgen, Radium Therapy (ar cr) Mosser, others
209 Roentgen Diagnosis (3 cr) Peterson, others
210 Roentgen Technique (2 cr) Peterson, others
217 Roentgenologic Conference on Chest Diseases (1 cr)
4:00-5:30 F, Hosp ToddAmph, Berger, Carey
218 Seminar: Radiobiology (1 cr; prereq ‡) Mosser, others
220 Urologic-Roentgenologic Conference (1 cr)
5:00-6:00 M, Hosp EustisAmph, Creevy, Baggenstoss, Peterson
236 Seminar: Radioactive Isotope (1 cr, §PhCh 236)
12:30-1:20 W, Mayo C-239, Mosser, others
237 Radiological Physics II (2 cr; prereq 104)
4:00-5:00 W, Mayo C-239, Marvin, Loken
238 Roentgen-Surgical Pathology Conference (1 cr)
4:00-6:00 Th, Hosp ToddAmph, Peterson, Lober, others
240 Radiation Therapy Conference (1 cr)
4:00-5:00 M, Mayo C-239, Mosser, others

SURGERY (Surg)

127 Surgical Diseases of Nervous System (1 cr; prereq regis Med)
I Th, Hosp ToddAmph, Peyton, others
129 Surgical Clinics for Juniors (1 cr, †3 qtrs; prereq regis Med)
V T, Hosp ToddAmph, Wangensteen, others
134 Frontiers in Surgery (1 cr; prereq regis Med)
I F, Hosp EustisAmph, Wangensteen, others
135 Junior Clinical Clerkship (8 cr; prereq regis Med) Wangensteen, others
136 Surgical Specialties (6 cr; prereq regis Med) Wangensteen, others
137 Gen Surgery Conference (1 cr; prereq regis Med)
V M, Mayo SurgLib, Wangensteen, others
138 Clerkship in Fractures, Dislocations (2 cr; prereq regis Med) Hitchcock, MacLean
140 Orthopedic Surgery in Children (1 cr; prereq regis Med)
I W, Hosp ToddAmph, Moe, others
142 Orthopedic Surgery (1 cr; prereq regis Med)
I W, Hosp ToddAmph, Moe, others
145 Orthopedic Outpatient Clinic (1 cr; prereq regis Med) Moe, others
163 Neurosurgery Clerkship (1 cr; prereq regis Med) Peyton, others
170 Clinical Clerkship in Urology (1 cr; prereq regis Med) Creevy, others
200 Out-Patient Clinic in Surgery (1 cr)
202 Applied Surgical Anatomy on Cadaver (1 cr)
203 Proctoscopy, Sigmoidoscopy (1 cr)
204 Tumor Clinic (1 cr)
I-IV Th
205 Surgical Diagnosis (1 cr)
208 Surgical Service (1 cr)
211 Operative Surgery (1 cr)
214 Surgical Ward Conference (1 cr)
215 Roentgenological-Surgical Conference (1 cr)
I-IV S, Hosp ToddAmph
216 Research: Surgery (1 cr)
217 Seminar: Surgery (1 cr)
218 Medical, Surgical Pathological Conference (1 cr)
IV W, Hosp ToddAmph
219 Surgical Literature Conference (1 cr)
I Th, Mayo SurgLib
220 Peripheral Vascular Surgery (1 cr)
II-IV T, Mayo SurgClinic
221 Seminar: Surgery-Physiology (1 cr)
VIII-IX T, MMA 100
250 Urological Surgery (4 cr)
251 Cystoscopy, Urological Diagnosis (4 cr)
252 Urological Conference (4 cr)
253 Research: Urology (4 cr)
254 Urological Seminar (3 cr)
255 Urological Radiological Conference (3 cr)
256 Urological Pathological Conference (3 cr)
305 Neurosurgical Diagnosis (3 cr)
308 Neurosurgical Service (4 cr)
311 Operative Neurosurgery (4 cr)
316 Neurosurgical Research (3 cr)
318 Neurosurgical Conference (1 cr)
VI-VIII F, Hosp ToddAmph
405 Orthopedic Diagnosis (ar cr)
408 Orthopedic Service (ar cr)
411 Orthopedic Operative Surgery (ar cr)
416 Orthopedic Research (ar cr)

UNATTACHED COURSES

Biophysics (BPhy)

138 Seminar: Gen Physiology, Biophysics (ar cr)
170 Radiation (3 cr; prereq ‡)
204 Research: Biophysics, Physiology of Radiation (ar cr)
221 Research: Biophysics (ar cr)
222 Research: Biophysics (ar cr)
223 Research: Biophysics (ar cr)

Cancer Biology (CBio)

140 Seminar (1 cr)
12:30-1:30 Th, LyonL 271, Halberg
141 Problems (ar cr) Bittner
207 Research (ar cr) Bittner

COLLEGE OF PHARMACY

Pharmaceutical Chemistry (PhmC)

2 Inorganic Pharmaceutical Products (4 cr; prereq 1)
Lect I MW, WuH 202, Soine
Rec I F, WuH 202, Soine
Lab VI-VIII MW, WuH 301, Soine

55 Quantitative Pharmaceutical Chemistry (5 cr; prereq 54)
Lect II MWF, WuH 201, DiGangi
Lab VI-VIII T, VII-IX W, WuH 1, DiGangi

163 Organic Medicinal Agents (3 cr; prereq 162)
II MWF, WuH 202, I F, WuH 201, Gisvold

201 Seminar (1 cr) Gisvold

207 Adv Medicinal Chemistry (3-6 cr; prereq 206) Gisvold

Pharmaceutical Technology (PhmT)

56 Pharmaceutical Preparations (4 cr; prereq 55)
Lect I MW, WuH 201, Hadley
Lab VI-VIII MF, WuH 302, Hadley, Rippie

60 Prescription Compounding (5 cr; prereq 59)
Lect II MWF, WuH 104, Netz
Rec 2:00-3:00 T, VI W, WuH 201, Netz
Lab 2:00-5:00 T, VI-VIII W, WuH 205, Netz, Miller

65 Cosmetics (3 cr; prereq sr, 56)
Lect III T, I F, Netz
Lab I-III Th, WuH 205, Netz

71 Pharmaceutical Specialties (3 cr; prereq 3rd qtr sr, PhmC 163)
III MWF, WuH 201, Soine

72 Veterinary Products (3 cr; prereq sr)
III TTh, WuH 201, I F, Hadley

202 Adv Analytical Methods (3-5 cr; prereq PhmC 165) Rippie

Pharmacognosy (Phcg)

3 Vegetable Drug Histology (3 cr; prereq 2)
Lect IV TTh, WuH 104, Fischer
Lab VI-VIII Th, WuH 104, Fischer

164 Insecticides, Fungicides (3 cr; prereq 3 or ‡)
I MWF, WuH 104, Fischer

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AmSt)

92 Proseminar (3 cr; prereq 91)
VIII-IX M, FolH 10, Weber

202 Introduction (3 cr; prereq 201)
VIII-IX T, FolH 10, Noble, Kwiat

213 Seminar (3 cr; prereq 212)
VIII-IX W, FolH 10, Foster

ANTHROPOLOGY (Anth)

1A **Introduction: Prehistoric Man, Culture** (5 cr)
Lect II MWThF, MNH Aud, Murrill
—1, I T, ForH 20
—2, II T, ForH 115
—3, II T, ForH 120
—4, II T, ForH 20
—5, III T, ForH 185
—6, III T, ForH 15
—7, IV T, ForH 185

2A **Introduction: Cultural Anthropology** (5 cr)
Lect IV MTWF, MNH Aud, Gibbs
—1, I Th, ForH 20
—2, II Th, ForH 115
—3, III Th, ForH 185
—4, III Th, ForH 15
—5, IV Th, ForH 185
—6, IV Th, ForH 130
—7, IV Th, ForH 150

115 Indians of the Great Plains (3 cr; prereq 2A or 100 or △)
IV MWF, ForH 150, Hoebel

126 Peoples, Cultures of SE Asia, Indonesia (3 cr; prereq 2A or 100 or △)
II MWF, ForH 130, Spencer

127 Islamic Culture Sphere (3 cr; prereq 1A, 2A or 100 or △)
VI MWF, ForH 170, Spencer

130 Archaeological Methods, Techniques (3 cr; prereq sr, 90, △)
VI-VIII T, ForH 346, Johnson

165 **Culture, Personality** (3 cr; prereq sr, 2A or 100 or △...or none for PubH nurs, psy, soc, SW maj)
II MWF, ForH 185, Gibbs

169 Comprehensive Survey (3 cr; prereq sr, △)
VI-VII MW, ForH 175, Gibbs

172 **Physical Anthropology** (4 cr; prereq 171)
Lect IV TTh, ForH S20, Murrill
Lab VI-VII TTh, ForH S20, Murrill

182 Language, Culture (3 cr; prereq 181)
III MWF, ForH 175, Spencer

201 Anthropology, Scientific Method (3 cr; prereq 200)
7:00-9:30 pm T, ForH S50, Hoebel

ART (Art)

1 **Principles** (5 cr, §50)
Lect III MWF, NH 45, Eitner, lab ar

3 **Renaissance, Modern Art** (3 cr; prereq 1)
III MWF, J 207b, Waldfogel

10 **Photography** (3 cr)
I-II MWF, J 2, Liebling

12 **Photography** (3 cr; prereq 11 or △)
III-IV MWF, J 2, Liebling

20 **Drawing** (2 cr)
IV-V TTh, J 200a, Quirt

25 **Drawing, Design I** (3 cr; prereq 24)
—1, I-II MWF, J 104, Downs
—2, II-III TThS, J 200, Quirt
—3, III-IV MWF, J 104, Young
—4, IV-V MWF, J 4

25A **Drawing, Painting for Architects I** (2 cr; prereq 24A)
—1, II-IV TTh, J 11, Rollins
—2, II-IV TTh, J 10, Crowell
—3, III-V TTh, J 104, Kutzik
—4, VII-IX TTh, J 104, Young

32 **Printmaking** (3 cr)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers

42 **Sculpture I: Design Workshop** (3 cr; prereq 1)
—1, I-II MWF, HolB 154, Morton
—2, I-II TThS, HolB 154, Rood
—3, III-IV TThS, HolB 154, Rood

45 **Ceramic Processes** (3 cr)
—1, I-II MWF, HolB 134, MacKenzie
—2, III-IV MWF, HolB 134, MacKenzie

50 Visual Arts (3 cr, §1)
III MWF, NH 45, Eitner

51 **Pictorial Design** (2 cr; prereq 25)
I-II MW, J 4, Booth

52 **Drawing II** (3 cr; prereq 25, △)
III-IV MWF, J 10, Downs

53 **Drawing II** (3 cr; prereq 52)
III-IV MWF, J 10, Downs

54 **Life Drawing** (3 cr; prereq 52, △)
VI-VII MWF, J 11, Rollins

55 **Life Drawing** (3 cr; prereq 54)
VI-VII MWF, J 11, Rollins

58 **Renaissance, Baroque Art: 1650-1800** (3 cr; prereq 1 or 50 or △)
IV MWF, J 207b, Waldfogel

60B **Water Color** (2 cr; prereq 20 or 23 or △)
III-IV MF, J 11, Rollins

61B **Water Color** (2 cr; prereq 60B)
III-IV MF, J 11, Rollins

62A **Drawing, Painting for Architects II** (2 cr; prereq 61A)
—1, VI-VIII T, II-IV S, J 4, Kinsey
—2, VI-VIII T, II-IV S, J 11, Munoz
—3, 6:00-9:00 pm TTh, J 4, Lind

62B **Water Color** (2 cr; prereq 61B)
III-IV MF, J 11, Rollins

68 **Modern Art: Contemporary European, American** (3 cr; prereq 1 or 50 or △)
VI MWF, J 207b, Waldfogel

69 **Lettering** (3 cr; prereq 25)
VI-VII MWF, J 104, Young

70 **Oil Painting** (3 cr; prereq 54)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

71 **Oil Painting** (3 cr; prereq 70)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

72 **Oil Painting** (3 cr; prereq 71)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt

80 **Sculpture II** (3 cr; prereq 42)
VI-VII TThS, HolB 154, Rood

80A **Direct Metal Sculpture, Constructions** (3 cr; prereq 42 or △)
VI-VII MWF, HolB 154, Morton

81 **Sculpture II** (3 cr; prereq 80)
VI-VII TThS, HolB 154, Rood

81A **Metal Sculpture in Relief, Repousse** (3 cr; prereq 80A)
VI-VII MWF, HolB 154, Morton

82 **Sculpture II** (3 cr; prereq 81)
VI-VII TThS, HolB 154, Rood

82A **Bronze Casting, Wax Modeling** (3 cr; prereq 81A)
VI-VII MWF, HolB 154, Morton

85 **Photography II** (3 cr; prereq 84)
VI-VII MWF, J 2, Liebling

87 **Art of the Film** (3 cr; prereq 86)
VIII-IX MW, VIII F, J 207a, Amberg

90 **Printmaking** (3 cr; prereq 32 or △)
VI-VIII TTh, J 203, Myers

91 **Printmaking** (3 cr; prereq 90)
VI-VIII TTh, J 203, Myers

92 **Printmaking** (3 cr; prereq 91)
VI-VIII TTh, J 203, Myers

94 **Ceramic Design** (3 cr; prereq 45 or △)
VI-VII MWF, HolB 134, MacKenzie

95 **Ceramic Design** (3 cr; prereq 94)
VI-VII MWF, HolB 134, MacKenzie

102 **Romanesque, Gothic** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
VII MWF, J 207a, Simon

113 **Design in Jewelry** (3 cr; prereq 25, △)
III-IV MWF, HolB 154, Morton

114 **Adv Design in Jewelry** (3 cr; prereq 113)
III-IV MWF, HolB 154, Morton

115 **Probs: Jewelry Design** (3 cr; prereq 114)
III-IV MWF, HolB 154, Morton

118 **Renaissance, Baroque Art in Italy, Spain** (3 cr; prereq 117)
IV MWF, J 207a, Thomas

125 **Film Workshop** (3 cr; prereq 124)
VI-VII MWF, J 4, Downs

128 **Renaissance, Baroque Art in the North** (3 cr; prereq 127)
VII MWF, J 207b, Thomas

138 **Art in the United States** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
V MWF, J 207b, Tselos

142 **Scandinavian Sculpture, Minor Arts** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
I MWF, J 207b, Nelson
148 **Modern Architecture: 1900-1950** (3 cr; prereq 1 or 50, 9 cr art hist...or 9 cr hist or lit with △)
III MWF, J 207a, Tselos
150 **Probs: Painting** (ar cr; prereq 72, △)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt
151 **Probs: Painting** (ar cr; prereq 150)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt
152 **Probs: Painting** (ar cr; prereq 151)
—1, VI-VIII MW, J 200a, Booth
—2, VI-VIII TTh, J 200a, Quirt
178 **20th Century European, American Painting** (3 cr; prereq sr, 1 or 50, 9 cr art hist... or 9 cr hist or lit with △)
V MWF, J 207a, Eitner
180 **Probs: Sculpture** (ar cr; prereq 82, 82A or △)
VI-VII TThS, HolB 154, Rood
181 **Probs: Sculpture** (ar cr; prereq 180)
VI-VII TThS, HolB 154, Rood
182 **Probs: Sculpture** (ar cr; prereq 181)
VI-VII TThS, HolB 154, Rood
186 **Art of the Film** (3 cr; prereq 87 or △)
VIII-IX MW, VIII F, J 207a, Amberg
190 **Probs: Printmaking** (ar cr; prereq 92 or △)
VI-VIII TTh, J 203, Myers
191 **Probs: Printmaking** (ar cr; prereq 190)
VI-VIII TTh, J 203, Myers
192 **Probs: Printmaking** (ar cr; prereq 191)
VI-VIII TTh, J 203, Myers
193 Adv Probs: Design (ar cr; prereq 9 up div cr in design, cons maj adv)
194 Adv Probs: Design (ar cr; prereq 193)
195 Adv Probs: Design (ar cr; prereq 194)
196 Readings: Art History, Criticism (3 cr; prereq sr, △)
197 Readings: Art History, Criticism (3 cr; prereq sr, △)
198 Readings: Art History, Criticism (3 cr; prereq sr, △)
200 Adv Probs: Studio Work (ar cr; prereq ♯)
201 Adv Probs: Studio Work (ar cr; prereq 200)
202 Adv Probs: Studio Work (ar cr; prereq 201)
216 Seminar: European, American Painting (3 cr; prereq 27 cr sr col courses in art hist, ♯)
VIII-IX F, J 207b, Arnason
217 Seminar: European, American Painting (3 cr; prereq 216)
VIII-IX F, J 207b, Arnason
218 Seminar: European, American Painting (3 cr; prereq 217)
VIII-IX F, J 207b, Arnason
236 Seminar: Probs in Art History, Criticism (ar cr; prereq ♯) Tselos
237 Seminar: Probs in Art History, Criticism (ar cr; prereq 236) Tselos
238 Seminar: Probs in Art History, Criticism (ar cr; prereq 237) Tselos
250 Thesis Seminar (no cr; prereq cons adv) Booth
251 Thesis Seminar (no cr; prereq 250) Booth
252 Thesis Seminar (no cr; prereq 251) Booth

ASTRONOMY (Ast)

11 Descriptive Astronomy (5 cr, §51)
IV MTWF, Ph 150, Luyten
53 Stellar Astronomy (3 cr; prereq 11 or Phys 9, Math 53)
II MWF, Ph 358, Danby
106 Celestial Mechanics (3 cr; prereq 105)
V MWF, AE 211, Danby

BOTANY (Bot)

3 **General Botany** (4 cr, §5, §Biol 3, §old NSci 9; prereq 2)
Lect III TTh, Bo B6, Hall
—1, Lab V-VI TTh, Bo 4
—2, Lab VII-VIII TTh, Bo 4
10 **Minnesota Plant Life** (3 cr)
VI-VIII T, VI-VII Th, HS S45, Morley
51 **Plant Physiology** (5 cr; prereq bot or biol, InCh 5 or 25)
Lect VI MW, Z 313, Frenkel
—1, Lab II-III MW, Bo 104
Conf IV M
—2, Lab VII-VIII MW, Bo 104
Conf IX M
52 **Taxonomy** (3 cr; prereq 3 or 5 or Biol 3 or NSci 9)
VI-VIII MW, Bo 401, Morley
54 **The Plant Kingdom** (5 cr, §104; prereq 3 or 5 or Biol 3 or NSci 9)
II-IV MWF, Bo 209
104 **The Plant Kingdom** (5 cr, §54; prereq 3 or 5 or Biol 3 or NSci 9)
II-IV MWF, Bo 209
115 Flora of Minnesota (4 cr; prereq 52 or ♯)
VI-VIII TTh, Bo 401, Ownbey
128 Paleobotany (3 cr; prereq ♯)
VI-VIII TTh, Hall
137 Adv Ecology (5 cr; prereq 50, 50A or 130, 130A, ♯)
VI-VII T, V-IX Th, Bo 214, Lawrence, Martin
140 **Adv Survey of Plant Physiology** (3 or 5 cr, §51; prereq elem biol or bot or zool or ♯, org chem or biochem)
Lect VI MW, Z 313, Frenkel
—1, Lab II-III MW, Bo 102
Conf IV MW
—2, Lab VII-VIII MW, Bo 102
Conf IX M
155 Fresh-water Algae (4 cr; prereq 10 cr biol or ♯)
VI-VIII MW, HS S45, Norris

166 **Palynological Analysis** (5 cr; prereq 165 or Zool 161 or ♯) Dahl
199 Problems (1-5 cr; prereq 20 cr nat sci, ♯)
203 Research Probs: Morphology of Vascular Plants (ar cr) Hall
207 Research Probs: Taxonomy (ar cr) Morley, Ownbey
211 Research Probs: Paleobotany (ar cr) Hall
223 Research Probs: Ecology (ar cr) Lawrence, Martin
227 Research Probs: Plant Physiology (ar cr) Brown, Frenkel, Roshal
231 Research Probs: Cytology (ar cr) Dahl
235 Probs: Phycology (ar cr) Norris
242 Seminar: Morphology (1 cr) Hall
245 Seminar: Taxonomy (1 cr) Morley, Ownbey
248 Seminar: Paleobotany (1 cr) Hall
251 Seminar: Ecology (1 cr) Lawrence, Martin
254 Seminar: Plant Physiology (1 cr) Brown, Frenkel, Roshal
257 Seminar: Cytology (1 cr) Dahl
260 Seminar: Cryptogramic Plants (1 cr) Norris

CLASSICS

Classics (Clas)

24 Technical Terms of Science, Medicine, Humanities (3 cr, §124; prereq soph)
VI MWF, FolH 308, D Swanson
42 Greek Mythology (2 cr; prereq soph)
VI MW, FolH 303, Forbes
107 Study of Language (3 cr; prereq 106)
VIII MWF, FolH 304, D Swanson
124 Technical Terminology (3 cr, §24)
VI MWF, FolH 308, D Swanson
190 Proseminar: Classical Archaeology (3 cr; prereq 122, 123 or ♯)
VII MWF, FolH 303, McDonald
193 Classical Literary Traditions (3 cr; prereq 9 cr lit)
VII MWF, FolH 304, DeWitt

Greek (Grk)

3 Attic Prose (5 cr; prereq 2)
Lect II MWThF, FolH 303, McDonald
—1, II T, FolH 205½, Jacobson
—2, III T, FolH 205½, Jacobson
53 Homer (3 cr, §153; prereq 3)
IV MWF, FolH 302, Allen
73 Hellenistic Greek (3 cr; prereq △) D Swanson
153 Homer (3 cr, §53; prereq 3)
IV MWF, FolH 302, Allen
173 Advanced Reading (3 cr; prereq 172) Allen
213 Seminar: Greek Epic (3 cr)
4:15 Th, Lib 317, McDonald

Latin (Lat)

3 Interm Latin (5 cr; prereq 2 or 1 yr HS Lat)
Lect I MTWF, FolH 303, Forbes
—1, I Th, FolH 205½, Parker
—2, II Th, FolH 205½, Parker
53 Survey of Literature (3 cr, §153; prereq 52)
IV MWF, FolH 304, DeWitt
73 Prose Composition (3 cr; prereq 3 yrs HS Lat or △) R Swanson
135 Medieval Latin (3 cr; prereq adv students or ♯) R Swanson
153 Survey of Literature (3 cr, §53; prereq 152)
IV MWF, FolH 304, DeWitt
173 Adv Reading (3 cr; prereq 53 or △)
II-III S, FolH 304, Forbes

COMPARATIVE LITERATURE (CLit)

47 Nature of Literature (3 cr; prereq 46)
VI MWF, FolH 207, Wood
223 Seminar (ar cr; prereq 222) Falk

ENGLISH

English (Engl)

B Literature, Composition (5 cr, §2A or 2B or Comm 2; prereq A)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MTWF, FolH 5, Donagan
—2, Rec V MWThF, FolH 226, Simson
C Literature, Composition (5 cr, §3A or 3B or Comm 3; prereq B)
—1, Lect VIII M, C 100 (for InCh 24 students only)
—2, Lect II T, NMA Aud
—3, Lect III T, NMA Aud
—1, Rec I MTWF, FolH 9, Goldman
—2, Rec I MTWF, FolH 213, Kirchner
—3, Rec I MTWF, FolH 204, Klein
—4, Rec I MTWF, EE 137, Johnson
—5, Rec II MWThF, TSF 109, Johnson
—6, Rec II MWThF, FolH 205, Mitchell
—7, Rec II MWThF, VH 211, Hoople
—8, Rec III MWThF, FolH 5, Goldman
—9, Rec III MWThF, Ph 236a, Klein
—10, Rec III MWThF, TSF 109, Hart
—11, Rec III MWThF, FolH 3, Joseph
—12, Rec IV MTWF, FolH 5, Joseph
—13, Rec IV MTWF, FolH 9, Hanna
—14, Rec V MTWF, FolH 6, McGinnis
—15, Rec V MTWF, Ph 236a, T Browne
—16, Rec V MTWF, FolH 202, Kirchner
—17, Rec V MTWF, FolH 213, Mooney
—18, Rec VI MTWF, FolH 110, Mays
—19, Rec VI MTWF, FolH 213, McGinnis
—20, Rec VI MTWF, FolH 5, Hanna
—21, Rec IV MTWF, FolH 213, Shapiro (honors section, △)

2A Freshman English (4 cr, §B or 2B or Comm 2; prereq 1A)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
Rec V MWF, E 225, Burton Weber

2B Freshman English (4 cr, §B or 2A or Comm 2; prereq 1B)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MWF, FolH 205, Fort
—2, Rec I MWF, E 225, Keller
—3, Rec I MWF, JohH 313, Mays
—4, Rec III MWF, FolH 205, Griscom
—5, Rec III MWF, E 4, C Nelson
—6, Rec III MWF, JohH 114, Korges
—7, Rec V MWF, FolH 205, Reidy
—8, Rec V MWF, JohH 313, R Shaw
—9, Rec V MWF, FolH 204, Biewen
—10, Rec V MWF, E 4, Gurian
—11, Rec VI MWF, E 225, Griscom
—12, Rec VI MWF, FolH 114, Meckhonik
—13, Rec VII MWF, FolH 205, Biewen
—14, Rec VII MWF, FolH 5, Simson

3A Freshman English (4 cr, §C or 3B or Comm 3; prereq 2A)
—1, Lect VIII M, C 100 (for InCh 24 students only)
—2, Lect II T, NMA Aud
—3, Lect III T, NMA Aud
—1, Rec I MWF, P 218, Schwegel
—2, Rec I MWF, C 111, Burton Weber
—3, Rec II MWF, FolH 107, Atkins
—4, Rec II MWF, VH 210, Erickson
—5, Rec III MWF, E 305, Erickson
—6, Rec III MWF, MurH 420, Duus
—7, Rec IV MWF, MinMet 124, Wise
—8, Rec IV MWF, FolH 206, Peterson
—9, Rec V MWF, ChE 162, Duus
—10, Rec V MWF, C 111, Wise
—11, Rec VI MWF, FolH 205, Mooney
—12, Rec VII MWF, E 215, Shea

3B Freshman English (4 cr, §C or 3A or Comm 3; prereq 2B)
—1, Lect VIII M, C 100 (for InCh 24 students only)
—2, Lect II T, NMA Aud
—3, Lect III T, NMA Aud
—1, Rec I MWF, TSF 109, Denzell Smith
—2, Rec I MWF, FolH 107, Hansen
—3, Rec I MWF, AE 211, Elsenpeter
—4, Rec I MWF, FolH 305, Hoople
—5, Rec I MWF, ME 302, Daniel
—6, Rec II MWF, ForH 170, Hart
—7, Rec II MWF, E 225, M Shaw
—8, Rec II MWF, VH 307, Elsenpeter
—9, Rec II MWF, TNM 115, Kvernes
—10, Rec II MWF, TNCW 113, Daniel
—11, Rec II MWF, CW 206, David Smith
—12, Rec III MWF, E 215, Ryley
—13, Rec III MWF, C 115, Mitchell
—14, Rec III MWF, CW 222, Hansen
—15, Rec III MWF, E 225, Shea
—16, Rec III MWF, ForH 85, Breslin
—17, Rec III MWF, Psy 115, Anderson
—18, Rec III MWF, C 215, Keller
—19, Rec III MWF, C 111, David Smith
—20, Rec IV MWF, FolH 107, Breslin
—21, Rec IV MWF, P 218, Lohmann
—22, Rec IV MWF, EE 137, Meckhonik
—23, Rec IV MWF, FolH 113, Kvernes
—24, Rec IV MWF, FolH 205, Korges
—25, Rec IV MWF, E 225, Guidera
—26, Rec V MWF, ME 202, Albrecht
—27, Rec V MWF, TSF 109, C Brown
—28, Rec V MWF, ChE 154, Gurtoff
—29, Rec V MWF, FolH 107, Lohmann
—30, Rec V MWF, P 218, Ryley
—31, Rec V MWF, FolH 206, Rower
—32, Rec V MWF, EE 137, M Shaw
—33, Rec V MWF, ME 208, Schwegel
—34, Rec VI MWF, E 215, Peterson
—35, Rec VI MWF, Ph 236a, C Brown
—36, Rec VI MWF, FolH 113, Gurtoff
—37, Rec VII MWF, E 4, T Browne
—38, Rec VII MWF, FolH 206, Shapiro
—39, Rec VIII MWF, FolH 101, Rower

22 **Introd Literature** (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
II MTWThF, FolH 204, Montgomery

23 **Introd Literature** (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
—1, III MTWThF, P 110, R Foster
—2, VI MTWThF, FolH 301, Buckley

39 **Modern Literature** (3 cr; prereq C or 3A or 3B or Comm 3 or exemption)
—1, IV MWF, Bu 211, R Foster
—2, VII MWF, FolH 301, Myers

54 English Novel (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
II MWF, Pt 202, Frank

55 **Shakespeare: Early Plays** (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
—1, II MWF, FolH 213, Youngblood
—2, III MWF, FolH 113, Steinmann
—3, VI MWF, FolH 206, Youngblood

56 **Shakespeare: Later Plays** (3 cr; prereq 55 or △)
—1, II MWF, FolH 114, Unger
—2, III MWF, FolH 207, Buckley
—3, VI MWF, FolH 204, Jones

73 **American Literature** (3 cr; prereq 72 or ♯)
II MWF, FolH 9, Levenson

74 **American Literature** (3 cr; prereq 72 or ♯)
—1, II MWF, FolH 308, Hornberger
—2, VII MWF, FolH 308, C Foster

75 Chaucer (4 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr... or 5 cr in 21-22-23)
III MWThF, FolH 204, Ferris

86 **Adv Technical Communication for Engineers** (3 cr; prereq 85)
—1, I MWF, E 215, Omans
—2, I MWF, E 4, Haga
—3, II MWF, E 215, Coleman
—4, II MWF, E 4, Guthrie

—5, IV MWF, E 215, Coleman
—6, IV MWF, E 4, Haga
—7, V MWF, E 215, Guthrie
—8, VI MWF, E 4, Omans

103 Beowulf (3 cr; prereq 100)
VII MWF, FolH 204, Brown

113 American Short Story (3 cr; prereq 5 cr above C)
II MWF, FolH 206, R Foster

122 Interpretation of Poetry (3 cr; prereq 121 or ‡)
1:30-2:45 TTh, FolH 207, Tate

129 Modern Drama (3 cr; prereq 55, 56 or 126, 127)
VI MWF, FolH 9, Hurrell

131 Victorian Poetry II (3 cr; prereq 5 cr above C)
III MWF, FolH 305, Montgomery

134 Origins of American Naturalism (3 cr; prereq 5 cr above C)
II TThS, FolH 107, Bowron

139 19th Century Literature (3 cr; prereq 5 cr above C)
III MWF, FolH 206, Youngblood

141 Adv Chaucer (3 cr; prereq 140)
VI MWF, FolH 108, Clark

143 20th Century Literature (3 cr; prereq 5 cr above C)
VII MWF, FolH 9, O'Connor

156 American Drama (3 cr; prereq 5 cr above C)
III MWF, FolH 103, Hornberger

158 American Poetry (3 cr; prereq 157 or ‡)
10:30-12:00 TTh, FolH 107, Levenson

162 Milton (3 cr; prereq 21, 22 or 56)
VII MWF, FolH 107, Jackson

174 American English (3 cr)
VI MWF, FolH 306, Allen

175 Chaucer (4 cr, §75; prereq 100)
VI MTWF, FolH 107, Jackson

186 Form, Idea in Dramatic Literature (3 cr; prereq 5 cr above C...56 rec)
VIII-IX T, FolH 307, Hurrell

189 18th Century Literature (3 cr; prereq 5 cr above C)
II MWF, FolH 207, Monk

193 Poetry of W B Yeats (3 cr; prereq 5 cr above C)
III MWF, FolH 114, Unger

196 Elizabethan Literature: Prose, Poetry, Drama (3 cr; prereq 5 cr above C)
II MWF, FolH 113, Brown

199 17th Century Literature (3 cr; prereq 5 cr above C)
IV MWF, FolH 303, Hurrell

206 English Language (3 cr; prereq 100, 174, 204, 205 or ‡)
VI TTh, VII T, FolH 303, Allen

212 17th Century Literature (3 cr; prereq 211)
VIII-IX M, FolH 103, Unger

213 Bibliography, Methods of Literary Research (2 cr)
VIII-IX W, FolH 307, O'Connor

218 Seminar: Linguistics, Philosophy of Language (3 cr, §Phil 192; prereq 217)
VIII-IX Th, FolH 103, Steinmann, Garver

224 Origins, Early Development of American Literary Tradition (3 cr; prereq 223)
VIII-IX M, FolH 108, Hornberger

242 The Canterbury Tales (3 cr; prereq 241)
VIII-IX Th, FolH 302, Clark

247 English Literary Criticism (3 cr; prereq 246)
VIII-IX F, FolH 307, O'Connor

255 American Renaissance I: Emerson, Whitman, Melville (3 cr; prereq 254)
VIII-IX Th, FolH 108, C Foster

258 Milton (3 cr; prereq 257)
VIII-IX M, FolH 302, Brown

279 American Realism (3 cr; prereq 278)
VIII-IX F, FolH 108, Bowron

286 Dryden, His Age (3 cr; prereq 285)
VIII-IX W, FolH 108, Monk

292 Critical Theory (3 cr; prereq 291)
VIII-IX W, FolH 103, Tate

299 Independent Reading (3 cr; prereq MA degree)

English Composition (Comp)

X **Preparatory Composition** (0 cr)
—1, I MWF, JohH 205, Beck
—2, IV MWF, Bu 123, Potter
—3, IV MWF, JohH 313, Livingston
—4, V MWF, ForH 160, Livingston

27 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3)
—1, II MWF, FolH 103, Ferris
—2, III MWF, FolH 107, Atkins
—3, IV MWF, FolH 305, Myers
—4, VI MWF, FolH 305, Myers
—5, VII MWF, FolH 103, Fraser

28 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3...27 rec)
—1, II MWF, ForH 175, Alford
—2, IV MWF, FolH 114
—3, V MWF, FolH 305, Schneider
—4, V T, V-VI Th, FolH 204, Schneider
—5, VII MWF, FolH 213

58 **Business Reports, Letters** (3 cr; prereq regn BA or ‡, C or 3A or 3B or Comm 3)
II MWF, ForH 50, Haga

103 Writing of Fiction, Poetry (3 cr; prereq 102)
VIII-IX M, FolH 307, Blum

202 Seminar: Writing (3 cr; prereq ‡)
VIII-IX T, FolH 304, Tate

GEOGRAPHY (Geog)

1 **Natural Resources** (5 cr)
Lect II MWThF, Owre 15, Mather
—1, I T, ForH 60
—2, I Th, ForH 60
—3, III M, ForH 60
—4, III T, ForH 60
—5, III W, ForH 60

—6, III Th, ForH 60
—7, III F, ForH 60
—8, IV F, ForH 60
—9, V M, ForH 60
—10, V W, ForH 60
—11, V F, ForH 60
—12, VI F, ForH 60

4 **Human Geography** (5 cr)
Lect III MWF, Owre 15, Broek
—1, I MW, ForH 70
—2, I TTh, ForH 70
—3, II TTh, ForH 70
—4, II WF, ForH 70
—5, III TTh, ForH 70
—6, IV MW, ForH 70
—7, IV TTh, ForH 70
—8, V MW, ForH 70
—9, V TTh, ForH 70
—10, VI MW, ForH 70
—11, VI TTh, ForH 70
—12, VII MW, ForH 70

41 **Primary Production** (5 cr)
Lect VI MWThF, ForH 55, Lukermann
—1, I W, ForH 60
—2, II T, ForH 60
—3, II Th, ForH 60
—4, IV T, ForH 60
—5, IV Th, ForH 60
—6, VI T, ForH 60

67 Minnesota (3 cr; prereq 5 cr or ‡)
VI MWF, ChE 240, Borchert

100 Geographical Exploration, Discovery (3 cr; prereq 10 cr or ‡)
III MWF, ForH 285, Webb

112 Western United States (3 cr; prereq 10 cr or ‡)
IV MWF, ForH 85, Mather

118 Africa (3 cr; prereq 10 cr or ‡)
I MWF, ForH 285, Porter

126 Australia, New Zealand, Oceania (3 cr; prereq 10 cr or ‡)
V MWF, ForH 285, Barrett

139 **Air Photo Interpretation** (3 cr; prereq 70 or ‡)
I-II TTh, ForH 80, Porter

152 Industrial Geography (3 cr; prereq 41 or ‡)
II MWF, ForH 285, Lukermann

170 Field Course (3 cr; prereq sr, 15 cr)
VIII M, ForH 285, Webb

190 Readings (1-3 cr; prereq sr)

196 Proseminar: East, South Asia (3 cr, §Anth 196, Pol 196; prereq sr)
3:30-5:15 M, ForH 346

251 Seminar: Land Use Planning (ar cr; prereq ‡)
7:30-9:30 pm T, ForH 175, Borchert

252 Seminar: Agricultural Geography (ar cr; prereq ‡)
VIII-IX M, ForH 175, Mather

253 Seminar: Settlement in the Tropics (ar cr; prereq ‡)
VI-VII W, ForH 75, Broek, Porter, Webb

255 Seminar: Geographic Thought (ar cr; prereq ‡)
VII-VIII T, ForH 175, Broek

301 Research Probs (ar cr)

GEOLOGY AND MINERALOGY (Geol)

A **Gen Geol Lab** (2 cr; prereq 1 or 8 or 51 or ¶)
—1, III-IV TTh, P 22
—2, V-VI TTh, P 22
—3, III-IV MW, P 22
—4, I-II MW, P 22
—5, V-VI MW, P 22
—6, VII-VIII TTh, P 22
—7, VII-VIII MW, P 22

B **Gen Geol Lab** (2 cr; prereq A, 2 or ¶2)
—1, I-II MW, P 20
—2, III-IV MW, P 20
—3, VI-VII TTh, P 20

1 **Gen Geology** (3 cr, §5)
—1, IV MWF, P 2, Thiel
—2, II MWF, P 2, Craddock
—3, VI MWF, P 210, Gast

2 **Gen Geology** (3 cr, §6; prereq 1 or 8 or 51)
—1, IV MWF, P 110, Swain
—2, VII MWF, P 110, Dickinson

25 Rock Study (2 cr; prereq soph, 24)
Lect I T, P 210, Phinney
Rec I Th, P 210
—1, Lab VI-VII T, P 100
—2, Lab VIII-IX T, P 100

111 Economic Geology (3 cr; prereq 110)
I TTh, VIII F, P 218, Schwartz

120 Glacial Geology (3 cr; prereq B)
I MWF, P 110, West

126 Adv Structural Geology (3 cr; prereq 125) Craddock

132 Petrology (4 cr; prereq 131)
Lect III MWF, P 210, Phinney
Lab VI-VII WF, P 200

152 Stratigraphy II (3 cr; prereq 151)
II MWF, P 218, Swain

153 **Subsurface Stratigraphy** (2 cr; prereq 151)
VII-VIII TTh, P 10, Swain

167 Mineralography (3 cr; prereq 166) Schwartz

170 Geologic Probs (1-3 cr)

171 Preparation of Geologic Report (1 cr; prereq sr, 150 or △)

179 Mining Geology (3 cr; prereq 111) Schwartz

183 Adv Geochemistry (3 cr; prereq 182, diff equat or ‡) Gast

252 Mineralogical Probs (ar cr; prereq 251) Zoltai

264 Seminar: Metamorphic Petrology (3 cr; prereq 131) Phinney

265 Seminar: Research Fields (ar cr)
VIII-IX MF, P 210, Gast, Phinney, Zoltai

266 X-Ray Mineralogy (3 cr; prereq 24, 121 or ‡) Zoltai

GERMAN (Ger)

1C **Bgn German** (5 cr, §1A or 1B)
—1, Lect IV MWF, FolH 209
Lab IV TTh
—2, Lect VI MWF, FolH 209½
Lab VI TTh

2C **Bgn German** (5 cr, §2A or 2B; prereq 1C or 1 yr HS Ger)
—1, Lect III MWF, FolH 209
Lab III TTh
—2, Lect III MWF, FolH 303
Lab III TTh
—3, Lect V MWF, FolH 209
Lab V TTh
—4, Lect V MWF, FolH 207
Lab V TTh

3A **Bgn German: Conversational** (5 cr, §3B or 3C; prereq 2A)
Lect I MWF, FolH 209½, Menze
Lab I TTh

3B **Bgn German: Language, Culture** (5 cr, §3A or 3C; prereq 2B)
Lect III MWF, FolH 209½, Ramras
Lab III TTh

3C **Bgn German** (5 cr, §3A or 3B; prereq 2C or 2 yrs HS Ger)
—1, Lect I MWF, FolH 209
Lab I TTh
—2, Lect II MWF, FolH 209½
Lab II TTh
—3, Lect IV MWF, FolH 209½
Lab IV TTh
—4, Lect V MWF, FolH 209½
Lab V TTh

4 Interm German (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
VII MTWThF, FolH 209½

52 **Reading German: Bgn for Juniors, Seniors** (3 cr, §3A or 3B or 3C; prereq 51)
—1, II MWF, FolH 209
—2, VII MWF, FolH 209

56 Reading, Analysis of Literary Texts (3 cr; prereq 4 or 4 yrs HS Ger)
IV MWF, FolH 3

59 Composition (2 cr; prereq 4)
VI MWF, FolH 101

63 Conversation (2 cr; prereq 4)
VI TTh, FolH 208

69 Pronunciation, Diction (1-2 cr; prereq 3, cand for Ger play)

72 **Lyric Poetry from Goethe to Rilke** (2-3 cr; prereq 56...or 4, △)
IV TTh, FolH 208

75 **Drama from Lessing to the Present** (3 cr; prereq 56...or 4, △)
IV MWF, FolH 208

78 **Prose of the 19th, 20th Century** (2-3 cr; prereq 56...or 4, △)
III TTh, FolH 105

96 **Survey of Literature** (3 cr; prereq 3 cr above 69)
II MWF, FolH 4

99 **Faust I** (3 cr; prereq 6 cr above 69)
VI MWF, FolH 208

135 Bibliography, Research Methods (1 cr; prereq sr, 11 cr above 69)

159 Readings (3 cr; prereq sr, 14 cr above 69)
II MWF, FolH 208

165 Goethe (3 cr; prereq sr, 14 cr above 69)
VIII-IX Th, FolH 208, Ramras

178 19th Century Drama (3 cr; prereq sr, 14 cr above 69)
VIII-IX T, FolH 208, Wood

HISTORY (Hist)

2 **Civilization of the Modern World** (3 cr)
Lect II MW, C 410, Bamford
—1, II Th, ForH 30
—2, II F, ForH 30
—3, I T, ForH 15
—4, I Th, ForH 15
—5, I F, ForH 60
—6, IV W, ForH 244, Bamford (honors section, △)
—7, II F, ForH 60
—8, VI Th, ForH 30
—9, II Th, E 305

3 **Civilization of the Modern World** (3 cr)
Lect II TTh, NH 45, Wright
—1, I M, MinMet 104
—2, I T, ForH 50
—3, I W, ForH 50
—4, I Th, ForH 50
—5, I F, ForH 50
—6, II M, ForH 70
—7, II F, ChE 40
—8, III T, ForH 50
—9, III Th, ForH 50
—10, IV T, ForH 50
—11, VI M, ForH 60
—12, VI W, VH 205
—13, VI F, ForH 70
—14, VII T, ForH 50
—15, II W, ForH 60
—16, III W, ForH 70
—17, VI Th, ForH 50, Wright (honors section, △)
—18, VI T, ForH 50
Lect III TTh, NH 45, Giesey
—19, I Th, ForH 160
—20, I T, ForH 160
—21, I F, ForH 30
—22, II M, ForH 30
—23, II Th, ForH 50
—24, III M, ForH 50
—25, IV Th, ForH 30
—26, VI W, ForH 60, Giesey (honors section, △)
—27, VII Th, ForH 50
—28, III W, ForH 30
Lect VI TTh, NH 45, Altholz
—29, I M, ForH 60
—30, I W, ForH 30
—31, I Th, ForH 85

—32, II W, ForH 30
—33, III T, ForH 150
—34, III Th, ForH 30
—35, IV F, ForH 70
—36, VI W, ChE 54, Altholz (honors section, △)

6 **English History** (3 cr)
Lect IV MW, FraH 101, Willson
—1, I M, ForH 30
—2, IV T, ForH 30
—3, IV T, ForH 130
—4, VI W, ForH 50
—5, VI F, ForH 30

13 **Medieval, Renaissance History** (3 cr; prereq art or mus maj or △)
IV MWF, ForH 115, Thompson

16 Ancient Civilization (3 cr, §16A)
VII TWTh, Ph 166, Jones

16A Ancient Civilization with Readings (5 cr, §16)
VII TWTh, Ph 166, VII MF, ForH 115, Jones

19 Asia (3 cr, §61)
VI MWF, ForH 185, Stein

21 **American History** (3 cr; prereq soph)
Lect IV MW, NH 45, Rutman
—1, VI T, ForH 150
—2, I Th, ForH 30
—3, I M, C 215
—4, II T, ForH 150
—5, II Th, ForH 160
—6, III T, ForH 130, Rutman (honors section, △)
—7, IV F, ForH 30

22 **American History** (3 cr; prereq soph)
Lect I MW, MNH Aud, Murphy
—1, I F, C 215, Murphy (honors section, △)
—2, I T, ForH 85
—3, VI T, ForH 30
—4, III W, ForH 244
—5, IV W, ForH 30
—6, III Th, ForH 130
—7, I Th, ForH 150
—8, II Th, ForH 150
—9, II T, ForH 50
Lect II TTh, C 100, Noble
—10, I M, ForH 50
—11, VI M, ForH 30
—12, I T, ForH 30, Noble (honors section, △)
—13, III T, ForH 30
—14, IV T, ForH 15
—15, III W, ForH 50
—16, IV W, ForH 60
—17, VII W, ForH 50
—18, III Th, ForH 150
—19, VI Th, ForH 15
—20, I Th, Ph 145
—21, II M, FraH B25
Lect VI TTh, EE 335, Rutman
—22, III M, ForH 30
—23, II T, ForH 30
—24, VII T, ForH 30
—25, IV W, ForH 50
—26, VI F, ForH 50

52 Ancient Civilization (3 cr, §16)
VII TWTh, Ph 166, Jones

55 **Civilization of the Modern World** (3 cr, §3)
Lect II TTh, ForH 155, Altholz
—1, II M, ForH 60
—2, III M, ForH 70
—3, VI W, ForH 30
—4, II F, ChE 150

58 **England** (3 cr, §6)
Lect IV MW, FraH 101, Willson
Rec IV F, ForH 50

61 Asia (3 cr, §19)
VI MWF, ForH 120, Stein

72 **English Constitutional History** (3 cr; prereq prelegal soph, C avg or jr)
—1, Lect II MWF, ForH 115, Hoyt
—2, Lect I MWF, ForH 115, Thompson

88 American Colonies (3 cr)
II MWF, ForH 155, Tyler

95 American Diplomatic History (3 cr)
I MWF, ForH 155, Beatty

99 **Minnesota, the Northwest** (3 cr)
III MWF, ForH 155, Jordan

102B Rome (3 cr)
VIII MWF, ForH 185, Jones

105 Europe in the Middle Ages (3 cr)
III MWF, ForH 185, Hoyt

105A Renaissance, Reformation (3 cr)
1:30-3:00 TTh, ForH 120, Giesey

108A Europe in the 19th Century (3 cr)
1:30-3:00 TTh, ForH 115, Bowditch

111 Europe in the 20th Century (3 cr)
I MWF, Bo B6, Deutsch

114 Economic History of Europe (3 cr)
9:00-10:20 TTh, ForH 170, Bamford

127 Russia (3 cr)
IV MWF, ForH 55, Anderson

127A Eastern Europe, Middle East in 19th, 20th Centuries (3 cr; prereq 1-2-3)
III MWF, ForH 160, Anderson

130A Modern England: 1714 to Present (3 cr)
II MWF, ForH 150, Willson

136 **World War II** (3 cr)
II MWF, Bo B6, Deutsch

139 Early Natl Period in United States History (3 cr)
I MWF, ForH 170, Jordan

139A American History: 1850-1900 (3 cr)
III MWF, ForH 120, Loehr

142 Germany (3 cr; prereq 1-2-3 or Ger maj or ♯)
VI MWF, ForH 160, Wright

148 American Economic, Social History (3 cr)
II MWF, ForH 180, Loehr

148A The South (3 cr)
10:30-12:00 TTh, ForH 155, Noble

151 Social, Intellectual History of the United States (3 cr)
III MWF, ForH 115, Tyler

151A American Constitutional History (3 cr)
IV MWF, ForH 130, Murphy

6B South Asia, Especially India (3 cr)
10:30-12:00 TTh, ForH 170, Stein
159 Latin-American History (3 cr)
III MWF, ForH 170, Beatty
169 Readings: Works of Great Historians (2 cr; prereq sr)
VIII-IX T, ForH 244, Giesey
172 Readings: Ancient History (3 cr, †170-171-172; prereq 171) Jones
175 Readings: Medieval, Renaissance History (3 cr, †173-174-175; prereq 174)
VI-VII M, ForH 244, Hoyt
175A Readings: Medieval English History (3 cr, †173A-174A-175A; prereq 174A)
VI-VII Th, ForH 244, Thompson
178A Readings: Russian History (3 cr, †176A-177A-178A; prereq 177A)
VII-VIII F, ForH 256, Anderson
178B Readings: India (3 cr, †176B-177B-178B; prereq 177B)
VI-VII Th, ForH 150, Stein
178C Readings: Recent European History (3 cr, †176C-177C-178C; prereq 177C)
1:00-2:40 M, ForH 75, Deutsch
178D Readings: 19th Century European History (3 cr, †176D-177D-178D; prereq 177D)
VIII-IX W, ForH 256, Bowditch
181A History of European Commerce (3 cr)
VI-VII T, ForH 256, Bamford
184 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq 183)
VI-VII F, ForH 175, Willson
187A Readings: The West in American History (3 cr, †185A-186A-187A; prereq 186A)
VIII-IX W, ForH 244, Murphy
187B Readings: American Diplomatic History (3 cr, †185B-186B-187B; prereq 186B)
VI-VII M, JohH 126, Beatty
187C Readings: 20th Century American History (3 cr, †185C-186C-187C; prereq 186C)
VI-VII Th, ForH 60, Noble
187D Readings: 19th Century American History (3 cr, †185D-186D-187D; prereq 186D)
VI-VII W, ForH 256, Jordan
187E Readings: Probs of 18th Century (3 cr, †185E-186E-187E; prereq 186E)
VI-VII Th, ForH 256, Tyler
190A Readings: American History 1850-1900 (3 cr, †188A-189A-190A; prereq 189A)
VI-VII F, ForH 346, Loehr
202 Historical Bibliography, Criticism (2 cr, †200-201-202; prereq 201)
V TTh, ForH 185, Jones
212 Ancient History (3 cr, †210-211-212; prereq 211) Jones
215 Medieval History (3 cr, †213-214-215; prereq 214) Hoyt
222 Medieval English History (3 cr, †220-221-222; prereq 221) Thompson
225 English History, Tudor-Stuart Period (3 cr, †223-224-225; prereq 224) Willson
242 Nineteenth Century Europe (3 cr, †240-241-242; prereq 241) Bowditch
245 Recent European History (3 cr, †243-244-245; prereq 244) Deutsch
252 European Economic History (3 cr, †250-251-252; prereq 251) Bamford
255 Russian History (3 cr, †253-254-255; prereq 254) Anderson
262 Latin American History (3 cr, †260-261-262; prereq 261) Beatty
265 History of India (3 cr, †263-264-265; prereq 264) Stein
272 Probs of 18th Century: Early American Social, Intellectual History (3 cr, †270-271-272; prereq 271) Tyler
275 Nineteenth Century American History (3 cr, †273-274-275; prereq 274) Jordan
278 American History: 1850-1900 (3 cr, †276-277-278; prereq 277) Loehr
285 American Economic History (3 cr, †283-284-285; prereq 284) Loehr
292 The West in American History (3 cr, †290-291-292; prereq 291) Murphy
295 American Diplomatic History (3 cr, †293-294-295; prereq 294) Beatty

INTERDEPARTMENTAL COURSES AND GENERAL EDUCATION

Communication (Comm)

1 **Communication** (4 cr, §Engl A or 1A or 1B; prereq classif 1 or 1A or 2 or 3)
—1, I MTWF, TNM 115
—2, IV MTWF, TNM 107
—3, V MTWF, TNM 106
2 **Communication** (4 cr, §Engl B or 2A or 2B; prereq 1)
—1, II MTWF, TNM 107
—2, III MTWF, TNM 115
—3, V MTWF, TNM 107
3 **Communication** (4 cr, §Engl C or 3A or 3B; prereq 2)
—1, I MTWF, TNM 114
—2, II MTWF, TNM 114
—3, III MTWF, TNM 114
—4, IV MTWF, TNM 114
—5, V MTWF, TNM 114
—6, VI MTWF, TNM 114

Family Life (FL)

1 **Preparation for Marriage** (3 cr, §1A)
—1, II MWF, JohH 306, Torbett
—2, II MWF, JohH 106, Mandell
—3, II TTh, III Th, JohH 306, Neubeck
—4, IV MWF, TNM 115, M Hansen
—5, IV MWF, JohH 306, G Hansen
—6, V MWF, JohH 106, Sudia
1A **Preparation for Marriage** (3 cr, §1; prereq up div or married students)
—1, V MWF, TNM 115, M Hansen
—2, II TTh, III Th, JohH 307, Torbett

15 **The Home, Its Furnishing** (3 cr but cr added to SLA grad req)
II MWF, JohH 205, Ludwig

20 **Consumer Education** (3 cr but cr added to SLA grad req)
II MWF, C 215, Maynes

25 **Child Development, Adjustment** (3 cr, §CD 40 or 80, not open to NKP or psy maj)
III MWF, JohH 205, Grams

Humanities (Hum)

1 **Modern World I** (5 cr)
—1, I MTWThF, JohH 114, Ramsland
—2, II MTWThF, JohH 122, Siegelman
—3, III MTWThF, FolH 9, Wood
—4, IV MTWThF, FraH B1, Altholz
—5, VI MTWThF, JohH 113, J Wright

2 **Modern World II** (5 cr; prereq 1)
—1, III MTWThF, P 218, Ramsland
—2, IV MTWThF, JohH 122, J Wright
—3, V MTWThF, JohH 114, Kliger
—4, VII MTWThF, JohH 114, Ames

2A **Romanticism, Industrial Revolution** (3 cr; prereq 1A)
III MWF, McNH 201 (StP Campus), Ludwig

3 **Modern World III** (5 cr; prereq 2)
—1, III MTWThF, JohH 113, Kwiat
—2, IV MTWThF, JohH 113, Siegelman
—3, V MTWThF, JohH 122, Bryan
—4, VII MTWThF, JohH 113, W Wright

3A **Science, Humanism** (3 cr; prereq 1A)
—1, I MWF, DI 15 (StP Campus), Drake
—2, II MWF, Hr 302 (StP Campus), Ludwig
—3, 1:30-2:50 TTh, McNH 227 (StP Campus), Drake

4 **Modern World IV** (5 cr; prereq 1 or 2 or 3)
V MTWThF, JohH 115, Vogelbaum

13 **Renaissance, Reformation** (5 cr)
II MTWThF, JohH 313, Swanson

23 **American Life III** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
—1, II MWF, FolH 6, Kwiat
—2, III MWF, FolH 6, Weber
—3, IV MWF, FolH 6, Beck
—4, VI MWF, FolH 6, Rutman

24 **American Humanities** (3 cr; prereq 1A)
VI MWF, McNH 48 (StP Campus), Carr

53 **Modern World** (5 cr, §3)
—1, II MTWThF, JohH 115, Blum
—2, III-IV TTh, JohH 114, 1 hr ar, Ross
—3, IV MTWThF, FolH 204, Frank

54 **Modern World** (5 cr, §4)
—1, III-IV TTh, WeH 202, 1 hr ar
—2, VI MTWThF, JohH 122, Amberg

63 **European Heritage** (5 cr, §13)
—1, II MTWThF, JohH 113, Vogelbaum
—2, III-IV TTh, JohH 115, 1 hr ar, Ames

73 **Humanities in the United States** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
VII MWF, FolH 6, Levenson

133 **Proseminar** (3 cr; prereq 132)
VII-VIII T, JohH 105

Natural Science (NSci)

3 **Orientation** (5 cr; prereq 2)
III MTWThF, Ph 166, Graubard, lab ar

6 **Physical World** (4 cr, §Geol 1 or 8; prereq 5)
Lect VII MWF, P 210, Thiel
—1, Lab I-II T, P 22
—2, Lab III-IV F, P 22
—3, Lab V-VI F, P 22

173 Development of Sciences (3 cr; prereq 1 yr of HS biol, 1 yr of HS phys sci or ‡)
IV MWF, Ph 236a, Graubard

Personal Orientation (PO)

1 **How to Study** (2 cr but cr added to SLA grad req)
—1, I MWF, JohH 307, Carlson
—2, II MWF, JohH 307, Wark
—3, V MWF, JohH 307, Wark
—4, VI MWF, JohH 307, Carlson

11 **Choosing a Vocation** (2 cr but cr added to SLA grad req)
III MWF, JohH 307, Hewer

Social Science (SSci)

1 **Introduction** (4 cr)
—1, II MWThF, JohH 114, Krueger
—2, IV MWThF, ForH 15, Brotz
—3, V MWThF, JohH 113
—4, VI MWThF, JohH 114

2 **Introduction** (4 cr; prereq 1)
—1, II MWThF, ForH 85, Engelbourg
—2, III MWThF, FraH B1, Merrill
—3, VII MWThF, JohH 122

3 **Introduction** (4 cr; prereq 2)
—1, I MWThF, JohH 113, Engelbourg
—2, II MWThF, ForH 20
—3, II-III TTh, JohH 205, Kanun
—4, IV MWThF, JohH 205, Roshwald
—5, VI MWThF, JohH 115

53 **Introduction** (4 cr, §3)
IV MWF, JohH 115, 1 hr ar, Cooperman

JOURNALISM (Jour)

13 **Introd to Journalistic Writing** (4 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3, typ 35 words/min or BA 32 or 33)
I-II MWF, IV T, MurH 212, Hvistendahl

14 **Newspaper Reporting for Majors** (3 cr; prereq 13 with grade C or ‡, ¶Comp 27 or 28, typ 35 words/min or ¶BA 33)
I-III TTh, MurH 212

15 **Newspaper Reporting for Majors** (3 cr; prereq 14 with grade C or ‡, ¶Comp 27 or 28)
—1, I-II TTh, MurH 210, 1 hr ar, Hage
—2, VI-VII TTh, MurH 212, 1 hr ar, Charnley

18 **Prin Advertising** (3 cr; prereq 13, C avg, ¶Comp 27 or 28)
I MWF, MurH 302, Winter

41 **Publications Editing** (3 cr; prereq soph, 11 or 13)
Lect IV M, MurH 308, Sim
—1, I-II TTh, MurH 206
—2, IV-V WF, MurH 206

51 **News Editing** (3 cr; prereq 15 or B avg in 13, 14)
Lect III T, MurH 302, Carter
Lab VIII-IX MW, MurH 206

54 **Advertising Layout, Typography** (3 cr; prereq jour adv maj or min in Educ or BA or AFHE or ‡)
Lect III T, MurH 308, Wilson
—1, III-IV MW, MurH 315, 320, Wilson
—2, I-II TTh, MurH 315, 320

58 **Newspaper, Periodical Design, Typography** (3 cr; prereq 55, ‡)
VI-VII TTh, MurH 315, 320, Wilson

65 Graphic Arts: Processes (3 cr)
8:30-10:00 TTh, MurH 308, Wilson

66 **News, Feature Photography** (3 cr; prereq 12, 13 or ‡)
VI-VIII TTh, MurH 20

69 **Business News, Feature Writing** (3 cr; prereq 41)
—1, II TTh, MurH 302, 1 hr ar, Kildow
—2, VII MWF, MurH 212

79 **Advertising Copy Writing** (3 cr; prereq 41 or 51, 54, 65)
IV MWF, MurH 212, Winter

82 Supervision of School Publications (3 cr; prereq 41 or 51)
VI MWF, MurH 308, Kildow

90 Mass Communications, News (3 cr; prereq non-jour maj)
III MWF, MurH 308, Charnley

95 Newspaper Mgt (3 cr; prereq 41 or 51)
8:30-10:00 TTh, MurH 311, Sim

101 **Reporting Public Affairs** (3 cr; prereq sr, 51)
III MWF, MurH 311, Hage

103 Literary Aspects (3 cr; prereq ‡)
VII MWF, MurH 311, Hage

113 Mass Communication Theory (3 cr; prereq jour maj or ‡)
II MWF, MurH 311, Nixon

115 Communications Analysis: Content, Audiences, Effects (3 cr; prereq BA 5 or Soc 45 or Psy 70 or ‡...Psy 167 rec)
II TTh, MurH 420, 1 hr ar, Jones

118 Adv Projects (1-3 cr; prereq sr, jour maj, B avg, ‡) Nixon

122 **Current Communications Probs** (3 cr; prereq sr, 51)
VI-VII T, MurH 302, 1 hr ar, Gerald

126 Communications in Authorian Society (3 cr; prereq 15 cr soc sci...up div course in intl rel or compar govt rec)
VII MWF, MurH 302, Nixon

142 **News Interpretation for Radio, Television** (3 cr; prereq jour maj, 85, 140...or others, ‡)
VI MWF, MurH 302, Lindsay

150 Institutional Public Relations (3 cr; prereq non-jour maj, sr, ‡)
3:30-5:00 MW, MurH 302, Lindsay

163 Advertising Media Analysis (3 cr; prereq sr, 18, 161, 162, ‡...or 161, 162, BA 77 or ‡)
VII MWF, MurH 308, Mindak

164 Current Advertising Developments, Probs (3 cr; prereq 54, 79, 163 or ‡)
III MWF, MurH 302, Mindak

177 Freedom of Press, Communications Law (3 cr; prereq 15 cr soc sci)
IV MWF, MurH 311, Gerald

190 Adv Probs: Journalistic Writing (3 cr; prereq grad, ‡) Charnley

208 Communication Agencies as Social Institutions (3 cr; prereq ‡)
III TTh, MurH 206, Gerald

220 Seminar: Advertising Research (3 cr; prereq 115 or 218 or ‡) Mindak

230 Seminar: Public Opinion, Propaganda (3 cr; prereq 131, cons adv) Carter

292 Probs: Mass Communications (3 cr; prereq ‡)

LIBRARY (Lib)

62 Reference I (3 cr)
6:30-9:00 W, Lib 4A, Wezeman

74 Materials in Classroom (3 cr; prereq school librarians on certif prog)
III MWF, Lib 4A, Zimmerman

83 Cataloguing, Classification (3 cr)
9:00-10:30 TTh, Lib 4A

131 Public Library Extension, Development (3 cr; prereq 55)
10:30-12:00 TTh, Lib 4A, Wezeman

153 History of Books, Printing (3 cr)
9:00-10:30 TTh, Lib 4B, Shove

162 Literature of Natural Sciences (3 cr; prereq 62)
VI MWF, Lib 4A, Shove

175 Publishers, Publishing (3 cr)
III MWF, Lib 4B, Shove

176 Communication Media, Library (3 cr)
6:30-9:00 M, Lib 4A, Berninghausen

259 Probs: Public Librarianship (3 cr; prereq 154)
1:00-3:00 T, Lib 4A, Wezeman

272 Children's, Young People's Work (3 cr; prereq 157)
1:00-3:00 W, Lib 4B, Zimmerman

MATHEMATICS (Math)

X Preparatory Mathematics (no cr; prereq △)
—1, III MTWThF, FolH 110
—2, V MTWThF, FolH 114

H Higher Algebra (3 or 5 cr; prereq 1 yr elem alg)
—1, III MTWThF, Bu 120
—2, V MTWThF, FolH 308
—3, II MTWThF, AgEng 109 **(StP Campus)** (for AFHE students)

T Trigonometry (3 cr; prereq plane geom, H or HS higher alg)
—1, I MWF, FolH 207
—2, I TThS, FolH 109
—3, IV MWF, FolH 102
—4, VI MWF, FolH 2
—5, IV MWF, AgEng 103 **(StP Campus)** (for AFHE students)

5 Foundations of Arithmetic (3 cr; prereq 1 yr elem alg, 1 yr HS geom)
II MWF, FolH 301, Carlson

10 College Algebra (5 cr; prereq plane geom or △, H or HS higher alg)
—1, I MTWThF, FolH 104
—2, V MTWThF, FolH 105
—3, VI MTWThF, FolH 104
—4, III MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

20 Investment (5 cr; prereq 10)
I MTWThF, FolH 102

40 Mathematical Analysis I (5 cr; prereq 10, T or ¶ or HS trig)
—1, I MTWThF, FolH 308
—2, II MTWThF, FolH 109
—3, V MTWThF, FolH 301
—4, VII MTWThF, FolH 109
—5, I MTWThF, FolH 4 (honors section)

40A Mathematical Analysis I (5 cr; prereq pre-acctg students, 10)
I MTWThF, FolH 101

53 Mathematical Analysis II (5 cr; prereq 40)
—1, II MTWThF, FolH 102
—2, III MTWThF, FolH 101
—3, V MTWThF, FolH 104

54 Mathematical Analysis III (5 cr; prereq 53)
—1, I MTWThF, FolH 105
—2, IV MTWThF, FolH 104

55 Interm Calculus (3 cr; prereq 51 or 51A or 54)
—1, III MWF, FolH 301
—2, VII MWF, FolH 104

59 Elem Differential Equations (2 cr; prereq 50A or 51 or 53)
III TTh, FolH 301

60 Synthetic Metric Geometry (3 cr; prereq 40)
II MWF, FolH 101

106 Differential Equations (3 cr; prereq 52 or 55)
I MWF, FolH 109

108 Adv Calculus (3 cr; prereq 107)
V MWF, FolH 101, Storvick

109 Theory of Numbers (3 cr; prereq 51 or 51A or 54)
I MWF, FolH 301, Carlson

111B Development of Number System (3 cr; prereq 111A)
VII TTh, FolH 102, 1 hr ar, Bzoch

112C Mathematical Logic (3 cr; prereq 112B)
IV MWF, FolH 4, Orey

123 Theory of Statistics (3 cr; prereq 122)
IV MWF, FolH 101, Gelbaum

125B Critical Reasoning in Mathematical Analysis (3 cr; prereq 125A)
III MWF, FolH 105, Olmsted

129 Mathematics of Social, Biological Sciences (3 cr; prereq 128)
VI MWF, FolH 102, Kalisch

131B Adv Algebraic Theory (3 cr; prereq 131A)
VII MWF, FolH 101, Gil de Lamadrid

159 Methods of Applied Mathematics (3 cr; prereq 158)
II TThS, FolH 101, Spitzer

172 Modern Algebra (3 cr; prereq 171)
VI MWF, FolH 109, Jonsson

178C Introd to Probability (3 cr; prereq 178B)
11:30-12:45 TTh, FolH 101, Orey

181B Topology of Cartesian Plane (3 cr; prereq 181A)
II TTh, FolH 4, 1 hr ar, Slye

187A Finite Planes, Orthogonal Latin Squares (3 cr; prereq 100B or 131A or ♯)
9:30-11:00 TTh, FolH 104, Parker

205 Adv Topics: Mathematical Statistics (3 cr; prereq 204)
1:30-3:00 TTh, FolH 101, Spitzer

208 Theory of Functions of Real, Complex Variables (3 cr; prereq 207)
II MWF, FolH 105, Gelbaum

245 Lebesgue Integrals (4 cr; prereq 207)
VII MTThF, FolH 105, Cameron

252C Linear Spaces, Operator Theory (3 cr; prereq 252B)
VII MWF, FolH 102, Kalisch

260 Theory of Probability (3 cr; prereq 259)
III TTh, FolH 4, 1 hr ar, Knight

293C Seminar: Stochastic Processes (2 or 3 cr; prereq 293B) Spitzer

MUSIC (Mus)

A Piano (no cr)
Ar, ScH 107, Weiser, Freed, Hunter, Lillestol

D Voice (no cr)
Ar, ScH 107, Schuessler, Knowles, Oja

1 Fundamentals (2 cr; prereq non-mus maj)
—1, I MTWTh, NMA 4, Oja
—2, II MTWTh, ScH 4, Oja
—3, V MTWTh, ScH 4, Oja
—4, VIII-IX TTh, NH 45, Fitzsimmons

2T Theory (3 cr; prereq 1T)
V MTWThF, ScH 3, Collins

3T **Theory** (3 cr; prereq 2T)
—1, I MTWThF, ScH 3, Barry
—2, III MTWThF, ScH 3, Barry
—3, VI MTWThF, ScH 3, Argento
—4, VII MTWThF, ScH 3, Barry

5T **Theory** (4 cr; prereq 4T)
V MTWThF, ScH 103, Argento

6T **Theory** (4 cr; prereq 5T)
—1, II MTWThF, ScH 103, Malcolm
—2, III MTWThF, ScH 103, Malcolm
—3, VI MTWThF, ScH 103, Malcolm

7C **Ear Training** (2 cr; prereq 7B)
I TWThF, ScH 103, Malcolm

11 Piano (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, Weiser, Freed, Hunter, Lillestol

11C **Piano: Class Lessons** (2 cr; prereq 11B)
Mu Hr IV T, ScH 108
—1, III MWF, MusEd 103, Duckworth (2-3 years piano training)
—2, V MWF, MusEd 103, Duckworth (no piano training)
—3, VI MWF, MusEd 103, Duckworth (1-2 yrs piano training)

12 Voice (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Schuessler, Knowles, Oja

12C **Voice: Class Lessons** (2 cr)
Mu Hr IV T, ScH 108
—1, V MWF, MusEd 104, Knowles
—2, VI MWF, MusEd 104, Knowles
—3, VII MWF, MusEd 104, Knowles
—4, IV MWF, MusEd 4, Abelson

13 Violin (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Druian, Fitzsimmons

14 Viola (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitzsimmons

15 Cello (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Jamieson

16 Double Bass (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch

17 Flute (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Opava

18 Oboe (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Angelucci

19 Clarinet or Saxophone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch, Handlon, Williams

20 Bassoon (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Santucci

21 Trumpet (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Adelstein

22 French Horn (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Speyer

23 Trombone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Stamm

24 Tuba (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Walton

25 Percussion (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Dahlgren

26 Harp (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Miller

27 Organ (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fleischer

33 Music Literature (2 cr)
II TTh, ScH 108, 1 hr ar, Ivory

36 **History of Music** (2 cr; prereq 35)
I MTWThF, ScH 104, Houle

39 Women's Glee Club (1 cr; prereq ♯)
VI MWF, NMA 4, Barry

42 Orchestra (1 cr; prereq ♯)
7:00 pm W, NMA Stage, sectionals ar, Oberg

43 **Chorus** (1 cr, †3 qtrs; prereq ♯)
—1, IV MWF, NMA 4, 5, 7:30 pm T, NH 45, Collins
—2, VIII MWF, NMA 5, NH 45, 7:30 pm T, NH 45, Collins

45S St Paul Campus Chorus (1 cr; prereq ♯)
4:30 MWF, CofH 225, Abelson

48 Concert Band (1 cr; prereq ♯)
—1, VIII MTTh, NMA 4, 5, Sperry
—2, VIII MWF, NMA 4, Sperry
—3, VIII-IX TThF, NMA 4, 5, Sperry

49 Men's Glee Club (1 cr; prereq ♯)
V MWF, NMA 5, Abelson

52 History of Musical Styles II (2 cr; prereq non-mus maj, 10 or 50)
VII-VIII TTh, ScH 104, Houle

62 Instrumental Ensemble (2 cr)
VII MTWThF, ScH 104, Oberg

68 Chamber Singers (2 cr; prereq ♯)
VII MWF, NMA 5, Collins

76 **Form, Analysis** (3 cr; prereq 6T)
II MWF, ScH 104, Argento

82 Adv Normal Piano (2 cr; prereq 81)
III TTh, MusEd 103, VII-VIII ar, MusEd 2, Duckworth

92 Adv Instrumental Ensemble (2 cr; prereq sr, 62)
VII MTWThF, ScH 104, Oberg

99 Counterpoint (2 cr; prereq 98)
III TTh, ScH 4, Fetler

100 Adv Applied Music (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

106 American Music (2 cr; prereq 105)
III TTh, ScH 104, Riedel

117 Vocal Literature (2 cr; prereq 12 cr in 12 or ♯)
II TTh, ScH 104, Schuessler
123 Adv Harmony (2 cr; prereq 122)
II TTh, ScH 3, Argento
129 Composition (2 cr; prereq 128)
II MW, ScH 2, 1 hr ar, Fetler
132A Music of Romantic Period (3 cr; prereq 39)
VII MWF, ScH 4, Houle
136 History of Church Music (2 cr; prereq 135)
VIII-IX T, ScH 103, Riedel
143 Orchestration (2 cr; prereq 142)
I TTh, ScH 4, Argento
149 Opera Workshop (2 cr)
6:00-8:00 pm M, 3:30-5:00 Th, ScH 4, Knowles
152 Musicology (3 cr; prereq 151)
I MWF, ScH 2, Riedel
156 Middle Ages, Renaissance (2 cr; prereq 155)
VII TTh, ScH 2, Riedel
177 Analysis of Contemporary Music (3 cr; prereq 6T)
IV MWF, ScH 103, Fetler
204 Applied Music (3 cr, †3 qtrs; prereq entr exam)
Ar, ScH 107
212 Problems (3-9 cr; prereq 110)
VIII W, ScH 2, Riedel, others
229 Seminar: Composition, Orchestration (3 cr; prereq 228)
VI MW, ScH 2, 1 hr ar, Fetler

PHILOSOPHY (Phil)

1 **Probs of Philosophy** (5 cr, §1A; prereq 3rd qtr fr)
Lect II MWF, WeH 202, Garver
—1, I TTh, JohH 105, Garver
—2, II TTh, JohH 105, Garver
Lect IV MWF, WeH 202, Luce
—3, III TTh, JohH 106, Luce
—4, IV TTh, JohH 106, Luce
1A **Probs of Philosophy** (3 cr, §1; prereq 2A or ♯)
VI MWF, JohH 205, Luce
2 **Logic** (5 cr, §2A)
Lect I MWF, ChE 240, Maxwell
—1, I TTh, JohH 313, Maxwell
—2, II TTh, JohH 106, Maxwell
—3, III TTh, JohH 313, Maxwell
Lect III MWF, FraH 102, Garver
—4, II TTh, FraH B1, Garver
—5, III TTh, JohH 105, Garver
—6, IV TTh, JohH 313, Garver
3 **Ethics** (5 cr; prereq 3rd qtr fr)
Lect III MWF, JohH 122, Luce
—1, III TTh, JohH 122, Luce
—2, II TTh, WeH 202, Luce
11 **World Religions** (5 cr)
I MTWThF, Bu 120, Mason
40 Logic of Scientific Reasoning (3 cr; prereq 2)
IV MWF, JohH 114, Maxwell
52 **History of Western Philosophy** (5 cr)
II MTWThF, MMA 100, Donagan
113 Plato (3 cr; prereq 112)
VI MWF, JohH 306, Allen
134 Kant (3 cr; prereq 52 or ♯)
IV MWF, JohH 106, Mason
138 Contemporary Existentialism (3 cr; prereq 52 or 137 or ♯)
III MWF, JohH 306, Mason
140 Contemporary Philosophy (3 cr; prereq 52 or ♯)
VI MWF, JohH 105, Raab
150 Ethical Theory (3 cr; prereq 3 or ♯)
III MWF, JohH 106, Raab
160 Philosophy of Science (4 cr; prereq 2 or ♯)
II MTWF, Psy 115, Feigl
182 Philosophy of Religion (3 cr; prereq 6 cr)
III MWF, WeH 202, Holmer
192 **Seminar** (3 cr; prereq 9 cr or ♯)
—1, Ar, Garver, Steinmann
—2, Ar, Ross
—3, Ar, Heschel
232 Adv History of Philosophy (3 cr)
III MWF, JohH 115, Donagan
262 Seminar: Metaphysics (3 cr; prereq 157 or ♯) Brodbeck
351 Research: History of Philosophy (ar cr; prereq ♯) Holmer

POLITICAL SCIENCE (Pol)

B **State in Modern World** (3 cr, †A-B; prereq A)
II MWF, P 110, Chase
C State in Modern World (3 cr; prereq B or ¶)
III MWF, ForH 55, Holt
2 **American Govt, Politics** (3 cr, †1-2, §5; prereq 1)
II MWF, ChE 240, Backstrom
3 American Govt, Politics (3 cr; prereq 2)
IV MWF, FraH 102, Christensen
5 American Govt, Politics (5 cr, §1-2)
VI MTWThF, FraH 102, Hathaway
25 World Politics (3 cr)
VI MWF, Bo B6, Rogers
27 Analysis of Intl Relations (3 cr; prereq 25 or 26 or ♯)
VI MWF, ME 110, Holt
103 American Constitution III (3 cr; prereq 101 or 102)
10:30-12:00 TTh, ForH 180, Chase
119A Rural Local Govt (2 cr; prereq 2 or 5 or ♯)
11:00-12:00 MWF, DI 118 (StP Campus), Backstrom
122 Municipal Probs (3 cr; prereq 121 or ♯) Peterson
127 Govt, Economic Order II (3 cr; prereq 2 or 5 or ♯)
10:30-12:00 TTh, ForH 120, Warp
133 Public Admin (3 cr; prereq 131 or ♯)
II MWF, ForH 160, Short

138 American Political Campaigns, Elections (3 cr; prereq 2 or 5 or ‡)
VII MWF, ForH 150, Backstrom
143 Govt of USSR, Adjacent States (3 cr; prereq B or 12 cr soc sci or ‡)
VI MWF, ForH 155, Turner
157 Topics: Latin-American Govt (3 cr; prereq 155 or 156 or ‡)
II MWF, ForH 346, Bonn
159 Comparative Govt Systems: Principles, Probs (3 cr; prereq 158)
1:30-3:00 TTh, ForH 75, Holt
162 Recent Political Thought (3 cr; prereq B or 9 cr soc sci or ‡)
IV MWF, ForH 155, Cooperman
163 Political Theory, Utopia (3 cr; prereq B or 9 cr soc sci or ‡)
10:30-12:00 TTh, ForH 160, Swanson
166 Development of Political Thought: Early Modern (3 cr; prereq B or 9 cr soc sci or ‡)
I MWF, ForH 20, Roshwald
169 Political Behavior (3 cr; prereq 168)
1:30-3:00 TTh, ForH 185, Hoffmann
177 Conduct of US Foreign Relations (3 cr, †176-177; prereq 176)
1:30-3:00 TTh, ForH 180, Wilson
182 Intl Law: Pacific Relations (3 cr; prereq 181)
8:30-10:00 TTh, ForH 185, Baird
186 Intl Relations, Organization III (3 cr)
I MWF, ForH 180, Levi
196 Proseminar: East, South Asia (3 cr, §Anth 196, Geog 196; prereq sr)
3:30-5:00 F, ForH 346, Turner, Levi
206 Seminar: Administrative Law (3 cr; prereq 205)
VI-VII W, ForH 244, Chase
212 Seminar: Public Admin (3 cr, †210-211-212; prereq 211)
3:30-5:00 TTh, Lib 13, Short
213 Probs: Contemporary Latin American Govt, Politics (3 cr; prereq 155 or 156 or ‡)
II MWF, ForH 346, Bonn
218 Seminar: Comparative European Govt (3 cr; prereq 217)
VIII-IX W, ForH 75, Turner
227 Readings: Classics of Politics (3 cr; prereq 226)
VIII-IX T, ForH 75
240 Intl Constitutional Law (3 cr; prereq 181 or ‡)
VI-VII F, ForH 75, Takeuchi
247 Seminar: East Asian Govt, Int'l Relations (3 cr; prereq 246)
IV-V M, ForH 346, Levi

PSYCHOLOGY (Psy)

1-2 Gen Psychology (6 cr; prereq soph or 3rd qtr fr with B avg)
VI MTWThF, 2:30-3:00 TTh, MNH Aud, Senders
2 Gen Psychology (3 cr, †1-2; prereq 1)
VII MWF, NH 45, Dunnette
4-5 **Lab Psychology** (4 cr; prereq 2 or ¶1-2)
Lect IV MW, Ph 170, Russell
—1, Lab V-VI MW, Psy 211, Russell, others
—2, Lab VII-VIII MW, Psy 211
—3, Lab IX-X TTh, Psy 211
5 **Lab Psychology** (2 cr, †4-5; prereq 4)
Lect I T, Bo B6, Russell
—1, Lab II-III T, Psy 211, Russell, others
—2, Lab V-VI T, Psy 211
—3, Lab VII-VIII T, Psy 211
—4, Lab I-II Th, Psy 211
—5, Lab III-IV F, Psy 211
6 **Lab Psychology** (2 cr; prereq 5)
Lect VII T, Bo B6, Russell
—1, Lab I-II W, Psy 211, Russell, others
—2, Lab III-IV Th, Psy 211
—3, Lab VII-VIII Th, Psy 211
10 Applications of Psychology (3 cr; prereq soph, 2)
I MWF, ForH 55, Volsky, Hewer
55 **Sensation, Perception** (3 cr; prereq 2)
11:00-12:30 MW, Psy 211, Senders
70 Psychological Measurement (3 cr; prereq 5)
VI MWF, Ph 170, Clark
117 Analysis of Behavior (3 cr, §old 165; prereq 2, course above 50)
12:30-1:45 TTh, WuH 202, MacCorquodale
130 **Vocational, Occupational Psychology** (3 cr; prereq 5 or 5 cr in stat)
Lect III TTh, Bu 211, Paterson, others
—1, Lab V-VI F, Psy 211
—2, Lab VII-VIII F, Psy 211
137 Occupational Counseling (2 cr; prereq sr, 130)
VIII-IX M, Psy 115, Lofquist
141 Social Psychology of Small Groups (3 cr; prereq 5, 9 cr soc sci)
1:30-2:45 TTh, Ph 170, Willerman
145 Abnormal Psychology (3 cr, †144-145; prereq 144)
10:50-12:10 TTh, FraH 102, Lindzey
148 **Physiological Psychology** (3 cr; prereq 5 or Zool 3 or ‡)
II MW, ForH 120, Heistad
155 Industrial Psychology (3 cr; prereq 2, Math 10 or 10 cr in stat)
V MWF, Ph 166, Dunnette
173 Clinical Psychology (3 cr; prereq 172)
VI MWF, P 110, Meehl, others
190 Project (ar cr; prereq sr, ‡)
202 **Systematic Psychology** (3 cr; prereq 201)
VIII-IX Th, Psy 155, Russell, Kelley
212 Research Probs (ar cr)
217 **Seminar: Areas of Psychology, Related Sciences** (ar cr)
—1, Ar, Neubeck
—2, Ar, Jenkins
—3, Ar, Hafner
—4, Ar, Dunnette
220 **Psychology of Personality** (3 cr; prereq 219)
Rosen

229 Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 228)
IX-X alt F, Psy 109, Lofquist
232 Field Work: Psychometric, Applied Psychology (ar cr; prereq written cons)
237 Clinical Practice in Counseling (1-3 cr; prereq cons adv, ‡) Berdie
242 Seminar; Student Personnel Work (1 cr; prereq ‡) Williamson
243 Experimental Psychodynamics (3 cr; prereq 145, 129 or 165 or ‡)
VI MWF, Psy 115, Russell
244 Experimental Psychodynamics (3 cr; prereq 243) Russell
246 **Psycho-Analytic Theory** (3 cr; prereq 145, 172)
1:00-3:30 T, Psy 109, Lindzey
252 Adv Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 251)
IX-X alt F, Psy 109, Lofquist
259 Methods of Research in Group Behavior (3 cr, †257-258-259; prereq 258)
267 Seminar: Adv Clinical Psychology (1 cr; prereq 266) Hathaway
270 Adv Psychological Measurement (3 cr)
VI MWF, Ph 170, Clark
274 Pre-Clinical Practicum: Clinical Psychology (2 cr; prereq clin psy maj, 172, 291 or ¶291) Schofield
277 Seminar: Student Personnel Work (1 cr; prereq 276) Volsky
297 Seminar: Individual Differences, Applied Psychology (1 cr; prereq written ‡)
VIII-IX alt W, Psy 109, Paterson

ROMANCE LANGUAGES

French (Fren)

2C **Bgn French: Standard** (5 cr, §2A or 2B; prereq 1C)
—1, I MTWThF, FolH 226, Blodgett
—2, I MTWThF, Fol 6, Green
—3, II MTWThF, FolH 8, Romaniak
—4, III MTWThF, FolH 8, Romaniak
3A **Bgn French: Conversational** (5 cr, §3B or 3C; prereq 2A)
Dem III MTWThF, FolH 201, Renaud
—1, Lab I MTWThF, FolH 108, Lynch
—2, Lab II MTWThF, FolH 108, Green
3B **Bgn French: Language, Culture** (5 cr, §3A or 3C; prereq 2B)
—1, I MWF, FolH 8, Burks, I TTh, FolH 203, Kalb
—2, II MWF, FolH 2, Bieter, II TTh, FolH 2, Erickson
—3, III MWF, FolH 226, Falk, III TTh, FolH 108, Lampert
—4, III MWF, FolH 226, Falk, IV TTh, FolH 304, Lampert
—5, IV MTWThF, FolH 201, Christianson
3C **Bgn French: Standard** (5 cr, §3A or 3B; prereq 2C)
—1, II MTWThF, FolH 226, Vartanian
—2, V MTWThF, FolH 201, Gale
—3, VI MTWThF, FolH 201, Gale
4 **Interm French** (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Fren)
IV MTWThF, FolH 2, Burks
20 Literary Texts (3 cr; prereq 4)
III MWF, FolH 203, Blinoff
52 **Reading French: Bgn Course for Juniors, Seniors** (3 cr; prereq 51)
V MWF, FolH 303, Burks
53 Diction (1-2 cr; prereq 3A or 3B or 3C or 4, Fren play cand)
54 **Conversation, Pronunciation** (3 cr; prereq 4)
—1, IV MTThF, FolH 103, Sullivan
—2, V MTThF, FolH 103, Christianson
—3, VI MTThF, FolH 103, Sullivan
56 History of Language (3 cr; prereq 20)
VII MWF, FolH 302, Brackney
62 Civilization, Culture (4 cr; prereq 61)
II MTWThF, FolH 202, Blinoff
67 Survey of Literature (3 cr; prereq 4)
VI MWF, FolH 4, Brackney
72 17th Century Literature (2 cr, §65; prereq 20)
IV TTh, FolH 203, Renaud
82 18th Century Literature (2 cr, §66; prereq 20)
III TTh, FolH 203, Vartanian
92 19th Century Literature (2 cr, §67; prereq 20)
IV MF, FolH 203, Falk
105 Syntax, Composition (2 cr; prereq 104)
III TTh, FolH 302, Sullivan
126 Classical Drama: Racine (3 cr; prereq sr with ‡)
VII T, VII-VIII Th, FolH 203, Renaud
137 20th Century Literature (2 cr)
VII MF, FolH 202, Blinoff
154 19th Century Novel: Stendhal (3 cr; prereq sr with ‡)
VI MWF, FolH 203, Vartanian
177 Main Trends in Literary Criticism (2 cr; prereq sr with ‡)
VII-VIII W, FolH 208, Falk
206 Readings: Old Literature (2 cr; prereq 205)
VIII-IX T, FolH 302, Brackney
232 Research Methods, Materials (1 cr; prereq 231)
IV T, FolH 302, Grismer
261 Readings (ar cr; prereq 260)

Italian (Ital)

3 **Bgn Italian** (5 cr; prereq 2)
IV MTWThF, FolH 108, Nissen
74 Petrarch (3 cr; prereq 3 or 4...or 2 or 5, ‡)
III MWF, FolH 302, Nissen
164 Dante in English (3 cr; prereq ‡)
II MWF, FolH 302, Nissen
174 Petrarch (3 cr; prereq grad, 1 course above 50)
III MWF, FolH 302, Nissen

Portuguese (Port)

3 Interm Portuguese (3 cr; prereq 2)
II MWF, FolH 304, Floripe

Spanish (Span)

2C **Bgn Spanish: Standard** (5 cr, §2A or 2B; prereq 1C)
—1, IV MTWThF, FolH 11
—2, IV MTWThF, FolH 105, Estelle
—3, VI MTWThF, FolH 8, Lillo

3A **Bgn Spanish: Conversational** (5 cr, §3B or 3C; prereq 2A)
Dem II MTWThF, FolH 201, Cuneo
—1, Lab I MTWThF, FolH 201, Adams
—2, Lab I MTWThF, FolH 208, Shamblin

3C **Bgn Spanish: Standard** (5 cr, §3A or 3B; prereq 2C)
—1, I MTWThF, FolH 202, Estelle
—2, III MTWThF, FolH 213, Lillo
—3, IV MTWThF, FolH 202, Pattison
—4, V MTWThF, FolH 8, Liebberman

20 Interm Grammar, Composition (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span
III MTWThF, FolH 102, Rundorff

21 Spanish, Spanish-American Literature, Culture (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
II MTWThF, FolH 10, Rundorff

52 Pronunciation, Diction (1-2 cr; prereq 3A or 3B or 3C, Span play cand or ‡)

55 **Composition, Conversation** (3 cr; prereq 54)
—1, IV MWF, FolH 10, Shamblin
—2, V MWF, FolH 108, Adams

56 Phonetics, Diction (3 cr; prereq 3A or 3B or 3C)
IV TTh, FolH 303, 1 hr ar, Cuneo

67 Spanish Literature: The Modern Period (3 cr, §68, 69; prereq soph, 21)
VII MWF, FolH 201, Grismer

69 Spanish Literature: 19th Century to Present (5 cr, §65, 66, 67; prereq soph, 21)
VI MTWThF, FolH 202, Floripe

72 Latin-American Civilization, Culture (3 cr; prereq 20 or 21 or ‡)
III MWF, FolH 202, Cuneo

76 Literature of Spanish America (3 cr; prereq 75)
II MWF, FolH 203, Irving

79 Latin-American Thought: 1850-1957 (2 cr; prereq jr or ‡, 6 qtrs)
III TTh, FolH 202, Cuneo

105 Syntax, Composition (1 cr; prereq 104)
V T, FolH 203, Pattison

117 17th Century Literature: Poetry (3 cr; prereq 65, 66, 67 or 68, 69)
VIII-IX Th, FolH 304, Grismer

163 Hispano-Arabic Culture (2 cr; prereq 162)
VIII-IX T, FolH 203, Irving

173 History of Language (1 cr, †171-172-173; prereq 172)
V Th, FolH 203, Grismer

176 Contemporary Literature: Poetry (3 cr; prereq 65, 66, 67 or 68, 69)
VI MWF, FolH 302, Pattison

232 Research Methods, Materials (1 cr; prereq 231)
IV T, FolH 302, Grismer

243 Old Philology (2 cr; prereq 242)
VIII-IX M, FolH 203, Grismer

255 Seminar: Latin-American Literature (2 cr; prereq 254)
VIII-IX W, FolH 203, Irving

261 Readings (ar cr; prereq 260)

SCANDINAVIAN (Scan)

3 Interm Norwegian (5 cr; prereq 2)
II MTWThF, FolH 5, Nelson

6 Adv Norwegian (3 cr; prereq 5)
III TTh and ar, FolH 12, Nelson

9 Interm Swedish (5 cr; prereq 8)
II MTWThF, FolH 12, Lorenzen

12 Adv Swedish (3 cr; prereq 11)
III MWF, FolH 12, Lorenzen

23 Scandinavian Life Today, Yesterday (3 cr; prereq 22)
VII MWF, FolH 12

61 Norwegian Conversation (3 cr; prereq 3) Nelson

71 Swedish Conversation (3 cr; prereq 9) Lorenzen

162 Contemporary Novel (3 cr; prereq 6 or 12 or 8 cr lit)
V MWF, FolH 12, Gustafson

173 Contemporary Theater (3 cr; prereq 6 or 12 or 8 cr lit)
IV MWF, FolH 12, Gustafson

193 Readings (3 cr; prereq 6 or 12) Gustafson, Nelson

197 Old Norse: Language, Literature (3 cr, †195-196-197; prereq 196)
7:00-9:00 pm T, FolH 103, Bjarnar

223 Dramatic Interpretative Problems in Strindberg (3 cr; prereq 222)
I-II M, FolH 13, Gustafson

SLAVIC AND ORIENTAL LANGUAGES

Chinese (Chin)

3 Bgn Chinese (5 cr; prereq 2)
VI MTWThF, FolH 305½, Mather

53 Interm Chinese (3 cr; prereq 52)
II MWF, ForH 75, Gong

58 Composition (2 cr; prereq 57)
II TTh, FolH 103, Gong

103 Adv Chinese (3 cr; prereq 102)
III MW, Lib 338, Gong

163 Readings (1-3 cr; prereq 162) Mather

Japanese (Jap)

3 Bgn Japanese (5 cr; prereq 2)
III MTWThF, FolH 304, Copeland
53 Interm Japanese (3 cr; prereq 52)
II MWF, FolH 305½, Copeland
58 Composition (2 cr; prereq 57)
II TTh, FolH 302, Copeland
103 Adv Japanese (3 cr; prereq 102)
IV MWF, FolH 305½, Copeland
163 Readings (1-3 cr; prereq 162) Copeland

Oriental (Ortl)

75 Asian Civilization: India (3 cr; prereq soph with ‡)
III MWF, ForH 75, Stein

Russian (Russ)

3 **Bgn Russian** (5 cr; prereq 2)
—1, III MTWThF, FolH 11, Nice
—2, VI MTWThF, FolH 11, Niemi
—3, I MTWThF, FolH 11, Alexeev
—4, VII MTWThF, FolH 11, Donchenko
53 Interm Russian (3 cr; prereq 52)
II MWF, FolH 11, Nice
58 Conversation (3 cr; prereq 57) Alexeev
63 Composition (2 cr; prereq 62)
III TTh, FolH 305½, Alexeev
73 Readings in Literature (3 cr; prereq 72)
III MWF, FolH 305½, Niemi
103 Literature in Translation (3 cr; prereq 102)
V MWF, FolH 304, Niemi

Semitic (Sem)

52 Modern Spoken Arabic (3 cr; prereq 51)
I MWF, V MTWThF, FolH 302, Irving

SOCIAL WORK (SW)

203 Topics (ar cr; prereq ‡)
208 Readings (ar cr; prereq ‡)
212 Field Instruction (ar cr; prereq 211, ¶265 or ¶275)
217 Field Instruction (ar cr; prereq 216)
227 Social Policy, Programs III (2 cr; prereq 226)
III TTh, ForH 115, Oren
242 Seminar: Social Work Education (ar cr; prereq MSW degree)
VI-VII T, ForH 467, Boehm
250 Concepts of Human Growth, Behavior in Practice III (3 cr; prereq 249, ¶212 or ‡)
VIII-IX TTh, ForH 115, Lewis, Hall, Saloshin
253 Concepts of Human Growth, Behavior in Practice VI (2 cr; prereq ¶217, 250)
IX-X Th, ForH 130, Lippman
260 Prin Administration (3 cr)
8:00-9:30 TTh, ForH 115, Kidneigh
267 **Social Casework III** (2 cr; prereq ¶212, 265)
—1, II TTh, ForH 175, Whitmore
—2, IV TTh, ForH 175, Whitmore
270 **Social Casework VI** (2 cr; prereq ¶216, 267)
—1, II-III T, ForH 467, Scott
—2, II-III T, ForH 447, Boehm
271 Community Organization (2 cr)
I TTh, ForH 130, Francel
275 Social Group Work (3 cr)
IV-V TTh, ForH 115, Pernell
277 Social Group Work III (2 cr; prereq ¶212, 276)
IV-V T, ForH 467, Saloshin
280 Social Group Work VI (2 cr; prereq 279)
IV-V T, ForH 447, Konopka
281B Use of Program in Groups I (1 cr; prereq 281A)
II T, ForH 346, Pernell
285 Special Studies (ar cr)
VI-VII T, ForH 130, Francel
290 Seminar: Recent Research (ar cr)
II-III M, ForH 467, Scott
300 Seminar: Social Work (ar cr; prereq MSW degree)
3:00-5:00 Th, ForH 467, Kidneigh

SOCIOLOGY (Soc)

1 **Introduction: Man in Modern Society** (3 cr)
—1, II MWF, NH 45, Sirjamaki
—2, VII MWF, Bo B6, Brotz
1A Man in Modern Society (3 cr; prereq regis AFHE)
II MWF, McNH 227, Taylor
2 **American Community** (3 cr; prereq 1 or 1A or 3)
I MWF, FraH 102, Martindale
3 **Social Probs** (3 cr)
—1, II MWF, ScH 108, Johnson
—2, VII MWF, FraH 101, Johnson
—3, V MWF, ForH 130, Forster (honors section)
14 Rural Sociology (3 cr)
IV MWF, ChE 240, Taylor
45 **Social Statistics** (5 cr, §BA 5)
Lect VII MWF, ForH 85, Francis
—1, Lab III-IV TTh, ForH 85, Francis, others
—2, Lab VI-VII TTh, ForH 85, Francis, others
53 **Criminology** (3 cr; prereq 1 or 1A or ‡)
—1, II MWF, ForH 55, Carroll
—2, VII MWF, ForH 130, Vold (honors section)
91 Case Method Applied to Study of Human Probs (3 cr; prereq 50 or cons maj adv)
IV MWF, ForH 120, Cohn
99 Tutorial, Honors Work (3 cr; prereq cons maj adv in soc)
100 Contemporary Penology (3 cr; prereq 1, 53 or ‡)
IV MWF, ForH 185, Vold

117 Scandinavian Folk Movement: Social, Political Significance (3 cr; prereq 1 or ‡)
VI MWF, FolH 12, Thorsen

121 Adv Social Psychology (3 cr; prereq 120 or ‡)
8:30-9:45 TTh, ForH 180, Rose

123 Minority Group Relations (3 cr; prereq 1 or ‡)
III MWF, C 225, Forster

126 **Family Development** (4 cr; prereq 1, CD 80 or ‡)
VI-VII TTh, ForH 170, Hill

140 Social Organization (3 cr; prereq 1 or ‡)
V MWF, ForH 155, Sirjamaki

141 **The Family** (3 cr; prereq 1 or ‡)
Lect IV TTh, ForH 55, Johnson
—1, V T, ForH 160, Johnson, others
—2, V Th, ForH 160, Johnson, others
—3, VII Th, ForH 160, Johnson, others

144 Social Stratification, Mobility (3 cr; prereq 1 or ‡)
VI MWF, ForH 130, Brotz

151 Comparative Social Organization (3 cr; prereq 20 cr soc or econ or pol or ‡)
I MWF, ForH 175, Forster

161 Rural Community Analysis (3 cr; prereq sr, 1 or ‡)
II MWF, AgEng 105 (**StP Campus**), Taves

162 Rural Social Institutions (3 cr; prereq 1 or ‡)
VI MWF, ForH 115, Taves

172 Backgrounds of Modern Social Thought (3 cr; prereq 1 or ‡)
III MWF, Z 313, Martindale

180 Methods of Social Research (3 cr; prereq 45)
VII MWF, ForH 120, Taves

183 Probs: Social Measurement (3 cr; prereq 45 or 182)
V MWF, ForH 175, Francis

202 Seminar: Research Probs in Crime, Social Conflict (2 cr)
VIII-IX W, ForH 467, Vold

222 Seminar: Social Psychology (2 cr)
VIII-IX T, ForH 467, Rose

225 Seminar: Research Probs of Modern Mass (2 cr)
VIII-IX Th, ForH 346, Brotz

226 Seminar: Family Development Theory (2 cr; prereq ‡)
VI-VII M, ForH 467, Hill

272 Seminar: Social Theory (2 cr)
VI-VII W, ForH 467, Martindale

286 Seminar: Statistical Theory in Relation to Social Theory, Practice (2 cr)
VI-VII F, ForH 467, Monachesi

299 Seminar (ar cr)
V TTh

SPEECH AND THEATER ARTS (Spch)

5 **Fundamental** (5 cr, §old 1-2; prereq soph or fr with △)
—1, I MTWThF; FolH 307
—2, II MTWThF, FolH 307
—3, III MTWThF, FolH 307
—4, IV MTWThF, FolH 307
—5, V MTWThF, FolH 307
—6, VI MTWThF, FolH 10
—7, VII MTWThF, FolH 305

6 **Fundamentals** (3 cr, §old 3; prereq 5)
—1, I MWF, FolH 409
—2, II MWF, FolH 305
—3, III MWF, FolH 409

6A **Voice, Articulation** (3 cr, §old 3A; prereq 5, ‡)
VII MWF, FolH 404, Fletcher

31 **Theater Arts** (4 cr)
II MWF, ShH 115, Ballet

32 **Bgn Acting: Creative Approach** (3 cr; prereq soph, 31)
—1, II MWF, ScH 19, Whiting
—2, VI MWF, ScH 19, Manfull
—3, IV MWF, ScH 19, Rumley

33 **Bgn Acting: Technique** (3 cr; prereq 32)
II MWF, NH 304, Moulton

34 **Stagecraft: Construction, Painting** (3 cr; prereq soph, 31)
I-II MF, I W, ShH 110, Struthers

39 **Parliamentary Procedures** (2 cr; prereq △)
IV MWF, FolH 8, Shapiro

51 **Adv Public Speaking** (3 cr; prereq 5)
—1, II MWF, FolH 306, Shapiro
—2, IV MWF, FolH 306, Ahart

55 **Speech Writing, Platform Speaking** (3 cr; prereq 5 or ‡)
II MWF, FolH 409, Smith

61 **Personal Development Through Speech** (3 cr; prereq 5, Psy 2)
III MWF, FolH 308, Bryngelson

65 **Radio, Television Speech** (3 cr; prereq 5)
—1, II MWF, MurH 302, Bormann
—2, V MWF, MurH 302, Bormann

66 **Radio, Television Drama** (3 cr; prereq 32, 65)
IV MWF, MurH 302, Snook

67 **Phonetics** (3 cr; prereq 5)
I MWF, FolH 306, Fletcher

76 **Play Production in Secondary School** (3 cr; prereq 75 or 112 or ‡)
IV MWF, ScH 110, Lenhoff

79 **Adv Acting** (3 cr; prereq 32)
IV MWF, NH 304, Graham

81 **Interpretative Reading** (3 cr; prereq 5)
III-IV T, III Th, WeH 306, Fredricks

82 **Interpretative Reading** (3 cr; prereq 81)
III MWF, WeH 306, Thompson

83 **Interpretative Reading** (3 cr; prereq 81)
—1, IV MWF, WeH 306, Fredricks
—2, VI MWF, WeH 306, Thompson

92 **Lighting** (3 cr; prereq 5, 31, 34)
III TThS, IV ThS, ShH 110, Adey

103 **Argumentation, Persuasion** (3 cr; prereq 5, Psy 2, 10 cr soc sci)
—1, III MWF, FolH 306, Scott
—2, VI-VII T, VI Th, FolH 306, Howell

106 **Discussion** (3 cr; prereq 5)
VII MWF, FolH 306, Howell, Bormann

109 **Classical Rhetoric** (3 cr; prereq 5, △)
VI MWF, FolH 307, Scott

113 **Stage Direction** (3 cr; prereq sr, 5, 90 or 91 or 92, △)
III MWF, ShH 115, Whiting

117 **Writing Radio, Television Drama** (3 cr; prereq 5, 32 or △)
II MWF, WeH 306, Thompson

132 **Children's Theater** (3 cr; prereq 5, 31 or ‡)
VIII-IX T, VIII Th, ShH 115, Graham

137 **Production of Television Drama** (3 cr; prereq 65, 66, 78, 111, 112, ‡)
VI MWF, ScH 102, Ballet

142 **Physical Bases, Instrumentation of Speech** (3 cr; prereq 67, 140 or ‡, Psy 5)
IV MWF, FolH 409, Fletcher

155 Lip Reading, Lip Reading Methods (3 cr; prereq 152 or ‡)
III MWF, Mayo A675, Lassman

157 Clinical Practice in Audiology (3 cr; prereq 153, 155 or ‡) Lassman

163 Speech Pathology (3 cr, †162-163; prereq 61, 67, 161)
VII MWF, FolH 409, Henrikson

166 Clinical Methods, Practice in Speech Pathology (3 cr, §EdCI 176; prereq 165) Bryngelson, Henrikson, Starr

173 **History of Theater** (3 cr; prereq sr, 5, 31)
VI T, VI-VII Th, NH 304, Graham

183 Readings (ar cr; prereq 5, 6 addtl cr, ‡)

201 Seminar (1 cr; prereq ‡) Smith

213 Seminar: Dramatic Theory (3 cr; prereq 171, 172, 173, 9 cr dram lit) Ballet

216 Seminar: Stage Direction (3 cr; prereq 215) Whiting

223 Seminar: Oral Interpretation of Literature (3 cr; prereq 105, 122) Thompson

243 Seminar: Radio Research (2 cr; prereq ‡) Ziebarth

251 Seminar: Listening Comprehension (2 cr; prereq undergrad maj spch, ‡)
VIII-IX W, AgEng 221 (**StP Campus**), Nichols

263 Seminar: Speech Pathology (3 cr; prereq 122, 163 or ‡) Henrikson, Bryngelson

267 Seminar: Experimental Phonetics (2 cr; prereq 67, 142) Fletcher

273 Seminar: Hearing (3 cr; prereq 272) Lassman

277 Seminar: Rhetoric (3 cr; prereq 109 or ‡) Smith, Scott

283 Seminar: Organic Disorders (2 cr; prereq 261, 162, 263, ‡) Henrikson

293 Research (ar cr)

ZOOLOGY (Zool)

3 **Gen Zoology** (4 cr, †1-2-3; prereq 2)
—1, Lect II TTh, Bo B6, Underhill
—2, Lect IV WF, Bo B6, Kerr
—1, Lab I-II MF, Z 101D, 107
—2, Lab III-IV MF, Z 101D, 107
—3, Lab V-VI MF, Z 101D, 107
—4, Lab VII-VIII MF, Z 101D, 107
—5, Lab I-II TTh, Z 101D, 107
—6, Lab III-IV TTh, Z 101D, 107
—7, Lab V-VI TTh, Z 101D, 107
—8, Lab VII-VIII TTh, Z 101D, 107

50 **Gen Physiology** (5 cr; prereq 3 or Biol 3 or 15 cr bot, 10 cr chem or ‡)
Lect III TThS, Z 313, Brokaw
—1, Lab VI-VIII TTh, Z 18
—2, Lab I-III WF, Z 18
—3, Lab VII-IX WF, Z 18

53 **Fauna of Central United States** (5 cr; prereq 3 or Biol 3)
Lect VII MWF, Z 313, Eddy
—1, Lab V-VI MWF, Z S3
—2, Lab VIII-IX MWF, Z S3
—3, Lab VI-VIII TTh, Z S3

58 **Ornithology** (3 cr, †57-58; prereq 57)
Lect III TTh, MNH 307, Warner
Lab I-II TTh, MNH 307

83 Genetics, Eugenics (3 cr; prereq 3 or Bot 3 or Biol 3)
II MWF, Z 313, Reed

84 **Genetics Lab** (1 cr; prereq 83 or ¶ or ‡)
—1, VII-VIII T, Z 202, Merrell
—2, III-IV W, Z 202

102 Zoological Techniques (ar cr; prereq grad)

107 **Protozoology** (4 cr; prereq 15 cr incl 3 or Biol 3 or Bot 3 or ‡)
Lect VI TTh, Z 313, Kerr
Lab VII-VIII TTh, Z 201

138 Seminar: Biophysics (2 cr; prereq grad)
3:00-5:00 T, Z 323, Schmitt

140 Biological Microscopy (4 cr, §Ent 140; prereq sr, 15 cr zool or bot or ent, ‡)
Lect VI WF, Richards
Lab VII-IX WF

146 **Helminthology** (3 cr, §Ent 146; prereq 15 cr incl 3 or Biol 3, ‡)
Lect VI, TTh, Z 211, Wallace
Lab VII-VIII TTh, Z 208

157 Biophysics (3 cr; prereq 28 cr betw phys, biol, ‡...phys chem, physiol rec)
Lect VI-VIII M, Ph 49, Schmitt
Lab VIII-IX M, Ph 49

161 **Cytology** (3 cr; prereq 160)
Lect II MF, Z 211, Gall
Lab III-IV MF, Z 204

175 Human Genetics (3 cr; prereq 83, ‡)
VIII MWF, Z 313, Reed

182 **Experimental Embryology** (5 cr; prereq sr, 50, 59, ‡)
Lect III-IV MW, Z 323, lab ar, Spratt

199 Problems (ar cr; prereq 198)

203 Research: Entomology (ar cr; prereq 202) Mickel
213 Research: Ecology (ar cr; prereq 212) Eddy
219 Research: Physiology (ar cr; prereq 218) Richards
223 Research: Biophysics (ar cr; prereq 222) Schmitt
231 Research: Histology (ar cr) Olson
235 Research: Embryology (ar cr; prereq 234) Spratt
236 Gen Ecology of Insects (3 cr; prereq 15 cr zool or ent)
Lect VI TTh, CofH 307, Hodson
Lab VII-VIII TTh, CofH 15
239 Research: Cytology (ar cr; prereq 238) Gall
253 Research: Genetics (ar cr; prereq 252) Reed
256 **Adv Entomology** (3 cr, §Ent 256; prereq 255)
Lect I TTh, Z 211, Mickel
Lab I-III S, Z 402
263 Research: Parasitology (ar cr; prereq 262) Wallace
293 Seminar (no cr; prereq 292)
298 Seminar: Research Fields (ar cr; prereq 297)

UNATTACHED COURSES

Biology (Biol)

3 **Gen Biol** (4 cr, †1-2-3, §Bot 3 or 5 or Zool 3, §old Zool 15 or NSci 9; prereq 2)
—1, Lect III TTh, MNH Aud, Kerr
—2, Lect IV TTh, NH 45, Olson
—3, Lect VII TTh, NH 45, Martin
—4, Lect V WF, Bo B6, Brown
—1, Lab I-II MF, Bo 1, 4, 5, Z 101
—2, Lab III-IV MF, Bo 1, 4, 5, Z 101
—3, Lab V-VI MF, Bo 1, 5, Z 101
—4, Lab VII-VIII MF, Bo 1, 4, 5, Z 101
—5, Lab I-II TTh, Bo 1, 4, 5, Z 101
—6, Lab III-IV TTh, Bo 1, 4, 5, Z 101
—7, Lab V-VI TTh, Bo 1, 5, Z 101
—8, Lab VII-VIII TTh, Bo 1, 5, Z 101

3A **Gen Biol** (3 cr, †1A-2A-3A, §Bot 3 or 5 or Zool 3, §old Zool 15 or NSci 9; prereq 2A)
—1, Lect III TTh, MNH Aud, Kerr
—2, Lect IV TTh, NH 45, Olson
—3, Lect VII TTh, NH 45, Martin
—4, Lect V WF, Bo B6, Brown
—1, Dem I W, Z 101A
—2, Dem II W, Z 101A
—3, Dem III W, Z 101A
—4, Dem IV W, Z 101A
—5, Dem V W, Z101A
—6, Dem VI W, Z 101A
—7, Dem VII W, Z 101A
—8, Dem VIII W, Z 101A

Linguistics and Comparative Philology (Ling)

153 Honors Course (1-3 cr; prereq 152)

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING

Aeronautical Engineering (Aero)

6 **Aero-Space Survey, Laboratory** (1 cr; prereq 5)
VIII T, AE 209
20 **Flying: Theory, Practice** (2 cr)
V Th, ME 102
21 **Flying: Theory, Practice** (2 cr; prereq 20)
V Th, ME 102
22 **Flying: Theory, Practice** (2 cr; prereq 21)
VI Th, ME 102
46 **Link Instrument Flying** (no cr; prereq ♯)
101A **Theoretical Aerodynamics II** (3 cr; prereq 100A)
III MWF, AE 209
107A **Applied Aerodynamics II** (3 cr; prereq 106A)
III MWF, AE 309
114 **Analysis of Structural Components** (3 cr; prereq MM 41, 150)
II MWF, AE 309
117A **Analysis of Load-Carrying Surfaces** (3 cr; prereq 115A)
VI MWF, AE 211
132A **Aero-Space System Design** (4 cr; prereq 131A)
—1, VI-VIII MW, AE 317
—2, VI-VIII T, III-V Th, AE 317
141 **Experimental Aerodynamics** (3 cr; prereq 102A)
—1, VII-IX MW, AE 211
—2, VII-IX TW, AE 211
150 **Aeroelasticity I** (3 cr; prereq 107...or 102, MM 193)
3:30-5:00 MW, AE 227
195 **Probs: Aero-Space Engineering** (2-6 cr; prereq ♯)

203 Aerodynamics of Compressible Fluid (3 cr; prereq 106 or ‡)
I T, I-II Th, AE 211

212 Topics: Gas Dynamics (3 cr; prereq 203, ITM 234 or ‡)
8:00-9:20 MW, AE 227

232 Aerodynamics, Flight Performance of Supersonic Missiles (3-5 cr; prereq 231 or ‡)
II-III T, III Th, AE 211

272 Research (3-6 cr; prereq ‡)

273 Research (3-6 cr; prereq 272)

274 Research (3-6 cr; prereq 273)

Mechanics and Materials (MM)

27 **Rigid-Body Mechanics I** (3 cr; prereq ITM 25A, Phys 14)
—1, I MWF, Ex 193
—2, III MWF, Ex 193
—3, IV MWF, Ex 193
—4, V MWF, Bu 120
—5, VI MWF, Ex 193
—6, VII MWF, Ex 193

28 **Rigid-Body Mechanics II** (3 cr; prereq 27, ITM 26A)
IV MWF, AE 209

29 **Rigid-Body Mechanics III** (3 cr, §Phys 100; prereq 28)
—1, II MWF, AE 209
—2, IV MWF, AE 309
—3, VII MWF, AE 209

40 **Deformable-Body Mechanics I** (3 cr; prereq 27)
—1, II MWF, Ex 193
—2, III MWF, AE 327

41 **Deformable-Body Mechanics II** (3 cr; prereq 40)
—1, V MWF, Ex 193
—2, VI MWF, AE 327

93 **Solid Mechanics for Architects** (4 cr; prereq 92)
Lect I MTTh, E 305
—1, Lab I W, Ex 130
—2, Lab II W, Ex 130
—3, Lab I F, Ex 130
—4, Lab II F, Ex 130

142 **Experimental Mechanics** (2 cr; prereq 40)
Lect V TTh, Bu 120
—1, Lab VI-VII M, Ex 130
—2, Lab VIII-IX M, Ex 130
—3, Lab I-II T, Ex 130
—4, Lab III-IV T, Ex 130
—5, Lab VI-VII T, Ex 130
—6, Lab VIII-IX T, Ex 130
—7, Lab VI-VII W, Ex 130
—8, Lab VIII-IX W, Ex 130
—9, Lab I-II Th, Ex 130
—10, Lab III-IV Th, Ex 130
—11, Lab VI-VII Th, Ex 130
—12, Lab VIII-IX Th, Ex 130
—13, Lab VI-VII F, Ex 130
—14, Lab VIII-IX F, Ex 130

166 **Problems** (3 cr; prereq ‡)

182 **Deformable-Body Mechanics IV** (3 cr; prereq 41 or 180)
10:30-12:00 TTh, Ex 25

193 **Introd to Theory of Mechanical Vibrations** (3 cr; prereq 29, ITM 26 or 26A or 80)
VI MWF, AE 209

199 **Thermal Stresses** (3 cr; prereq 180, ME 133)
II MWF, Ex 22

202 Gyroscopic Instruments, Other Applications of Adv Dynamics (3 cr; prereq 196)
III MWF, Ex 22

212 Theory of Vibrations II (3 cr; prereq 193, ITM 147)
V MWF, Ex 22

223 Theory of Plasticity (3 cr; prereq 222)
VI MWF, AE 15

242 Theory of Viscoelasticity (3 cr; prereq 180, 193)
9:30-11:00 TTh, Ex 22

290 Theory of Plates, Shells (3 cr; prereq 180, ITM 147, ‡)
V MWF, AE 21

296 Theory of Elasticity with Applications (3 cr; prereq 295)
VII MWF, Ex 25

299 Seminar (0-3 cr)

AGRICULTURAL ENGINEERING (AgEn)

10 **Laboratory: Applications** (1 cr)
VIII-IX T, Schwantes

72 **Principles of Farm Machinery** (3 cr; prereq ME 24 or ¶)
Lect VI TTh, AgEng 101, Flikke
Lab VII-IX Th, AgEng 49, Flikke

125 **Topics: Agricultural Physics** (3 cr; prereq 4th yr, Phys 50 or inte calc, 25) Hustrulid

143 **Irrigation** (3 cr; prereq 82, Hydr 103, Soil 19)
I MWF, AgEng 105, Allred

159 **Instrumentation** (3 cr; prereq EE 37)
Lect VII MW, AgEng 103, Hustrulid
Lab VIII-X W, AgEng 6, Hustrulid

172 **Agricultural Machine Analysis** (3 cr; prereq 171, MM 142)
Lect VI T, AgEng 105, Strait
Lab VII-IX T, VI-VIII Th, AgEng 105, Strait

176 **Mgt of Power, Machinery** (3 cr; prereq 147)
Lect IV MW, AgEng 105, Schwantes, lab ar

181 **Field Probs in Soil-Water Mgt** (3 cr; prereq 141, 142, 143 or ¶143)
Lect I T, AgEng 105, Allred, Larson
Lab II-IV TTh, AgEng 305, Allred, Larson

193S **Probs: Soil Moisture** (2-6 cr; prereq ‡)

193P **Probs: Power, Machinery** (2-6 cr; prereq ‡)

193F **Probs: Farmstead Equipment, Operations** (2-6 cr; prereq ‡)

200 Seminar (1 cr; prereq ‡)
213 Adv Probs, Research (2-6 cr; prereq 191 or 192 or 193)

ARCHITECTURE (Arch)

1 **Introduction** (1 cr)
VI T, E 305, Koeper
13 **Architectural Drawing** (2 cr; prereq 12)
III-V TTh, E 315
50 **Japanese Architecture** (1 cr)
IX W, E 305, Engel
53 **History** (4 cr; prereq 52)
II MTWF, E 305, Koeper
54 **Structures in Architecture** (1 cr)
IX Th, E 305, Myers
73 **Building Technology** (4 cr, §old 59; prereq 72†)
III-IV TTh, E 305
76 **Building Technology** (4 cr; prereq 75)
III-IV TTh, AE 209
83 **Architectural Design I** (6 cr, †81-82-83; prereq 82)
Lect VI W, E 305
Lab VI-IX MThF, VII-IX W, E 411, Myers
91 **Architectural Design II** (6 cr, †91-92-93; prereq 83)
VI-IX MWThF, E 306, Bliss
92 **Architectural Design II** (6 cr, †91-92-93; prereq 91)
VI-IX MWThF, E 306, Bliss
93 **Architectural Design II** (6 cr, †91-92-93; prereq 92)
VI-IX MWThF, E 306, Bliss
103 **Tutorial Work in History** (2 cr; prereq 102) Koeper
106 **Planning** (3 cr; prereq 104 or Econ 110 or Pol 123 or Soc 106) Vivrett
110 **Planning Techniques** (ar cr; prereq 105) Vivrett
111 **Architectural Design III** (8 cr, †111-112-113; prereq 93, MM 93)
VI-IX MTWThF, E 417, 4 hrs ar, Cerny
112 **Architectural Design III** (8 cr, †111-112-113; prereq 111)
VI-IX MTWThF, E 417, 4 hrs ar, Cerny
113 **Architectural Design III** (8 cr, †111-112-113; prereq 112)
VI-IX MTWThF, E 417, 4 hrs ar, Cerny
121 **Architectural Design IV** (9 cr, †121-122; prereq 113, CE 41)
VI-IX MTWThF, E 315, 7 hrs ar, Vivrett
122 **Architectural Design IV** (9 cr, †121-122; prereq 121)
VI-IX MTWThF, E 315, 7 hrs ar, Vivrett
123 **Thesis** (12 cr; prereq 122)
36 hrs ar, E 405, Rapson
201 Research: History (ar cr; prereq 53) Koeper
233 Planning (ar cr; prereq 232)
253 Architectural Design VI (ar cr; prereq 252) Rapson

CHEMICAL ENGINEERING (ChEn)

103 **Principles** (3 cr; prereq 102)
Lect II TTh, ChE 240
—1, Rec I MW, ChE 158
—2, Rec II MW, ChE 154
—3, Rec II MW, ChE 150
—4, Rec III MW, ChE 154
113 **Laboratory** (2 cr; prereq 103
Conf II T, E 205
—1, Lab VI-IX M, ChE 3rd fl
—2, Lab VI-IX W, ChE 3rd fl
—3, Lab VI-IX Th, ChE 3rd fl
—4, Lab VI-IX F, ChE 3rd fl
118 **Process Evaluation, Design** (3 cr; prereq 117)
VII-VIII T, VIII-IX Th, ChE 50
120 **Thermodynamics** (3 cr; prereq 119)
Lect I TTh, ChE 240
—1, Rec II MW, ChE 40
—2, Rec VII WF, ChE 50
—3, Rec VIII MW, ChE 50
123 **Biochemical Engineering Lab** (3 cr; prereq 122)
VI-IX WF, ChE 260
132 **Chemical Reactor Analysis** (3 cr; prereq 131)
I MWF, MinMet 116
154 **Problems** (ar cr)
155 **Problems** (ar cr)
163 **Nuclear Reactor Design** (3 cr; prereq 162)
I MWF, ChE 150
173 **Adv Process Control** (3 cr; prereq 172)
IV MWF, ChE 150
203 Seminar (1 cr)
VI T, ChE 240
210 Physical Rate Processes, Transfer Operations (3 cr; prereq 209)
VI MWF, ChE 40
216 Adv Mathematics for Chemical Engineers, Chemists (3 cr; prereq 215)
VIII-IX TTh, ChE 240
218 Adv Topics (3 cr)
223 Chemical Rate Processes, Reactor Design Principles (3 cr; prereq ‡)
VII-VIII TTh, ChE 162
227 Fluid Mechanics, Related Topics (3 cr; prereq 226)
I-II TTh, ChE 158
264 Survey (1 cr; prereq ‡)
303 Research (ar cr; prereq 302)

CHEMISTRY

Analytical Chemistry (AnCh)

52 **Quantitative Analysis: Volumetric** (2 cr; prereq 51)
VI MWF, C 325, Meehan
54 **Quantitative Analysis Lab** (3 cr; prereq 53, 52 or ¶)
—1, Lab VII-IX MWF, C 310, Meehan
—2, Lab VI-IX T, VI-X Th, C 310

57 **Quantitative Analysis** (4 cr; prereq InCh 11 or 26)
Lect VI MWF, C 225, Herr
Lab VI-IX TTh, C 310
58 **Quantitative Analysis** (3 cr; prereq 52 or ¶52)
VI-IX TTh, C 310, Meehan
98 **Senior Thesis** (ar cr; prereq 4th yr)
102 **Quantitative Analysis** (5 cr; prereq InCh 26)
VI-IX MWF, C 310, Meehan
103 **Quantitative Inorganic Microanalysis** (3 cr; prereq 51, 52, 53, 54)
Lect VI F, C 315, lab ar, Sandell
108 **Technical Analysis** (2 or 3 cr; prereq 51, 52, 53, 54) Sandell
122 **Adv Analytical Chemistry** (2 cr; prereq 51, 52, 53, 54)
III TTh, C 325, Meehan
133 **Voltammetry, Amperometric Titrations** (2 cr; prereq 51, 52, 53, 54, PCh 103 or 103A)
VI MW, C 315, Bruckenstein
134 **Voltammetry, Amperometric Titrations** (2 cr; prereq 133 or ¶) Bruckenstein
137 **Seminar: Modern Probs** (1 cr; prereq 51, 52, 53, 54, PCh 103 or 103A)
IV T, C 325, Kolthoff
138 **Adv Volumetric Analysis** (3 cr; prereq 131) Kolthoff
203 Topics (ar cr; prereq 51, 52, 53, 54) Kolthoff
237 Seminar: Research (ar cr; prereq 236)
VIII-IX Th, C 315, Kolthoff
262 Survey (1 cr; prereq ♯)
303 Research: Quantitative Analysis (ar cr)

Inorganic Chemistry (InCh)

5 **Gen Inorganic Chemistry** (5 cr, †4-5; prereq 4)
Lect V MWThF, C 100, Winter (for AFHE, SLA, med, med tech, dent, ed students)
—1, Lab VI-IX M
—2, Lab VI-IX T
—3, Lab VI-IX W
—4, Lab VI-IX Th
—5, Lab VI-IX F
11 **Semimicro Qualitative Analysis** (4 cr; prereq 5 or 15 or 25)
—1, Lect VI MWF, C 100, Britton
Lab VI-IX T (for med, med tech, dent, SLA, ed students)
—2, Lect VII MWF, C 100, Brasted
Lab VI-IX Th (for med, med tech, nurs, nurs ed, PubH nurs, SLA, AFHE students)
—3, Lect IV MWF, C 325, Conroy
Lab VI-IX M (mines, SLA, AFHE students)
25 **Chemical Principles** (5 cr, †24-25; prereq 24)
Lect V MWF, C 225, Hugus
Lab VI-VIII MW (for IT Chem, SLA Chem, pharm, ed students)
26 **Chemical Principles** (5 cr; prereq 25)
Lect II MWF, C 100, O'Connor
Lab I-III TTh (for IT Chem, SLA Chem, pharm, ed students)
98 **Senior Thesis** (ar cr; prereq 4th yr)
105 **Coordination Compounds** (3 cr; prereq 103 or ♯)
III MWF, C 325, Britton
122 **Adv Inorganic Chemistry Lab** (2 cr; prereq AnCh 51, 52, 53, 54, PCh 103 or 103A, 105) Reynolds, Tobias
136 **Seminar: Modern Probs** (1 cr; prereq PCh 103 or 103A)
IV Th, C 215
213 Topics (ar cr; prereq △)
222 Adv Lab Methods (ar cr; prereq ♯)
260 Survey (1 cr; prereq ♯)
303 Research (ar cr)

Organic Chemistry (OrCh)

16 **Carbon Compounds** (4 cr; prereq InCh 15)
I MTWF, C 100, Leete
17 **Carbon Compounds Lab** (1 cr; prereq 16 or ¶)
Lab Conf I Th, C 100, Leete
—1, Lab VI-VII M, C 390
—2, Lab VIII-IX M, C 390
—3, Lab III-IV T, C 390
41 **Organic Chemistry** (4 cr; prereq InCh 5)
Lect IV MTWF, FraH 20, IV Th, C 410, Fenton
—1, Lab VI-IX Th, C 390
—2, Lab VI-IX F, C 390
62 **Organic Chemistry** (4 cr, †61-62; prereq 61)
Lect IV MTWThF, C 100, Koelsch
—1, Lab VI-IX M, C 390
—2, Lab VI-IX T, C 390
—3, Lab VI-IX W, C 390
—4, Lab VI-IX Th, C 390
—5, Lab I-IV Th, C 390
63 **Organic Chemistry** (3 cr; prereq 42 or 62)
III MWThF, C 100, Parham
64 **Laboratory** (3 cr; prereq 63 or ¶)
Lab Conf VII M, C 410, Kreevoy
—1, Lab II-IV, VI-VIII T, C 390
—2, Lab VI-VIII TTh, C 390
—3, Lab VII-IX WF, C 390
98 **Senior Thesis** (ar cr; prereq 4th yr)
107 **Adv Organic Chemistry** (3 cr; prereq 106)
II MWF, C 325, Smith
130 **Quantitative Analysis** (3 cr; prereq 63, 64, AnCh 51, 52, 53, 54, ♯) Lauer
163 **Organic Chemistry** (3 cr; prereq 62)
III MWThF, C 100, Parham
165 **Mechanisms of Organic Reactions** (3 cr; prereq 107, PCh 103, calc or ♯)
I MWF, C 325, Noland
203 Seminar (1 cr)
7:30-8:30 pm W, C 325

206 Stereochemistry: Polymerization, High Polymers (3 cr; prereq 107)
II MWF, C 315, Lauer
215 Theoretical Organic Chemistry (3 cr; prereq 107, PCh 103, inte calc or ‡)
III TThS, C 315, Kreevoy
239 Organic Research Techniques (2-5 cr; prereq OrCh maj) Parham
261 Survey (1 cr; prereq ‡)
303 Research (ar cr; prereq 102, △)

Physical Chemistry (PCh)

98 **Senior Thesis** (ar cr; prereq 4th yr)
103 **Physical Chemistry** (4 cr; prereq 102)
—1, Lect IV MWF, Owre 15, IV S, C 100, Wertz
—2, Lect IV MWFS, C 410, Moscowitz
106 **Laboratory** (1-2 cr; prereq 103 or 103A or ¶)
Lect V M, C 325, Lipsky
—1, Lab VII-VIII M, VI-VIII W, C 190
—2, Lab VI-VIII T, VII-VIII Th, C 190
—3, Lab III-IV T, II-IV Th, C 190
117 **Fundamentals of Reaction Kinetics** (3 cr; prereq 103 or 103A)
IV MWF, C 225, Livingston
131 **Colloidal Processes** (3 cr; prereq 128)
II MWF, C 115, Reyerson
134 **Colloid Chemistry Lab** (1-2 cr; prereq 128 or ¶) Reyerson
206 Atomistics (4 cr; prereq 205)
II TThS, C 215, Prager
218 Thermodynamics (4 cr; prereq 217)
III MWF, C 315, Mead
223 Seminar: Colloid (ar cr; prereq 222) Reyerson
252 Seminar: Physical Chemistry (1 cr)
7:30 pm W, C 225
255 Seminar: Molecular Spectroscopy (ar cr) Crawford
261 Seminar: Chemical Kinetics (ar cr) Livingston
263 Survey (1 cr; prereq ‡)
267 Seminar: Magnetochemistry (ar cr) Wertz
270 Seminar: Polymers (ar cr) Prager
276 Seminar: Quantum Mechanics (ar cr; prereq 275) Mead
292 Topics (ar cr)
303 Research (ar cr)

CIVIL ENGINEERING

Civil Engineering (CE)

8 **Laboratory** (1 cr; prereq 2)
—1, VII-IX M, E 229
—2, VII-IX W, E 225
—3, VII-IX Th, E 225
17 **Surveying** (3 cr; prereq not open to IT students, ITM 12)
Lect IV TTh, E 227
—1, Lab VI-IX Th, E 229
—2, Lab VI-IX F, E 229
20 **Surveying** (3 cr; prereq 18)
Lect I TTh, E 215
—1, Lab VI-IX M, E 217
—2, Lab VI-IX T, E 217
Lect I TTh, E 203
—3, Lab VI-IX W, E 217
—4, Lab VI-IX Th, E 217
Lect IV TTh, E 215
—5, Lab VI-IX F, E 217
—6, Lab I-IV S, E 217
Lect VI TTh, E 215
—7, Lab I-IV T, E 217
—8, Lab I-IV Th, E 217
33 **Structural Design** (3 cr; prereq 32)
—1, Lect II MWF, E 203
—2, Lect II MWF, AE 19
—3, Lect VI MWF, E 227
—1, Lab VII-IX M, E 225
—2, Lab II-IV T, E 225
—3, Lab VII-IX W, E 229
—4, Lab VII-IX F, E 225
34 **Drafting Room Practice** (2 cr; prereq ¶33)
—1, Lect IV T, AE 211
—2, Lect V F, E 227
—3, Lect VI Th, E 4
—1, Lab VII-IX M, TSCE 220
—2, Lab VII-IX W, TSCE 220
—3, Lab II-IV Th, TSCE 220
—4, Lab VII-IX Th, TSCE 220
41 **Structural Design: Concrete** (3 cr; prereq 39)
—1, Lect I MWF, AE 21
—2, Lect III MWF, E 227
53 **Soil Mechanics** (3 cr; prereq 52 or none for Min, Geol majors)
—1, Lect III TTh, E 227
—2, Lect V MW, E 227
—3, Lect V TTh, E 215
—1, Lab VII-IX M, Ex 154
—2, Lab IV-VI W, Ex 154
—3, Lab VII-IX W, Ex 154
—4, Lab I-III Th, Ex 154
—5, Lab VII-IX Th, Ex 154
—6, Lab VII-IX F, Ex 154
111 **Land Surveying** (3 cr; prereq 23 or ‡)
III MWF, E 217
132 **Structural Design** (2 cr; prereq 131)
Lect VI T, E 227
—1, Lab VII-IX T, E 227
Lect VI Th, E 227
—2, Lab VII-IX Th, E 227
143 **Arch Analysis, Design** (3 cr; prereq ‡)
I TTh, II T, AE 19
144 **Prestressed Reinforced Concrete** (3 cr; prereq 142)
IV MWF, AE 9

146 **Concrete, Concrete Materials** (3 cr; prereq 51 or ¶)
Lect I TTh, AE 227
Lab VI-IX T, Ex 93
147 **Foundations** (3 cr; prereq 141)
I MWF, AE 19
151 **Adv Highway Lab** (3 cr; prereq 52)
VI-IX MW, Ex 255
152 **Highway Design** (3 cr; prereq 52)
Lect III TTh, E 215
Lab VII-IX Th, TNCE 100
160 **Applied Hydraulics** (3 cr; prereq Hydr 103, 104)
Lect II TTh, E 206
—1, Lab VII-IX T, TSCE 220
—2, Lab VII-IX F, TSCE 220
171 **Sewerage, Sewage Treatment** (3 cr; prereq 161, 170)
—1, Lect I MWF, Ex 22
—2, Lect VI MWF, AE 227
—1, Lab I-III T, E 229
—2, Lab VII-IX T, E 225
—3, Lab II-IV F, E 229
175 **Industrial Waste Disposal** (3 cr; prereq 174)
II MWF, Ex 250
178 **Seminar: Sanitary Engineering** (1 cr; prereq 5th yr)
236 Adv Structural Probs (3 cr; prereq 132)
VI MWF, ChE 150
252 Adv Soil Mechanics Lab (3 cr; prereq 251)
262 Sewage Plant Design (3-5 cr; prereq 174)
277 Adv Sanitary Engineering: Sewage, Industrial Waste (3-5 cr; prereq 174)
280 Research (3-5 cr; prereq ‡)
281 Research (3-5 cr; prereq 280)
282 Research (3-5 cr; prereq 281)

Hydromechanics (Hydr)

101 **Fluid Mechanics for Aeronautical, Electrical Engineering Students** (3 cr; prereq MM 27)
—1, II MWF, AE 211
—2, III MWF, AE 211
—3, IV MWF, E 227
—4, IV MWF, AE 21
—5, V MWF, AE 19
—6, VI MWF, AE 21
—7, VII MWF, E 227
103 **Fluid Mechanics** (5 cr; prereq MM 27)
—1, I MTWThF, E 227
—2, II MTWThF, AE 21
—3, III MTWThF, ChE 162
—4, IV MTWThF, Ex 22
—5, VII MTWThF, AE 227
104 **Fluid Mechanics Lab** (1 cr; prereq 101 or 103 or ChEn 101 or ¶)
—1, III-IV M, Ex 138
—2, VI-VII M, Ex 138
—3, VIII-IX M, Ex 138
—4, III-IV T, Ex 138
—5, VI-VII T, Ex 138
—6, VI-VII W, Ex 138
—7, VIII-IX W, Ex 138
—8, III-IV Th, Ex 138
—9, VI-VII Th, Ex 138
—10, III-IV F, Ex 138
—11, VI-VII F, Ex 138
186 **Adv Hydraulic Probs** (2 cr; prereq 185)
187 **Interm Fluid Mechanics** (3 cr; prereq 101 or 103, 104)
II MWF, E 227
192 **Natural, Artificial Waterways** (3 cr; prereq 183 or ‡)
3:00-4:30 WF, HL 307
193 **Hydraulic Measurements** (3 cr; prereq 187 or ‡)
1:15-2:45 WF, HL 307
295 Hydrodynamics (3 cr; prereq 294 or ‡)
8:00-9:30 TTh, HL 307

ELECTRICAL ENGINEERING (EE)

16 **Laboratory** (1 cr; prereq 14)
—1, VIII-IX M, EE 237
—2, VII-VIII T, EE 237
—3, VII-VIII Th, EE 237
36 **Elements** (3 cr; prereq ITM 26A or 80)
Lect V MWF, EE 335
—1, Lab VIII-IX M, ME 208
—2, Lab I-II T, ME 202
—3, Lab VI-VII T, ME 208
—4, Lab VI-VII W, ME 202
—5, Lab VI-VII Th, ME 208
38 **Elements** (3 cr; prereq 37)
—1, III MWF, ME 18
—2, 10:30-11:45 TTh, ME 18
38A **Laboratory** (1 cr; prereq 37A, ¶38)
—1, V-VI M, EE 121
—2, VIII-IX M, EE 121
—3, I-II T, EE 121
—4, III-IV T, EE 121
—5, VI-VII T, EE 121
—6, VIII-IX W, EE 121
—7, I-II Th, EE 121
—8, V-VI Th, EE 121
—9, VII-VIII Th, EE 121
55 **Electrical Engineering** (5 cr; prereq 53)
—1, II MTWThF, EE 137 (honors section)
—2, I MTWThF, EE 335
—3, III MTWThF, EE 335
56 **Laboratory** (1 cr; prereq 54, ¶55)
—1, V-VI Th, EE 216 (honors section)
—2, VI-VII M, EE 216
—3, VIII-IX M, EE 216
—4, I-II T, EE 216
—5, III-IV T, EE 216
—6, VI-VII T, EE 216
—7, VIII-IX T, EE 216
—8, VI-VII W, EE 216
—9, VIII-IX W, EE 216
—10, I-II Th, EE 216
—11, III-IV Th, EE 216
—12, VII-VIII Th, EE 216
—13, VI-VII F, EE 216

56A Prob Solving Lab (1 cr; prereq 54A, ¶55)
For EE 55, Lect 2 students only
—1, VI-VII M, EE 137
—2, IV-V T, EE 137
—3, VIII-IX T, EE 137
—4, IV-V Th, EE 137
—5, VI-VII Th, EE 137
For EE 55, Lect 3 students only
—6, I-II T, ME 208
—7, VI-VII T, EE 137
—8, VI-VII W, EE 137
—9, VIII-IX W, EE 137
—10, I-II Th, ME 208
—11, VIII-IX M, EE 137 (honors section)

59 Engineering Electronics (3 cr; prereq 57)
—1, II MWF, EE 335
—2, VI MWF, ME 18
—3, VI MWF, EE 238 (honors section)

60 Engineering Electronics Lab (1 cr; prereq 58, ¶59)
—1, I-II M, EE 205
—2, VI-VII M, EE 205
—3, VIII-IX M, EE 205
—4, I-II T, EE 205
—5, III-IV T, EE 205
—6, VI-VII T, EE 205
—7, VIII-IX T, EE 205
—8, VI-VII W, EE 205
—9, I-II Th, EE 205
—10, III-IV Th, EE 205
—11, V-VI Th, EE 205
—12, VII-VIII Th, EE 205
—13, III-IV F, EE 205
—14, VIII-IX F, EE 205
—15, VIII-IX W, EE 205 (honors section)

101 Summer Engineering Employment (1-3 cr; prereq 2 yrs engin, ♯)

102 Summer Engineering Employment (1-3 cr; prereq 101, ♯)

103 Summer Engineering Employment (1-3 cr; prereq 102, ♯)

125 Analysis of Electromagnetic Devices (3 cr; prereq 123)
—1, II MWF, EE 238 (honors section)
—2, III MWF, ChE 240
—3, VI MWF, EE 335

126 Experimental Study of Electromagnetic Devices (1 cr; prereq 124, ¶125)
—1, V-VII T, EE 121 (honors section)
—2, I-II T, EE 107
—3, III-IV T, EE 107
—4, VI-VII T, EE 107
—5, VIII-IX T, EE 107
—6, VI-VII W, EE 107
—7, VIII-IX W, EE 107
—8, I-II Th, EE 107
—9, III-IV Th, EE 107
—10, V-VI Th, EE 107
—11, VII-VIII Th, EE 107

135 Electronic Circuit Design (3 cr; prereq 133)
Lect II TTh, EE 335
—1, Lab I-II M, EE 35
—2, Lab VIII-IX M, EE 35
—3, Lab III-IV T, EE 35
—4, Lab VI-VII T, EE 35
—5, Lab VIII-IX T, EE 35
—6, Lab I-II W, EE 35
—7, Lab VI-VII W, EE 35
—8, Lab VIII-IX W, EE 35
—9, Lab III-IV Th, EE 35
—10, Lab V-VI Th, EE 35
—11, Lab I-II F, EE 35
—12, Lab VI-VII F, EE 35

136 Electric Machines (3 cr; prereq 134)
Lect III TTh, EE 238
—1, Lab VII-VIII Th, EE 116
—2, Lab II-III F, EE 116

140 Electric Power Control (3 cr; prereq 139)
Lect IV TTh, EE 237
—1, Lab VI-VII M, EE 107A
—2, Lab VIII-IX T, EE 107A
—3, Lab VI-VII Th, EE 107A

141 Materials (3 cr; prereq 109)
—1, Lect IV MWF, ME 18
—2, Lect VIII MWF, ME 18

141A Materials Lab (1 cr; prereq ¶141)
For EE 141, Lect 1 students only
—1, Lab IV T, EE 335
For EE 141, Lect 2 students only
—2, Lab VIII T, ME 18
—3, Lab VI-VII Th, EE 210 (honors section)

145 Engineering Acoustics (3 cr; prereq 144)
VIII MWF, EE 238

152 Statistical-Mechanical Methods (3 cr; prereq 150, 151, Phys 109)
3:30-4:45 T, 2:30-3:45 Th, EE 335

155 Properties of Solids (3 cr; prereq 154)
4:00-5:15 MW, EE 335

159 Electronic Control (3 cr; prereq 158)
Lect I TTh, ME 18
—1, Lab I-II M, EE 21
—2, Lab VI-VII M, EE 21
—3, Lab III-IV T, EE 21
—4, Lab VI-VII T, EE 21
—5, Lab VIII-IX T, EE 21
—6, Lab VI-VII W, EE 21
—7, Lab VIII-IX W, EE 21
—8, Lab III-IV Th, EE 21
—9, Lab V-VI Th, EE 21
—10, Lab VII-VIII Th, EE 21
—11, Lab VI-VII F, EE 21

163 Networks (3 cr; prereq 162)
—1, I-II TTh, ME 214 (honors section)
—2, II MWF, ME 18
—3, VII MWF, EE 335

163A Networks Lab (1 cr; prereq 162A, ¶163)
—1, VIII-IX M, EE 210
—2, I-II T, EE 210
—3, III-IV T, EE 210
—4, VIII-IX T, EE 210
—5, I-II W, EE 210
—6, V-VI W, EE 210
—7, I-II Th, EE 210
—8, III-IV Th, EE 210
—9, V-VI T, EE 210 (honors section)

—10, VI-VII F, EE 210
—11, VIII-IX F, EE 210

166 **Communication Circuits** (3 cr; prereq 165)
Lect III TTh, EE 237
—1, Lab VI-VII M, EE 204
—2, Lab VIII-IX M, EE 204
—3, Lab VI-VII W, EE 204
—4, Lab IV-V Th, EE 204

169 **Electromagnetic Theory, Application** (3 cr; prereq 168)
Lect IV TTh, EE 238
—1, Lab VI-VII W, EE 217
—2, Lab VIII-IX T, EE 217

175 **Physical Electronics** (3 cr; prereq 174)
VI-VII Th and ar, EE 204

180 **Nonlinear Active Circuits** (3 cr; prereq 179)
VI-VII TTh, EE 238

181D **High-Frequency Transistor Circuits** (2 cr; prereq 181C, ‡)
7:00-7:50 am TTh, EE 335

185 **Electrical Lab** (1-3 cr; prereq ‡)

189 **Problems** (3 cr; prereq 188)
IV MWF, EE 335

193 **Active Network Theory** (3 cr; prereq 192)
VII MWF, EE 237

196 **Servomechanisms** (3 cr; prereq 195)
V MWF, EE 237

199 **Electrical Design of Machines I** (3 cr; prereq 198)

213 Network Analysis, Synthesis (3 cr; prereq 212)
V-VI TTh, EE 237

238 Solid State Theory (3 cr; prereq 237)
VIII-IX MW, ME 106

257 Analysis of AC Power-Systems Circuits (3 cr; prereq 256)

269 Theory of Communication (3 cr; prereq 268)
V MWF, AE 15

289 Electron Tube Analysis (3 cr; prereq 288)
VI MWF, EE 237

MATHEMATICS (ITM)

8 **Solid Geometry** (no cr; prereq plane geom)
V MWF, ChE 158

11 **College Algebra, Trigonometry I** (5 cr; prereq 9)
—1, V MTWThF, AE 9
—2, VI MTWThF, ChE 50

12 **College Algebra, Trigonometry II** (5 cr; prereq 11)
—1, I MTWThF, ChE 154
—2, II MTWThF, AE 9
—3, II MTWThF, TNCE 120
—4, III MTWThF, ChE 50
—5, IV MTWThF, ChE 40
—6, V MTWThF, MinMet 124
—7, V MTWThF, ChE 50
—8, VI MTWThF, ChE 154

13A **Calculus I: Analytic Geometry, Calculus** (5 cr; prereq 8, 12)
—1, I MTWThF, AE 9
—2, I MTWThF, ChE 162
—3, I MTWThF, AE 309
—4, II MTWThF, E 106
—5, II MTWThF, ChE 50
—6, II MTWThF, Ph 143
—7, II MTWThF, AE 327
—8, III MTWThF, AE 21
—9, III MTWThF, AE 19
—10, III MTWThF, AE 15
—11, III MTWThF, ChE 150
—12, IV MTWThF, AE 15
—13, IV MTWThF, ChE 162
—14, IV MTWThF, ChE 158
—15, V MTWThF, E 203
—16, V MTWThF, MinMet 116
—17, VI MTWThF, MinMet 116
—18, VI MTWThF, MinMet 120

14 **Laboratory** (1 cr; prereq 2nd yr)
VI-VII T, E 203

24A **Calculus II: Analytic Geometry, Calculus** (5 cr; prereq 13A)
—1, IV MTWThF, ChE 154
—2, IV MTWThF, AE 19
—3, V MTWThF, ChE 150

25A **Calculus III: Analytic Geometry, Calculus** (5 cr; prereq 24A)
—1, I MTWThF, Ex 25
—2, I MTWThF, ChE 50
—3, III MTWThF, ChE 158
—4, IV MTWThF, ChE 50
—5, IV MTWThF, AE 327
—6, VI MTWThF, E 106

26A **Calculus IV: Differential Equations, Calculus** (5 cr, §80; prereq 25A)
—1, I MTWThF, AE 15
—2, I MTWThF, AE 327
—3, II MTWThF, ChE 162
—4, II MTWThF, AE 15
—5, II MTWThF, AE 227
—6, II MTWThF, Ph 236a
—7, III MTWThF, AE 9
—8, III MTWThF, AE 227
—9, IV MTWThF, E 106
—10, IV MTWThF, E 203 (honors section)
—11, IV MTWThF, AE 227
—12, V MTWThF, E 106
—13, V MTWThF, Ex 25
—14, VI MTWThF, E 205

90 **Engineering Statistics** (3 cr; prereq 25 or 25A or ¶25A)
—1, II MWF, Ex 25
—2, II MWF, ChE 158
—3, V MWF, E 205

101C **Orientation** (2 cr; prereq 101B)
VIII MW, Ph 170

134 **Statistics with Applications** (3 cr; prereq 133)
V MWF, E 104

147 Vector Analysis (3 cr, §152, §old 154; prereq 25 or 25A)
—1, I MWF, E 104
—2, I MWF, E 205

149 Determinants, Matrices (3 cr, §142; prereq 25 or 25A)
—1, III MWF, E 205
—2, III MWF, E 206
—3, III MWF, Ex 25

150A Ordinary Differential Equations (3 cr, §148; prereq 26 or 26A or 80)
—1, I MWF, E 206
—2, I MWF, ChE 40

152 Calculus VI: Adv (3 cr, §147; prereq 151A)
—1, IV MWF, E 205
—2, IV MWF, MinMet 120

153 Calculus VII: Adv (3 cr; prereq 151A)
—1, I MWF, E 203
—2, I MWF, E 106
—3, III MWF, ChE 40 (honors section)
—4, III MWF, E 104
—5, III MWF, E 106

156 Tensor Analysis with Applications (3 cr; prereq 155)
V MWF, ChE 40

163 Analytical Dynamics (3 cr; prereq 162)
IV MWF, E 206, Koehler

165A Programming Modern Digital Calculators (3 cr, §165; prereq 25 or 25A)
VI MWF, E 203, Pope

166 Theory, Programming of Modern Digital Computers (3 cr; prereq 165)
VIII-IX MTh, E 106, Stein

168B Applications of Complex Variables (3 cr; prereq 168A or 174 or ♯)
III-IV TTh, E 104

169 Mathematical Theory of Fluid Flow (3 cr; prereq 152, 168A or 152, 174 or 147, 168A or 147, 174 or ♯)
VII MWF, E 104, Serrin

175 Integral Transforms (3 cr; prereq 168A or 174)
—1, II MWF, E 205
—2, II MWF, E 206
—3, II-III TTh, E 203

180 Finite Groups (3 cr; prereq 143 or ♯)
II MWF, E 104

186 Numerical Analysis (3 cr; prereq 185)
III MWF, E 203

190C Combinatorial Topology (3 cr; prereq 190B)
VI MWF, E 206

192 Theory of Approximation in Numerical Analysis (3 cr, §old 270E; prereq 174, 186 or ♯)
V MWF, E 206

198 Functions in Mathematical Analysis (3 cr; prereq 197)
III MWF, ChE 54, Fulks

199C Prob Course (3 cr; prereq ♯)
III-IV TTh, E 206

226 Lie Groups, Lie Algebras (3 cr; prereq 225)
IV T, VI-VII Th, ChE 54, Yamabe

250 Reading, Research (1-3 cr; prereq 249)

263 Functions of a Complex Variable (3 cr; prereq 262)
IV MWF, E 104, Warschawski

269 Topics: Theory of Analytic Functions (3 cr; prereq 268)
VI MWF, E 104, Rohrl

276 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 275)
II MWF, ChE 54, Serrin

289 Hilbert Space, Functional Analysis (3 cr; prereq 288)
VI-VII TTh, E 104, Green

306 Adv Topics: Differential, Difference Equations (3 cr; prereq 305)
VI MWF, MinMet 104, Markus

MECHANICAL ENGINEERING

Engineering Graphics (EG)

14 Engineering Graphics (3 cr; prereq solid geom)
Lect IV MW, AE 215
—1, Lab III-IV TTh, E 18
—2, Lab III-IV TTh, TSCE 100

15 Engineering Graphics (3 cr; prereq 14)
Lect II MW, AE 215
—1, Lab I-II TTh, E 18
—2, Lab I-II TTh, TSCE 100
—3, Lab I-II TTh, TSCE 120
Lect VI MW, AE 215
—4, Lab V-VI TTh, E 18
—5, Lab V-VI TTh, TSCE 100
—6, Lab V-VI TTh, TSCE 120

16 Engineering Graphics (3 cr; prereq 15)
Lect I MW, AE 215, and indiv work
—1, Rec I Th, E 101
—2, Rec I F, AE 215
Lect III MW, AE 215, and indiv work
—3, Rec III Th, E 101
—4, Rec III F, AE 215
Lect V MW, AE 215, and indiv work
—5, Rec V Th, E 101
—6, Rec V F, AE 215
Lect VII MW, AE 215, and indiv work
—7, Rec VII Th, E 101
—8, Rec VII F, AE 215
Lect I TTh, AE 215
—9, Lab I-II WF, E 18
—10, Lab I-II WF, E 101
—11, Lab I-II WF, TSCE 120
Lect IV TTh, AE 215
—12, Lab III-IV WF, E 18
—13, Lab III-IV WF, E 101
—14, Lab III-IV WF, TSCE 120
Lect V TTh, AE 215
—15, Lab V-VI WF, E 18
—16, Lab V-VI WF, TSCE 100
—17, Lab V-VI WF, TSCE 120
Lect VII TTh, AE 215
—18, Lab VII-VIII WF, E 18

—19, Lab VII-VIII WF, TSCE 100
—20, Lab VII-VIII WF, TSCE 120
Lect-Lab
—21, VII-VIII MTWTh, TNCE 120 (Arch Students only)

52 **Alignment Charts** (3 cr; prereq 15, ITM 12)
VI MWF, TNCE 120

55 **Production Illustration** (2 cr; prereq 16)
V-VI MWF, E 101

118 **Curve Fitting** (3 cr; prereq 16, ITM 25A, or ‡)
VI MWF, TSCE 210

Industrial Engineering (IE)

50 **Elements, Mgt** (3 cr, §old 150; prereq 3rd yr)
I MWF, AE 209

155 **Industrial Wage Admin** (3 cr; prereq 153)
III MWF, ME 106

163 **Process Planning, Development** (3 cr; prereq 50, ME 15, 16)
Lect V TTh, ME 106
Lab VII-IX Th, ME 180

170 **Production Planning, Control** (3 cr; prereq 50)
II MWF, ME 106

171 **Quality Control** (3 cr; prereq ITM 90 or 132 or ‡)
IV MWF, ME 102

174 **Analysis for Prod Mgt** (3 cr; prereq 50, 171 or ‡)
V MWF, ME 106

180 **Supervision** (3 cr; prereq 50)
—1, Lect I MWF, ME 106
—2, Lect I MWF, ME 202

190 **Seminar** (1 cr; prereq 12 cr)
II-III T, ME 102

194 **Applied Industrial Engineering** (3 cr; prereq 15 cr)
IV MWF, ME 106

196 **Applied Industrial Engineering** (3 cr; prereq 195)

199 **Design of Industrial Experiments** (3 cr; prereq ITM 133 or ‡)
VI MWF, ME 102

253 Adv Industrial Engineering (3 cr; prereq 252)

263 Probs: Production Engineering (3-5 cr; prereq 262)

273 Research (3-5 cr; prereq 272)

Mechanical Engineering (ME)

16 **Cold Processing Materials** (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 202
—1, Lab VII-IX T, ME 171
—2, Lab VII-IX Th, ME 171

21 **Kinematics, Mechanisms** (3 cr; prereq ITM 26A or ¶, EG 16)
—1, Lect III TTh, ME 110
—2, Lect IV TTh, ME 110
—1, Lab VI-VII M, ME 325
—2, Lab VIII-IX M, ME 325
—3, Lab VI-VII T, ME 325
—4, Lab VIII-IX T, ME 325
—5, Lab VI-VII W, ME 325
—6, Lab VIII-IX W, ME 325
—7, Lab VI-VII Th, ME 325
—8, Lab VIII-IX Th, ME 325

24 **Machine Design** (3 cr; prereq MM 41)
Lect I TTh, ME 321
—1, Lab VII-IX M, ME 314
—2, Lab VII-IX W, ME 314
—3, Lab VII-IX F, ME 314

31 **Thermodynamics** (3 cr, §old 131; prereq 30)
V MWF, ME 110

32 **Thermodynamics** (3 cr, §old 132; prereq 31)
—1, I MWF, ME 110
—2, II MWF, ME 110
—3, III MWF, ME 110
—4, IV MWF, ME 110

34 **Laboratory II** (2 cr; prereq 33)
—1, Lect I T, AE 209
—2, Lect II T, AE 209
—1, Lab VII-IX M, ME 370
—2, Lab VII-IX M, ME 370
—3, Lab VII-IX T, ME 370
—4, Lab VII-IX T, ME 370
—5, Lab VII-IX W, ME 370
—6, Lab VII-IX W, ME 370
—7, Lab VII-IX Th, ME 370
—8, Lab VII-IX Th, ME 370
—9, Lab VII-IX F, ME 370
—10, Lab VII-IX F, ME 370

90 **Industrial Assignment** (4 cr, †90-91-92-93; prereq regis coop work-study program)

91 **Industrial Assignment** (4 cr, †90-91-92-93; prereq 90)

94 **Industrial Assignment** (3 cr, †90-91-92-93-94-95; prereq 93)

95 **Industrial Assignment** (3 cr, †90-91-92-93-94-95; prereq 94)

110 **Control of Metal Working Processes** (3 cr; prereq 15, 16)
Lect III TTh, ME 106
Lab VII-IX M, ME 50

112 **Properties, Fabrication of Plastics** (3 cr; prereq 15, 16 or ‡)
Lect I TTh, ME 106
—1, Lab VII-IX T, ME 251
—2, Lab VII-IX W, ME 251

121 **Machine Design** (3 cr; prereq 24)
Lect II TTh, ME 110
—1, Lab VII-IX M, ME 308
—2, Lab VII-IX T, ME 308
—3, Lab VII-IX W, ME 308
—4, Lab VII-IX Th, ME 308
—5, Lab VII-IX F, ME 308

122 **Design** (3 cr; prereq 121)
Lect VI T, ME 302
Lab VII-IX TTh, ME 302

125 **Machine Design Lab** (2 cr; prereq 24)
—1, Lect VI M, ME 321
Lab VII-IX M, ME 357
—2, Lect VI T, ME 321
Lab VII-IX T, ME 357
—3, Lect VI W, ME 321
Lab VII-IX W, ME 357
—4, Lect VI Th, ME 321
Lab VII-IX Th, ME 357
—5, Lect VI F, ME 321
Lab VII-IX F, ME 357

127 **Lubrication** (3 cr; prereq 121)
III MWF, ME 321

129 **Vibration Engineering** (3 cr; prereq MM 193)
IV MWF, ME 214

133 **Heat Transmission** (3 cr; prereq 32, Hydr 101 or 103 or ¶...or Hydr 101 or 103, ♯)
—1, I MWF, ME 102
—2, VI MWF, ME 106

134 **Thermodynamics of Fluid Flow** (3 cr; prereq 32, Hydr 103)
—1, II MWF, ME 102
—2, IV MWF, ME 202

136 **Reactor Heat Transfer** (3 cr; prereq 133)
III MWF, ME 202

142 **Adv Heat Power Engineering** (3 cr; prereq 141)
IV MWF, ME 321

143 **Turbomachinery** (3 cr; prereq 134 or ¶)
—1, I MWF, ME 321
—2, II MWF, ME 321
—3, IV MWF, ME 302

146 **Combustion** (3 cr; prereq 133 or ¶)
—1, V MWF, ME 321
—2, V MWF, ME 102
—3, VI MWF, ME 302

150 **Internal Combustion Engines** (3 cr; prereq 32)
III MWF, ME 102

151 **Adv Internal Combustion Engines** (3 cr; prereq 150)
III MWF, ME 302

154 **Internal Combustion Engines** (3 cr; prereq 121, 150)
II MWF, ME 302

157 **Gas Turbine, Jet Propulsion Power Plants** (3 cr; prereq 143)
V MWF, ME 302

158 **Aircraft Power Plant Lab** (2 cr; prereq 143, 146)
VI-IX Th, ME 480

159 **Heat Power Lab** (2 cr; prereq 143, 146)
—1, Lab VI-IX M, ME 480
—2, Lab VI-IX W, ME 480
—3, Lab VI-IX F, ME 480

160 **Psychrometrics, Air Conditioning** (3 cr; prereq 133 or ¶)
—1, I MWF, ME 214
—2, III MWF, ME 214

166 **Industrial Ventilation, Exhaust System** (3 cr; prereq 160)
II MWF, ME 202

169 **Air Conditioning, Refrigeration Lab** (2 cr; prereq 34, 160, 180)
—1, Lab VI-IX M, ME 362
—2, Lab VI-IX W, ME 362
—3, Lab VI-IX F, ME 362

180 **Mechanical Refrigeration** (3 cr; prereq 32)
II MWF, ME 214

194 **Adv Problems** (2-4 cr; prereq 5th yr, ME maj, 2.5 GPA, △)

198 **Industrial Instrumentation, Automatic Control** (3 cr; prereq EE 38 or ¶)
Lect I TTh, ME 110
—1, Lab VII-IX M, ME 359
—2, Lab VII-IX T, ME 359
—3, Lab VII-IX W, ME 359
—4, Lab VII-IX Th, ME 359
—5, Lab VII-IX F, ME 359

226 Adv Applied Dynamics (3 cr; prereq 225)

232 Adv Thermodynamics of Fluid Flow (3 cr; prereq 134, 230 or ♯)
I MWF, ME 208

235 Radiation (3 cr; prereq 234)
II MWF, ME 208

248 Atomization, Vaporization, Mixing (3 cr; prereq 132)
III MWF, ME 208

255 Adv Rocket Propulsion (3 cr; prereq 134, 155)
VI MWF, ME 208

267 Adv Air Conditioning (3 cr; prereq 266 or ♯)
IV MWF, ME 208

282 Reverse Applications of Refrigeration: Heat Pump (3 cr; prereq 180)

290 Research (ar cr; prereq △)

291 Research (ar cr; prereq 290)

297 Adv Servomechanisms (3 cr; prereq 296)

298 Adv Instrumentation, Automatic Control (3 cr; prereq 198)

METALLURGY (Met)

1 **Metallurgy Lab** (1 cr)
VII-IX Th, MinMet 120

56 **Physical Metallurgy** (3 cr; prereq 3rd yr)
VII MWF, MinMet 116, Jerabek

57 **Physical Metallurgy Industrial Alloys** (2-3 cr; prereq 53 or 56 or 60)
II MWF, MinMet 124, Jerabek

60 **Physical Metallurgy for Chemical Engineering Students** (3 cr; prereq 3rd yr)
VII MWF, MinMet 116, Jerabek

155 **Physical Metallurgy III** (3 cr; prereq 154 or ♯)
I MWF, MinMet 124, Sivertsen

155A **Physical Metallurgy Lab** (2 cr; prereq 154 or ¶155)
VI Th, MinMet 124, IX Th, VI F, MinMet 410, Sivertsen

161 **Corrosion of Metals** (2 cr; prereq PCh 101 or 101A)
II TTh, MinMet 116, Nicholson

165 **Engineering Physical Metallurgy** (3 cr; prereq 56 or 60 or 154)
I TTh, MinMet 104, VI-VIII T, MinMet 410, Jerabek

172 **Probs: Physical Metallurgy** (1-3 cr)

175 **Imperfections in Metal** (3 cr; prereq 174 or ‡)
10:30-11:50 TTh, MinMet 116, Sivertsen

182 **Thermodynamics of Alloys, Solid State Reactions** (3 cr, §old 163C; prereq 181)
II MWF, MinMet 120, Swalin

209 Physical Metallurgy (ar cr)

215 Seminar: Physical Metallurgy (ar cr)

252 Kinetics of Solid State Reactions (3 cr; prereq 251 or ‡) Swalin

260 Dislocation Theory of Crystals (3 cr; prereq 155 or ‡) Johnston

MINES AND METALLURGY

Metallurgical Engineering (MetE)

1 **Laboratory** (1 cr)
VII Th, MinMet 124

75 **Inspection Trip** (2 cr)

92 **Industrial Employment** (2 cr; prereq ‡)

108 **Prin Process Metallurgy** (3-4 cr; prereq 107)
III MWF, VI W, MinMet 124, VII-IX W, MinMet 12, Bitsianes

112 **Mineral Dressing** (4 cr; prereq 111)
Lect III TTh, I S, MinMet 124, Cooke
—1, Lab VI, VIII M, MinMet 16, 22, VII M, MinMet 120
—2, Lab VI, VIII W, MinMet 16, 22, VII W, MinMet 120
—3, Lab VI, VIII F, MinMet 16, 22, VII F, MinMet 120

123 **Adv Mineral Dressing** (3 cr; prereq 122)
VI M, II TTh, MinMet 124, Cooke

126 **Probs: Mineral Dressing** (ar cr; prereq 112) Cooke

136 **Unit Processes** (3 cr; prereq 108)
III MWF, MinMet 104, Joseph

138 **Adv Process Metallurgy** (2 cr; prereq 134)
III TTh, MinMet 120, Bitsianes

143 **Probs: Process Metallurgy** (ar cr; prereq 108) Joseph, Bitsianes

144 **Metallurgical Unit Operations** (2 cr; prereq 111 or ‡)
IV TTh, MinMet 120, Schulz

203 Research: Process Metallurgy (ar cr) Joseph, Bitsianes

206 Research: Mineral Dressing (ar cr) Cooke

212 Seminar (ar cr)
IV T, MinMet 124

Mining Engineering (MinE)

1 **Mineral Engineering Lab** (1 cr)
VII Th, MinMet 124, Pfleider

13 **Mine Surveying** (3 cr; prereq CE 18 or ‡)
II MWThF, MinMet 104, Yardley

90 **Industrial Employment** (2 cr; prereq ‡) Pfleider

91 **Industrial Employment** (2 cr; prereq 90) Pfleider

113 **Exploitation of Mineral Deposits** (3 cr; prereq 112 or ‡)
I MWF, MinMet 120, II T, MinMet 104, Pfleider

122 **Mine, Petroleum Plant Engineering** (3 cr; prereq EE 37, Hydr 103, ME 30 or ‡)
V-VI TTh and ar, MinMet 104, Roberts, Fairhurst

133 **Adv Rock Mechanics** (3 cr; prereq 132 or ‡)
IV MWF, MinMet 104, Fairhurst

143 **Coal Mining Engineering** (3 cr; prereq 113)
II TTh, MinMet 120, V F, MinMet 104, Yardley

145 **Adv Mining Engineering** (4 cr; prereq 144)
VI-IX M, VI-VIII WF, MinMet 321, Pfleider

153 **Problems** (ar cr; prereq 113) Pfleider

160 **Mining, Processing Industrial Minerals** (ar cr; prereq 112 or ‡) Yardley

203 Seminar: Mineral Engineering (ar cr) Pfleider

214 Research Probs (ar cr) Pfleider

230 Adv Geochemical Exploration (ar cr; prereq ‡) Yardley

Petroleum Engineering (PetE)

92 **Industrial Employment** (2 cr; prereq 91) Lacabanne

131 **Reservoir Mechanics** (3 cr; prereq 134, Hydr 103 or ‡)
10:30-11:45 TTh, MinMet 104, Lacabanne

145 **Adv Petroleum Engineering** (4 cr; prereq 144)
VI-IX M, VI-VIII WF, MinMet 321, Pfleider

154 **Petroleum Production Technology** (3 cr; prereq 153)
Lect I Th, MinMet 216, Lacabanne
—1, Lab VI-VIII TTh, MinMet 216, 220
—2, Lab ar

203 Seminar: Petroleum, Natural Gas Engineering (ar cr; prereq 202)
IV T, MinMet 216, Lacabanne

PHYSICS (Phys)

3 Physical Science (3 cr; prereq 1)
III MWF, Ph 150, Wall

3A Physical Science Lab (1 cr; prereq 3 or ¶)

6 **Gen Physics: Sound, Light** (5 cr; prereq 5)
I MTWThF, Ph 166, Buchta
Lab sec assigned during first 2 days of class

9 Gen Physics (5 cr; prereq 8, ¶ITM 25A or Math 54)
II MTWThF, Ph 166, Freier
Lab sec assigned during first 2 days of class

12 Gen Physics (5 cr; prereq 11, ¶ITM 12 or ¶Math 10)
VII MTWThF, Ph 150, Earl
Lab sec assigned during first 2 days of class

13 Gen Physics (5 cr; prereq 12, ¶ITM 13A or ¶Math 40)
—1, I MTWThF, Ph 150, Mantis
—2, IV MTWThF, Ph 166, Lowe
—3, VI MTWThF, Ph 150, Likely
Lab sec assigned during first 2 days of class

50 Interm Physics (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54)
V MTWThF, Ph 150, Valasek

50A Physics Lab (1 cr; prereq ¶50)

51 Interm Physics (4 cr; prereq 50, ITM 25A or Math 54)
—1, II MTWThF, Ph 170, Ney (honors section)
—2, I MTWThF, Ph 133, Porter
—3, III MTWThF, Ph 133, Winckler
—4, VI MTWThF, Ph 133, Wall

51A Physics Lab (1 cr; prereq ¶51)
—1, Ar, Likely (honors section)
—2, Ar

104 Mechanics, Electromagnetism (4 cr; prereq 102)
—1, I MTWF, Ph 170, Zimmermann
—2, I MTWF, Ph 145, Kellogg

105 Theoretical Physics (3 cr; prereq 4th yr, 9 or 14, ¶diff equat or ‡)
II MWF, Ph 145, Cheston

111 Modern Physics (3 cr; prereq 109 or ‡)
VI MWF, ForH 180, Lee

112 Atomic, Nuclear Physics (3 cr; prereq 110)
VI MWF, Ph 145, Eisberg

118 Physical Investigation (3 cr; prereq △)

122 Experimental Nuclear Physics II (3 cr; prereq 50, 107 or ‡)
—1, VI-IX TTh, Ph 250, Blair
—2, VII-X MF, Ph 250, Johnson

125 Thermodynamics, Statistical Mechanics, Theories of Structure of Matter (3 cr; prereq 124)
IV MWF, Ph 143, Werntz

133 Physical Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
II TThS, Ph 145, Valasek

133A Physical Optics Lab (1 cr; prereq ¶133)
Lect VII T, Ph 348, Valasek
—1, Lab VIII-X T, Ph 348
—2, Lab VIII-X Th, Ph 348

136 Spectrum Analysis (3 cr; prereq 15 cr, ITM 25A or Math 54)
Lect VII T, Ph 145, Valasek
Lab VIII-IX T, VII-IX Th, Ph 348

148 Application of Electronic Circuits (4 cr; prereq 146 or ‡)
Lect II MWF, Ph 133, Blair
—1, Lab VII M, Ph 256
—2, Lab VI T, Ph 256
—3, Lab VI W, Ph 256
—4, Lab VI Th, Ph 256
—5, Lab VII F, Ph 256
—6, Lab II S, Ph 256

185 Atomistics, Quantum Mechanics (3 cr; prereq 183)
IV MWF, Ph 145, Hill

193 Mathematical Physics (3 cr, †191-192-193; prereq 101, 103, 105, diff equat, adv calc)
III MWF, Ph 145, Hill

203 Dynamics of Fluid Motion (3 cr; prereq 202)
10:30-12:00 TTh, Ph 143, Hill

212 Quantum Mechanics (3 cr; prereq 211)
V-VI MWF, Ph 143, Yennie

215 Seminar: Contemporary Experimental Physics (3 cr; prereq 214)
I MWF, Ph 236a, Johnston

218 Seminar: Contemporary Theoretical Physics (3 cr; prereq 217)
VII-VIII W, Ph 143, Yennie

227 Adv Quantum Theory (3 cr; prereq 226)
V-VI MWF, Ph 143, Yennie

230 Nuclear Physics (3 cr; prereq 229)
III MWF, Ph 143, Bolsterli

239 Seminar: Radiofrequency Spectroscopy (ar cr; prereq 238)
VI-VII TTh, Ph 143, Lowe

251 Theory of Solid State of Matter (3 cr; prereq 250)
VIII-IX TTh, Ph 143, Sanders

254 Seminar: Nuclear Physics (ar cr; prereq 253)
VII-IX F, Ph 143, Porter

257 Seminar: Mass Spectroscopy (ar cr; prereq 256)
VIII-IX T, Ph 145, Nier

260 Seminar: Cosmic Rays (ar cr; prereq 259)

270 Topics: Nuclear Theory (3 cr; prereq 193, 230 or ‡) Kramer

303 Research (ar cr)

UNATTACHED COURSES

General Engineering (GE)

70 Slide Rule (1 cr; prereq ITM 11 or ¶)
—1, VI T, AE 215
—2, VI Th, AE 215
—3, III T, AE 215
—4, III Th, AE 215

101 Contracts, Specifications (3 cr; prereq 5th yr)
V MWF, ChE 240

105 **Engineering Library Techniques** (1 cr)
VI T, E 206, O'Leary

Geophysics (GPhy)

92 **Industrial Employment** (2 cr; prereq 91)
Mooney

110 **Exploration Geophysics** (3 cr; prereq Geol 2, Phys 9 or 14...Geol 125 rec)
III MWF, MinMet 120, Mooney

127 **Electrical Exploration** (2 cr; prereq Phys 14, Geol 125, ITM 25A)
III Th, MinMet 219, Mooney

137 **Problems** (ar cr; prereq ‡)

COLLEGE OF VETERINARY MEDICINE

Veterinary Anatomy (VAna)

130 Neuroanatomy (3 cr; prereq 101, 151, ‡)
Lect VII TTh, VetS 257, Stromberg
Lab VIII-IX TTh, VetS 141

153 Microscopic Anatomy of Domestic Animals (5 cr; prereq 152, ‡)
Lect VI MW, I F, VetS 257, Kitchell, Stinson
Lab VII-IX MW, VetS 247

191 Special Studies (1-5 cr; prereq 151, ‡)
Kitchell, Stromberg

Veterinary Bacteriology and Public Health (VBac)

101 Gen Bacteriology, Immunology (6 cr; prereq 10 cr zool, 13 cr chem, ‡)
Lect I MW, II F, VetS 257, II M, VetS 325, Lindorfer, Loken, Pomeroy
Lab III-IV MWF, II W, VetS 325

127 Public Health (2 cr; prereq 126, ‡)
VII-VIII W, VetS 229, Anderson, Schuman

128 Probs: Bacteriology, Public Health (ar cr; prereq 103, ‡) Pomeroy, Anderson, Lindorfer, Loken

201 Adv Poultry Diseases (ar cr; prereq 131, ‡)
Pomeroy

205 Adv Bacteriology (ar cr; prereq ‡) Pomeroy, Fenstermacher, Lindorfer

211 Seminar: Veterinary Bacteriology (1 cr; prereq ‡) Pomeroy, Anderson, Lindorfer

Veterinary Medicine and Clinics (VMC)

52 Animal Hygiene (5 cr)
I MTWTh, Meat Shop, I F, TSH 220, Sorensen

101 Physical Diagnosis (4 cr; prereq ‡)
Lect VI MWF, VetS 229, Low
—1, VII-IX M, VetC 70, Low
—2, VII-IX W, VetC 70, Low

104 Large Animal Medicine (5 cr; prereq 103, ‡)
I MTWThF, VetA 103, Wass

112 Clinics (5 cr; prereq 111)
II-IV MTWThF, I-III S, VetC 125, 70

116 Clinics (5 cr; prereq 115, ‡)
II-IV MTWThF, I-III S, VetC 125, 55

117C Clinical Conference (⅓ cr, †117A-117B-117C; prereq 117B, ‡)
IX W, VetC 125, Campbell

118C Clinical Conference (⅓ cr, †118A-118B-118C; prereq 118B, ‡)
IX W, VetC 125, Campbell

121 Small Animal Medicine (4 cr; prereq ‡)
VII MWThF, VetC 125, Mather

132 Infectious Diseases of Large Animals (5 cr; prereq 131, ‡)
I MTWThF, VetC 125, Hoyt

137 Animal Diseases, Poisonous Plants (3 cr, §old 141, §PlPa 137; prereq ‡)
Lect VI MW, VetC 125, Sorensen, Kommedahl
Lab VII-IX M, Ag Bot 106

201 Adv Veterinary Medicine (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

202 Adv Diagnosis, Therapeutics of Animal Diseases (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

203 Seminar (ar cr; prereq ‡) Hoyt, Mather, Sorensen

204 Medical Conference (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

Veterinary Obstetrics (VObs)

101 Veterinary Obstetrics (4 cr; prereq VMC 101, ‡)
Lect VI M, VetA 103, VI F, VIII W, VetC 125
Lab VIII-X MThF, VetC 55, Zemjanis

201 Probs: Animal Reproduction (ar cr; prereq ‡) Zemjanis

Veterinary Pathology and Parasitology (VPaP)

102 Parasitology (5 cr; prereq ‡)
Lect I MWThF, VetS 229, Griffiths
—1, VII-IX W, VetS 225, Bemrick
—2, VII-IX M, VetS 225

153 Special Pathology, Infectious Diseases of Animals (5 cr; prereq 152, ‡)
Lect II MWF, VetS 229, Sautter
Lab VI-VIII TTh, VetS 225, 229, Willigan, Ball, Nielsen

157 Veterinary Necropsies (1-3 cr; prereq 153, ‡) Sautter

158 Surgical Pathology (1-3 cr; prereq 153, ‡) Sautter

201 Adv Veterinary, Poultry Pathology (ar cr; prereq ‡) Sautter, Fenstermacher

202 Seminar: Pathology (1 cr; prereq 153, ‡) Sautter, Kernkamp

203 Neoplasms of Domestic Animals (ar cr; prereq ‡) Sautter

240 Adv Parasitology (ar cr; prereq 102, ‡) Griffiths

241 Probs: Parasitology (ar cr; prereq 102, ‡) Griffiths

Veterinary Physiology and Pharmacology (VPP)

109 Physiology of Endocrine, Reproductive Systems (3 cr; prereq 108, ‡)
III MWF, VetA 103, Bergman

151 Pharmacology (4 cr; prereq 108, ‡)
Lect IV MW, II Th, VetA 103
Lab VII-IX F, TEH 100, Stowe, Hammond

Veterinary Surgery and Radiology (VSR)

103 Special Surgery (4 cr; prereq 101, ‡)
Lect VI TWTh, VetA 102, 103, Arnold, Clifford, Gourley, Herschler
Lab VII-IX T, VetA 102, 103

220 Anesthesia (ar cr; prereq 103, ‡) Arnold, Usenik, Clifford

225 Adv Small Animal Surgery (ar cr; prereq 103, ‡) Arnold, Usenik, Clifford

230 Adv Large Animal Surgery (ar cr; prereq 103, ‡) Arnold, Usenik

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE (Air)

33 **Air Science I: Foundations of Air Power** (1 cr; prereq 32)
Drill I M or V M or VI M
—1, I TTh, A 12
—2, III TTh, A 12
—3, V TTh, A 12
—4, VI TTh, A 12

36 **Air Science II: Foundations of Air Power** (1 cr; prereq 35)
Drill I M or V M or VI M
—1, I WF, A 12
—2, III WF, A 12
—3, IV WF, A 12

133 **Air Science III: Air Force Officer Development** (3 cr; prereq 132)
Drill I M or V M or VI M
—1, I TWThF, A 11
—2, III TWThF, A 11
—3, V TWThF, A 11

136 **Air Science IV: Intl Relations, Air Force Officer** (3 cr; prereq 135)
Drill I M or V M or VI M
—1, II TWThF, A 11
—2, IV TWThF, A 11

MILITARY SCIENCE AND TACTICS (Mil)

3 **Military Science I** (1 cr; prereq 2)
Drill VI and VII Th
—1, II M, A 116a, Rutledge
—2, III M, A 116a, Rutledge
—3, VI M, A 116a, Rutledge
—4, II T, A 116a, Rutledge
—5, III T, A 116a, Rutledge
—6, VI T, A 116a, Rutledge

6 **Military Science II** (1 cr; prereq 5)
Drill VI and VII Th
—1, II T, A 201, Edwards
—2, III T, A 201, Edwards
—3, V T, A 201, Edwards

153 **Military Science III** (3 cr; prereq 152)
Drill VI and VII Th
—1, I MTW, A 105, Elliott
—2, IV MTW, A 105, Elliott
—3, VI MTW, A 105, Elliott

156 **Military Science IV** (3 cr; prereq 155)
Drill VI and VII Th
—1, II MTW, A 116, Carlton
—2, V MTW, A 116, Carlton

MORTUARY SCIENCE (Mort)

3 **Introd Restorative Art** (1 cr)
I Th, NH 100, Gates

6 **Restorative Art** (1 cr, †4-5-6; prereq 5)
—1, VIII-IX T, NH 100, Gates
—2, VIII-IX Th, NH 100, Gates

8 **Orientation in Funeral Service** (1 cr)
I T, JacH 304, Thorsell

9 **Orientation in Funeral Service** (1 cr)
I Th, JacH 304, Thorsell

10 **Orientation in Funeral Service** (1 cr)
VIII M, NH 122, Slater

11 **Mortuary Mgt** (2 cr; prereq 10)
II TTh, JacH 304, Thorsell

12 **Embalming** (3 cr; prereq 10)
II MWF, JacH 304, Thorsell

13 **Mortuary Law** (3 cr)
I MWF, ForH 130, Grayson

52 **Anatomy** (3 cr, †51-52; prereq 51)
Lect V TTh, JacH 304, Buckman
Lab VI-VII TTh, JacH 301, Buckman, others

55 **Medical Science Survey** (3 cr; prereq 52, 54)
I MWF, JacH 304, Gamble

58 **Embalming Theory, Practice** (3 cr, †56-57-58; prereq 57)
VI MWF, NH 107, Slater

59 **Public Health, Minnesota Law, Regulations** (2 cr; prereq △)
IV TTh, JacH 304, Larson

62 **Funeral Mgt** (2 cr; prereq 11)
I TTh, JohH 122, Slater

63 **Business Methods** (2 cr; prereq Econ 24)
VII MW, VH 207, Lund

64 **Psychology of Funeral Service** (2 cr; prereq GC 41 or Psy 1-2)
VIII MW, NH 107, Slater, Thorsell

71 **Chemistry for Embalmers** (3 cr, †70-71; prereq 70)
Lect II TTh, C 115, Pervier
Lab III-IV W, Pervier, others

72 **Bacteriology** (4 cr; prereq Zool 3 or 15, Phsl 4)
Lect II MWF, Owre 111, Hinz
Lab III M, III-IV F, Hinz

NAVAL SCIENCE (Nav)

13 **Sea Power** (3 cr)
Drill 7:30-8:20 T
—1, III MWF, A 205, McCabe
—2, IV MWF, A 205
—1, Lab III T, A 205
—2, Lab IV T, A 205

23 **Naval Weapons** (3 cr)
Drill 7:30-8:20 T
—1, III MWF, A 202, Laing
—2, IV MWF, A 202
—1, Lab III T, A 202
—2, Lab IV T, A 202

53 **Celestial Navigation** (3 cr)
Drill 7:30-8:20 T
—1, VI-VII MW, A 12A, Loberger
—2, VI-VII TF, A 12A

56 **Modern Basic Strategy, Tactics** (3 cr)
Drill 7:30-8:20 T
Lect VI MWF, A 205, Hollier
Lab IV T, A 12A

59 **Advanced Supply Afloat** (3 cr)
Drill 7:30-8:20 T
Lect V MWF, A 202, Donnelly
Lab V Th, A 202

63 **Leadership** (3 cr)
Drill 7:30-8:20 T
—1, III MWF, A 12A, Thiel
—2, V MWF, A 12A
—1, Lab III T, A 12A
—2, Lab V T, A 12A

66 **Leadership** (3 cr)
Drill 7:30-8:20 T
Lect V MWF, A 205, Hollier
Lab V T, A 205

PHYSICAL EDUCATION FOR MEN (PE M)

Nonprofessional

1C Sports Education (1 cr)
Swimming, Bgn
—1, II MWF, CH Pool, Boyce
—2, VII MWF, CH Pool, Thorpe
—3, III T, II-III Th, CH Pool, Boyce
Swimming, Bgn-Interm
—4, 3:00-3:50 MWF, Gy Pool, (StP Campus), Nowotny
Bowling, Bgn
—5, I MWF, CMU, Sattervall
—6, II MWF, CMU, Sattervall
Handball-Paddleball
—7, IV MWF, StadN, Fischer
Tennis, Bgn
—8, II MWF, CH Gym, Novak
—9, 11:00-11:50 MWF, Gy 100 (StP Campus), McDonnell
—10, 12:00-12:50 TTh, Gy 100 (StP Campus), 1 hr ar, Nowotny
Tennis, Bgn-Interm
—11, V MWF, CH Gym, Novak
Golf, Bgn
—12, II MWF, StadS, Bolstad
—13, III MWF, StadS, Bolstad
—14, 12:00-12:50 MWF, Gy 100 (StP Campus), McDonnell
—15, II TTh, StadS, 1 hr ar, Bolstad
—16, III TTh, StadS, 1 hr ar, Bolstad
Trampoline
—17, VII MWF, App Gym, Novak
Adapted Activities
—18, III MWF, StadS, Osell
—19, IV MWF, StadS, Osell
—20, VIII MWF, StadS, Osell

Weight Lifting
—21, III T, III-IV Th, CH Gym, Murray
—22, VI MWF, CH Gym, Fischer

Freshman Baseball
—23, Ar, FieldHse, Gostic

Freshman Golf
—24, Ar, StadS, Bolstad

Freshman Tennis
—25, Ar, CH Gym, Lewis

Freshman Track
—26, Ar, FieldHse, Kelly

2C Sports Education (1 cr)

Swimming, Interm
—1, II T, II-III Th, CH Pool, Boyce
—2, VI MWF, CH Pool, Thorpe
—3, VI T, VI-VII Th, CH Pool, Thorpe
—4, VI-VII T, VI Th, CH Pool, Thorpe

Life Saving
—5, III MWF, CH Pool, Boyce

Volleyball-Softball
—6, IV MWF, CH Gym, Aus
—7, VI MWF, CH Gym, Aus

Weight Lifting
—8, VIII MWF, CH Gym, Aus

Archery
—9, II MWF, FieldHse, Fischer
—10, 10:00-10:50 MWF, Gy 100 **(StP Campus)**, McDonnell
—11, 8:00-8:50 TTh, Gy 100 **(StP Campus)**, 1 hr ar, McDonnell

Tennis, Adv
—12, III MWF, CH Gym, Lewis

Square, Folk Dancing
—13, VIII TTh, NGW

Ballroom Dancing
—14, I TTh, NGW
—15, VII TTh, NGW

Golf, Interm
—16, 2:00-3:50 TTh, Gy 100 **(StP Campus)**, McDonnell

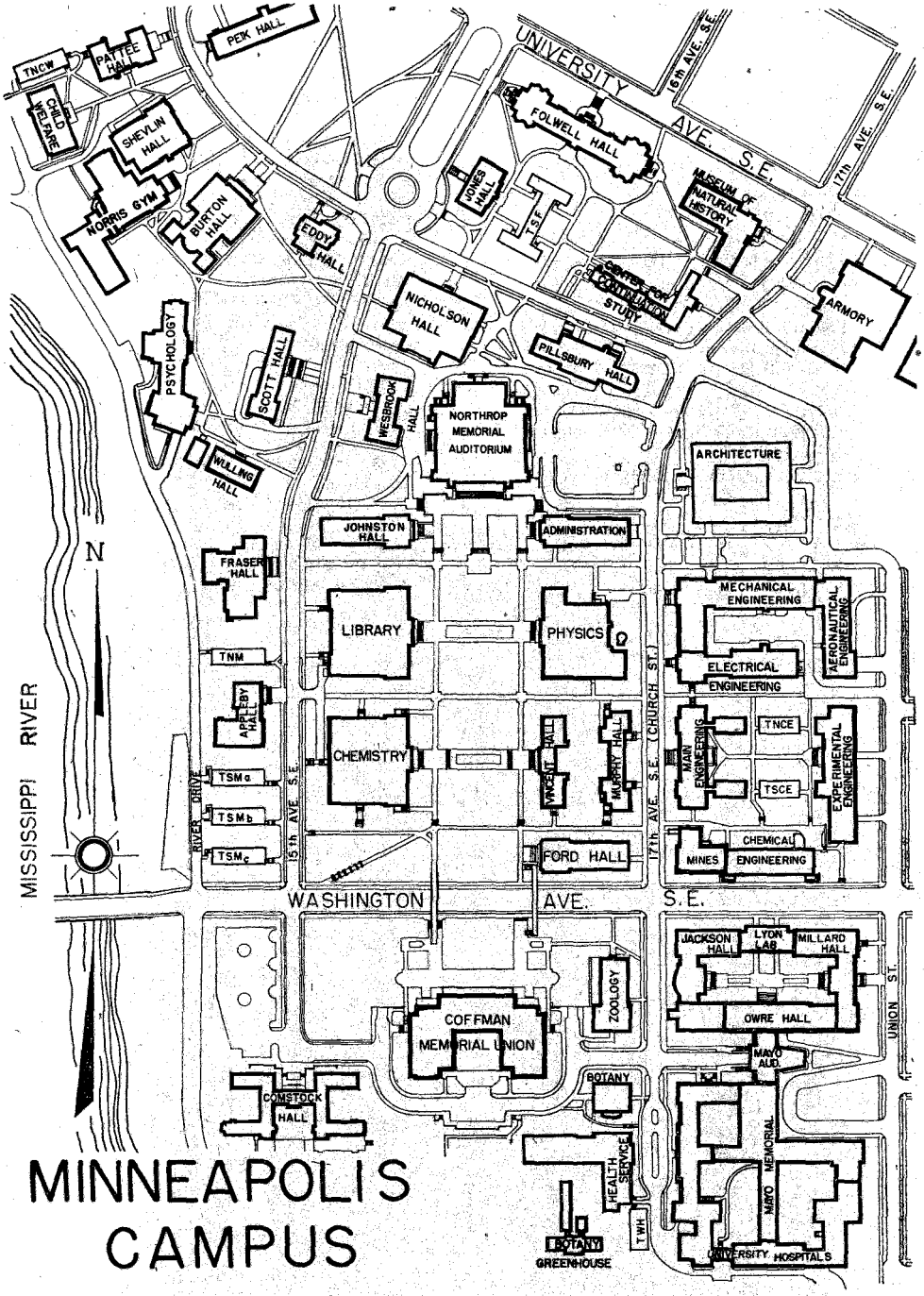
Body Building
—17, VIII MWF, StadS, Osell

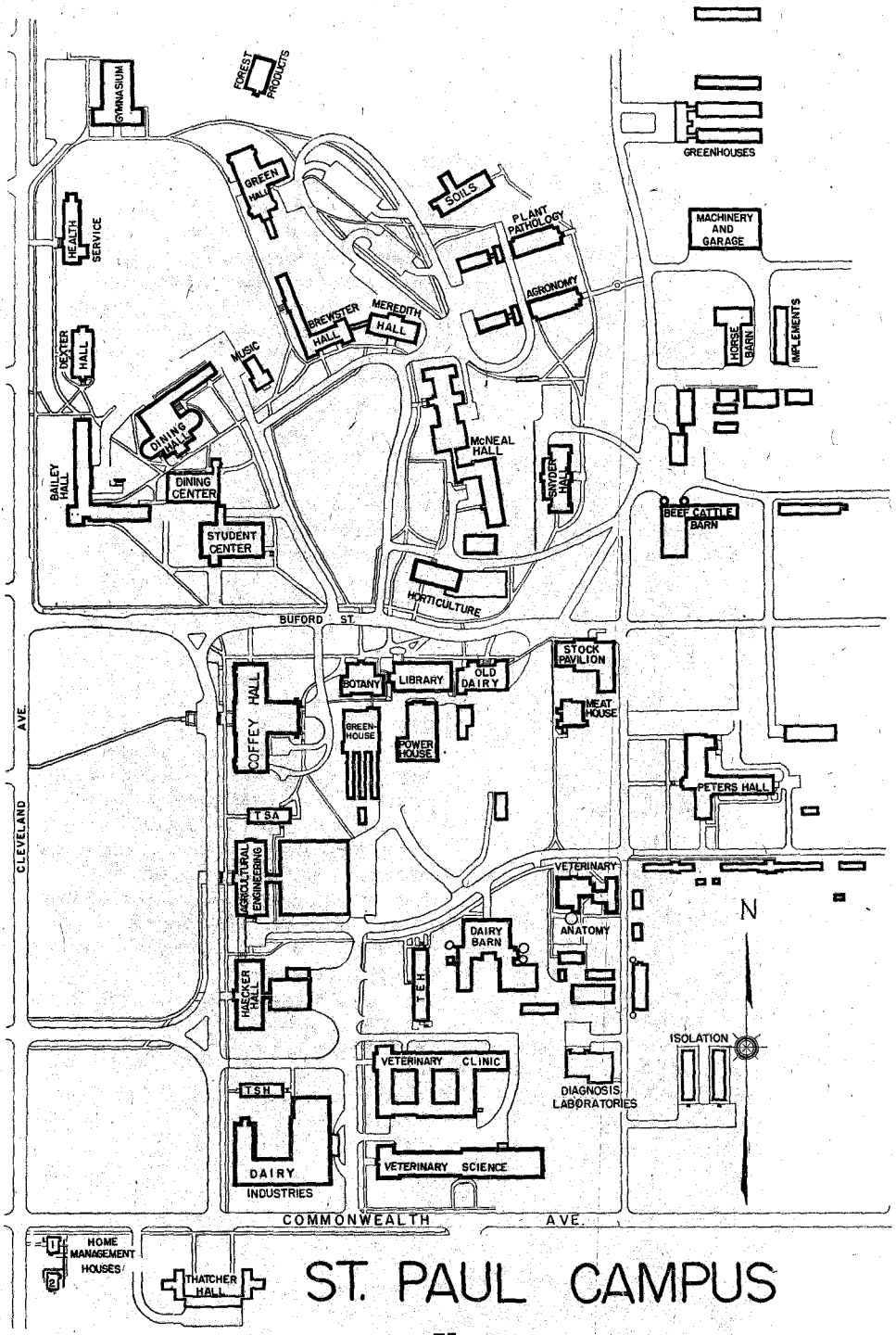
Varsity Baseball
—18, Ar, FieldHse, Siebert

Varsity Golf
—19, Ar, StadS, Bolstad

Varsity Tennis
—20, Ar, CH Gym, Lewis

Varsity Track
—21, Ar, FieldHse, Kelly


MINNEAPOLIS CAMPUS
UNIVERSITY AVE. S.E.
16th AVE. S.E.
17th AVE. S.E.
WASHINGTON AVE. S.E.
MISSISSIPPI RIVER
N
TNCW
PATTEE HALL
PEK HALL
CHILD WELFARE
SHEVLIN HALL
NORRIS GYM
BURTON HALL
EDDY HALL
FOLWELL HALL
JONES HALL
T.S.E.
MUSEUM OF NATURAL HISTORY
CENTER FOR CONTINUATION STUDY
ARMORY
NICHOLSON HALL
PILLSBURY HALL
PSYCHOLOGY
SCOTT HALL
WESBROOK HALL
NORTHROP MEMORIAL AUDITORIUM
WILLING HALL
ARCHITECTURE
JOHNSTON HALL
ADMINISTRATION
FRASER HALL
LIBRARY
PHYSICS
MECHANICAL ENGINEERING
AERONAUTICAL ENGINEERING
ELECTRICAL ENGINEERING
TNM
APPLEBY HALL
CHEMISTRY
VINCENT HALL
MURPHY HALL
MAIN ENGINEERING
TNCE
TSCE
EXPERIMENTAL ENGINEERING
TSMa
TSMb
TSMc
RIVER DRIVE
15th AVE. S.E.
17th AVE. S.E. (CHURCH ST.)
FORD HALL
CHEMICAL ENGINEERING
MINES
JACKSON HALL
LYON LAB
MILLARD HALL
OWRE HALL
MAYO AUD.
UNION ST.
COFFMAN MEMORIAL UNION
ZOOLOGY
BOTANY
COMSTOCK HALL
HEALTH SERVICE
MAYO MEMORIAL
T.W.H.
BOTANY GREENHOUSE
UNIVERSITY HOSPITALS



ST. PAUL CAMPUS

BUILDING ABBREVIATIONS

A, Armory
AE, Aeronautical Engineering
AgBot(StP), Agricultural Botany
AgEng(StP), Agricultural Engineering
Agr(StP), Agronomy
Bo, Botany
BoG, Botany Greenhouse
Bu, Burton Hall
C, Chemistry
CH, Cooke Hall
ChE, Chemical Engineering
CofH(StP), Coffey Hall
CW, Child Welfare
DI(StP), Dairy Industries
DinC(StP), Dining Center
DCB(StP), Dairy Cattle Barn
E, Main Engineering
EdH, Eddy Hall
EE, Electrical Engineering
Ex, Experimental Engineering
FieldHse, Fieldhouse
FP(StP), Forest Products
FolH, Folwell Hall
ForH, Ford Hall
FraH, Fraser Hall
GH(StP), Green Hall
Gy(StP), Gymnasium
HH(StP), Haecker Hall
HL, Hydraulic Lab (Hennepin Island)
HolB, Holman Bldg (2035 Univ Ave)
Hosp, University Hospitals
Hr(StP), Horticulture
J, Jones Hall
JacH, Jackson Hall
JohH, Johnston Hall
Lib, Walter Library
LsPav(StP), Livestock Pavilion
LyonL, Lyon Laboratories
Mayo, Mayo Memorial
McNH(StP), McNeal Hall (Home Economics)
ME, Mechanical Engineering
MeH(StP), Meredith Hall
MEx, Mines Experiment Station
MH, Millard Hall
MinMet, Mines and Metallurgy
MMA, Mayo Memorial Auditorium
MNH, Museum of Natural History
MSh(StP), Meat Shop
MurH, Murphy Hall
MusEd, Music Education
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
Owre, Owre Hall
P, Pillsbury Hall
PeikG, Peik Hall Gymnasium
PeikH, Peik Hall
PetH(StP), Peters Hall
Ph, Physics
PoH, Powell Hall
PP(StP), Plant Pathology
Psy, Psychology
Pt, Pattee Hall
SBH, State Board of Health
ScH, Scott Hall
ShH, Shevlin Hall
SnH(StP), Snyder Hall
So(StP), Soils
Stad, Stadium
TEH(StP), Temporary, East of Haecker Hall
TNCE, Temporary, North Court of Engineering
TNCW, Temporary, North of Child Welfare
TNM, Temporary, North of Mines (Appleby Hall)
TSCE, Temporary, South Court of Engineering
TSF, Temporary, South of Folwell
TSH(StP), Temporary, South of Haecker Hall
VCHH, Variety Club Heart Hospital
VetA(StP), Veterinary Anatomy
VetC(StP), Veterinary Clinic
VetS(StP), Veterinary Science
VH, Vincent Hall
WeH, Wesbrook Hall
WmsA, Williams Arena
WuH, Wulling Hall
Z, Zoology

OFFICE DIRECTORY

Admissions and Records, Office of:	
Minneapolis Campus	105Adm
St. Paul Campus	220CofH
Aeronautical Engineering	107AE
Agricultural Biochemistry	214SnH
Agricultural Economics	303HH
Agricultural Education	205Hr
Agricultural Engineering	200AgEng
Agricultural Journalism	107CofH
Agronomy and Plant Genetics	303Agr
Air Science	3A
American Studies	101TSF
Anatomy	201JacH
Anesthesiology	C596 Mayo
Animal Husbandry	122PetH
Anthropology	325ForH
Architecture	310E
Art	108J
Art Education	106J
Astronomy	358Ph
Bacteriology	1060 Mayo
Biology	104Z
Biophysics	48Ph
Botany	8Bo
Business Administration	109VH
Cancer Biology	274LyonL
Chemical Engineering	151ChE
Chemistry	139C
Child Development and Welfare	103CW
Civil Engineering	123E
Classics	310FolH
Comparative Literature	200AFolH
Dairy Husbandry	202HH
Dairy Industries	225DI
Dental Assisting	302 Owre
Dental Hygiene	106 Owre
Dentistry	136 Owre
Economics	221VH
Electrical Engineering	139EE
Engineering Graphics	125ME
English	219FolH
Entomology and Economic Zoology	300CofH
Food Technology	214SnH
Forestry	110GH
General College	106NH
General Education	204Bu
Geography	290aForH
Geology and Mineralogy	108P
Geophysics	207MinMet
German	210FolH
History	200ForH
Home Economics	200HE
Home Economics Education	117HE
Horticulture	111Hr
Industrial Education	103TNCW
Interdepartmental Courses, General Education	208JohH
Journalism	111MurH
Law	125FraH
Library	3Lib
Linguistics and Philology	311FolH
Mathematics (IT)	114E
Mathematics (SLA)	119FolH
Mechanical Engineering	125ME
Medical Technology	C205 Mayo
Medicine	C309 Mayo
Metallurgy	403MinMet
Military Science and Tactics	108A
Mines and Metallurgy	112MinMet
Mortuary Science	155NH
Music	107ScH
Music Education	214ScH
Naval Science	203A
Nursing	125 Owre
Obstetrics and Gynecology	A616Hosp
Ophthalmology	A684 Mayo
Orientation	202CofH
Otolaryngology	A605 Mayo
Pathology	110JacH
Pediatrics	1403 Mayo
Pharmacology	105MH
Pharmacy	101WuH
Philosophy	100WeH
Physical Education for Men	111CH
Physical Education for Women	101NGW
Physical Medicine	860 Mayo
Physics	148Ph
Physiological Chemistry	227MH
Physiology	424MH
Plant Pathology and Agricultural Botany	304PP
Political Science	395ForH
Poultry Husbandry	205PetH
Psychiatry and Neurology	B692 Mayo
Psychology	112Psy
Public Health	1325 Mayo
Radiology	B238 Mayo
Rhetoric	309AgEng
Romance Languages	200FolH
Scandinavian	13FolH
Slavic and Oriental Languages	322FolH
Social Work	400ForH
Sociology	400ForH
Soils	125So
Speech	309FolH
Student Counseling Bureau	101EdH
Surgery	B518 Mayo
Veterinary Medicine	301VetS
Zoology	108Z

FINAL EXAMINATIONS

Hours and days—The time of your examination is based on the hours and days the class is regularly scheduled, and the college under which the course is listed in the *Class Schedule*. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine . . . or to courses numbered over 200 which have no regularly scheduled classrooms.

In determining your proper final examination time from this schedule:

- Go by the lecture hours rather than the laboratory or recitation hours.
- Follow the MWF sequence if your class meets four or more days a week.
- Use the first full class hour if your class meets for more than one continuous hour.
- Use the common examination hour if your course is listed on the following page.

Classes meeting II Hour Saturday only will be examined 8:00-10:00 S March 12.

Classes meeting III-IV Hour Saturday only will be examined 10:30-12:30 S March 12.

Courses Listed Under Business Administration, General College, and Institute of Technology

Class Hours					Class Hours				
I	MWF	1:30- 3:30	W	Mar 16*	VI	MWF	1:30- 3:30	T	Mar 15*
I	TThS	1:45- 3:45	S	Mar 12	VI	TTh	4:00- 6:00	T	Mar 15
II	MWF	3:45- 5:45	F	Mar 11*	VII	MWF	8:00-10:00	F	Mar 11*
II	TThS	1:15- 3:15	M	Mar 14	VII	TTh	10:30-12:30	F	Mar 11
III	MWF	10:15-12:15	M	Mar 14*	VIII	MWF	6:45- 8:45 pm	M	Mar 14*
III	TThS	10:45-12:45	Th	Mar 17	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:00-10:00	W	Mar 16*	IX				
IV	TThS	10:45-12:45	S	Mar 12	X				
V	MWF	1:30- 3:30	Th	Mar 17*					
V	TTh	4:00- 6:00	Th	Mar 17					

Courses Listed Under Science, Literature, and the Arts, Education, Medical Sciences‡, Dentistry‡, and Unattached Departments**

Class Hours					Class Hours				
I	MWF	3:45- 5:45	W	Mar 16*	VI	MWF	1:30- 3:30	T	Mar 15*
I	TThS	1:45- 3:45	S	Mar 12	VI	TTh	4:00- 6:00	T	Mar 15
II	MWF	1:30- 3:30	F	Mar 11*	VII	MWF	8:00-10:00	F	Mar 11*
II	TThS	1:15- 3:15	M	Mar 14	VII	TTh	10:30-12:30	F	Mar 11
III	MWF	8:00-10:00	M	Mar 14*	VIII	MWF	6:45- 8:45 pm	M	Mar 14*
III	TThS	10:45-12:45	Th	Mar 17	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	10:15-12:15	W	Mar 16*	IX				
IV	TThS	10:45-12:45	S	Mar 12	X				
V	MWF	1:30- 3:30	Th	Mar 17*					
V	TTh	4:00- 6:00	Th	Mar 17					

Courses Listed Under Agriculture, Forestry, and Home Economics

Class Hours					Class Hours				
I	MWF	1:30- 3:30	W	Mar 16*	VI	MWF	1:30- 3:30	T	Mar 15*
I	TThS	1:45- 3:45	S	Mar 12	VI	TTh	4:00- 6:00	T	Mar 15
II	MWF	1:30- 3:30	F	Mar 11*	VII	MWF	8:00-10:00	F	Mar 11*
II	TThS	1:15- 3:15	M	Mar 14	VII	TTh	10:30-12:30	F	Mar 11
III	MWF	8:30-10:30	M	Mar 14*	VIII	MWF	6:45- 8:45 pm	M	Mar 14*
III	TThS	10:45-12:45	Th	Mar 17	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:30-10:30	W	Mar 16*	IX				
IV	TThS	10:45-12:45	S	Mar 12	X				
V	MWF	1:30- 3:30	Th	Mar 17*					
V	TTh	4:00- 6:00	Th	Mar 17					

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* Classes meeting four or more hours per week may give three-hour examinations provided the instructor notifies the Room Scheduling Office of his intention to do this. Three-hour examinations will be scheduled from 8:30-11:30 or 1:30-4:30 on the respective morning or afternoon the examination would otherwise be given (6:30-9:30 p.m. for VIII Hour classes).

‡ Courses offered primarily to students other than medical and dental students.

** Courses listed under Air Science, Military Science, Mortuary Science, Naval Science, and nonprofessional Physical Education for Men.

Common Examinations—All sections of the following courses are examined together at the time indicated.

BA 5—10:45-12:45 Th	June 9
BA 24, 25, 26—4:00-6:00 T	June 7
Biol 3, 3A—7:00-9:00 **pm** T	June 7
Comm 1, 2, 3—10:45-12:45 Th	June 9
Comp X—10:45-12:45 Th	June 9
Econ 1, 2—7:00-9:00 **pm** Th	June 9
EG 14—10:30-12:30 W	June 8
EG 15—10:45-12:45 S	June 4
EG 16—1:45-3:45 T	June 7
Engl B, 2A, 2B—10:45-12:45 Th	June 9
Engl C, 3A, 3B—8:00-10:00 W	June 8
Fren 2C, 3B, 3C—7:30-10:30 S	June 4
GC 32A—10:45-12:45 Th	June 9
Ger 1C, 2C, 3C—8:15-10:15 S	June 4
ITM 11, 26A—7:30-10:30 S	June 4
ITM 12, 24A—7:30-10:30 T	June 7
ITM 13A, 25A—7:30-10:30 Th	June 9
Math H, 10, 40, 53, 54—7:30-10:30 Th	June 9
Math X, T, 55—8:15-10:15 T	June 7
ME 32—10:45-12:45 Th	June 9
MM 27, 29—7:30-10:30 T	June 7
MM 40, 41—7:30-10:30 Th	June 9
Span 2C, 3C—7:30-10:30 S	June 4
Zool 3—7:00-9:00 **pm** W	June 8

Rooms—Examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Instructors note: Requests for special final examination rooms are submitted to the Office of Room Assignments and Scheduling by your department office on Form A123. These rooms will be scheduled beginning May 10.

Conflicts and Three Examinations in One Day—Report conflicts with examinations in other courses and situations involving three examinations in one day to your college office.

Changes in Final Examination Hours—All requests for adjustment of final examination hours should be made by May 27 to permit publication and orderly consideration of hardships. Additional common examinations may be requested on Form A163, which is available in department offices. The same form is used to request exceptions to official examination hours. Please note Regulations Regarding Examinations below.

University Schedule Committee Regulations Regarding Examinations

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the chairman of the University Scheduling Committee. This prohibition precludes also moving a final examination from a scheduled time to the last or earlier meetings of the class, except laboratory final examinations which cannot be held in accordance with the regular final examination schedule.

2. Instructors requesting any variation from the official final examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one day because of the change in hours being requested.

3. No variations from the University final examination schedule will be considered official until published in the Official Daily Bulletin.

4. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.

Recommended: In order to give students an opportunity for thorough review prior to final examinations, instructors are requested not to schedule quizzes or term papers to be due during the last week of class.

GRADES

Academic Staff—Grades are due in the Office of Admissions and Records within 90 hours after the examination. Spring quarter grades are due beginning June 8 with last day examination grades due by noon, Tuesday, June 14. Messenger service is provided. Please call Extension 6658 when grades are ready. Do not put reports in campus mail.

Students—Your Spring quarter report will be a blueprint of your current record which will be mailed with registration instructions for fall quarter about July 1 to your home address.

GRADING SYSTEM

1. There shall be four permanent grades, A (highest), B, C, and D (lowest), which shall be acceptable for the completion of a single course.

2. There shall be a permanent grade of F (failure) given when a student does not complete successfully the work of a course.

3. There shall be a temporary grade of I (incomplete) which may be assigned when there is not sufficient information immediately available to permit the assignment of a permanent grade. This would be the case if the student has not done all the work of the course or if the instructor does not know why a student, officially registered for his course, has not appeared or has left. If the instructor is able to ascertain that the student has no adequate excuse or if the student attended beyond the sixth week and was failing, F is the appropriate grade.

   An I which is not turned into a permanent grade or into a W (official cancellation with approval of the student's college) by the end of the sixth week of the next regular quarter of attendance shall become an F. (This does not apply to students in the Graduate School or to students in a Master's degree program in undergraduate colleges; their I grades remain until changed by the instructors to some other grade.) Permission to complete the work must be obtained from the instructor. He may set a makeup deadline of less than 6 weeks.

   An extension of time may be permitted for removal of I grades upon recommendation of the instructor concerned and with approval of the Scholastic Committee of the college in which the student is registered. If the petition is presented after the end of the sixth week of the next quarter of residence, a restoration of the mark of I and the completion of the required work would be considered in the nature of a special examination for which the special examination fee would be required.

4. There shall be a symbol W to indicate official cancellation from a course without grade. This shall be assigned in all cases of official cancellation during the first 6 weeks of classes irrespective of the student's standing. Whether cancellation is permitted is within the authority of the student's college to determine. After 6 weeks, W shall be posted only if the student is not failing at the time of official cancellation. W is a registration symbol, not a grade, and shall be posted by the Recorder on the basis of the student's registration activity as approved by the student's college.

5. A student who cancels officially or otherwise leaves a class after the sixth week of classes and is failing at the time shall receive an F.

6. There shall be a symbol X which may be reported in continuation courses in which a student is permitted to continue but in which a grade cannot usually be determined until the sequence is completed. The instructor shall submit a grade for each X when the student has completed the entire sequence.

7. In courses numbered 200 and higher, the permanent grade S (satisfactory) may be used to indicate satisfactory work for graduate students. In calculating grade point averages, it counts as a B.

8. In the Doctor of Medicine program, the permanent grade P (pass) may be used to indicate satisfactory work for Doctor of Medicine candidates. The student's standing will be calculated using more detailed evaluations available in the college office.

9. There shall be a registration symbol V (visitor) to indicate registration as an auditor or visitor.

10. There shall be a symbol T (transferred) indicating credits transferred from another institution, or from one college to another within the University when a revaluation is required. It shall be posted as a preceding supplement to the original grade.

11. For purposes of determining scholarship averages, grade points shall be assigned as follows:

Each credit of A	4 grade points
Each credit of B	3 grade points
Each credit of C	2 grade points
Each credit of D	1 grade point
Each credit of F	0 grade points

   A student's scholastic average—or grade point average—shall be the sum of grade points divided by the sum of credits passed and failed. In general, all credits must enter into the grade point average. If a course is repeated, usually both grades should enter into the computation of the grade point average. However, the faculty of a school or college may determine which credits and grade points are to be included in the average.

12. Any college or school may set special scholastic standards or other standards as a condition for registration in particular courses of study, for placing students on probation, for admission to the college or school, for promotion, for honors, for continued residence in the college or school, or for degrees, etc.

13. The official grade point average shall be calculated in accordance with paragraph 11 above regardless of when grades were earned.

STUDENT PROGRAM WORK SHEET

EXAMPLE:

Course	AgEc 1
Section	Sec 2
Room Bldg.	109 HH
Instructor	Lowe

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
I					
II					
III					
IV					
V					
VI					
VII					
VIII					

COURSE FEES

All fees are per quarter unless otherwise indicated.

Students taking the following courses will pay course fees in addition to tuition as follows:

Civil Engineering (Summer)
$35.00 per term—23

Composition (SLA)
*21.00—X Preparatory Composition

English (Duluth)
*$21.00—X Preparatory English

Itasca Biological Station (Summer)
$10.00—Laboratory fee
*$25.00—Research Table Fee

Mathematics (IT)
*$21.00—8 Solid Geometry

Mathematics (SLA)
*$35.00—X Preparatory Mathematics

Modern Language Institute (Summer)
$40.00 per term—French (22, 58, 109); or German (22, 66, 107); or Spanish (22, 58, 109)

Music
$35.00 for 1 half-hour individual lesson per week; $70.00 for 2 half-hour lessons or 1 hour lesson per week—A, D (no cr) ¶¶
$35.00 (2 cr) for 1 half-hour individual lesson per week; $70.00 (4 cr) for 2 half-hour lessons or 1 hour lesson per week—11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 100 ¶¶
$50.00—for 2 half-hour individual lessons per week or 1 hour lesson per week—13B (Summer)
$25.00—60B, 61B, 62B (Summer)
$70.00—for 1 hour lesson per week—204 ¶¶
$10.00—Piano for Children, ages 6-16

Music Education
225E—Same as Music 11-27, 100 ¶¶

Physical Education (men)
Towel and locker fee for students using PE facilities for activity, $2.50 per quarter payable at department
Uniforms (optional for class of recreation activity) $2.00 per quarter payable at department

Physical Education (women)
$3.25 (maximum $6.50 per quarter—All nonprofessional courses except Horseback Riding, 20A, 20B, 20C, 21A, 21B, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 40D, 41A, 41B, 42A, 45, 54, 76, 87, 88

Public Health
$100.00—169, 190
$185.50—231, 232
*$200.00—230 (September field course)

Rhetoric (AFHE)
*$7.00 per credit for more than 6 credits in Rhet 1

SPECIAL FEES

Supplement to *General Information Bulletin.*

Matriculation Deposit
$5.00—required of students in all colleges including the Graduate School. Students who overdraw or seriously deplete their accounts are required to pay a supplementary deposit of $10.00 to reinstate their accounts.

Music Practice Room
$1.00 per qtr for one, $2.00 for two, 50 cents for each addtl hr per week—all instruments except organ
.20 per hr—small organ
.40 per hr—large organ

Record Service Fee
$1.00—Deducted from matriculation deposit. This fee provides three certified copies of student records. When more than three copies of records are requested, a charge of $1 will be made for each additional copy.

Speech and Hearing Clinic—Students
$5.00 per qtr—spec clinical treatment

Speech and Hearing Clinic—Nonstudents
Articulatory cases, per 10 weeks—$15.00 for one, $25.00 for two, $30.00 for three, $35.00 for four, $40.00 for five lessons per week.
Stuttering, per session—$100.00 for full time remediation

* In lieu of tuition.

¶¶ Number of lessons are doubled per Summer Session term for courses listed in these sections.

DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry cards are $10; Agricultural Biochemistry, Art, Pharmacy, and Physiological Chemistry cards are $5.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be credited to your matriculation deposit at the end of the course.

You must present your deposit card to be assigned a laboratory desk. Veterans (P.L. 346, 16, 894) will receive information from their instructor concerning deposit cards and laboratory assignments.

OTHER FEES

Tuition Fee

School or College	Quarter Fee		Credit Hour Fee	
	Resident	Non-resident	Resident	Non-resident
Agriculture, Forestry, Home Economics; Business Administration; Dental Hygiene; Duluth; Education; General College; Institute of Technology; Public Health (except Hospital Administration); Science, Literature, Arts	$ 71	$180	$ 6.00	$15.00
Dentistry and Graduate Work; Medical School and Graduate Work; Hospital Administration	130	255	11.00	21.25
Graduate School, more than 6 credits	71	180	No credit hour	
6 credits or less, or thesis only	35.50	90	fee provided	
Law School and Graduate Work; Medical Technology; Physical and Occupational Therapy	85	180	7.25	15.00
Mortuary Science	100	180	8.50	15.00
Nursing, Basic and Practical	71	105	6.00	8.75
Nursing Administration	71	180	6.00	15.00
Other programs	85	180	7.25	15.00
Pharmacy and Graduate Work	76	185	6.50	15.50
University College	Tuition of college in which work is taken			
Veterinary Medicine and Graduate Work	110	245	9.25	20.50

Incidental Fee

Institute of Technology ..... $17.85 per quarter

Other colleges, including Duluth ..... 17.00 per quarter

Foreign Student Health Fee

Required of all noncitizens ..... $5.00 per quarter

COURSES TALLIED IN COLLEGE OFFICES

Aeronautical Engineering
All courses under 200—E 136

Agricultural Biochemistry
1A—CofH 220

Agricultural Economics
1, 2 (lect and rec), 12—CofH 220

Agricultural Engineering
All courses under 200—E 136

Agronomy and Plant Genetics
2—CofH 220

Air Science
All courses—A 1

Analytical Chemistry
57—JohH 210
All other courses under 200—E 136

Animal Husbandry
1, 65, 165—CofH 220

Anthropology
1A, 2A, 165, 172—JohH 210

Architecture
All courses under 200—E 136

Art
25A, 62A—E 136
All other courses under 193 except 1, 50—JohH 210

Art Education
17, 18, 19, 54, 84—Bu 206

Biology
3 (lect and lab), 3A (lect and lab)—CofH 220 for AFHE, Owre 125 for Nurs, WuH 101 for Pharm, NH 156 for Mort Sci, and JohH 210 for other students

Botany
10, 51, 52, 54, 104, 140, 166—JohH 210

Business Administration
1, 5, 24, 26—JohH 210
25—WuH 101 for Pharm, and JohH 210 for other students
28—E 136
All other courses under 200 except 32, 33, 34, 36, 39, 149—VH 107

Chemical Engineering
All courses under 200—E 136

Child Development and Welfare
80—JohH 210

Civil Engineering
All courses under 200 (lect and lab for 33, 34, 53, 171)—E 136

Communication
All courses—JohH 210

Curriculum and Instruction
60, 61, 62, 63, 64, 65, 66, 101, 109, 110, 125, 252—Bu 206

Dairy Husbandry
9, 149—CofH 220

Dairy Industry
1—CofH 220

Economics
1—JohH 210
2—WuH 101 for Pharm, and JohH 210 for other students
2T—E 136
All other courses under 200 except 90, 181C, 190—VH 107 for BA, and JohH 210 for other students

Education
55B, 75A—Bu 206

Educational Psychology
150, 151, 218, 218A, 219A, 233, 253, 281, 282—Bu 206

Electrical Engineering
All courses under 200—E 136

Engineering Graphics
All courses—E 136

English (SLA)
B (lect and lab), C (lect and lab), 2A (lect and lab), 3A (lect and lab)—E 136 for IT, and JohH 210 for other students
2B (lect and lab), 3B (lect and lab)—E 136 for IT, Owre 106 for DH, and JohH 210 for other students
22, 23, 39, 55, 56, 73, 74—JohH 210
86—E 136

English Composition
58—VH 107
All other courses under 200 except 103—JohH 210

Entomology and Economic Zoology
1A, 146—CofH 220

Family Life
All courses—JohH 210

Forestry
8, 10—CofH 220

French
2C, 3A, 3B, 3C, 4, 52, 54—JohH 210

General College
7A, 7C, 10B, 26A—CofH 220 for AFHE, and NH 106 for other students
All other courses—NH 106

General Engineering
All courses—E 136

Geography
1, 4, 41, 139—JohH 210

Geology and Mineralogy
A, 1—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
B, 2, 153—JohH 210

Geophysics
All courses—E 136

German
1C, 2C, 3A, 3B, 3C, 52, 72, 75, 78, 96, 99—JohH 210

History
2, 3, 6, 13, 21, 22, 52, 55, 58, 72, 99, 136—JohH 210

History and Philosophy of Education
180—Bu 206

Home Economics
1, 125—CofH 220 for AFHE, and JohH 210 for other students
30—Owre 125 for Nurs, and JohH 210 for other students
All other courses under 200 except 190—CofH 220

Horticulture
10, 22, 40—CofH 220

Humanities
2A, 3A, 24—CofH 220
23, 53—E 136 for IT, and JohH 210 for other students
All other courses—JohH 210

Hydromechanics
All courses under 200—E 136

Industrial Education
1—Bu 206
3, 6, 9, 12, 15, 20, 50—TNCW 103

Industrial Engineering
All courses under 200—E 136

Inorganic Chemistry
5, 11—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
25, 26—E 136 for IT, and JohH 210 for other students
All other courses under 200—E 136

Italian
3—JohH 210

Journalism
13—CofH 220 for AFHE, and JohH 210 for other students
14, 15, 18, 41, 51, 54, 58, 66, 69, 79, 101, 122, 142—JohH 210

Mathematics (IT)
All courses under 200—E 136

Mathematics (SLA)
H, T, 10—CofH 220 for AFHE, and JohH 210 for other students
X, 5, 20, 40, 40A, 53, 54, 55, 59, 60, 106, 108, 109, 111B, 112C, 123, 125B, 187A—JohH 210

Mechanical Engineering
All courses under 200 (lect and lab for 21, 34)—E 136

Mechanics and Materials
All courses under 200—E 136

Mechanized Agriculture
3, 4, 7, 12, 12A, 25, 35, 42, 45, 45A, 130—CofH 220

Metallurgy
All courses under 200—E 136

Metallurgical Engineering
All courses under 200—E 136

Military Science and Tactics
All courses—A 106

Mining Engineering
All courses under 200—E 136

Mortuary Science
All courses—NH 156

Music Education
4, 5, 6, 7, 50A, 51, 52, 67, 68, 103—Bu 206

Music
1, 2T, 3T, 5T, 6T, 7C, 11C, 12C, 36, 43, 76—JohH 210

Natural Science
All courses **except** 173—JohH 210

Naval Science
All courses—A 203

Organic Chemistry
41—CofH 220
62—Mayo C205 for Med Tech, and JohH 210 for other students
63—WuH 101 for Pharm, and E 136 for other students
All other courses under 200—E 136

Personal Orientation
All courses—JohH 210

Petroleum Engineering
All courses under 200—E 136

Philosophy
1, 2—E 136 for IT, and JohH 210 for other students
1A, 3, 11, 52, 192—JohH 210

Physical Chemistry
All courses under 200—E 136

Physical Education for Men
1C (secs 1, 2, 3, 5, 6, 7, 8, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26)—JohH 210
1C (secs 4, 9, 10, 14)—CofH 220
2C (secs 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15, 17, 18, 19, 20, 21)—JohH 210
2C (secs 10, 11, 16)—CofH 220
5C, 6C, 8, 9B, 45, 135 (sec 2)—Bu 206

Physical Education for Women
C (nonprofessional) secs 1, 22, 23, 34—CofH 220 for AFHE, and JohH 210 for other sections
22B, 22C, 25, 45, 70, 135 (sec 1)—Bu 206

Physics
6—JohH 210
9, 12, 13, 50, 51, 51A, 104, 122, 133A, 136, 148—E 136

Plant Pathology and Botany
1, 120—CofH 220

Political Science
B, 2—E 136 for IT, and JohH 210 for other students

Psychology
4-5, 5, 6, 55, 130, 148, 202, 216, 220, 246—JohH 210

Public Health
52—CofH 220
131—JohH 210

Rhetoric
47—CofH 220 for AFHE, and JohH 210 for other students
All other courses under 200 **except** 1, 2, 3, 32, 33—CofH 220

Russian
3—JohH 210

Social Science
1, 2, 3—E 136 for IT, and JohH 210 for other students
All other courses—JohH 210

Social Work
267, 270—JohH 210

Sociology
1, 3—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
2—E 136 for IT, and JohH 210 for other students
45, 53, 126, 141—JohH 210

Soils
3B, 19, 119, 127, 131—CofH 220.

Spanish
2C, 3A, 3C, 55—JohH 210

Speech and Theater Arts
All courses under 183 **except** 155, 157, 163, 166—JohH 210

Zoology
3 (lect and lab)—CofH 220 for AFHE, Owre 106 for DH, and JohH 210 for other students
50, 53, 58, 84, 107, 146, 161, 182, 256—JohH 210

CALENDAR

MARCH

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

March

24-25 Registration and payment of fees for new students in all undergraduate colleges

28 Spring quarter classes begin

APRIL

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

April

1 Last day for registration and payment of fees for the Graduate School, and for teachers in service

15 Holiday (Good Friday)

28 Senate meeting, 3:30 p.m.

MAY

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

May

19 Cap and Gown Day Convocation; 11:30 a.m., IV hour classes excused

30 Holiday (Memorial Day)

JUNE

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

June

2 Senate meeting, 3:30 p.m.

4-10 Final examination period

5 Baccalaureate service, 3:00 p.m.

11 Commencement, 8:00 p.m.

11 Spring quarter closes

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REGISTRATION DATES

Students in attendance winter quarter must register during the period set for their college and pay fees by **March 17.**

Students returning to the University who were not in attendance winter quarter may register during the period set for their college or on March 24-25 with fees due March 25.

Orientation and registration for new students will also be on March 24-25 with fees due **March 25.**

Agriculture, Forestry, Home Economics (220 Coffey)
Seniors, February 23, 24
Juniors, February 25, 26
Sophomores, February 29, March 1, 2
Freshmen, Special Students, March 3-10

Business Administration (107 Vincent)
Issue of Material, February 23 and a.m. February 24
Tally, 1:30 p.m. February 24 through February 26

Dental Hygiene (106 Owre)
February 23, 24, 25

***Dentistry** (149 Owre)
March 24, 25

Education (206 Burton)
February 23-March 11

General College (106 Nicholson)
Saturday, February 20 (8 a.m.-1 p.m.)
Students registering this day will turn in material to Admissions and Records on Tuesday, February 23
Thursday, February 25 (8-11:30 a.m., 1-5 p.m.; classes will not meet)
February 29-March 4 (classes meet as usual)
Returning students: March 7-18

Graduate School (316 Johnston)
February 23-April 1 (Fees due April 1)

***Law** (125 Fraser)
March 24-25

Medical Technology (C-205 Mayo)
February 23-March 4

***Medicine** (1360 Mayo)
March 24-25

Mortuary Science (156 Nicholson)
February 24, 25, 26

Nursing (125 Owre)
February 23-March 4

Occupational Therapy (860 Mayo)
February 23-March 4

Pharmacy (101 Wulling)
February 23-March 4

Physical Therapy (860 Mayo)
February 23-March 4

Public Health (1325 Mayo)
February 23-March 10

Science, Literature, and the Arts
Lower Division (216B Johnston)
Upper Division (223 Johnston)
Special Students (216 or 225 Johnston)
Issue of material starts February 23
Tally starts February 25
Students should complete registration by March 10 because advisers will not be available after that date.

Technology, Institute of
Engineering and Architecture (133 Main Engineering)
Chemistry (127 Chemistry)
Mines and Metallurgy (112 Mines and Metallurgy)
Physics (148 Physics)
February 23-March 2

University College (223 Johnston)
Dates same as for S.L.A.

***Veterinary Medicine** (220 Coffey)
March 24-25

Education and Graduate students taking Saturday Classes Only may also register on Saturday, April 2 at 206 Burton

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* Students in these colleges have normally already registered for the entire year.

Iva Manley

University of Minnesota

CLASS SCHEDULE

Fall Quarter

1960

Minneapolis and St. Paul Campuses

including

- Registration instructions, page 2
- Final examination schedule, page 120
- Courses tallied in college offices, page 124
- Course fees, page 126
- Calendar, page 123

Every Student Is Held Accountable for Information Contained Herein and Should Save This Bulletin for Future Reference.

Courses Are Listed Under the Departments Which Offer Them. Consult Index on Page 127.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office. Follow the instructions given you by your college. Registration dates for each college are listed on the back cover.

Step 2—Get class reservation cards for courses tallied in the college offices. Courses which are tallied in college offices are listed on page 124.

Step 3—New students (who have not already done so) go to the University Health Service and make an appointment for your physical examination. Required of all undergraduate students taking 6 credits or more and of all graduate students except "teachers in service" taking less than 6 credits.

Step 4—Turn in your registration permit, class reservation cards, approved registration blank, student address book card, University Relations mailing slips, Dean of Students information card, and religious census card at your record window in the Office of Admissions and Records to obtain statement of fees. New students, in addition, must present physical examination appointment slip (if required).

Step 5—Pay your fees to the bursar. Every fee statement must be receipted, even when no payment is required, before you are considered officially registered. Except for Graduate School, registration and payment of fees must be completed by September 23. Fees for students registered through September 9 are due September 15. Students in the Graduate School must complete registration and payment of fees by September 30.

Change of registration—Have your "cancel-add" blank approved by your college office, get necessary class reservation cards for courses you are adding as in step 2 above, and present to your college window in the Office of Admissions and Records. You will get a supplementary fee statement or fee refund statement as necessary.

Withdrawal from the University—Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. All-University property such as library books, military, athletic or band equipment, laboratory material, locker keys or locks, athletic tickets, etc., must be turned in before you leave. P.L. 346, 16, and 894 veterans must also notify 102 Administration Building.

Accounts Paid By Various Agencies

If you have authorization for the University to bill a donor for your tuition and fees you must have your fee statement approved at window 18 in the Office of Admissions and Records (or room 220 Coffey Hall, St. Paul Campus) and *receipted by the bursar.* Failure to have your fee statement receipted before the last date for payment will necessitate a "late fee."

Veterans and War Orphans

P.L. 550 veterans and P.L. 634 war orphans—You must register and pay fees like every other student. Your business with the Veterans Administration is separate, and you must attend to it on your own responsibility. The University assists you by certifying that your claims for payment are justified. You initiate this business at window 18 on the first floor of the Administration Building (or room 220 Coffey Hall, St. Paul Campus). Do the following:

Make application to the Veterans Administration for benefits on or before your first day of classes. You don't get paid unless you do apply. A Certificate of

Education and Training comes to you from the Veterans Administration about a month after you apply. Turn this in as soon as you complete your registration at one of the above addresses.

If you are returning for another session, your previous training period under either law having been officially interrupted, you have to make out a re-entrance form to notify the Veterans Administration that you wish to return to training status. Do this at one of the above addresses.

Make a report of your attendance every month. During the first five days of each month, fill out the Certification of Attendance Form and turn it in at one of the above addresses. The Admissions and Records Office adds to this form a certification of the amount of work you are doing and sends it on to the Veterans Administration, which in turn sends you a check at your home address. If you want full benefits, take 14 credits per quarter as an undergraduate or 12 credits in the Graduate School.

P.L. 16, 346, and 894 veterans—Have your fee statement approved at window 18 in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), and then receipted by the bursar. Present the receipted statement and your course list to room 102 Administration Building to obtain an order for books and supplies. (The $5 matriculation fee is not chargeable to the Veterans Administration.)

Additional information and assistance with problems concerning any of the above laws may be obtained at room 102 Administration Building.

Graduate School Fees for Staff Members

All academic appointees giving 25 per cent or more of full time service and all 75 per cent time or more civil service appointees, when enrolled in the Graduate School, will pay tuition at the Graduate School resident rate, regardless of source of fund, resident status, or curriculum pursued. Similar staff members when enrolled in the final year of a Master's degree curriculum in an undergraduate college will pay tuition at the respective college resident rate. If you are a non-resident, entitled to resident fee privileges under these regulations, tell the fee statement clerk that you are a staff member when you turn in your approved registration blank at your college window in the Admissions and Records Office.

If You Are Graduating This Year

For the December Commencement, you must file a form called "Application for Degree" at the appropriate window in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), preferably with your fall quarter registration material. A graduation fee of $10 is due November 7 for fall quarter graduation.

If you expect to graduate any time during the coming year (through August 1961), file your formal Application for Degree now. Shortly thereafter you will receive a balance sheet which shows whatever requirements for the degree you still must complete.

Foreign Students

Your first action upon arriving at the University should be to show your passport at the Foreign Student Adviser's Office, 302 Eddy Hall. There you will be given full information about federal, state, and local regulations, and about housing, finance, health and personal problems. Following this, you register in the same manner as all other students.

HOW TO USE THIS BULLETIN

Bold face titles—You must obtain a class reservation card to enroll in courses which appear with **bold face** titles. Instructions on where to get these class reservation cards precede the index at the back of this bulletin.

Prerequisites—Before you can enroll in some courses, you must have completed or be concurrently enrolled in certain other courses or possess some particular qualification or class standing. These requirements are known as prerequisites. If no prerequisites are listed, there are none, except insofar as the course number indicates a class standing requirement.

Class standing requirements, unless otherwise noted, are indicated by the course number:

1-49 for freshmen and sophomores

50-99 for juniors, seniors, and fifth-year students

100-199 for juniors, seniors, fifth-year students, and graduate students

200 and over for graduate students only

A minimum of prerequisite information is shown. For example, when courses which must be taken in sequence are prerequisites, only the last course of the sequence is listed. A comma always means "and"; while a semi-colon indicates that there are alternative prerequisites.

Example: prereq 2 or 5, Psy 1 (you must have had Psychology 1 plus either course 2 or 5)

Example: prereq C...or Comp 6 or Comm 3, 5 addtl cr...or 5 cr in 21-22-23 (you must have had either course C...or 5 credits in the same department plus either Composition 6 or Communication 3...or 5 credits from either course 21, course 22, or course 23)

When no departmental designation precedes the course number listed as a prerequisite, that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.

Work equivalent to a prerequisite course (having the same content) is ordinarily accepted in lieu of that prerequisite. You will also note that the instructor may, in some instances, waive prerequisites at his discretion. See your college bulletin for further information.

Symbols—The following symbols are used throughout this bulletin:

† To receive credit, all courses listed after the dagger must be completed.

‡ Students may enter any quarter.

§ No credit if credit received for equivalent course after the symbol.

¶ Means "concurrent registration in."

‡ Means "consent of instructor."

△ Means "consent of department or school offering the course."

Hours and days—Class hours are identified by Roman numerals, and continue for 50 minutes after the beginning time shown below:

Hour	I	II	III	IV	V	VI	VII	VIII
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00

A class listed I-III TTh meets the first through the third hours Tuesdays and Thursdays, the hyphen always indicating "through." Days of the week are abbreviated M, T, W, Th, F, and S.

Building name abbreviations—Refer to the index for page reference.

Choice of classes—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll. Many courses have a choice of laboratory or recitation periods, but only a single lecture period for all students taking the course. Occasionally there will be a choice of both lecture and laboratory or recitation periods. The choice of the laboratory or recitation section will determine the lecture section whenever the lecture sections have no identifying section number.

Examples:

—1, I TThS	Lect III MWF	Lect II T	—1, Lect II T
—2, II MWF	—1, Lab V-VI M	—1, Lab III-IV T	—2, Lect II Th
—3, IV TThS	—2, Lab V-VI W	—2, Lab III-IV Th	—1, Lab III-IV T
		Lect II Th	—2, Lab III-IV Th
		—3, Lab VI-VII T	—3, Lab VI-VII T
		—4, Lab VI-VII Th	—4, Lab VI-VII Th

Missing information—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

Changes—Changes made subsequent to publication of the *Class Schedule* are published in the Official Daily Bulletin, which appears in the *Minnesota Daily*. Room changes are posted on classroom doors.

Winter and Spring Courses

Winter and spring courses are listed so you can plan your program for the entire year when registering for the fall quarter. The quarter is identified by "w" or "s" attached to the course number.

Whenever a course is repeated or continued into the winter or spring quarters, you are referred back to the fall quarter listing for information about title, credits, prerequisites, and time the course is offered. Any deviation from the fall quarter information is indicated.

A hyphen (-) preceding the course number indicates that there is a continuity between it and the course immediately preceding it in numerical order. These must be taken in the order shown unless the prerequisite (or double dagger symbol) indicates that they can be taken out of sequence.

Credits listed for winter and spring quarter classes are for one quarter only, unless otherwise indicated.

Important Note to *STUDENTS*—

Accurate registration is your personal responsibility. You will receive credit in only those courses for which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel it on a regular cancellation form.

Colleges of the University reserve the right to cancel courses in which enrollment is not sufficient to warrant giving the course.

Do not register from the *Class Schedule* alone. Your college bulletin contains full course descriptions, college rules and requirements, and other information necessary for sound program planning.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

Courses offered on the St. Paul Campus by Minneapolis Campus departments:

Geog 150(f)
Hum 1A(f,w,s), 2A(f,w,s), 3A(s)
Math H(f,w,s), T(f,w,s)
Mus 43S(f), 44S(w), 45S(s)
PubH 52(f,w,s)
Soc 1A(f,w,s), 14A(f,w,s)
Spch 251(f,w,s)
PEM (unattached) (f,w,s)
PEW (non-professional) (f,w,s)

For additional information, see the course listing under the appropriate department.

AGRICULTURAL BIOCHEMISTRY (AgBi)

Fall Quarter

1A Biochemistry (5 cr; prereq InCh 5)
Lect II MTThF, HH 100, Schultze
—1, II W, HH 100
—2, II W, McNH 201
—3, II W, SnH 116
—4, II W, McNH 48
—5, II W, McNH 125

2 **Quantitative Methods** (5 cr; prereq 8 cr inorg chem)
VI-IX MWF, SnH 116, Anderson

3 Introduction (3 cr; prereq OrCh 42 or 62)
I TThS, SnH 113, Liener

118 Lab Probs: Biochemistry (3-5 cr; prereq ‡)

119 Physical Biochemistry (3 cr; prereq 3...Phys 9 rec)
III MWF, SnH 113, Briggs

124 Vitamins (3 cr; prereq 6, 119...123 rec)
I TThS, SnH 116, Schultze

129 Physical Biochemistry Lab (2 cr; prereq 2, ¶119)
VI-VIII TTh, SnH 202, Briggs

202 Biochemical Methods (3 cr; prereq 6 cr from 129-133 or cons adv)
VI-IX MW, SnH 208, Glass

203 Research Probs (2-5 cr; prereq ‡)

205 Topics: Literature (1-3 cr; prereq ‡)

208 Seminar: Cereal Chemistry (1 cr; prereq 108 or ‡) Geddes, Glass

213 Seminar: Dairy Chemistry (1 cr; prereq 103, ‡) Jenness

216 Seminar: Nutrition, Enzymes (1 cr; prereq 116, 123, ‡) Schultze, Liener, Kirkwood

219 Seminar: Colloids (1 cr; prereq 119, ‡) Briggs

220 Seminar: Proteins (1 cr; prereq 120, ‡) Briggs, Jenness

221 Seminar: Carbohydrates (1 cr; prereq 121, ‡) Smith

222 Seminar: Lipides (1 cr; prereq 122, ‡) Lundberg

224 Seminar (1 cr)
IX F, SnH 113, Geddes

Winter and Spring Quarters

1As See 1Af

2w See 2f

3w See 3f

5s Plant Biochemistry (3 cr; prereq 3) I MWF

6s Animal Biochemistry (3 cr; prereq 3) II MWF

10s Dairy Chemistry (5 cr; prereq 3) Lect VI MWF, lab VII-IX WF

103w Adv Dairy Chemistry (5 cr; prereq 10) Lect IV MWF, lab VI-VIII TTh

105s Plant Biochemistry (3 cr; prereq 3) I MWF

106s Animal Biochemistry (3 cr; prereq 3) II MWF

108s Wheat, Wheat Products (3 cr; prereq 5) IV MWF

110s Flour Lab Methods (3-5 cr; prereq 2, 108 or ¶) VI-IX MWF

116w Adv Animal Nutrition (3 cr; prereq 6...120 rec) III TThS

117s Lab Probs: Animal Nutrition (3 cr; prereq 116, ‡)

118w,s See 118f

120w Proteins (3 cr; prereq 119 or ‡) III MWF

121w Carbohydrates (3 cr; prereq 119 or ‡) II MWF

122s Lipides (3 cr; prereq 119 or ‡) II WF, VI W

123s Enzymes (3 cr; prereq 120 or ¶120 or ‡... PCh 107, 108 rec) III MWF

130w Proteins Lab (2 cr; prereq 2, ¶120) VI-VIII TTh

131w Carbohydrates Lab (2 cr; prereq 2, ¶121) VI-VIII MW

132s Lipides Lab (2 cr; prereq 2, ¶122) VI-VIII MW
133s Enzymes Lab (2 cr; prereq 2, ¶123) VI-VIII TTh
203w,s See 203f
205w,s See 205f
208w,s See 208f
213w,s See 213f
216w,s See 216f
219w,s See 219f
220w,s See 220f
221w,s See 221f
222w,s See 222f
224w,s See 224f

AGRICULTURAL ECONOMICS (AgEc)

Fall Quarter

1 **Introduction** (3 cr)
—1, II MWF, DI 15, Hess
—2, IV MWF, DI 15, Hess
3 Principles of Economics II (3 cr; prereq 2) 11:00-12:15 TTh, HH 9, Hess
12 **Farm Management I** (3 cr; prereq 2) I I MWF, HH 100, Nodland
25 **Accounting** (4 cr; prereq soph, regis AFHE)
Lect VII MWF, AgEng 103, R Dahl
Lab VIII-IX W, HH 210
40 Marketing Organization (3 cr; prereq soph, 2)
II MWF, AgEng 108, D Dahl
50 Farm Finance (5 cr; prereq soph with ♯, 2, Ag or For students only)
III MTWThF, HH 210, Koller
82 Farm Mgt II (3 cr; prereq 12)
9:00-10:15 TTh, DI 118, Jensen
110 Production (3 cr; prereq 2)
I MWF, AgEng 101, Engene
126 Consumption (3 cr; prereq 2)
I MWF, DI 255, Helmberger
127 Economics of Food Consumption, Distribution (3 cr; prereq 2 or ♯)
VIII MWF, DI 118, Cochrane
140 Grain Marketing (3 cr; prereq 40
II MWF, HH 210, R Dahl
241 Seminar: Marketing (3 cr)
3:00-4:15 TTh, HH 210

Winter and Spring Quarters

1w See 1f
2w,s Principles I (3 cr; prereq 1) Lect II or IV MW(s); II or IV TTh(w), rec I Th; III Th; V Th; I F; II F; IV F; V F
3s See 3f
12s See 12f: III MWF
25w See 25f
30s Agricultural Prices (3 cr, §180; prereq soph, 2) VII MWF
40w See 40f
80w Farm Accounting (3 cr; prereq soph with ♯) I MWF
82s See 82f
101w Statistical Methods for Social Sciences (4 cr; prereq Biom 100) Lect III MWF, lab I-II T
107s Farm Work Simplification (3 cr; prereq 2) VIII-IX MWF
108s Agricultural Policy (3 cr, §old 8) II MWF
131w Market Prices (3 cr; prereq 30) 3:30-4:45 TTh
141w Dairy Marketing (3 cr; prereq 40) II MWF
143w Livestock, Poultry Marketing (3 cr; prereq 40) IV MWF
144s Co-operative Organization (3 cr; prereq 40) IV MWF
150s Adv Farm Finance (3 cr; prereq 50) 1:30-2:45 TTh
170w Land Economics (3 cr; prereq 110 or ♯) VII MWF
172s World Agriculture (3 cr) 1:30-2:45 WF
180w Farm Accounting (3 cr, §80; prereq ♯) I MWF
183w Farm Planning (3 cr; prereq ♯) 10:00-11:15 TTh
208s Seminar: Agricultural Price, Income Policies (3 cr) 10:00-11:15 TTh
211s Economics of Agricultural Production II (3 cr; prereq 110, Econ 165 or ♯) VIII-IX MW
221w Farm Mgt Research Methods (3 cr) 1:30-2:45 TTh
226s Seminar: Farm Management (3 cr) 3:00-4:15 TTh

AGRICULTURAL ENGINEERING

Mechanized Agriculture (MeAg)

Fall Quarter

3 **Technical Drawing** (3 cr, §2)
—1, III-IV MWF, AgEng 303, Christopherson
—2, III-IV TTh, 2 hrs ar, AgEng 303, Christopherson
4 **Mechanical Training** (4 cr)
Lect VI-VII M, AgEng 108, Olson
—1, Lab VIII-IX MWF, AgEng 20, Olson
—2, Lab II-IV TTh, AgEng 20, Olson
Lect VI-VII W, AgEng 108, Olson
—3, Lab VIII-IX MWF, AgEng 20, Olson
—4, Lab II-IV TTh, AgEng 20, Olson
Lect VI-VII F, AgEng 108, Olson
—5, Lab VIII-IX MWF, AgEng 20, Olson
—6, Lab II-IV TTh, AgEng 20, Olson
12 **Machinery** (3 cr)
Lect VI MW, AgEng 109, Solstad
—1, Dem VI F, AgEng 37, Solstad
—2, Dem VII F, AgEng 37, Solstad
12A **Machinery Lab** (1 cr; prereq 12 or ¶)
—1, VIII-IX F, AgEng 49, Solstad
—2, VIII-IX M, AgEng 49, Solstad

24 **Agricultural Physics I** (4 cr; prereq Math T, 10)
Lect III MWF, AgEng 101, Culmer
—1, Lab VI-VII M, AgEng 102, Culmer
—2, Lab VI-VII W, AgEng 102, Culmer
—3, Lab VII-VIII Th, AgEng 102, Culmer
—4, Lab VIII-IX T, AgEng 102, Culmer
—5, Lab IV-V Th, AgEng 102, Culmer

42 **Surveying** (4 cr; prereq 3, Math T)
Lect VI TTh, AgEng 103, Machmeier
—1, Lab II-IV TTh, AgEng 305, Machmeier
—2, Lab VII-IX TTh, AgEng 305, Machmeier

106 **Hydrology, Erosion Control** (3 cr; prereq Soil 1 or 3 or 19, Math H)
III MWF, AgEng 109, Larson

114 Probs: Farm Buildings (2-4 cr; prereq 3, 7, 14) Otis, Christopherson

130 **Farm Shop Mgt** (3 cr; prereq AgEd maj, 4, 3 addtl cr, AgEd 91)
Lect VII TTh, AgEng 35, Taylor
Lab VIII-IX TTh, AgEng 20, Taylor

Winter and Spring Quarters

2w Technical Drawing Probs (1 cr; §3; prereq 1 yr HS mech draw) III-IV T

3w,s See 3f: III-IV MWF

4w See 4f: Lect V-VI M; V-VI W; V-VI F; lab III-V TTh

4s See 4f

7w,s Farm Building Construction (3 cr) Lect VI TTh, lab VII-IX T or Th

12s See 12f: Lect V TTh, dem III or IV Th

12As See 12Af: VII-VIII Th

14s Farm Buildings (3 cr) I MWF

23w General Physics (5 cr; prereq Math H) Lect II MTWF, lab I-II Th; III-IV Th

24w See 24f: Lect I MWF, lab VI-VII W; VI-VII Th; VIII-IX Th

25w,s Agricultural Physics II (4 cr; prereq 24) Lect I MWF(s); III MWF(w), lab I-II T(w); III-IV T(w,s); VI-VII M(s); VI-VII T(w,s); VIII-IX T(w)

35s Household Physics (5 cr) Lect II MWF, lab I-II TTh; VIII-IX MW; VIII-IX TTh

39w Rural Sanitation, Water Supply (3 cr; prereq 23, Math H) IV MWF

42s See 42f: Lect VI TTh, lab VII-IX TTh

45w,s Engines, Tractors (3 cr; prereq 23) Lect VI MW, dem VI or VII F

45Aw,s Engines, Tractors Lab (1 cr; prereq 45 or ¶) VIII-X M(w,s); VIII-X F(w)

55w Electricity (2 cr; prereq 23, Math H) III TTh

107w Drainage, Irrigation (3 cr; prereq Math H, Soil 1 or 3 or 19) II MWF

108s Probs: Soil, Water Conservation (4 cr; prereq 106 or 107) VI-IX MW

114w,s See 114f

124s Machinery, Mechanical Power Mgt (3 cr; prereq 9 cr incl 12, 23) 8:00-9:30 TTh

125s Topics: Agricultural Physics (3 cr; prereq Phys 50 or inte calc, 25)

130s See 130f

AGRONOMY AND PLANT GENETICS (Agro)

Fall Quarter

1 **Introduction** (4 cr)
Lect IV MWF, Agr 202, Smith
—1, Lab III-IV T, Agr 104, Smith
—2, Lab VI-VII T, Agr 104, Smith
—3, Lab III-IV Th, Agr 104, Smith

27 Forage Crops (4 cr; prereq 1)
Lect VI MWF, Agr 202, Schmid
Lab VII MWF, Agr 104, Schmid

50 Crop Judging (4 cr; prereq 22, 24)
VI-IX TTh, Agr 104, Schmid

127 Forage Crops (4 cr; prereq 1)
Lect VI MWF, Agr 202, Schmid
Lab VII MWF, Agr 104, Schmid

131 **Genetics** (4 cr; prereq 30)
Lect I MWF, Agr 202, Lambert
—1, Lab II-III M, Agr 104, Lambert
—2, Lab III-IV Th, Agr 104, Lambert

135 Weed Control (3 cr; prereq 1, PlPa 3)
VI-VII T, VI Th, Agr 202, Behrens

201 Research: Farm Crops (ar cr; prereq 121, 127) Behrens, Robinson, Schmid, Smith

202 Seminar: Farm Crops (1 cr; prereq 9 cr farm crops)
IX W, Agr 408

241 Research: Plant Genetics (ar cr) Myers, Burnham, Rinke, Ausemus, Thomas, Lambert

242 Seminar: Plant Breeding (1 cr)
VIII-IX F, Agr 408

244 Lab Methods in Plant Breeding (ar cr; prereq 132)

251 Probs: Application of Statistics (ar cr; prereq Biom 100) Thomas

252 Cytogenetics (4 cr; prereq 240, Bot 118)
Lect I MWF, Agr 408, Burnham
Lab ar, Burnham

Winter and Spring Quarters

1w,s See 1f

21w Grain, Oilseed Crops (4 cr; prereq 1) Lect VI MWF, lab VII MF; VII-VIII W

22s Grain, Hay Grading (3 cr; prereq 1) I-II MWF

24s Identification, Judging (1 cr; prereq soph, 1) VIII-IX Th

30w Genetics (3 cr; prereq soph, Biol 3) I MWF

77w Literature (1 cr; prereq sr, 9 cr) IX W

121w Grain, Oilseed Crops (4 cr; prereq 1) Lect VI MWF, lab VII MF; VII-VIII W

122s Grain, Hay Grading (3 cr; prereq 1) I-II MWF

132w Farm Crops Plant Breeding (4 cr; prereq 30) VI-VII TTh
134s Adv Forage Crops (4 cr; prereq 27) Lect VI MWF, lab VII MWF
201w,s See 201f
202w See 202f
240w Adv Genetics (3 cr; prereq 131) II MWF
241w,s See 241f
242s See 242f
243s Methods in Plant Breeding (3 cr; prereq 132, 240) II MWF
246w Seminar: Genetics (1 cr) VIII-IX F
248w Applied Statistics (3 cr; prereq Biom 101 or PubH 110) V MWF
251w See 251f
253s Methods: Plant Genetics (3 cr; prereq 252) I MWF
255s Topics: Genetics (2 cr; prereq 252 or △)
261 Quantitative Inheritance (3 cr; prereq 131 or 248) III-IV T, IV Th

ANIMAL HUSBANDRY (AnHu)

Fall Quarter

1 **Introduction** (4 cr)
II MTWThF, LsPav 100, Meiske, Kolari, Jordan
36 Livestock Feeding I (3 cr; prereq 1...AgBi 3 rec)
III MWF, PetH 110, Smith
36A **Livestock Feeding I Lab** (1 cr; prereq 36 or ¶)
—1, VIII-IX T, LsPav 203, Smith
—2, VIII-IX Th, LsPav 203, Smith
53 Adv Meats (3 cr; prereq 31)
VI-VII TTh, MSh 102, Aunan
58 Market Classes, Grades of Livestock (3 cr; prereq 1)
II T, II-IV Th, MSh 102, Harvey
60 Current Topics (1 cr; prereq sr)
IX F, PetH 108, Harvey
63 Swine Production (3 cr, §163; prereq 37, 37A, 62 or ♯)
I TTh, III-IV T, LsPav 203, Meade
101 Livestock Selection (3 cr; prereq 9 or ♯)
VI-VII MWF, LsPav 100, Jordan
163 Swine Production (3 cr, §63; prereq 37, 37A, 62 or ♯)
I TTh, III-IV, LsPav 203, Meade
201 Adv Animal Breeding I (3 cr; prereq 162, Agro 136, Zool 171)
Lect III MWF, PetH 108, Rempel
Lab VI-VII Th, PetH 108
208 Seminar: Animal Husbandry (1 cr)
VIII-IX M, PetH 108, Meade
213 Research: Animal Husbandry (3-9 cr)

Winter and Spring Quarters

1w,s See 1f
8w Breeds of Livestock (4 cr; prereq soph, 1)
II-IV TTh
9s Livestock Judging (3 cr; prereq 8) III-IV MWF
30w Meat Selection, Utilization (3 cr; prereq soph) VI-VII MW
31s Meats (3 cr; prereq 1, 30) VI-VIII TTh
37w Livestock Feeding II (3 cr; prereq 36) III MWF
37Aw Livestock Feeding II Lab (1 cr; prereq 37 or ¶) VIII-IX T or Th
-61w‡ See 60f
62w Animal Breeding (3 cr, §162; prereq Agro 30) IV MWF
64w Sheep Production (3 cr, §164; prereq 37, 37A, 62 or ♯) VI-VII TTh
65s Beef Cattle Production (3 cr, §165; prereq 37, 37A, 62 or ♯) Lect I TTh, lab II-IV T or Th
107s Meat Probs (3 cr; prereq 53)
162w Animal Breeding (3 cr, §62; prereq Agro 30) IV MWF
164w Sheep Production (3 cr, §64; prereq 37, 37A, 62 or ♯) VI-VII TTh
165s Beef Cattle Production (3 cr, §65; prereq 37, 37A, 62 or ♯) Lect I TTh, lab II-IV T or Th
204s Adv Animal Breeding III (3 cr; prereq 162, Agro 261) VI T, VI-IX Th
206w Adv Livestock Feeding I (3 cr; prereq 37, AgBi 6) VI MWF
207s Adv Livestock Feeding II (3 cr; prereq 37, AgBi 6) VI MWF
-209w-210s‡ See 208f: VIII M(s); IX M(w)
211w Experimental Methods (3 cr; prereq Agro 248) IV MWF
213w,s See 213f

DAIRY HUSBANDRY (DyHu)

Fall Quarter

1 Dairying (3 cr, §DInd 1)
III MWF, DI 15, Morris, Williams
9 Dairy Cattle Judging (1 cr; prereq soph)
VI-VIII Th, HH 9
11 Milk Production (5 cr)
IV MTWThF, HH 100, Cole
19 Dairy Cattle Management (1 cr; prereq ¶11)
VI-VIII Th, HH 9, Cole, Williams
49 **Reproduction, Artificial Insemination** (3 cr; prereq 1)
VI-VIII TTh, HH 102, Graham
70 Feeds, Feeding Practices (3 cr, §AnHu 70; prereq VetMed students)
VII MWF, LsPav 203, Donker
105 Seminar: Dairy Literature (2 cr; prereq sr, 3 courses)
II TTh, HH 9
121 Dairy Production I (4 cr; prereq none... AnHu 36, 37 rec)
I-II MWF, HH 9, Donker, others
202 Research: Dairy Production (ar cr)
217 Dairy Cattle Inheritance (3 cr; prereq ♯)
VI-VII TTh, HH 6

219 Dairy Cattle Reproduction (3 cr; prereq ‡) II-III TTh, HH 102, Graham

Winter and Spring Quarters

1w,s See 1f
5s Practice (3 cr; prereq soph, △)
9s See 9f: VI-VIII T
19w,s See 19f
51s Classification, Evaluation of Dairy Cattle (2 cr; prereq 9) VI-VIII TF
122w Dairy Production II (4 cr; prereq 49, Agro 30) VI-VII TTh
123s Dairy Production III (4 cr; prereq 19, 49) VI-VIII TTh
149s Reproduction, Artificial Insemination (3 cr, §49; prereq grad or ‡) II-IV TTh
-203w-204s‡ See 202f
218w Nutrition, Feeding of Dairy Cattle (3 cr; prereq ‡) II TThS
220s Lactation (3 cr) VI-VII TTh
221s Dairy Cattle Management (3 cr; prereq ‡) II MWF

DAIRY INDUSTRIES (DInd)

Fall Quarter

1 Dairying (3 cr, §DyHu 1)
III MWF, DI 15, Morris, Williams
2 Dairying Lab (2 cr; prereq 1)
VII-VIII TTh, DI 10, 15, Thomas
101 Condensed Milk Products (3 cr; prereq 2, 50, AgBi 10)
I TTh, DI 255, VI-VIII Th, DI 150, 151, Morris
105 Butter (3 cr; prereq 2, 50, AgBi 10)
VI MW, DI 255, VI-VIII F, DI 150, 155, Coulter
205 Seminar (1 cr)
210 Research: Dairy Products (2-5 cr)
212 Research: Dairy Bacteriology (2-5 cr)

Winter and Spring Quarters

1w,s See 1f
2s See 2f: VI-IX T
3w Dairy Products Judging (1 cr; prereq soph) IX-X Th
4s Dairy Products Practice I (3 cr; prereq soph)
5s Dairy Products Practice II (3 cr; prereq 4)
20s Household Microbiology (4 cr; prereq 3rd qtr fr, ‡)
VI MF, VI-VII W
50w Dairy Bacteriology (3 or 5 cr, §150; prereq soph, Bact 53, ‡ to take lect only)
Lect VI MWF, lab VII-VIII MWF
100w Seminar: Literature (2 cr; prereq sr, 3 courses) V TTh
102w Dry Milk Products (3 cr; prereq 101) I TTh, VI-VIII Th
103s Market Milk (3 cr; prereq 2, 50, AgBi 10) IV MW, VI-VIII Th
104w Ice Cream, Frozen Dairy Foods (3 cr; prereq 2, 50, AgBi 10) IV TS, VI-VIII T
106s Cheese (3 cr; prereq 2, 50, AgBi 10) IV TS, VI-VIII T
107s Technical Control of Dairy Products (3 cr; prereq sr, 105 or 106, AgBi 10) I-III TTh
130s Adv Dairy Products Judging (1 cr; prereq 3) IX-X Th
150w Dairy Bacteriology (3 cr, §50; prereq grad or ‡, Bact 53) Lect VI MWF, lab VII-VIII MWF
151s Adv Dairy Bacteriology (3 cr; prereq sr, 105 or 106) II-III MWF
205w,s See 205f
210w,s See 210f
212w,s See 212f

ENTOMOLOGY AND ECONOMIC ZOOLOGY (Ent)

Fall Quarter

1 Insect Life (4 cr)
Lect IV MWF, PetH 110
—1, VI-VII T, CofH 302
—2, VI-VII W, CofH 302
1A **Biological Studies with Insects** (1 cr; prereq 1, Biol 3 or ¶)
2 Fishery, Wildlife Mgt (1 cr)
II T, CofH 307, Beer, Marshall, Smith, Waters
51 **Animal Parasitology** (5 cr; prereq Biol 3)
Lect VI MWF, Z 313
—1, Lab III-IV MWF, Z 208
—2, Lab VII-VIII MWF, Z 208
55 Entomological Techniques (1-3 cr; prereq 52) Cook
121 **Ichthyology** (3 cr; prereq 15 cr zool incl Biol 3)
III MWF, Z 211
125 **Adv Entomology** (4 cr, §Zool 125; prereq 52, ‡)
Lect I TTh, Z 402 (Mpls Campus), Cook
Lab II-IV TTh, Z 402 (Mpls Campus), Cook
144 **Medical Entomology** (3 cr, §Zool 144; prereq 9 cr biol, 52, ‡)
Lect VI TTh, Z 208 (Mpls Campus), Price
Lab VII-VIII TTh, Z 208 (Mpls Campus), Price
179 Recent Advances in Entomology (ar cr)
197 Introd Research (ar cr; prereq sr, △)
200 Seminar (1 cr)
242 Insect Physiology (4 cr; prereq 9 cr biol, ‡)
Lect VI WF, CofH 8, Richards
Lab VII-IX WF, CofH 8, Richards
248 Fishery Biology, Mgt (5 cr; prereq 171, Zool 53, 118, 119, 121, Biom 100 or ‡)
Lect VI MWF, CofH 307, Smith
Lab VII-VIII MWF, CofH 20, Smith

251 Fishery Habitats, Development (3 cr; prereq 118, 171, Biom 100 or ‡)
Lect VI TTh, CofH 307, Waters
Lab VII-VIII TTh, CofH 20

275 Wildlife Mgt: Waterfowl (3 cr; prereq 65, Zool 58, 116, Bot 50 or ‡)
I TThS, LsPav 203, Marshall

Winter and Spring Quarters

1s See 1f

1As See 1Af

21s Beekeeping (3-5 cr) VI-VIII MWF

50s Economic Entomology (5 cr; prereq 1 or Biol 3) Lect VI MWF, lab VII-IX MW

52w Entomology (5 cr; prereq ‡ for soph, Biol 3) Lect VII MWF, lab V-VI MWF; VIII-IX MWF

56w Forest Entomology (4 cr; prereq Biol 3) Lect VIII WF, lab VI-VII MWF; IX-X MWF

63w Mammalogy (4 cr; prereq Zool 56) Lect II MWF, lab I-II ThS; IV-V ThS

64w Fishery, Wildlife Populations (3 cr; prereq Biol 3, Bot 50 or For 5) III MWF

65w Fishery, Wildlife Mgt (3 cr; prereq 64) III ThS

67s Forest Wildlife Mgt (2 cr; prereq 64)

114s Apiculture (3 cr; prereq 9 cr) I MW

118w Animal Ecology (3 cr; prereq 15 cr ent or zool, 3 cr animal or plant ecology, ‡) VI T, VI-VII Th

-126w-127s See 125f: Lect I MWF, lab II-V M

128s Aquatic Entomology (2 cr; prereq 52) I-III MW

140s Biological Microscopy (4 cr; prereq sr, 9 cr biol, ‡) Lect VI WF, lab VII-IX WF

141w Insects in Relation to Plant Diseases (3 cr, §PlPa 141; prereq 5 cr, 5 cr pl path or ‡) I-II TThS

145w Parasitic Protozoa (3 cr; prereq 15 cr zool incl Biol 3, ‡) Lect VI TTh, lab VII-VIII TTh

146s Helminthology (3 cr; prereq 15 cr zool incl Biol 3, ‡) Lect VI TTh, lab VII-VIII TTh

156w Adv Forest Entomology (3 cr; prereq 9 cr, ‡)

166s Wildlife Mgt (3 cr; prereq 63, 65, Bot 50, Zool 58 or ‡) Lect V TTh, lab ar

171s Techniques in Fishery Biology, Mgt (3 cr; prereq 65, 119, 121 or ‡) Lect VI TTh, lab VII-VIII TTh

175w Economic Entomology (4 cr; prereq 15 cr incl 50 or ‡) I MWF

197w,s See 197f

200w See 200f

236s Gen Ecology of Insects (3 cr; prereq 118) Lect VI TTh, lab VII-VIII TTh

-243w See 242f

244s Insect Microbiology (4 cr; prereq 9 cr biol, ‡...243 rec) Lect I TTh, lab II-IV TTh

-249w See 248f

250s Fisheries Resources (3 cr; prereq 248, 249 or ‡) I-II MW

259w Experimental Ecology Lab (2 cr; prereq 118 or ¶)

273w Wildlife Mgt: Fur Bearers (3 cr; prereq 63, 65, Zool 116, Bot 50 or ‡)

FORESTRY (For)

Fall Quarter

1 Introduction (1 cr)
II TTh, GH 120, Hallgren, Kaufert

7 **Forest Measurements** (3 cr; prereq Math T)
Lect IV MW, GH 120, R Brown
—1, Lab VI-VIII M, GH 206
—2, Lab VI-VIII W, GH 206

10 **Farm Forestry** (3 cr; prereq not open to forestry majors)
Lect IV TTh, GH 201, Scholten
—1, Lab VI-VIII M, GH 203
—2, Lab VI-VIII T, GH 203

59 **Forest Aerial Photogrammetry** (3 cr; prereq Biol 3, Math T, Geol 1 or Soil 3)
—1, I-III TTh, GH 206, Meyer
—2, VI-VIII TTh, GH 206

75 **Wood Structure, Identification** (2 cr, §old 53; prereq 4)
—1, VI-VII TTh, GH 211, Rees
—2, VI-VII MW, GH 211

77 Forest Products (3 cr, §old 56)
I MWF, GH 120, Kaufert

78 Forest Products Quality Standards (2 cr, §old 58; prereq 76 or ¶)
Lect III T, FP 204, Wallin
Lab III-IV TTh, FP 204

79 Strength of Wood Materials (3 cr, §old 114; prereq 76, Math 10)
I TThS, FP 204, Rees

81 Wood Drying (3 cr, §old 52; prereq 76)
II TTh, FP 204, Wallin

83 Wood Finishing (3 cr, §old 121; prereq org chem)
IV MWF, FP 204, Hossfeld

123 Production, Marketing (4 cr; prereq 47 or 147)
Lect IV MWF, GH 203, Skok
—1, Rec IV T, GH 203
—2, Rec VI W, GH 203
—3, Rec IV Th, GH 203

126 Forest Ecology (3 cr; prereq 4)
III MWF, GH 203, Hansen

127 Silviculture (3 cr; prereq 4, 5)
II MWF, GH 203, Hansen

141 Silvics (3 cr; prereq sr, 127) Hansen

143 Forest Recreation (3 cr)
III MWF, GH 201, Duncan

150 Forest Genetics (3 cr; prereq Agro 30 or 131 or ‡) Pauley

156 Introd to Research (3 cr; prereq sr, ‡)
III TTh, V F, GH 201, Hossfeld, Duncan, Shiue

181 Moisture Relations in Wood (3 cr; prereq 81, 177)
199 **Seminar** (1 cr)
—1, VIII-IX T, FP 204, Winsness, Kaufert
—2, VIII-IX W, FP 204
200 Research Probs: Silviculture (ar cr) Hansen, Duncan, B Brown, Bakuzis
203 Research Probs: Forest Mgt (ar cr) Duncan, Meyer, Irving, B Brown, Shiue, Winsness
205 Research Probs: Forest Economics (ar cr) Skok
207 Research Probs: Forest Products Engineering (ar cr) Hossfeld, Rees, Wallin, Kaufert
213 Research Probs: Forest Utilization (ar cr) Hossfeld, Rees, Wallin, Kaufert
218 Research Probs: Forest Measurements, Photogrammetry (ar cr) R Brown, Meyer, Shiue
220 Probs: Forest-Tree Genetics (ar cr) Pauley
221 Probs: Forest Influences (ar cr) Duncan
222 Probs: Forest Policy (ar cr) Irving, Skok, Winsness
223 Seminar (1 cr)
VIII-IX Th, GH 202

Winter and Spring Quarters

1Aw Conservation of Natural Resources (3 cr) III MWF
4s Dendrology (4 cr; prereq Biol 3 or ¶ or bot) Lect IV MWF, lab ar
8s Timber Estimating, Forest Surveys (3 cr; prereq 7) Lect IV TTh, lab VI-VIII T or W
10s See 10f
47s Forest Economy (2 cr; prereq AgEc 2 or ‡) III TTh
51w Logging (2 cr) II TTh
55s Fire Protection (2 cr) V TTh
60s Forest Engineering (2 cr; prereq MeAg 42)
61s Forest Recreation (1 cr)
62s Forest Policy (1 cr; prereq 124)
-76w See 75f
80w Timber Testing Lab (2 cr, §old 115; prereq 79) I-II TTh
82s Wood Preservation (3 cr, §old 125; prereq 76, org chem) Lect III TTh, lab ar
85w Glued Wood Products (3 cr, §old 57; prereq 76 or ¶) Lect IV TTh, lab VIII-IX Th
86s Wood Fiber, Particle Prod (3 cr, §old 57; prereq 85 or ¶) Lect IV TTh, lab VIII-IX Th
87w Building Materials Merchandising (3 cr, §old 58; prereq 123, 18 cr BA) Lect II-III T, lab II-III Th
88s Building Cost Estimating (3 cr, §old 120; prereq 78, MeAg 7, Ind 9) VII-IX W
101w Adv Dendrology (3 cr; prereq 4)
104w Watershed, Range Mgt (4 cr; prereq 5 or ‡) IV MTWF
111w Application of Statistical Methods (3 cr; prereq 8 or ‡) VI-VIII WF; VI-VIII TTh
124w Forest Mgt (3 cr; prereq 123) II MWF
128s Silviculture (6 cr, §128-129; prereq 127)
131s Forest Policy (3 cr; prereq sr) 1:30-2:50 TTh
133s Forest Mgt, Utilization (2 cr; prereq 124)
134s Forest Inventory, Photographic Interpretation (3 cr; prereq 59, 111 or Biom 90)
136w Forest Economics (3 cr; prereq sr, 123, ‡) VIII-IX T, VII Th
137s Forest Tree Seed (2 cr; prereq Biol 3 or bot) III TTh
140w Adv Forest Mgt (3 cr; prereq sr, 124) I-II TTh
145w Adv Silviculture (3 cr; prereq sr, 128)
146w Adv Forest Aerial Photogrammetry (3 cr; prereq sr, 59 or ‡)
147s Forest Economy (2 cr; prereq AgEc 2 or ‡) III TTh
149s Adv Forest Measurements (3 cr, §old 112; prereq 111 or ‡)
154w Adv Watershed Mgt (3 cr; prereq 104 or ‡) II TTh, VI-VII T
175w Wood Pulp, Paper (3 cr, §old 113; prereq 76, org chem) IX MWF
176s Timber Engineering (4 cr, §old 116; prereq 79) Lect VI W, lab VI-VIII MF
177s Wood Chemistry (3 cr, §old 142; prereq 76, org chem) II MWF
178s Woody Tissue Microtechnique (4 cr, §old 119; prereq 76 or ‡) Lect IX T, lab VI-VIII TTh
182s Adv Wood Preservation (3 cr; prereq 82)
184s Adv Wood Chemistry (2 cr; prereq 177, AgBi 2)
200w,s See 200f
203w,s See 203f
205w,s See 205f
207w,s See 207f
213w,s See 213f
218w,s See 218f
220w,s See 220f
221w,s See 221f
222w,s See 222f
-224w-225s See 223f
226w-227s‡ Statistical Methods (1 cr; prereq 6 cr stat or ‡)

HOME ECONOMICS (HE)

Fall Quarter

1 **Choice, Care of Clothing** (3 cr, §GC 3C; not open to men, sr)
—1, IV MWF, McNH 350, Baumgartner
—2, V MWF, McNH 350, Baumgartner
3 **Clothing Construction A** (3 cr; prereq 3rd qtr fr, 1)
—1, I-II MWF, McNH 327, Carlson
—2, VI-VII MWF, McNH 327, Carlson
4 **Clothing Construction B** (3 cr; prereq soph, 3)
—1, II-IV TTh, McNH 327, Carlson
—2, VI-VIII TTh, McNH 328, Gorham

10 Introduction (1 cr; prereq fr only)
—1, II Th, McNH 227, Stedman, others
—2, III Th, McNH 227, Stedman, others

17 Personal, Family Living (3 cr, not open to sr)
—1, II MWF, McNH 227
—2, VI T, VI-VII Th, McNH 227

20 Related Art (3 cr)
—1, II MWF, McNH 350, Myren
—2, III MWF, McNH 350, Myren

21 Color, Design (3 cr; prereq 20)
VI-VII MWF, McNH 359, Abell

22 Bgn Costume Design (3 cr; prereq 1, 20...21 rec)
VI-VIII TTh, McNH 342, Esteros

23 Probs: Design (3 cr; prereq 21, Art 20)
VI-VIII TTh, McNH 359, Abell

24 Probs: Home Planning, Furnishing (5 cr, §GC 3D, FL 15; prereq soph, 20...21, 49 rec)
V-VI MWF, McNH 360, Forsyth

25 Design Applied to Crafts (3 cr; prereq 20...21 rec)
III-IV MWF, McNH 433, Abell

28 Construction, Refinishing of Home Furnishings (3 cr; prereq ♯)
VI-VIII TTh, McNH 433, Myren

31 Nutrition (3 cr, §30 or GC 3B or PNurs 14, not open to HE sr)
—1, III MWF, McNH 201, North
—2, 9:00-10:15 TTh, McNH 201, North

33 Nutrition I (4 cr; prereq soph, AgBi 1A or OrCh 42, Phsl 4 or ¶)
Lect II MWF, McNH 44, Morse
Lab VI-VIII T, McNH 254, Morse

40 Food Preparation (5 cr; prereq 3rd qtr fr, 2 qtrs chem)
—1, Lect III TTh, McNH 44, Hanson
Lab III-IV MWF, McNH 157, Hanson
—2, Lect VII TTh, McNH 44, Hanson
Lab VI-VII MWF, McNH 157, Hanson

41 Food Mgt, Marketing (5 cr; prereq soph, 31, 40)
—1, Lect III TTh, McNH 125, 150, Trammell
Lab III-IV M, III-V F, McNH 150, 152, 156
Conf IV T, McNH 125
—2, Lect IV TTh, McNH 150, Lund
Lab III-IV M, III-V W, McNH 150, 152, 156
Conf III T, McNH 150

49 Household Equipment (3 cr; prereq soph, MeAg 35 or ♯)
—1, Lect I-II M, McNH 124, 128, Ehrenkranz
Lab I-II W, McNH 124, 128
—2, Lect II-III T, McNH 124, 128, Ehrenkranz
Lab II-III Th, McNH 124, 128

50 Textiles (4 cr; prereq 3rd qtr soph, 1, InCh 5 or GC 7C)
III-IV MWF, McNH 303, Gorham

53 Adv Clothing (3 cr; prereq 4, 50 or ¶)
VI-VII MWF, McNH 328, Gorham

58 Supervised Retail Training (4 cr; prereq 21, 22, 50 or ¶, Psy 2, ♯)
II TTh, all day S, McNH 342, Ludwig

63 Quantity Food Purchasing, Production (5 cr; prereq 41, 3rd qtr soph)
Lect V WF, McNH 201, Hitchcock
Lab I-IV TTh, Cafeteria

65 Food Service Organization, Mgt (3 cr; prereq 63)
VI MWF, McNH 201, Hitchcock

66 Administrative Food Service Experience (5 cr; prereq 65) Hitchcock

70 Adv Food Preparation (3 cr; prereq 40, AgBi 1A)
VI MW, McNH 48, VII-VIII MW, McNH 56, Trammell

72 Nutrition (2 cr; §31 or GC 3B or PNurs 14; prereq ♯ for HE maj; others, none)
VII M, IX W, Arch 40 (**Mpls Campus**), Gormican

76 Nutrition of the Family (4 cr, §170, 171; prereq 31, 40, phsl or hum biol)
IV MTWF, McNH 44, North

85 Home Mgt (3 cr; prereq 40...41 rec)
VII MWF, McNH 201, Jeary

86 Home Mgt Lab (4 cr; prereq 85 or ¶...41 rec)
—1, I MTWThFS, Home Mgt House, Sands, Steensland
—2, I MTWThFS, Home Mgt House, Sands, Steensland

102 Adv Textiles (3 cr; prereq 50, AgBi 1A or OrCh 42, AgEc 2 or ¶)
VI-VIII TTh, McNH 303, 304, Davison

120 Art History (3 cr)
VIII MWF, McNH 350, Esteros

122A Interior Design Presentation (2 cr; prereq 24, Art 20)
III-IV TTh, McNH 342, Forsyth

140 New Developments in Food Preparation (3 cr; prereq sr, 40...70 rec)
9:00-10:15 TTh, McNH 48

142 Experimental Cookery (3 cr; prereq 40, AgBi 1A)
VI TTh, McNH 48, VII-VIII TTh, McNH 56, Lund

152 Problems in Consumer Textiles (3 cr; prereq 50)
IX-X W, McNH 303, Davison

170 Nutrition Principles (3 cr; prereq 31, 40, AgBi 1A, Phsl 4)
III MWF, McNH 44, Morse

178 Clinical Probs: Nutrition (2 cr; prereq 35 or ¶, 170)
Lect V M, McNH 44, Gormican
—1, Lab VI-VIII T, U Hosp (**Mpls Campus**), Gormican
—2, Lab VI-VIII Th, U Hosp (**Mpls Campus**), Gormican

180 Adv Home Planning, Furnishing (3 cr; prereq 24, 49...120 rec)
VII-VIII MWF, McNH 360, Ludwig

185 **Family Relationships** (3 cr; prereq 17, HEEd 90 or ‡)
V MWF, McNH 227

187 Readings: Family Relationships (1-3 cr; prereq ‡)

189A Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

189B Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

189C Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

220 Readings: Related Art (1-3 cr; prereq ‡) Esteros

227 Probs: Home Planning, Furnishing (1-3 cr; prereq 180 or ‡...122B rec) Esteros, Ludwig

229 Seminar: Related Art (1 cr)
IX-X T, McNH 360, Esteros

249 Seminar: Foods (1 or 2 cr; prereq ‡) Noble

271 Human Nutrition (3 cr; prereq 270)

272 Human Metabolic Studies in Health, Disease (4 cr; prereq 173, ‡) Given at Rochester, Code

273 Adv Diet Therapy (4 cr; prereq 173 or ‡) Given at Rochester, Victor

295 Probs: Home Economics (1-5 cr; prereq ‡) Davison, Ehrenkranz, Esteros, Ford, Noble

296 Probs: Home Economics (1-5 cr; prereq 295) Davison, Ehrenkranz, Esteros, Ford, Noble

Winter and Spring Quarters

1w,s See 1f: II MWF(s); IV MWF(w)

3w,s See 3f: III-IV MWF(w,s); VI-VII MWF (s); VI-VIII TTh(w)

4w,s See 4f: II-IV TTh

17w,s See 17f: III MWF(w); IV MWF(w); V MWF(s)

20w,s See 20f: II MWF(w); III MWF(w); IV MWF(s)

21w,s See 21f: II-IV TTh(w); III-IV MWF (w,s); VI-VII MWF(s); VI-VIII TTh(s); VII-VIII MWF(w)

22w See 22f

24w,s See 24f: III-IV MWF(s); V-VI MWF(w); VI-VII MWF(s); VII-VIII MWF(w)

25w,s See 25f: II-IV TTh(w); VI-VIII TTh(s)

28s See 28f: II-IV TTh

30s Nutrition (2 cr, §31 or GC 3B or PNurs 14; prereq ‡ for HE maj; others, none) VII MW

31w,s See 31f: II MWF(w); III MWF(s); 11:00-12:15 TTh(w)

35w Nutrition II (4 cr; prereq soph, 33) Lect II MWF, lab VI-VIII T

40w,s See 40f

41w,s See 41f: Lect III TTh, lab III-IV M, III-V F, conf IV T(w,s); Lect IV TTh, lab III-IV M, III-V W, conf III T(w,s); Lect VII MW, lab VII-VIII T, VII-IX Th, conf VIII M(w)

49w,s See 49f

50w,s See 50f: III-IV MWF(w,s); VI-VII MWF (w)

53w,s See 53f

63w,s See 63f: Lect V MW, lab I-IV TTh(w); Lect V TTh, lab I-IV WF(s)

64s Food Service Equipment (4 cr; prereq 63) Lect 9:00-10:15 TTh, lab II-IV M

66w,s See 66f

70w See 70f: VI TTh, VII-VIII TTh

71s Demonstrations (1 cr; prereq 3rd qtr jr, 41) VI-VIII F

76s See 76f: II MTWTh

79s Probs for Dietitians (3 cr; prereq regis HE, 170) II MWF

85w,s See 85f

86w,s See 86f

88s Food Quality Evaluation (3 cr; prereq 70) Lect VI TTh, lab VII-VIII T

89w Probs: Household Equipment (2-4 cr; prereq 49 with B, MeAg 35, ‡) Lect 1:00-2:15 T, lab VI-VIII Th

107w Textile Analysis (3 cr; prereq 50, AgBi 1A, AgBi 2 or OrCh 42) VI-VIII MWF

115w Economic, Social Aspects of Clothing (3 cr; prereq 50, AgEc 2) IX-X T

120w,s See 120f

121w Textile Design (3 cr; prereq 23, 50 or ‡) VI-VII MWF

122Bs Interior Design Probs (3 cr; prereq 120, 122A, 123 or ‡...180 rec) II-IV TTh

123w History of Home Furnishings (2 cr; 120 rec) II TTh

125s Adv Costume Design (3 cr; prereq 3, 22 or ‡) VI-VIII TTh

126w,s Special Problems in Crafts (1-3 cr; prereq 25 or ‡) II-IV TTh(w); VI-VIII TTh (s)

127w,s Purchasing Home Furnishings (3 cr; prereq 24, 50) VI-VIII TTh

141w Current Literature in Foods (3 cr; prereq sr, 40) 9:00-10:15 TTh

146s Probs: Food (3 cr; prereq sr, 142) Lect VI MW, lab VII-VIII MW

170w See 170f

171w,s Maternal, Child Nutrition (3 cr; prereq 170, HEEd 90) III MWF, 2 hrs ar

173s Diet Therapy (4 cr; prereq 170...35 rec) Lect 10:30-11:45 TTh, lab VI-VII F

174w Topics: Nutrition (1 cr; prereq 170) V W or F

175w Nutrition (4 cr; prereq sr, 33, AgBi 2) Lect II MWF, lab VI-VIII T

176s Adv Nutrition (4 cr; prereq 35 or ¶, AgBi 2) Lect VI MW, lab VII-IX MW

178w,s See 178f: Lect IV T(w); V M(s), lab VI-VIII T or Th

179w Readings: Nutrition (2 cr; prereq 170)

185w,s See 185f: II-III T, II Th
186w Probs: Income Mgt (3 cr; prereq 76, 85 or ‡) 3:30-5:30 W
187w,s See 187f
188s Evaluation of Food Quality (3 cr; prereq 142, AgBi 2, Biom 90 or 100) Lect VI TTh, McNH 44, Noble, lab VII-VIII T, McNH 56
189Aw,s-189Bw,s-189Cw,s See 189Af-189Bf-189Cf
190s Colloquium: Family Relationships (1 cr; prereq 185 or 15 cr child dev or psy or soc) IX Th
202s Animal Fibers (2 cr; prereq adv textiles, ‡)
204s Plant, Other Cellulosic Fibers (2 cr; prereq bot, adv textiles, ‡)
208s Microanalysis of Textile Fibers (ar cr; prereq bot, zool, adv textiles, ‡) VI-VIII TTh
209s Seminar: Textiles, Clothing (1 cr; prereq ‡)
220w,s See 220f
221w,s Probs: Textile Design (1-3 cr; prereq 121 or ‡) VI-VII MWF(w); Ar(s)
227w,s See 227f
247w Probs: Food (3 cr; prereq 142, ‡)
272w,s See 272f
273w,s See 273f
279w,s Seminar: Nutrition (1 cr; prereq ‡)
295w,s See 295f
296w,s See 296f

HORTICULTURE (Hort)

Fall Quarter

1 Gen Horticulture (3 cr)
II MWF, Hr 102, Snyder
21 Plant Materials: Fall, Winter Aspects (3 cr; prereq Biol 3 or 6 cr bot)
VI-VIII MW, Hr 8, Johnson
41 Crop Judging (3 cr; prereq 1, 6 or 32)
VI-VIII M, VI W, Hr 106, Turnquist
60 Landscape Design (3 cr; prereq 21, 22 or ‡)
VI-VIII MF, Hr 303, Phillips
62 Probs: Landscape Design, Composition (2-4 cr; prereq sr, 61 or ‡) Phillips
105 Frozen Food Probs (2-4 cr, §FTec 105; prereq 104 or ‡)
107 Orchard Mgt (3 cr; prereq hort maj or min or ‡, 6) Andersen
135 Potatoes (2 cr; prereq 32)
I TTh, Hr 302, Lauer
152 Commercial Floriculture: Fall Crops (3 cr; prereq 16)
Lect III TTh, Hr 8, Widmer
Lab VI-VIII T
190 Problems (2-4 cr; prereq ‡)
242 Seminar (1 cr; prereq 9 cr)
IX W, Hr 301
243 Adv Topics (2 cr) Snyder, others
247 Report: Special Topics (1-9 cr)
249 Research: Crop Breeding (ar cr) Currence, Hutchins, Wilcox

Winter and Spring Quarters

1s See 1f: III MWF
6w Fruit Growing (3 cr; prereq Biol 3 or 3 cr bot) III MWF
10s Ornamental Horticulture (3 cr) III MWF, 1 hr ar
16s Greenhouse Mgt (3 cr; prereq Biol 3 or 6 cr bot) IV TTh, VI-VIII F
22s Plant Materials: Spring, Summer Aspects (3 cr; prereq Biol 3 or 6 cr bot) VI-VIII MW
32s Vegetable Growing (3 cr; prereq Biol 3 or 6 cr bot) II MWF
36w Plant Propagation (3 cr; prereq soph, Biol 3 or 6 cr bot) Lect III TTh, lab VI-VIII T
40s Horticultural Practices (2 cr; prereq soph, 6 or ‡) VI-IX W
61s Planting Composition (3 cr; prereq 60 or ‡) VI-VIII MF
62w,s See 62f
76s Landscape Construction, Maintenance (3 cr; prereq 60 or 61 or ‡)
104w Frozen Food Processing, Storage (3 cr, §FTec 104; prereq AgBi 5 or 6 or 10, Bact 53 or ‡) IV MWF
105w,s See 105f
110w Crop Breeding (3 cr; prereq Agro 30) III TThS
121w Small Fruit Culture (3 cr; prereq 6, hort maj or min or ‡) II MWF
138w Vegetable Crops I (3 cr; prereq 32, Bot 51) VII MWF
150s Quality Control (2 cr; prereq ‡)
154s Commercial Floriculture: Spring Crops (3 cr; prereq 16) Lect III TTh, lab VI-VIII T
-191w-192s‡ See 190f
241w Organization of Research (2 cr)
242w See 242f
-244w See 243f
247w,s See 247f
249w,s See 249f

PLANT PATHOLOGY AND BOTANY (PlPa)

Fall Quarter

1 **Plant Pathology** (5 cr, §51; prereq soph, 9 cr pl sci incl 6 cr bot or Biol 3)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105, Moore
—2, Lab VI-VII MWF, PP 105, Moore
53 Food Plants of Game Animals (3 cr; prereq 1 yr bot, 1 yr zool)
Lect I TTh, AgBot 107, Kommedahl
Lab II TTh, AgBot 106, Kommedahl
56 Study of Fungi (3 cr; prereq 9 cr bot or Biol 3 or ‡)
Lect II MW, PP 103, C Christensen, Anderson
Lab II-IV F, PP 105, C Christensen, Anderson

103 Physiology of Economic Plants (3 cr; prereq Bot 51 or 140)
II MWF, AgBot 107, Linck

105 Mycology (3 cr; prereq 1 or 51 or 56)
VI-VIII TTh, PP 105, C Christensen, Anderson

118 Bacterial Diseases of Plants (3 cr; prereq 1 or 51 or 120)
I-II TThS, PP 103, Eide

120 **Plant Pathology for Adv Students** (3 cr, §1 or 51; prereq 14 cr pl sci or ‡)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105, Moore
—2, Lab VI-VII MWF, PP 105, Moore

135 Ecology of Grasses, Grasslands (3 cr, §4; prereq 1 yr bot)
III-IV TThS, AgBot 107, Kommedahl

156 Adv Fungi (3 cr, §56, 105, 106, 107; prereq 9 cr bot or Biol 3 or ‡)
Lect II MW, PP 103, C Christensen, Anderson
Lab II-IV F, PP 105, C Christensen, Anderson

203 Research (ar cr) J Christensen, others

207 Probs: Mycology (ar cr; prereq 105, 106, 107) J Christensen, others

213 Seminar (1 cr)
IX-X T, PP 401, J Christensen, others

215 Genetics of Plant Pathogens (3 cr; prereq 1 or 51, 156, Agro 131)
Lect IV MF, PP 401, J Christensen
Lab III-IV W, PP 15, J Christensen

216 Physiology of Plant Pathogens (3 cr)
VI-VII MWF, AgBot 302, Eide, Durbin

251 Seminar: Agricultural Botany (1 cr)
IX Th, AgBot 302, J Christensen, others

254 Research Probs: Applied Plant Physiology (ar cr) Landon, Rowell

260 Research Probs: Agricultural Botany (ar cr) J Christensen, others

Winter and Spring Quarters

1s See 1f

3s Weeds, Seeds (3 cr; prereq 6 cr bot or Biol 3) Lect II TTh, lab III-IV T or Th

51w Forest Pathology (4 cr, §1, old 10; prereq 6 cr bot or Biol 3) Lect V WF, lab VI-VII MWF; VIII-IX MWF

101w Nematodes in Relation to Plant Diseases (3 cr; prereq 1, 51 or 120, 6 cr zool or Biol 3 or ‡) II MWF

102w Biology of Seeds (3 cr; prereq 15 cr pl sci or ‡) VI-VII MWF

104s Industrial Mycology (3 cr; prereq 1 or 51 or 56) I-II TThS

-106w-107s‡ See 105f

108w Physiology of Economic Plants Lab (2 cr; prereq Bot 140 with lab, quant anal) Lect VIII-IX M, lab VIII W, 3 hrs ar

111w Diseases of Field Crops (4 cr; prereq 1 or 51 or 120) III-IV TThS

114w Adv Forest Pathology (3 cr; prereq 1 or 51 or 120) VI-VIII T, VII-VIII Th

116s Diseases of Fruit Crops (3 cr; prereq 1 or 51 or 120) Lect I MF, lab I-II W

119s Plant Disease Control (3 cr; prereq 1 or 51 or 120) III-V TTh

120w,s See 120f: Lect V WF, lab VI-VII or VIII-IX MWF(w); Lect VIII MWF, lab VI-VII or IX-X MWF(s)

137s Animal Diseases, Poisonous Plants (3 cr, §VMC 137; prereq ‡) Lect VII M, lab VIII-IX M

141w Insects in Relation to Plant Diseases (3 cr, §Ent 141; prereq 5 cr, 5 cr ent or ‡) I-II TThS

143w Methods (2 cr; prereq 1 or 51) III-IV TThS

161s Technology of Fruits, Vegetables (3 cr; prereq 15 cr pl sci or ‡)

162w Temperature Relations of Crop Plants (3 cr; prereq 15 cr pl sci or ‡)

-204w-205s‡ See 203f

-208w-209s‡ See 207f

211w History (2 cr) IX-X M

213w,s See 213f

214w Radioisotope Techniques Applied to Biology (3 cr; prereq nuclear phys) VI-VIII TTh

217s Ecology of Plant Pathogens (3 cr; prereq 1 or 51 or 120, 156) Lect III-IV W, lab II-IV F

218w Principles of Plant Pathology (3 cr; prereq 1 or 51, 156, Bact 53, 6 addtl cr) III-IV MWF

251w,s See 251f

254w,s See 254f

260w,s See 260f

POULTRY HUSBANDRY (PoHu)

Fall Quarter

1 Poultry Production (3 cr)
II MWF, PetH 110, Snetsinger, Kinney

52 **Poultry Selection** (3 cr; prereq 1)
VI-VII TTh, PetH 205, Kinney

55 Problems (1-3 cr; prereq 6 cr, ‡)

154 **Poultry Products** (3 cr; prereq 1)
VIII-IX TTh, PetH 205, Swanson

214 Research: Poultry Husbandry (ar cr; prereq ‡)

215 Research: Poultry Nutrition (ar cr; prereq 9 cr agr biochem) Waibel, Johnson

216 Research: Poultry Breeding (ar cr; prereq 9 cr genetics) Shoffner

217 Seminar (1 cr; prereq ‡) Johnson

218 Research: Poultry Products (ar cr; prereq ‡) Swanson

Winter and Spring Quarters

1w,s See 1f

53w Poultry Feeding (2 cr; prereq 1) VI TTh

55w,s See 55f
57s Commercial Egg Operations (3 cr; prereq 1) I MWF
59w Commercial Turkey Production (3 cr; prereq 1) I MWF
153s Poultry Nutrition (3 cr; prereq 1, AgBi 1A) IV MWF
214w,s See 214f
215w,s See 215f
216w,s See 216f
217w,s See 217f
218w,s See 218f

RHETORIC (Rhet)

Fall Quarter

1-2-3 Communications I, II, III (3 cr per qtr) Three days assigned from I MTWThF. All entering freshmen and students transferring with fewer than nine credits of freshman English meet in Peters Hall Auditorium the first period MTW for the first week for diagnostic tests and sectioning. Students already tested during freshman week and students who have taken Rhetoric 1 or 2 will find section assignments posted on 2nd floor AgEng Bldg September 26.
22 **Public Speaking** (3 cr; prereq rhet comm req)
—1, II MWF, AgEng 306, Thiss
—2, II MWF, AgEng 307, Langtry
—3, III MWF, AgEng 307, Nichols
—4, III MWF, AgEng 317, Seeden
—5, IV MWF, AgEng 307, Langtry
—6, V MWF, AgEng 307, Seeden
—7, VI MWF, AgEng 307, Gill
—8, VII MWF, AgEng 307, Richardson
—9, III TThS, AgEng 307, Cashman
32 **Novel, Short Story** (3 cr; prereq rhet comm req)
V MWF, AgEng 306, Nadon
33 **American Life in American Literature** (3 cr; prereq rhet comm req)
II MWF, AgEng 317, Horberg
47 **Efficient Reading** (3 cr, SLA students see SLA bul)
VI MWF, AgEng 315, Brown
51 **Exposition** (3 cr; prereq rhet comm req)
—1, IV MWF, AgEng 306, Mixon
—2, V MWF, AgEng 317, Horberg
—3, VI MWF, AgEng 306, Mixon
—4, VII MWF, AgEng 306, Wright
—5, II TThS, AgEng 315, Brown
52 **Technical Writing** (3 cr; prereq 51)
III MWF, AgEng 315, Thurston
54 **Adv Public Speaking** (3 cr; prereq 22)
II MWF, TSH 220, Seeden
56 **Discussion Methods** (3 cr, §old 12; prereq rhet comm req)
IV MWF, AgEng 315, Cashman
60 Contemporary Life, Literature (3 cr; prereq rhet comm req)
IV MWF, AgEng 317, Wright
91 **American Speech for Foreign Students** (no cr)
IX MWF, AgEng 317, Gill
151 **Report, Thesis Writing** (3 cr; prereq 51 or ♦♯)
IX M, IX-X W, AgEng 306, Thurston
251 Seminar: Listening Comprehension (2 cr, §Spch 251)
VIII-IX W, AgEng 221, Nichols

Winter and Spring Quarters

1w,s-2w,s-3w,s See 1f-2f-3f
22w See 22f
22s See 22f: II MWF; III MWF; IV MWF; V MWF; VII MWF; III TThS
26s Original Writing (3 cr; prereq rhet comm req) IV MWF
28s Literature of Theater (3 cr; prereq rhet comm req) VIII MWF
32w,s See 32f
33w,s See 33f
47w,s See 47f
51w,s See 51f
52w,s See 52f
54w,s See 54f
56w,s See 56f: IV MWF(w,s); VII MWF(s)
60w See 60f
91w See 91f
151w,s See 151f
251w,s See 251f

SOILS (Soil)

Fall Quarter

1 **Soils, Soil Mgt** (4 cr)
Lect III MWF, So 115, Burson
—1, Lab VI-VIII M, So 115
—2, Lab VI-VIII T, So 115
—3, Lab VI-VIII W, So 115
125 Soil Development, Classification (3 cr; prereq 21 or 121 or ♯)
8:00-9:30 TTh, So 115, Rust
126 **Soil Physics** (4 cr; prereq 3 or 19, Math 10, MeAg 23)
Lect II MWF, So 115, Blake
Lab VI-VIII T, So 132
130 Problems (2-4 cr; prereq 1 or 3 or 19 or 119)
203 Seminar (1 cr)
IX T, So 215

Winter and Spring Quarters

1w See 1f: Lect III MWF, lab VI-VIII W; VI-VIII Th; VI-VIII F
3s Forest Soils (3 cr; prereq soph, InCh 5) III MWF
3Bs Forest Soils Lab (1 cr; prereq 3 or ¶) VI-VIII M; VI-VIII T

19s Interm Soils (4 cr; prereq InCh 5) Lect IV MWF, lab VI-VIII M; VI-VIII T
20w Interpretation of Soil Information (3 cr; prereq 1 or 3 or 19) Lect IV TTh, lab VI-VI M; VI-VIII T
21s Soils of Minnesota (3 cr; prereq 1 or 3 or 19) Lect I TTh, lab VI-VIII Th
22s Soil Conservation (3 cr; prereq 1 or 3 or 19) Lect II TTh, lab VI-IX T
24w Soil-Forming Minerals, Rocks (3 cr; prereq 1 or 3 or 19, InCh 5) Lect V TTh, lab VI-VIII Th
52w Topics (1 cr; prereq 1 or 3 or 19) VIII-IX F
53w Topics (1 cr; prereq 52) VIII-IX F
119s Interm Soils (4 cr, §19; prereq InCh 5) Lect IV MWF, lab VI-VIII M; VI-VIII T
121s Soils of Minnesota (3 cr, §21; prereq 1 or 3 or 19) Lect I TTh, lab VI-VIII Th
123s Fertilizers (3 cr; prereq 3 or 19 or 119 or ♯) II MWF
124w Soil-Forming Minerals, Rocks (3 cr, §24; prereq 1 or 3 or 19, InCh 5) Lect V TTh, lab VI-VIII Th
127s Soil Microbiology (4 cr, §Bact 103; prereq Bact 53, 8 cr org chem, ♯) Lect I MWF, lab II-III MF
128w Soil Chemistry (3 cr; prereq 3 or 19 or 119) 8:00-9:30 TTh
129w Chemical Analysis of Soils (3 cr; prereq AgBi 2) Lect VI MWF, lab VII-VIII MWF
130w,s See 130f
131s Physical Chemistry of Soils (3 cr; prereq phys chem or ♯) Lect VI TTh, lab VII-VIII TTh
132w Soil Fertility (3 cr; prereq 3 or 19 or 119) IV MWF
203w See 203f

UNATTACHED COURSES

Agricultural Journalism (AgJo)

Fall Quarter

54 Editing Bulletins (3 cr; prereq Jour 51, 11 or 15, 69 or 73 or ♯) Larson, Swanson

Winter and Spring Quarters

53w,s Publicity (3 cr; prereq rhet comm req) I MWF(s); I TTh, 1 hr ar(w)

Biometrics (Biom)

Fall Quarter

100 Statistical Analysis I (4 cr; prereq col alg, 90 or grad)
Lect VI MWF, AgEng 103, Gates, lab ar

Winter and Spring Quarters

90s Statistics (3 cr; prereq col alg or ♯) II MWF
101w Statistical Analysis II (4 cr; prereq 100) Lect IV MWF, lab ar
201s Experimental Design (3 cr; prereq 101) III-IV T, III Th

Food Technology (FTec)

Fall Quarter

51 Food Analysis (2 cr; prereq AgBi 2, 3) Geddes, Glass
101 Food Technology (3 cr; prereq AgBi 5, 6 or ♯, Bact 53, phys) Liener, Geddes

Winter and Spring Quarters

-52w‡ See 51f
-102w‡ See 101f: III MWF

Orientation (Orie)

Fall Quarter

1 College Orientation Lectures (1 cr)
—1, I T, CofH 225
—2, I W, CofH 225

Winter and Spring Quarters

1w,s See 1f: I T(w,s); I W(w)

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

Fall Quarter

1 Business, American Economy (3 cr; prereq no previous BA or econ)
I MWF, ScH 108, Gaumnitz

5 Statistics (4 cr, §151 or Soc 45; prereq Math 10)
—1, I MTWF, Arch 145, Neter
—2, II MTWF, MinMet 116
—3, III MTWF, Z 313
—4, III MTWF, C 111

—5, IV MTWF, MinMet 116
—6, VI MTWF, Arch 135, Willis

24 **Accounting** (3 cr, §55A; prereq 3rd qtr fr)
—1, I MWF, ForH 130, Bentley
—2, I MWF, JohH 115
—3, II MWF, ForH 130
—4, III MWF, MMA 100
—5, IV MWF, Arch 135
—6, IV MWF, Arch 60
—7, V MWF, ForH 130
—8, V MWF, ForH 180
—9, VI MWF, ForH 130
—10, VI MWF, ForH 150
—11, VII MWF, ForH 130

25 **Accounting** (3 cr, §55B; prereq 24)
—1, VI MWF, Arch 145, Bentley
—2, VII MWF, VH 6

26 **Accounting** (3 cr, §55B; prereq 25)
—1, VI MWF, AE 209, Bentley
—2, VII MWF, VH 1

28 **Business Law** (3 cr, §58; prereq soph with 6 cr, regis AFHE or IT or Pharm, cons adv)
9:00-10:30 TTh, VH 211, Eastlund

32 Typewriting (1 cr)
VI MTWThF, VH 209, Peterson

34 Typewriting Procedures (2 cr; prereq soph, 33, 45 words a min or 2 yrs HS type)
I MWF, VH 209, 2 hrs ar

37 Shorthand (3 cr, †37-38-39; prereq soph, 33)
III MWF, VH 209, 2 hrs ar, Peterson

43 Shorthand Theory (2 cr; prereq soph, 34, 39, ‡)
IV TTh, VH 209, Donaldson

50 **Production Mgt** (3 cr, §150; prereq Econ 2)
III MWF, FraH 101, Wickesberg

51 **Business Statistics** (3 cr, §161; prereq soph with ‡, 5)
—1, 9:00-10:30 TTh, VH 6, Willis
—2, III MWF, VH 207, Neter
—3, 10:30-12:00 TTh, VH 2, Willis

52 **Modern Industrial Relations: Labor Marketing** (3 cr, §152; prereq Econ 2)
Lect II TTh, C 100, Heneman
—1, III T, VH 307
—2, III T, VH 301
—3, III Th, VH 307
—4, IV T, VH 307
—5, IV T, VH 6
—6, IV Th, VH 307
—7, V T, VH 113
—8, V Th, VH 113

53 **Risk Mgt, Insurance** (3 cr, §153; prereq Econ 2)
—1, I MWF, VH 4, Fleischer
—2, II MWF, VH 301
—3, III MWF, VH 306, Fleischer
—4, 10:30-12:00 TTh, VH 1

54 **Transportation I: Principles** (3 cr, §154; prereq Econ 2)
—1, II MWF, VH 1, Nightingale
—2, II MWF, Z 211, Harper
—3, III MWF, VH 301, Harper

55A **Accounting** (4 cr, §24-25)
—1, IV MWF, VH 2, IV T, VH 306, Lund
—2, VI MTWF, VH 306, Bentley

55C **Managerial Costs** (3 cr, §115A or 115B or 265A; prereq 26)
I MWF, VH 207, Bentley

56 **Corporation Finance** (3 cr, §156; prereq 26)
—1, II MWF, VH 207, Stevenson
—2, III MWF, VH 4, Stevenson
—3, 10:30-12:00 TTh, VH 207

57 **Marketing** (3 cr, §157; prereq Econ 2)
—1, I MWF, VH 6, Holloway
—2, II MWF, VH 2, Hancock
—3, II MWF, VH 6, Werner

58 **Business Law: Contracts** (3 cr, §158; prereq Econ 2)
Lect III Th, Ph 150, Wright
—1, I TTh, VH 4
—2, II TTh, VH 4
—3, III T, IV Th, VH 4
—4, III T, IV Th, C 325
—5, IV TTh, VH 301

60 **Business Policy** (3 cr, §160; prereq 3rd qtr sr)
—1, III MWF, VH 307, Glaskowsky
—2, IV MWF, VH 301, Glaskowsky

72 **Modern Industrial Relations: Manpower Mgt** (3 cr, §172; prereq 52 or 152)
VI MWF, VH 1, Rhode

73 **Life, Accidental Injury, Sickness Insurance** (3 cr, §203; prereq 53)
IV MWF, VH 113, Preston

75A **Accounting Lab I** (1 cr; prereq 26)
—1, VI-VII Th, VH 306
—2, VII-VIII T, VH 306
—3, VII-VIII W, VH 306

76 **Financial Mgt** (3 cr, §276; prereq 56)
8:30-10:00 TTh, VH 207

79A **Admin Secretarial Studies** (3 cr; prereq 34, 39)
II MWF, VH 209, 2 hrs ar, Peterson

82 **Modern Labor Relations** (3 cr; prereq 52)
IV MWF, C 215

89B **Tabulating Equipment Applied to Business: Lab** (2 cr; prereq 5, 26)
Lect III T, VH 211, Hammond
—1, IV-V Th, VH 211
—2, V-VI T, VH 211

97 **Market Analysis, Research I** (3 cr, §217; prereq 51, 57)
III MWF, VH 205, Holloway

98 **Business Law: Property Rights, Obligations** (3 cr, §198; prereq 58)
9:00-10:30 TTh, VH 1, Neville

99 **Office Mgt** (3 cr; prereq Econ 2)
IV MWF, VH 211, Donaldson

100 **Probs: Production Mgt** (3 cr; prereq 50)
—1, 2:30-4:00 MF, VH 301, Basil
—2, 4:00-5:30 MF, VH 301, Basil

105A **Interm Accounting I** (3 cr; prereq 26)
—1, I MWF, VH 2, Berryman
—2, IV MWF, VH 307, Nelson
—3, VI MWF, VH 6, Berryman

105C **Interm Accounting III** (3 cr, §55D; prereq 105A)
II MWF, VH 306, Meyers

107 **Retail Mgt I** (3 cr, §227; prereq 57)
2:00-3:30 MF, VH 2, Hancock

107A Retail Mgt for Pharmacy Students (3 cr; prereq 25)
III MWF, WuH 201, Werner

115A **Cost Accounting** (3 cr, §55C; prereq 26)
—1, II MWF, VH 307, Nelson
—2, IV MWF, VH 205, Meyers

116 **Investments** (3 cr, §old 176; prereq 56 or 156)
VI MWF, VH 207, Stevenson

117 **Sales Mgt I** (3 cr, §237; prereq 57)
III MWF, VH 1, Lewis

117C **Marketing Topics** (3 cr, §237C; prereq 57)
IV MWF, VH 6, Lewis

119 **Business Communications, Correspondence Control** (3 cr; prereq sr, 99 or ‡)
2:30-4:00 TTh, VH 211, Donaldson

125 **Auditing Principles, Procedures** (4 cr; prereq 105B, 105C or ¶)
Lect VI TTh, VH 301, Lund
—1, I-II TTh, VH 307
—2, VII-VIII TTh, VH 307

135 **Income Tax Accounting** (4 cr; prereq 55D or 105A or ‡)
III MTWF, VH 6, Berryman

146 **Real Estate** (3 cr; prereq Econ 2)
1:30-3:00 TTh, VH 1, Ulseth

150 **Admin of Production** (3 cr, §50; prereq grad or ‡)
VI MWF, VH 113, Gaumnitz

152 **Principles of Industrial Relations: Labor Marketing** (3 cr, §52; prereq grad or ‡, Econ 2)
Lect II TTh, C 100, Heneman
Rec V T, VH 2

153 **Risk Mgt, Insurance** (3 cr, §53; prereq grad or ‡, Econ 2)
II MWF, VH 113, Fleischer

154 **Transportation I: Principles** (3 cr, §54; prereq grad or ‡, Econ 2)
III MWF, VH 210, Nightingale

155A **Managerial Accounting** (3 cr, §24-25 or 55A; prereq grad or ‡)
I MWF, VH 307, Meyers

157 **Marketing Fundamentals** (3 cr, §57; prereq grad or ‡, Econ 2)
IV MWF, MinMet 120, Hancock

158 **Business Law: Contracts** (3 cr, §58; prereq grad or ‡)
Lect III Th, Ph 150, Wright
Rec IV TTh, VH 301

170 **Top Mgt Organization, Control** (3 cr; prereq sr)
I MWF, VH 113, Glaskowsky (for grads)

171 **Statistical Methods for Sample Surveys** (3 cr; prereq 51 or 161)
1:00-2:30 MF, VH 205, Neter

172 **Principles of Industrial Relations: Manpower Mgt** (3 cr, §72; prereq 52 or 152)
III MWF, VH 2

177 **Foreign Trade** (3 cr; prereq 57)
VI MWF, VH 211, Holloway

182A **Interm Labor Marketing** (3 cr; prereq 52 or 152)
10:30-12:00 TTh, VH 210, Seltzer

185A **Adv Accounting** (3 cr; prereq 105C or ¶)
IV MWF, VH 306

187 **Price Policy** (3 cr; prereq 57)
I MWF, VH 306, Harper

192 **Industrial Relations Practices, Techniques** (3 cr; prereq 72 or 172)
IV MWF, C 315, England

194A **Adv Traffic Mgt I** (3 cr; prereq sr, 174 or ‡)
IV MWF, VH 210, Nightingale

195B **Internship: Internal Accounting** (ar cr; prereq 115B, ‡) Bentley

198 **Business Law: Property Rights, Obligations** (3 cr, §98; prereq grad or ‡, 158)
9:00-10:30 TTh, VH 1, Neville

203 Life, Accidental Injury, Sickness Insurance (3 cr, §73; prereq 153)
IV MWF, VH 113

237C Marketing Topics (3 cr, §117C; prereq 57)
IV MWF, VH 6, Lewis

251 Business Research Methods, Techniques (3 cr; prereq 51 or 161)
VI MWF, VH 210, Hastings

265A Managerial Cost Accounting (3 cr, §55C or 115A or 115B; prereq 26)
I MWF, VH 207, Bentley

270 Evolution, Development of Managerial Thought (3 cr, §70; prereq 2nd yr grad)
1:00-2:30 MW, VH 301, Basil

305A Seminar: Accounting Theory-Valuation, Principles (3 cr)
4:00-5:15 MW, VH 210, Nelson

306 Seminar: Finance (3 cr; prereq 156)
3:00-5:00 Th, VH 210

362 Seminar: Manpower Mgt (3 cr; prereq 182B)
VIII-IX M, VH 205, Mahoney

Winter and Spring Quarters

1s See 1f

5w,s See 5f

24w,s See 24f: I MWF(s); II MWF(s); III MWF(s); IV MWF(s); V MWF(w,s); VI MWF(w); VII MWF(w)

25w-26s See 24f: I MWF(w,s); II MWF(s); III MWF(w,s); IV MWF(w,s); V MWF(w,s); VI MWF(w,s); VII MWF(w)

25s See 25f: V MWF; VI MWF; VII MWF

26w See 26f

28s See 28f: I MWF

32w,s See 32f: I MTWThF

33w,s Interm Typing (1 cr; prereq 30 words a min, 32 or 1 yr HS type) II MWF, 2 hrs ar(s); VI MWF, 2 hrs ar(w)

34s See 34f: VI MWF, 2 hrs ar

36w Office Procedures (3 cr; prereq soph) IV MWF
38w Shorthand (3 cr, †37-38-39; prereq 37 or 1 yr HS shorthand) III MWF, 2 hrs ar
39s Shorthand (3 cr, †37-38-39; prereq 38, 34 or ¶ or 2 yrs HS shorthand) III MWF, 2 hrs ar
50w,s See 50f
51w,s See 51f
52w,s See 52f: Lect II TTh, rec III T; III Th; IV T; IV Th; V Th
53w,s See 53f: II MWF; III MWF; IV MWF; 10:30-12:00 TTh
54w,s See 54f: I MWF(w,s); II MWF(w,s); III MWF(w)
55Aw-55Bs See 55Af: VI MTWF
-55Bw See 55Af: IV MTWF
55Cw,s See 55Cf: IV MWF(s); VI MWF(w)
55Dw,s Analysis of Financial Statements (3 cr, §105C; prereq 26) I MWF
56w,s See 56f
57w,s See 57f
58w,s See 58f: Lect III T, rec I TTh; II TTh
60w,s See 60f: I MWF(s); II MWF(w); III MWF(w,s); IV MWF(s)
72w,s See 72f
75Aw,s See 75Af: VI-VII T(w); VI-VII Th(s)
75Bw,s Accounting Lab II (1 cr; prereq 115A) VI-VII T(s); VI-VII Th(w); VII-VIII W(w)
76w,s See 76f
77w,s Advertising (3 cr, §207; prereq 57...Psy 156 rec) II MWF(w); III MWF(s)
78w Business Law: Agency, Partnership, Corporations (3 cr, §178; prereq 58) Lect III Th, rec I TTh; II TTh; III T, IV Th; IV TTh
-79Bw See 79Af
80w Administrative Practices (3 cr; prereq sr) III MWF; IV MWF
83w Group Insurance (3 cr, §213; prereq 53) I MWF
87w Credits, Collections (3 cr; prereq 57) 2:00-3:30 MF
88s Business Law: Sales, Negotiable Instruments (3 cr, §188; prereq 58) Lect III Th, rec I TTh; II TTh; III T, IV Th; IV TTh
89Bw,s See 89Bf: Lect V Th, rec III-IV T or V-VI T(w); Lect III T, rec IV-V Th or V-VI T(s)
92s Industrial Relations Employment Security (3 cr; prereq 52) IV MWF
93w Property, Liability Insurance I (3 cr, §223; prereq 53) IV MWF
97w See 97f: II MWF
97Cs Marketing Research II (3 cr, §217C; prereq sr, 97) 2:00-3:30 MF
99w,s See 99f: IV MWF(s); VI MWF(w)
102w Human Relations in Industry (3 cr; prereq 52) IV MWF
103s Property, Liability Insurance II (3 cr, §243; prereq 53...93 rec) IV MWF
105Aw See 105Af: IV MWF
105Bw,s Interm Accounting II (3 cr; prereq 105A) IV MWF(w,s); VI MWF(w)
105Cs See 105Cf: VI MWF
106w Securities Markets (3 cr, §old 186; prereq 56 or 156) VI MWF
107w,s See 107f: III MWF(w); 2:00-3:30 MF(s)
107Cw Retail Mgt II (3 cr, §227C; prereq sr, 107) III MWF
110w Systems, Procedures Analysis: Work Measurement (3 cr; prereq 50) 8:30-10:00 TTh
113w Actuarial Science Principles: Personal Insurance (3 cr, §Math 21; prereq 53 or 153 or ♯) II MWF
115Aw-115Bs See 115Af: I MWF
-115Bw See 115Af: II MWF; III MWF
116s See 116f
117w,s See 117f: II MWF(s); IV MWF(w)
125s See 125f
126s Investment Mgt (3 cr, old 196B; prereq 116) 1:30-3:00 TTh
129w Records Admin (3 cr; prereq sr, 36, 99 or ♯) 2:30-4:00 TTh
135w,s See 135f
139s Analysis of Office Functions (3 cr; prereq sr, 99 or ♯) 2:30-4:00 TTh
147s Adv Advertising Procedure (3 cr; prereq 77 or 207) III MWF
149s Practice Course (ar cr)
151w Statistics (3 cr, §5 or Soc 45; prereq grad or ♯, Math 10) II MWF
152s See 152f
155Bw Managerial Accounting (3 cr, §25-26 or 55B; prereq grad or ♯, 155A) I MWF
156w Corporation Finance (3 cr, §56; prereq grad or ♯, 155A) 10:30-12:00 TTh
158w,s See 158f: Lect III T, rec II TTh
160s Mgt Organization, Business Policy (3 cr, §60; prereq grad or ♯) VI MWF
161s Business Statistics (3 cr, §51; prereq grad or ♯, 151) II MWF
170w See 170f (for undergrads)
174w,s Transportation II: Traffic Mgt (3 cr; prereq 54 or 154) I MWF(w); IV MWF(s)
175As Adv Cost Accounting (3 cr; prereq 115B) II MWF
175Bw Data Processing (3 cr; prereq 115B) II MWF
178w Business Law: Agency, Partnership, Corporations (3 cr, §78; prereq grad or ♯, 158) Lect III Th, rec IV TTh
181w Quality Control, Industrial Statistics (3 cr; prereq 51 or 161) IV MWF
182Bw Interm Manpower Mgt (3 cr; prereq 72 or 172) III MWF
184Aw Highway Transportation (3 cr; prereq 54 or 154) VI MWF
184Bs Intl Transportation: Water, Air (3 cr; prereq 54 or 154) I MWF
185Bs Auditing, Public Accounting (3 cr; prereq 125) 1:30-3:00 TTh

188s Business Law: Sales, Negotiable Instruments (3 cr, §88; prereq grad or ‡, 158) Lect III TTh, rec II TTh

194Bw Adv Traffic Mgt II (3 cr; prereq sr, 174 or ‡) IV MWF

194Cs Gen Transportation Mgt (3 cr, §264; prereq sr, 194B, ‡) IV MWF

195Aw Internship: Public Accounting (ar cr; prereq 125, ‡)

196w Corporation Financial Topics (3 cr, §old 196A; prereq 76 or 276) 1:30-3:00 TTh

197w Purchasing (3 cr; prereq 57) II MWF

207w,s Advertising (3 cr, §77; prereq 57...Psy 156 rec) II MWF(w); III MWF(s)

213w Group Insurance (3 cr, §83; prereq 153) I MWF

217w Market Analysis, Research (3 cr, §97; prereq 51 or 151, 57 or 157) IV MWF

217Cs Marketing Research II (3 cr, §97C; prereq 97 or 217) 2:00-3:30 MF

222s Wage, Salary Admin (3 cr; prereq 72 or 172) III MWF

223w Property, Liability Insurance I (3 cr, §93; prereq 153) IV MWF

227Cw Retail Mgt II (3 cr, §107C; prereq 107) III MWF

237w Sales Mgt (3 cr, §117; prereq 57) 2:30-4:00 MF

242w Mgt Development (3 cr; prereq 72 or 172) IV MWF

243s Property, Liability Insurance II (3 cr, §103; prereq 153...223 rec) IV MWF

247s Marketing Mgt (3 cr; prereq 57 or 157) IV MWF

250s Executive Leadership (3 cr; prereq 2nd yr grad) 2:30-4:00 MF

256w Govt, Business Enterprise I (3 cr) 10:30-12:00 TTh

257s Govt, Business Enterprise II (3 cr; prereq 256) 2:00-3:30 TTh

258w Quantitative Approaches to Admin Probs I (3 cr; prereq 151, 155B, Econ 65 or 165) 1:00-2:30 MF

259s Quantitative Approaches to Admin Probs II (3 cr; prereq 258) 1:00-2:30 MF

260w Policy Formulation, Admin (3 cr; prereq 2nd yr grad) 2:30-4:00 MF

265Aw,s See 265Af: IV MWF(s); VI MWF(w)

265Bw,s Corporate Statements (3 cr, §55D or 105C; prereq 26) I MWF

272w Graduate Topics: Industrial Relations (3 cr; prereq 72 or 172) 2:30-4:00 MW

276s Financial Mgt (3 cr, §76; prereq 56 or 156) 10:30-12:00 TTh

282s Topics: Industrial Relations (3 cr; prereq 72 or 172) 2:00-3:30 TTh

305Bw Seminar: Accounting Theory-Income Determination, Statement Presentation (3 cr) 4:00-5:15 MW

307s Seminar: Marketing (3 cr; prereq 57 or 157) VIII-IX M

345As Adv Accounting Probs (3 cr) 3:30-5:00 MTh

350s Seminar: Production (3 cr; prereq 100) 4:00-6:00 M

360s Seminar: Mgt (3 cr; prereq 260) 4:00-6:00 F

372s Seminar: Industrial Relations Research Methods (3 cr) VIII-IX M

ECONOMICS (Econ)

Fall Quarter

1 Principles (3 cr, §C or 1T or 50A; prereq 3rd qtr fr)
—1, I MWF, ForH 185
—2, I MWF, Arch 45
—3, II MWF, ForH 85
—4, III MWF, MNH Aud, Boddy
—5, IV MWF, P 110
—6, IV MWF, EE 237
—7, V MWF, VH 2
—8, V MWF, VH 113
—9, VI MWF, MurH 308
—10, VII MWF, VH 113

1H Honors Course: Principles (3 cr, §C or 1T or 50A; prereq 3rd qtr fr, GPA of 3.0) II MWF, VH 210, Bronfenbrenner

1T Principles (3 cr, §1 or C or 50A; prereq 3rd qtr fr, regis 1T)
—1, I MWF, VH 211
—2, I MWF, ForH 115
—3, III MWF, ME 110
—4, IV MWF, Arch 25
—5, V MWF, VH 6
—6, VI MWF, ME 110

2 Principles (3 cr, §C or 2T or 50B; prereq 1)
—1, I MWF, ForH 85
—2, II MWF, ForH 15
—3, III MWF, FraH B25
—4, IV MWF, JohH 115
—5, V MWF, VH 1
—6, VI MWF, ForH 15

65 Interm Economic Analysis: The Firm (3 cr, §165; prereq 2)
—1, 8:30-10:00 TTh, VH 2, M Richter
—2, II MWF, VH 4
—3, III MWF, Arch 145, Kareken
—4, 10:30-12:00 TTh, VH 113, M Richter
—5, IV MWF, VH 207, Kareken

66 Interm Economic Analysis: Income, Employment (3 cr, §166; prereq 2 or ‡)
—1, 8:30-10:00 TTh, VH 113, Coen
—2, II MWF, ME 110, Smith
—3, III MWF, VH 113, Smith

67 Money, Banking (3 cr; prereq 2)
—1, I MWF, VH 1, Gregory
—2, IV MWF, VH 4
—3, VI MWF, VH 4, Gregory

68 Public Finance (3 cr, §168 or 178A; prereq 2)
—1, IV MWF, ME 110, Borak
—2, VI MWF, VH 307, Borak
—3, VII MWF, VH 207, Borak

69 **Govt Regulation of Business** (3 cr, §169; prereq 65 or 165 for maj, law or pol sci or ‡ for others)
—1, IV MWF, VH 1, Weiss
—2, VI MWF, C 225, Weiss

101A **Foundations of Mathematics for Social Scientists** (3 cr; prereq Math 10 or ‡)
2:00-3:30 TTh, VH 207

103 **Economic Development** (3 cr; prereq 65, 66 or ‡)
II MWF, VH 211, Merrill

104 **International Economics** (3 cr; prereq 2)
9:00-10:30 TTh, VH 301, Krueger

121A **Theory of Statistics** (3 cr; prereq Math 7 or 10 or ‡)
III MWF, VH 211, D Richter

152 **Labor Movements** (3 cr; prereq BA 52 or 152)
IV MWF, Arch 145, Gregory (for undergrads)

157 **Business Cycles** (3 cr; prereq 66, 67)
IV MWF, FraH 20, Bronfenbrenner

165 **Economic Analysis: The Firm** (3 cr, §65; prereq grad, 2)
II MWF, VH 205, Boddy

166 **Economic Analysis: Income, Employment** (3 cr, §66; prereq grad, 2 or ‡)
I MWF, VH 205, Bronfenbrenner

169 **Govt Regulation of Market Behavior** (3 cr, §69; prereq grad, 65 or 165 for maj, law or pol sci or ‡ for others)
9:00-10:30 TTh, VH 210, Simler

172 **Public Policy: Labor Relations** (3 cr; prereq BA 52 or 152)
I MWF, VH 301, Simler (for undergrads)

177 **Interm Money, Banking** (3 cr; prereq grad or ‡, 66, 67)
IV MWF, C 115, Smith

178A **Public Finance** (3 cr, §68 or 168; prereq 2, ‡)
9:30-11:00 TTh, VH 205, Heller

181A **Topics: Statistics** (3 cr; prereq 121C or ¶ or ‡)

182 **Economic Security** (3 cr; prereq BA 52 or 152)
VI-VII F, ForH 185, Turnbull (for grads)

190 Readings (ar cr; prereq cons adv, instr)

195A **Analytical Methods in Business Decision Making: A** (3 cr; prereq 65, Math 40 or ‡)
VI-VII T, VH 210, Henderson

215A Welfare Economics A (3 cr; prereq 185B)
VIII-IX M, VH 307, Brownlee

245A Mathematical Economics A (3 cr; prereq 101A, Math 40, 53 or ‡)
III-IV Th, VH 306, Hurwicz

280A History of Economic Thought: Before 1870 (3 cr)
2:00-3:30 TTh, VH 113, Boddy

281A Adv Topics: Statistics (3 cr)

301 Seminar: Statistical Inference, Econometrics (3 cr)
VIII-IX F, VH 210, Hurwicz

392A Workshop: Labor Economics (ar cr)
VIII-IX F, VH 205, Gregory, Simler, Turnbull

393A Workshop: Economic Development (ar cr)
VIII-IX Th, VH 205, Bronfenbrenner, Krueger, Schmookler

398A Workshop: Public Finance, Fiscal Monetary Policy (ar cr; prereq pub finan macro econ, ‡)
VIII-IX W, VH 205, Brownlee, Heller, M Richter

Winter and Spring Quarters

Bw Scope, Methods, Application (3 cr) IV MWF

Cs Economic Analysis (3 cr, §1-2 or 1T-2T, prereq B or 50A, 50B) 11:00-12:30 TTh

1w,s See 1 f

1Hw,s See 1Hf: I MWF(w); II MWF(s)

1Tw See 1Tf: I MWF; IV MWF; VI MWF

2w,s See 2f: I MWF(w,s); II MWF(w,s); III MWF(w,s); IV MWF(w,s); V MWF(w,s); VI MWF(w,s); VII MWF(w)

2Hs Principles (3 cr, §C or 2T or 50B; prereq 1, GPA of 3.0) II MWF

2Tw,s Principles (3 cr, §2, C, 50B; prereq 1T) I MWF(w); IV MWF(w,s); V MWF(w); VI MWF(w,s)

40s Decision Making, Scientific Inference (3 cr) IV MWF

50Aw Problems of American Economy (3 cr, §1, 1T) III MWF

65w,s See 65f: 8:30-10:00 TTh(w,s); II MWF(w,s); III MWF(w,s); 10:30-12:00 TTh(w)

66w,s See 66f: 8:30-10:00 TTh(w,s); II MWF(w,s); III MWF(w,s); 11:00-12:30 TTh(w)

67w,s See 67f: I MWF(s); IV MWF(w,s); VI MWF(w); VII MWF(w)

68w,s See 68f: IV or VI MWF(w); II TTh, 1 hr ar(s)

69w,s See 69f: I MWF(s); 9:00-10:30 TTh(w); II MWF(s); III MWF(w); IV MWF(w); VI MWF(s)

75w,s Interm Economic Analysis: Household Policy (3 cr, §175; prereq 65) 10:30-12:00 TTh

101Bw Decision Theory (3 cr; prereq BA 5, 101A or ‡...Math 40 rec) 2:00-3:30 TTh

101Cs Econometrics (3 cr; prereq 101B or ¶121C or ¶Math 123, Math 40 or ‡) 2:00-3:30 TTh

103w See 103f

120s Consumption (3 cr; prereq 65, 66 or ‡) IV MWF

121Bw Theory of Statistics I (3 cr; prereq 121A, ¶Math 53 or ‡) III MWF

121Cs Theory of Statistics II (3 cr; prereq 121B, Math 53 or ‡) III MWF

133w Development of American Industry (3 cr; prereq 65 or 165) 2:00-3:30 MW

134s Intl Economic Probs (3 cr, §194; prereq 104) III MWF

152w See 152f: I MWF (for grads)
160w Comparative Economic Systems (3 cr; prereq 2) VI MWF
162w,s Union Govt, Policies (3 cr; prereq BA 52 or 152) 10:30-12:00 TTh(s) (for grads); 2:00-3:30 TTh(w) (for undergrads)
164s Economy of USSR (3 cr; prereq 2) 10:30-12:00 TTh
165w See 165f: 1:30-3:00 TTh
166s See 166f: IV MWF
172w See 172f: VI-VII F (for grads)
176Aw Theory of Employment, Natl Income, Price Level I (3 cr; prereq 66 or 166) VIII-IX Th
176Bs Theory of Employment, Natl Income, Price Level II (3 cr; prereq 176A) VIII-IX Th
178Bw Public Finance (3 cr; prereq 178A) 9:30-11:00 TTh
-181Bw-181Cs See 181Af
182w See 182f: IV MWF (for undergrads)
184w Economic Probs of the Far East (3 cr; prereq 2) II MWF
185Aw Price Theory (3 cr; prereq 65 or 165) VIII MWF
185Bs Market Structure (3 cr; prereq 185A or ‡) 2:00-3:30 TTh
188s State Local Taxation (3 cr; prereq 68 or 168 or 178B) III MWF
190w,s See 190f
192s Contemporary Labor Issues (3 cr; prereq BA 52 or 152) IV MWF
195Bw Analytical Methods in Business Decision Making: B (3 cr; prereq 195A or ‡) VI-VII T
215Bw Welfare Economics: B (3 cr; prereq 215A) VIII-IX M
245Bw Mathematical Economics B (3 cr; prereq 245A) III-IV Th
245Cs Mathematical Economics C (3 cr; prereq 245B) III-IV Th
280Bw History of Economic Thought: After 1870 (3 cr) VI MWF
-281Bw-821Cs See 281Af
301w,s See 301f
304s Seminar: Intl Economics (3 cr; prereq 114, 224) 9:00-10:30 TTh
368Aw Seminar: Public Finance (3 cr) VIII-IX T
377s Seminar: Monetary Policy (3 cr) VIII-IX M
-392Bw-392Cs See 392Af
-393Bw-393Cs See 393Af
-398Bw-398Cs See 398Af
-399Aw-399Bs Workshop: Industrial Organization (cr ar; prereq 165, 169, ‡) VIII-IX M

SCHOOL OF DENTISTRY

Dental Assisting (DA)

Fall Quarter

1 Dental Anatomy (2 cr; prereq regis GC)
2:00-5:00 M, MH 356, Wakely
2 Chairside Assisting (3 cr; prereq regis GC)
8:00-9:00 T, Owre 111, Thorson, 9:30-11:30 T, Owre 111, Tuckner
3 Clinic I (3 cr; prereq regis GC)
2:00-5:00 TTh, Owre 111
2:00-5:00 W, MH 356, Tuckner

Dental Hygiene (DH)

Fall Quarter

7 Dental Anatomy (2 cr)
Lect VI T, MH 356, Hall
Lab VII-IX T, MH 356, Hall
40 Dental Health Education (2 cr)
Lect I T, MH 356, Schendel, lab ar
45 Dental Assisting (2 cr)
Lect VI Th, lab ar, MH 356, Jackson
53 Dental Prophylaxis (2 cr; prereq 22)
—1, Lab II-IV T, Clinic, Schendel
—2, Lab II-IV Th, Clinic, Jackson
—3, Lab VII-IX M, Clinic, Jackson
—4, Lab VII-IX T, Clinic, Schendel
—5, Lab VII-IX W, Clinic, Jackson
—6, Lab VII-IX F, Clinic, Jackson
56 Pathology (1 cr)
VI F, MH 356, Gorlin
57 Prosthetic Dentistry, Dental Lab (2 cr; prereq 9)
Lect VI T, MH 356, Hall
Lab VII-IX Th, MH 356, Hall

Dentistry (Dent)

Fall Quarter

50 Dental Anatomy (2 cr; prereq regis Dent)
Lect I Th, Owre 12, Hall
Lab II-IV Th, Owre 1
60 Dental Prosthetics (4 cr; prereq regis Dent)
Lect I T, Owre 12, Hall
Lab II-IV T, VII-IX WF, Owre 1
70 Dental Prosthetics (3 cr; prereq 62)
Lect I W, Owre 12, Hall
Lab II-IV W, I-III F, Owre 1

75 Crown and Bridge Technic (4 cr; prereq regis Dent)
Lect I M, Owre 111, Serr
Lab II-IV M, VII-IX TTh, Owre 1
105 Orthodontics (3 cr; prereq 55)
8:00-9:00 MWF, Owre 113, Etem
110 Dental Prosthetics (1 cr)
1:00-2:00 T, Owre 111, Morstad
110C Dental Prosthetics Clinic (3 cr; prereq 72C) Morstad
115C Dental Prosthetics Clinic (2 cr; prereq 112C) Morstad
120 Crown and Bridge (1 cr; prereq 77)
I W, Owre 111, Yock
120C Crown and Bridge Clinic (2 cr; prereq ¶120) Yock
125C Crown and Bridge Clinic (2 cr; prereq 122C) Yock
128 Seminar: Restorative Dentistry (1 cr; prereq regis Dent)
1:00-2:00 W, Owre 113, Yock
140 Operative Dentistry (1 cr; prereq 86)
I F, Owre 111, Jensen
140C Operative Clinic (3 cr; prereq ¶140) Jensen
144 Endodontics (1 cr; prereq 86)
1:00-2:00 F, Owre 111, Jensen
145C Clinical Operative Dentistry (2 cr; prereq 142C) Jensen
155 Oral Surgery (2 cr; prereq 150)
1:00-2:00 MTh, Owre 113, Clark
160 Oral Pathology, Histology (4 cr; prereq regis Dent)
Lect 1:00-2:00 MWTh, Owre 111, Gorlin
Lab II-IV TTh, Owre 104, Gorlin
170 Pedodontics (1 cr; prereq regis Dent)
I M, Owre 12, Wittich
185 Periodontics (1 cr; prereq 181)
1:00-2:00 T, Owre 113, Schaffer
185C Periodontics Clinic (1 cr; prereq ¶185) Schaffer
195 Dental Jurisprudence (2 cr; prereq regis Dent)
8:00-9:00 TTh, Owre 113, Brand
200 Adv Orthodontic Technics (ar cr) Steadman, Etem
201 Treatment Procedures in Orthodontics (ar cr) Steadman
202 Case Analysis (ar cr) Steadman
203 Treatment Planning (ar cr) Steadman
204 Adv Clinical Orthodontics (ar cr) Steadman
205 Osteology, Myology of the Head (ar cr) Steadman
206 Growth of the Head (ar cr) Steadman
207 Comparative Odontology (ar cr) Steadman
208 Seminar: Orthodontics (ar cr) Steadman
209 Probs, Research: Orthodontics (ar cr) Steadman
220 Adv Dental Anatomy (ar cr) Hall
230 Adv Oral Diagnosis (ar cr) Bartholdi
231 Adv Clinical Oral Diagnosis (ar cr) Bartholdi
232 Research: Oral Medicine (ar cr) Bartholdi
240 Adv Technical Restorative Dentistry (ar cr) Jensen, Yock, Wittich
243 Adv Clinical Restorative Dentistry (ar cr) Jensen, Yock, Wittich
247 Research Probs: Restorative Dentistry (ar cr) Jensen, Yock, Wittich
250 Adv Oral Surgery (ar cr) Clark, Holland
251 Seminar: Oral Surgery (1 cr) Clark, Holland
252 Research: Oral Surgery (ar cr) Clark, Holland
253 Probs: Oral Surgery (ar cr) Clark, Holland
261 Adv Dental Radiographic Technique (ar cr) Peterson
262 Research: Oral Pathology (ar cr) Gorlin, Chaudhry
263 Seminar: Dental Research (1 cr) Gorlin, Chaudhry
264 Clinical Oral Pathology Conference (1 cr) Bartholdi, Clark, Gorlin, Chaudhry
280 Adv Periodontics Clinic (ar cr) Schaffer
281 Adv Periodontics Lectures (3 cr) Schaffer
282 Research: Periodontics (ar cr) Schaffer
284 Supporting Structures of the Teeth (3 cr) Schaffer

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AgEd)

Fall Quarter

20 Rural Education, Community Leadership (3 cr)
11:00-12:15 TTh, Hr 302, Swanson
56 Rural Education Through Extension Methods (3 cr; prereq soph)
IV MWF, Hr 301, Swanson
81 Teaching in Secondary School (4 cr; prereq Ed 55B or ¶)
Lect III MWF, Hr 301, Kitts
Lab VII-VIII T, Hr 301, Kitts
91 Supervised Teaching Experience (6 cr; prereq sr, 82, ¶) Kitts
103 Young Farmer, Adult Education (4 cr; prereq ¶)
Lect II MWF, Hr 301, Peterson, Marvin
Lab VII-VIII Th, Hr 301, Peterson, Marvin

104 Planning Programs (3 cr; prereq 3rd qtr sr or ‡)
11:00-12:15 TTh, Hr 301, Peterson
120 Rural Education, Community Leadership (3 cr; prereq grad or ‡)
11:00-12:15 TTh, Hr 302, Swanson
141 Supervised Farm Practice in Vocational Agriculture (3 cr; prereq ‡ or grad, 10 cr educ) Peterson, Kitts, Swanson
156 Rural Education Through Extension Methods (3 cr, §56; prereq grad or ‡)
IV MWF, Hr 301, Swanson
221 Field Probs (3 cr) Peterson, Kitts, Swanson
232 Research (ar cr; prereq 15 cr educ) Peterson, Kitts, Swanson
291 Seminar (ar cr) Peterson, Kitts, Swanson

Winter and Spring Quarters

20s See 20f
56w See 56f: III MWF
81w-82s See 81f: Lect IV MWF, lab VII-VIII Th
-82w See 81f
91w,s See 91f
103w See 103f
104w,s See 104f
120s See 120f
156w See 156f
221w,s See 221f
232w,s See 232f
286w Current Issues (ar cr; prereq ‡)
291s See 291f

ART EDUCATION (ArEd)

Fall Quarter

17 Pictorial Expression for Elem Education (3 cr)
—1, I-II MWF, TSF 259, Hegg
—2, III-IV MWF, TSF 259, Hegg
—3, VI-VII MWF, TSF 259, Cherry
—4, VIII-IX MWF, TSF 259, Cherry
18 Design Activities for Elem Education (3 cr)
—1, I-II MWF, TSF 256, Wold
—2, VIII-IX MWF, TSF 256, Wold
19 Functional Arts, Crafts in Elem Education (3 cr)
—1, III-IV MWF, TSF 256, Wold
—2, VI-VII MWF, TSF 256, Wold
53 Introduction to Weaving (3 cr)
VI-VII MWF, TSF 203, Smits
56 Principles, Experiences (5 cr; prereq 14)
III-IV MTWThF, J 109, Hastie, Cherry
84 Teaching in Elem School (3 cr; prereq 6 cr from 17, 18, 19)
Lect VII TTh, P 210, Gayne
—1, Lab VI TTh, J 109, Gayne
—2, Lab VIII TTh, J 109, Hegg
86 Student Teaching, Supervision (3 cr, †86-87-88; prereq sr, 56, 57, Ed 55A, 55B, ¶86A) Hastie, Cherry
86A Teaching, Supervision (2 cr, †86A-87A-88A; prereq sr, 56, 57, Ed 55A, 55B, ¶86)
IX-X T, J 109, Gayne
156 Intercultural Education Through Art (3 cr)
I-II S, J 109, Gayne
185 Improving Art Programs in Secondary School (3 cr; prereq tchg exper or ‡)
III-IV S, J 109, Hastie
295 Problems (ar cr; prereq cons maj adv) Gayne, Hastie

Winter and Spring Quarters

14w Introduction (2 cr) VII MW
17w,s See 17f: I-II MWF(w,s); III-IV MWF (w,s); VI-VII MWF(w); VIII-IX MWF (w,s)
18w,s See 18f: III-IV MWF; VI-VII MWF; VIII-IX MWF
19w,s See 19f: I-II MWF(w,s); VI-VII MWF(s)
53w See 53f
54s Adv Weaving (3 cr) VI-VII MWF
-57w-58s‡ See 56f
81w Puppetry in Education (3 cr) I-IV S
84w,s See 84f
84As Teaching in Elem School (3 cr) I-IV S
-87w-88s‡ See 86f
-87Aw-88As‡ See 86Af
153w Curriculum Building (3 cr; prereq 152) I-II S
184w Improving Art Programs in Elem School (3 cr; prereq tchg exper or ‡) III-IV S
295w,s See 295f
296s Seminar (1 cr) IX-X Th

CHILD DEVELOPMENT AND WELFARE (CD)

Fall Quarter

80 Child Psychology (3 cr; prereq Psy 2)
—1, I MWF, CW 218, Ruebush
—2, IV MWF, CW 218, Palermo
—3, VI MWF, CW 218, Wright
81 Adolescent Psychology (3 cr, §old 132; prereq Psy 2)
V MWF, CW 218, Grams
83 Guidance of Children's Activities (3 cr; prereq 80)
I-II TTh, CW 222, Robinson
89 Psychology of Parent-Child Relationships (2 cr, §old 90; prereq 80)
IV MW, CW 222, Wright
179 Clinical Procedures with Children (3 cr; prereq 12 cr educ psy or psy or soc)
IX-X MF, CW 206, Wirt
180 Personality Development in Children (3 cr; prereq 80)
III MWF, CW 222, Ruebush

190 Topics (ar cr, §old 95; prereq 18 cr with B avg incl 80, Psy 70, BA 5 or Soc 45)
210 Adv Child Psychology (3 cr; prereq ‡) II-III T, CW 206, Stevenson
220 Seminar: Current Research (ar cr)
223 Seminar: Development Theory (1 cr; prereq ‡)
VIII-IX M, Anderson
230 Seminar: Recent Literature (1 cr)
VIII-IX T, CW 206, Hurst
237 Seminar: Human Development (2 cr; prereq ‡)
VIII-IX M, Roff
250 Practicum: Clinical Child Psychology (ar cr; prereq ‡)
V-VII MW, Hafner
270 Readings, Research: Child Development (ar cr; prereq MA plan B students or ‡)
282 Experimental Child Psychology (2 cr; prereq Psy 129)
VIII-IX Th, CW 206, Palermo
287 Guidance of Children in Preschool (2 cr; prereq ‡)
VIII-IX M, CW 222, Moore
292 Practicum: Psychological Appraisal of Children (ar cr; prereq ‡)

Winter and Spring Quarters

80w,s See 80f: II MWF(w); III MWF(s); IV MWF(w); V MWF(s); VI MWF(w,s)
81w,s See 81f: IV MWF(s)
85s Psychological Appraisal of Child Behavior (3 cr, §old 100; prereq 80) VI TTh and ar
90s Child Rearing (3 cr; prereq Psy 2) VI TTh and ar
125s Experimental Child Psychology (3 cr; prereq sr, 80, Psy 5, 12 cr educ psy or psy or soc) I-II TTh
140w Behavior Probs (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) I MWF
142w Psychology of Handicapped Children (3 cr; prereq sr, 12 cr psy) 4:00-5:30 MW
143s Probs: Mental Deficiency (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) I MWF
144s Psychology of the Gifted Child (3 cr; prereq 80, 9 cr educ psy or psy or soc or HE) III MWF
170w Parent Education (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE) 4:00-5:30 TTh
181w Social Development of Children (3 cr; prereq 80) III MWF
182s Learning in Young Children (3 cr; prereq 80) VI MWF
183s Language, Thought in Children (3 cr; prereq 80) V MWF
184w Sensory, Motor Development (3 cr; prereq 80) III MWF
185s Children in Society (3 cr; prereq sr, 12 cr psy or educ psy or soc or HE) VI MWF
190w,s See 190f
-211w See 210f
213s Adv Adolescent Psychology (3 cr; prereq 12 cr psy or educ psy or soc) 4:00-5:30 TTh
-221w-222s‡ See 220f
-224w-225s See 223f
227s Multiple Factor Analysis (2 cr; prereq 3 qtrs stat, ment meas) VIII-IX F
-231w-232s‡ See 230f
233w-234s Research Methods (2 cr; prereq 12 cr educ psy or psy incl stat)
-238w,s See 237f
248w Clinical Child Psychology (3 cr; prereq ‡) IX-X MF
249s Treatment of Disturbed Children (3 cr; prereq 248) IX-X MF
250w,s See 250f: V-VII MW(w); Ar(s)
-271w-272s‡ See 270f
-283w-284s See 282f
-288w See 287f
291w Mental Testing of Infants, Preschool Children (3 cr; prereq ‡)
292w,s See 292f
295s Seminar: Projective Methods with Children, Adolescents (3 cr; prereq ‡) VI-VII Th

GENERAL EDUCATION

Curriculum and Instruction (EdCI)

Fall Quarter

55 Early Childhood Education (3 cr; prereq CD 80 or ¶)
VI TTh and ar, CW 222, Sorenson
56 Methods, Observation in Kindergarten (3 cr; prereq 55 or ¶)
VI MWF, CW 206, Headley
57 Nursery School-Kindergarten Lab: Art, Literature, Music, Social Studies, Science (6 cr; prereq 55 or ¶)
VIII MTWThF, CW 218, Headley
58 Core Curriculum Foundations (1 cr; prereq ‡)
3:00-4:20 M, Psy 109, Bossing
59 Methods, Observation in Nursery School (2 cr)
VIII TTh, CW 222
60 **Teaching Reading in Elem School** (3 cr; prereq Ed 75)
—1, II MWF, Bu 120, Bond
—2, VI MWF, Bu 120, Kerfoot
61 **Teaching Social Studies in Elem School** (3 cr; prereq Ed 75B)
—1, III MWF, CW 218, Mullins
—2, VI MWF, CW 222, Lambert
—3, VII MWF, CW 222, Mullins
62 **Teaching Mathematics in Elem Schools** (3 cr; prereq Ed 75A)
—1, III MWF, Pt 202, Stochl
—2, VI MWF, Pt 202, Stochl

63 **Children's Literature** (2 cr)
—1, VII MW, Bu 120, Odland
—2, IX-X W, Bu 120, Odland
—3, IV TTh, Bu 120, Odland

64 **Teaching English in Elem School** (3 cr; prereq 75A)
—1, VI MWF, Bu 211, Dykstra
—2, VI-VII T, VII Th, Arch 50, Chase

65 **Teaching Science in Elem School** (3 cr; prereq Ed 75A, 10 cr nat sci)
—1, VII-VIII M, VII W, Bu 211, Goossen
—2, VII-VIII T, VII Th, Bu 211, Goossen

66 **Treatment of Learning Difficulties** (3 cr; prereq 60, 62A, ¶student tchg)
—1, IX-X W, CW 218, Balow
—2, IX-X W, WeH 202, Dykstra

102 Teaching Social Studies in Elem School (3 cr; prereq Ed 75B)
I-II S, CW 218, Mullins

105 Audio-Visual Materials in Education (3 cr; prereq sr)
I-II S, NH 211, 1 hr ar, Pearson

106 Coordinating in Audio-Visual Education Program (3 cr; prereq 105 or ♯)
IX-X M, WeH 206, Pearson

109 **Audio-Visual Materials, Equipment Lab** (3 cr; prereq 105 or ¶ or ♯)
Lect IX-X T, WeH 206, Pearson
—1, VI-VII W, WeH 206, Pearson
—2, IX-X Th, WeH 206, Pearson

110 **Practicum: Laboratory School Teaching, K-6** (ar cr; prereq cons adv)

113 High School Curriculum (3 cr; prereq Ed 55B)
IX-X T, Bu 120, Bossing

115 Introd to Educ of Visually Handicapped Children (3 cr)
IX-X W, CW 206, Kenmore

116 Braille I (3 cr)
IX-X TTh, Pt 208, Kenmore

119 Elem School Curriculum (3 cr; prereq Ed 75B)
IX-X W, Bu 125, Goossen

125 **Occupational Information Lab** (3 cr; prereq ♯)
—1, II MWF, Bu 125, Dugan, Wright, Winfrey (guidance institute students)
—2, 3:45-5:15 TTh, Bu 123, Tennyson

131 Adv Teaching Technical Business Subjects (3 cr)
IX-X Th, Bu 103, Price

135 Group Procedures in Guidance (3 cr; prereq EPsy 133 or ♯, 9 cr educ)
III-IV S, Bu 123

136 Organization, Admin of Distributive Education (3 cr)
4:00-6:20 W, Bu 103, Meyer

143 Teaching, Supervision of Reading in Elem School (3 cr; prereq 9 cr educ)
III-IV S, Pt 202, 1 hr ar, Bond

144 Teaching Reading in Secondary Schools (3 cr; prereq 9 cr educ)
IX-X T, Bu 211, 1 hr ar, Bond

149 Teaching, Supervision of Arithmetic in Elem School (3 cr; prereq 9 cr educ)
III-IV S, CW 218, Stochl

150 Supervision, Improvement of Instruction (3 cr; prereq 9 cr educ)
IX-X M, Bu 211, Curtin

153 Supervision, Teaching of English in Elem Schools (3 cr; prereq Ed 75B)
IX-X W, JohH 106, 1 hr ar, Archer

156 Trends in Business Education (3 cr)
I-II S, Bu 103, Price

160 Materials Lab, Occupational Relations (3 cr; prereq 137A, EdT 90C or ♯)
4:00-6:20 T, Bu 103, Meyer

171 Curriculum Lab Practice (0-3 cr; prereq 170A or 170B, ♯) Bossing, Goossen

174 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 164; prereq Spch 163)

175 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 165; prereq 174)

176 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 166; prereq 175)

184 Supervision of Student Teaching (3 cr; prereq 15 cr educ or ♯)
III-IV S, PeikH 175, Davies

193A High School Mathematics: Content, Teaching Techniques (4 cr; prereq Natl Sci Found students)
V TTh, VI MTWThF, FolH 114, Johnson

199E Internship (ar cr)

201 Probs: Teaching Social Studies (3 cr; prereq 155 or 168, 204 or ♯) Morse, McCune, West

204 Social Studies Curriculum (3 cr)
IX-X T, PeikH 165, West

205 Probs: Audio-Visual Education (ar cr; prereq ♯) Pearson

215 Probs: School Health Education Program (ar cr; prereq ♯) Grout

222 Seminar: Current Probs in Techniques of High School Instruction (ar cr; prereq Ed 55B, sr methods)
IX-X W, PeikH 275, Bossing, Keller, Winter, Popper

225 Probs: Secondary School Supervision (ar cr; prereq ♯) Bossing, Lane, Keller, Popper

226 Seminar: Elem School Probs (2 cr)
IX-X Th, PeikH 165

227 Probs: Rural Education (ar cr; prereq Ed-Ad 117) Archer

228 Probs: Higher Education, Teacher Education (ar cr; prereq ♯) Eckert

238 Probs: Distributive Education (ar cr; prereq ♯) Meyer

239 Probs: Business Education (ar cr; prereq ♯) Price

250 Higher Education in the United States (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II T, I Th, Bu 123, Eckert

251 Curriculum Trends in American Colleges (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II S, Bu 123, Eckert
254 Directed Experience in College Instruction (ar cr; prereq ‡) Eckert, others
261 Probs: Improvement of Instruction (ar cr; prereq ‡) Archer, Goossen, Curtin, Mullins, Stochl
271 Probs: Curriculum Construction (3-6 cr; prereq ‡)
273 Probs: Reading (ar cr; prereq 143 or 144 or ‡) Bond, Chase, Odland, Reynolds, Balow
280 Supervision of Counseling (3 cr; prereq ‡) Dugan, Tennyson, Soldahl, Blocher
284 Probs: Student Teaching (3-9 cr; prereq ‡) Davies
294 Adv Curriculum, Methods in Secondary School English (2 cr; prereq EdT 75C)
I-II S, PeikH 245, Kegler
296 Probs: Teaching English (ar cr) Kegler

Winter and Spring Quarters

45w Business, Distributive Education (2 cr) IV MW
56s See 56f: VII MWF
57s See 57f
58w,s See 58f
59w See 59f
60w,s See 60f
61w,s See 61f: II MWF(s); III MWF(w); VI MWF(w); VI-VII T, VI Th(s); VII MWF(s)
62w,s See 62f: III MWF(w,s); IV MWF(s); VI MWF(w,s); IX-X T, IX Th(w)
63w,s See 63f: VI TTh(s); VII TTh(w); IX-X T(s); IX-X W(w)
64w,s See 64f: VI MWF(w,s); VI T, VI-VII Th(w); VII MWF(w,s)
65w,s See 65f: VII-VIII M, VII W(w,s); VII-VIII T, VII Th(w); IX-X T, IX Th(s)
66w,s See 66f
102w See 102f: IX-X T
103s Teaching Science in Elem School (3 cr; prereq sr, Ed 75B or tchg exper) III-IV S
104w Adult Education (3 cr) VIII-IX Th
105w,s See 105f: I-II Th, 1 hr ar(s); IX-X M(w)
109w,s See 109f: Lect IX-X T, rec VI-VII W; IX-X Th(w); Lect VI-VII T, rec VI-VII W; IX-X Th(s)
110w,s See 110f
113s See 113f: III-IV S
117w Braille II (3 cr; prereq 116) IX-X MW
118w Education of Blind Children in the Elem Grades (3 cr; prereq ‡) IX-X T
119w See 119f: III-IV S
120s Education of Blind Children in the Secondary Schools (3 cr) IX-X M
121w Literature for Elem School (3 cr) I-II S
122s Literature for Adolescents (3 cr; prereq Ed 55B or jr-sr HS tchg exper) I-II S
125s See 125f
132s Teaching Basic Business Subjects (3 cr) I-II S
133s Consumer Education in Schools (3 cr) IX-X Th
135w See 135f: I-II S
139w Co-ordination Techniques (3 cr) 4:00-6:20 W
141s Co-operative Part-Time Work Experience Programs (3 cr) 4:00-6:20 W
143w See 143f: IX-X T, 1 hr ar
144s See 144f: IX-X W, 1 hr ar
145w,s Reading Difficulties (3 cr; prereq 143 or 144) III-IV S, 1 hr ar(w); IX-X T, 1 hr ar(s)
149s See 149f: 4:30-6:00 MW
150s See 150f: I-II S
151w,s Diagnosis, Treatment of Learning Difficulties I-II S(w); IX-X M(s)
153w,s See 153f: IX-X W(w); III-IV S(s)
155s Materials Lab for Social Studies Teachers (3 cr; prereq ‡) IX-X T
159s Materials Lab, Secondary School Distributive Education (3 cr; prereq 137A, EdT 90C or ‡) 4:00-6:20 T
161w Curriculum Construction in Business Education (3 cr; prereq 113) III-IV S
162w Lab in Nursery School, Kindergarten Instruction Practices (3 cr; prereq tchg exper or ‡) IX-X W
168w Current Developments in Social Studies (3 cr; prereq grad or ‡) I-II S
170Bw Curriculum, Course of Study Construction (3 cr; prereq 113 or 119 or ‡) IX-X T
171w,s See 171f
173Bs Organizing Units of Instruction in Secondary School (3 cr; prereq 113 or ‡) IX-X Th
174w,s-175w,s-176w,s See 174f-175f-176f
178w Educational, Social Implications of Visual Impairment (3 cr; prereq ‡) III-IV S
182s Education of Partially Seeing Children (3 cr; prereq 115, 178) IX-X W
191w Adv Teaching, Supervision of Secondary Mathematics (3 cr) IX-X Th
192s Mathematics Lab (3 cr; prereq grad or tchg exper) IX-X Th
193Bw-193Cs See 193Af
199Ew,s See 199Ef
201w,s See 201f
203s Supervision, Admin of Special Education (3 cr; prereq ‡) IX-X T
205w,s See 205f
215w,s See 215f
217w Seminar: School Health Education Program (ar cr; prereq ‡) III-IV W, IV Th
222w,s See 222f
225w,s See 225f
226w,s See 226f
227w,s See 227f
228w,s See 228f
238w,s See 238f
239w,s See 239f

251w See 251f: I-II T, I Th
252w,s Effective College Teaching (3 cr; prereq 18 cr educ or 1 yr grad study in any field) I-II T, I Th(s); I-II S(w)
253Aw Seminar: Improvement of College Instruction (ar cr; prereq ‡) VI-VII MW
254w,s See 254f
257w Research: Language Instruction in Elem Schools (3 cr; prereq 153) IX-X W, 1 hr ar
261w,s See 261f
263w Research: Arithmetic Instruction (3 cr) III-IV S
271w,s See 271f
273w,s See 273f
284w,s See 284f
285w-286s Professional Education of Teachers (3 cr; prereq 15 cr educ incl 184, 250 or HEd 182 or EPsy 250 or ‡) III-IV S
294w See 294f
296w,s See 296f

Education (Ed)

Fall Quarter

55A Introd Secondary School Teaching (5 cr; prereq Psy 2)
Lect I MWF, NH 45, Neale
—1, I TTh, Pt 202
—2, I TTh, CW 218
—3, II TTh, Pt 202
—4, II TTh, FolH 8
—5, II TTh, FolH 11
—6, II TTh, FolH 110
—7, III TTh, CW 222
—8, III TTh, Pt 202
—9, III TTh, JohH 122

55N Introd Teaching Nursing (5 cr; prereq Psy 2)
VI-VII TTh, VIII T, ForH 15, Sagen

75A Introd Elem School Teaching (5 cr, §old 71B; prereq Psy 2)
Lect IV MWF, ScH 108, Dykstra
—1, II-III MW, Psy 115, Kerfoot
—2, I-II TTh, Psy 115, Kerfoot
—3, I-II TTh, Bu 211, Lambert
—4, VI-VII MW, Arch 60, Balzer
—5, III-IV TTh, Bu 123, Balzer
—6, III-IV TTh, Psy 115, Ekman
—7, VI-VII TTh, Bu 123, Dykstra
—8, VI-VII TTh, Psy 115, Balzer

81 Education for Public Health Nurses (3 cr, not open to educ degree cand; prereq PubH 62, 100, 133)
VI-VII T, VI Th, Mayo 1210, Grout

Winter and Spring Quarters

55Aw-55Bs See 55Af: Lect I TThS(w); I MWF (s); rec I TTh(s); II TTh(w,s); III TTh (w,s)
-55Bw See 55Af
55Ns See 55Nf
75Aw-75Bs See 75Af: Lect IV MWF, rec I-II TTh(w); III-IV TTh(w,s); VI-VII TTh(s)
-75Bw See 75Af: Lect VII MWF, rec I-II TTh; II-III MW; III-IV TTh; VI-VII TTh
81w,s See 81f: II MWF(s); VI-VII T, VI Th(w)

Educational Administration (EdAd)

Fall Quarter

101 Public School Admin (3 cr; prereq sr, 9 cr educ, non EdAd maj)
III-IV S, Bu 103, 1 hr ar, Popper
118 The Community School (3 cr; prereq sr)
IX-X T, Psy 109, 1 hr ar, Archer
201 Foundations (3 cr)
4:30-6:00 TTh, CW 218, Lane
210 Financial Aspects of Public School Business Admin (3 cr; prereq 227)
III-IV S, JohH 115, 1 hr ar, Domian
215 Elem School Principalship (3 cr)
I-II S, Pt 202, 1 hr ar, Curtin
218 Recent Literature in Secondary Education (ar cr)
IX-X W, PeikH 275, Bossing, Keller, Winter, Popper
224 Legal Aspects of Public School Admin (3 cr)
VI-VII T, Pt 202, 1 hr ar, Hooker
228 Probs: Educational Admin (1-3 cr; prereq 225) Domian, Hooker, Lane
235 Seminar: Educational Admin (no cr)
IX-X M, JohH 114, Bossing, Domian, Hooker, Keller, Lane, Popper
236 Field Study (0-10 cr; prereq ‡) Domian, Hooker, Lane
270A Probs: Elem Educ (ar cr; prereq ‡) Archer, Bond, Curtin, Goossen, Mullins
270B Probs: Secondary Educ (ar cr; prereq ‡) Bossing, Domian, Keller, Hooker, Lane, Popper
274 The Junior College (3 cr)
III-IV S, Bu 211, 1 hr ar, Keller

Winter and Spring Quarters

117w Schools in Rural Areas (3 cr) III-IV S, 1 hr ar
118s See 118f: IX-X W
167s Junior High School (3 cr; prereq sr, 9 cr educ) IX-X T
-202w† See 201f: IX-X TTh
215s See 215f: III-IV S
218w,s See 218f
224s See 224f: I-II S, 1 hr ar
226s School Plant Planning, Mgt (3 cr; prereq 227) I-II S, 1 hr ar
227w Teacher, Employee Admin (3 cr; prereq 225) I-II S, 1 hr ar
228w,s See 228f
230w Public Relations for Schools (3 cr; prereq 225) IX-X TTh

235w,s See 235f

236w,s See 236f

253w Admin in Higher Education (3 cr) 3:00-5:00 M, 1 hr ar

264w Admin of Instructional Activities in Secondary School (3 cr) III-IV S, 1 hr ar

265s Admin of Noninstructional Activities in Secondary School (3 cr) IX-X Th

270Aw,s See 270Af

270Bw,s See 270Bf

Educational Psychology (EPsy)

Fall Quarter

100 Individual Appraisal for Counseling (3 cr; prereq 9 cr educ)
I MWF, Bu 125, Dugan, Wright, Winfrey (guidance inst students)

110 Measurement in the Classroom (3 cr)
VIII MWF, JohH 115, Olson

116 Statistical Methods (3 cr; prereq ¶116A or ‡)
VI MWF, Bu 123, Collier

116A **Statistical Methods Lab** (2 cr; prereq ¶116)
VI-VII TTh, Bu 251, MacEachern

125 **Group Dynamics** (3 cr)
VI-VII TTh, CW 206, Flanders

133 **Procedures in Student Personnel Work** (3 cr; prereq 9 cr educ)
—1, I-II S, Bu 120, Tennyson
—2, 3:45-5:15 W, Bu 211, Blocher

134 School Counseling Procedures (3 cr; prereq 110 or 117, 133, ‡)
III MWF, Bu 125, Dugan, Wright, Winfrey (guidance inst students)

142 **Individual Mental Testing** (3 cr; prereq sr, 110 or 117 or ¶117 with ‡)
VIII MWF, Pt 202, Reynolds

150 **Clinical Practice in Remedial Teaching** (3 cr; prereq EdCI 145 or 151, ‡) Balow

151 **Clinical Practice in Educational Diagnosis** (3 cr; prereq 142, EdCI 145, ‡)
1:00-4:00 MTWThF, Pt 108, Reynolds, Balow, Capobianco, Force, Hodges

152 Introd to School Psychological Services (3 cr)
VI MWF, Bu 103, Hodges

159 Personality Development, Mental Hygiene (3 cr; prereq sr)
III-IV S, FraH 120, Vance

182 Education of Exceptional Children (3 cr; prereq Ed 55B or 75B)
III-IV S, CW 222, Capobianco

184 Education of Mentally Retarded Children in the Elem Schools (3 cr; prereq 182 or ‡)
IX-X W, Pt 202, Capobianco

187 Education of the Crippled Child (3 cr; prereq 182)
IX-X Th, Pt 202, Force

193 Psychology of Human Learning (3 cr; prereq sr)
I-II S, Bu 211, Kellogg

200 Seminar Institute in Guidance (3 cr)
VI-VII MWF, Bu 125, Dugan, Wright, Winfrey

216 **Statistical Methods** (3 cr)
II MWF, Bu 123, Collier

216A **Statistical Methods Lab** (2 cr)
—1, I-II TTh, Bu 251, MacEachern
—2, III-IV TTh, Bu 251, MacEachern

219 Design, Analysis of Statistical Investigations (3 cr; prereq 218, ‡)
VII MWF, Bu 103, Collier

219A **Design, Analysis of Statistical Investigations Lab** (2 cr; prereq 218, ‡)
VIII-IX MW, Bu 251, MacEachern

220 Adv Theory of Measurement (2 cr; prereq 117, 217 or ‡)
III TTh, Psy 109, Hoyt

233 **Probs: Guidance, Personnel Work** (1-9 cr)
—1, Ar, Tennyson
—2, 3:30-5:00 M, Bu 123, Blocher
—3, Ar, Dugan, Edson, Wrenn, Hagenah, Snoke

240 Probs: Measurement (3 cr) Hoyt

243 Probs: Statistics for Students in Education, Psychology (3 cr) Collier

244 Research: Special Education (3 cr; prereq 116, 117 or equiv, ‡)
IX-X M, Pt 202, Kenmore, Reynolds, Hodges

250 College Student Personnel Work: Development, Admin (3 cr; prereq 1 course higher educ or ¶ or ‡)
IX-X M, Bu 120, Wrenn

253 **Research Probs** (ar cr; prereq ‡)
—1, 3:30-5:00 M, Bu 123, Tennyson, Blocher
—2, Ar, Hoyt
—3, I T, Pt 104, Hodges
—4, Ar

260 Seminar (no cr)

280 Practicum in Group Leadership (3 cr; prereq ‡) Flanders

281 **Practice in Personnel Work** (3 cr; prereq 226 or ‡)
—1, VI-VII Th and ar, EdH 204, Hagenah
—2, Ar, Snoke, Wrenn

282A **Field Practice in Guidance** (3 cr; prereq ‡)
—1, I-IV T, Bu 129, Soldahl, Blocher
—2, I-VIII TTh, Bu 125, Dugan, Wright, Winfrey (guidance inst students)

282B Supervised Practicum in Counseling (3 cr; prereq ‡)
I-IV S, Bu 129, Soldahl, Blocher

287 Practicum: School Psychological Services (1-3 cr; prereq ‡) Hodges

288 Practicum: Special Education (ar cr; prereq ‡) Kenmore, Capobianco

292 Recent Literature (3 cr; prereq ‡) Hoyt

Winter and Spring Quarters

100s See 100f
110w,s See 110f
116w See 116f: III MWF
116Aw See 116Af
117w,s Measurement (3 cr; prereq 116 or 216 or Psy 70) VII MWF(w); VIII MWF(s)
125s See 125f: IX-X T, 2 hrs ar
133w,s See 133f: I-II S(s); 3:45-5:15 W(w)
134w,s See 134f: III MWF(s); 3:45-5:15 TTh(w)
140s Instruments, Techniques of Measurement (3 cr; prereq sr, 110 or 117) VIII MW, VIII-IX F
142w See 142f: III-IV S
143s Adv Individual Mental Testing (3 cr; prereq 142, ‡) VIII MWF
148s Clinical Diagnosis of Reading Difficulties (3 cr; prereq EdCI 145) I-II S
150w,s See 150f
151w,s See 151f
159w,s See 159f: I MWF(w); II MWF(s)
182w,s See 182f: I-II S(s); VII MWF(w)
183w Education of Gifted Children (3 cr; prereq Ed 55B or 75B) IX-X T
184s See 184f
190w Educational Problems of Cerebral Palsy (3 cr; prereq 182 or ‡) IX-X W
191w Education of the Mentally Retarded in Secondary Schools (3 cr; prereq 182 or ‡) IX-X W
200w,s See 200f
208s Methods in Educational Research (3 cr) I MWF
-217w-218s See 216f
-217Aw-218As See 216Af
-221w See 220f
225w Diagnosis as a Phase of Counseling (3 cr; prereq 140 or ¶, 133 or 250 or Psy 130) IV MWF
226s Interviewing Procedures in Counseling (3 cr; prereq 225) IV MWF
233w,s See 233f: VI-VII M or Ar(s); 3:30-5:00 M or ar (w)
240w,s See 240f
243w,s See 243f
244s See 244f: IX-X Th
253w,s See 253f: VI-VII M or Ar(s); 3:30-5:00 M or ar (w)
254s Measurement, Evaluation in Higher Education (3 cr) VIII-IX T, 1 hr ar
259s Personality Theory in Mental Hygiene (3 cr) I-II S
260w,s See 260f
280w,s See 280f
281w,s See 281f
282Aw,s See 282Af: I-IV T(w); I-VIII TTh for guidance inst students(w,s)
282Bw,s See 282Bf: I-IV S(w); I-VIII TTh, I-IV S(s)
287w,s See 287f
288w,s See 288f
289w Survey of Special Education Probs (3 cr; prereq 182, ‡) IX-X Th
292w,s See 292f
293w Psychology of Learning (3 cr; prereq 12 cr educ psy, psy) III MWF
294s Recent Theory, Research: Human Learning (3 cr; prereq ‡) III MWF

History and Philosophy of Education (HEd)

Fall Quarter

141 Critical Issues in Contemporary Education (3 cr)
IX-X T, CW 222, Beck
156 History of Ideas in American Education (3 cr)
IX-X M, JohH 113, Bagley
180 **The School, Society** (3 cr; prereq sr)
—1, VII-VIII T, VII Th, Bu 120, Bagley
—2, III MWF, Bu 211, Bagley
—3, IV MWF, Psy 115, Corwin
—4, VIII M, VIII-IX W, JohH 113, Corwin
—5, VI T, VI-VII Th, CW 218, Winter
—6, I MWF, CW 222, Corwin
241 Problems (ar cr; prereq ‡) Beck, Bagley
280 Education, Social Change (3 cr; prereq guidance inst students)
VIII-IX M, Bu 125, Beck

Winter and Spring Quarters

101w Historical Foundations of Modern Education (3 cr) IX-X T
131w Comparative Education (3 cr) IX-X M
141s See 141f: IX-X M
180w,s See 180f: I MWF(w,s); III MWF(w,s); IV MWF(w,s); VI T, VI-VII Th(w); VII-VIII T, VII Th(w,s); VIII M, VIII-IX W(w,s)
182s Comparative Philosophies of Education (3 cr) IX-X T
241w,s See 241f
242w Seminar: Educational Philosophy (3 cr; prereq ‡) 12:30-2:00 F
280s See 280f

Methods and Student Teaching (EdT)

Fall Quarter

50 Junior Practicum in Special Education (3 or 6 cr; prereq jr, ‡) Kenmore, Capobianco, Force
51A Teaching: Nursing (4 cr; prereq Ed 55N) I MWF, ForH 175, Dunning, Weise
51B Teaching: Nursing (6 cr; prereq 51A) I TTh, VIII-IX Th, MH 214, Dunning, Weise

52 Student Teaching (ar cr) Davies, others
53A Teaching Handicapped Children (6 cr; prereq ‡)
IX M and ar, Chase, Sorensen, others
53B Teaching Handicapped Children (6 cr; prereq ‡)
IX M and ar, Chase, Sorensen, others
54A Student Teaching: Elem School (6 cr)
IX M and ar, Chase, others
54B Student Teaching: Elem School (6 cr; prereq 54A)
IX M and ar, Chase, others
60 Student Teaching: Library Science (3 cr; prereq sr, Lib 53, 62, 70, 74, 171, 172 or ‡) Zimmerman
67 Student Teaching: Mathematics (3 or 6 cr, †9 cr; prereq sr, ¶67A, Math 60 or ¶)
IX-X F (off-campus), Johnson, Goralski, others
67A Teaching Secondary School Mathematics (3 cr, †67A-67B-67C)
IX-X MW, PeikH 175, Johnson
67M Teaching Secondary School Mathematics (3 cr; prereq minor only)
IX-X TTh, PeikH 315, Johnson
68 Student Teaching: Science (3 or 6 cr, †9 cr; prereq sr, ¶68A)
IX-X F (off-campus), Boeck, Goralski, others
68A Teaching Secondary School Science (3 cr, †68A-68B-68C)
IX-X MW, PeikH 365, Boeck
69 Student Teaching: Social Studies (1 or 3 or 6 cr; prereq jr, ¶EdT 55A...or sr, ¶69A)
IX-X F (off-campus), VIII M (1 cr), PeikH 165, West, Goralski, others
69A Teaching Social Studies in Secondary School (3 cr, †69A-69B-69C)
IX-X MW, PeikH 165, West
70 Student Teaching: Modern Languages (3 or 6 cr, †9 cr; prereq sr, ¶70A)
IX-X F (off-campus), Birkmaier, Goralski, others
70A Teaching Modern Languages (3 cr, †70A-70B-70C; prereq sr)
IX-X TTh, PeikH 225, Birkmaier
70M Teaching Modern Languages (3 cr; prereq minor only)
IX-X TTh, PeikH 225, Birkmaier
71 Student Teaching: Latin (3-9 cr, †9 cr; prereq sr, ¶71A)
IX-X F (off-campus), Goralski, Birkmaier, others
71A Teaching Latin (3 cr, †71A-71B-71C)
IX-X TTh, PeikH 225, Birkmaier
71M Teaching Latin (3 cr; prereq minor only)
IX-X TTh, PeikH 225, Birkmaier
72 Student Teaching: Distributive Education (3-9 cr, †9 cr; prereq Ed 55B, ‡) Meyer
73 Student Teaching: Business Subjects (3-9 cr, †9 cr; prereq Ed 55B, ‡) Price
75 Student Teaching: Language Arts (3 or 6 cr, †9 cr; prereq sr, ¶75A)
IX-X F (off-campus), Kegler, Goralski, others
75A Teaching Language Arts in Secondary Schools (3 cr, †75A-75B-75C)
IX-X MW, FraH 20, Kegler
77 Student Teaching: Nursery School (4 cr)
4:30-6:00 M and ar, CW 12, Robinson
78 Student Teaching: Kindergarten (6 cr)
4:30-6:00 M and ar, CW 218, Sorensen, others
79 Student Teaching: Primary Grades (6 cr)
4:30-6:00 M and ar, CW 218, Sorensen, others
82 Teaching Basic Business Subjects (2 cr; prereq Ed 55B or ¶)
VIII-IX M, Bu 103, Price
84A Practice, Field Work in Recreation Leadership (2 cr; prereq recr maj)
I T, CH 206, 6 hr ar, Giles
84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
I T, CH 206, 6 hr ar, Giles
84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
I T, CH 206, 6 hr ar, Giles
85A Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq sr, recr maj or min)
V W, CH 206, 3 hrs ar min, 6 hrs ar maj, Giles
85B Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85A)
V W, CH 206, 3 hrs ar min, 6 hrs ar maj, Giles
85C Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85B)
V W, CH 206, 3 hrs ar min, 6 hrs ar maj, Giles
90A Teaching Distributive Education Subjects (2 cr, †90A-90B-90C; prereq ‡)
V TTh, Bu 103, Meyer
93 Student Teaching: Core Curriculum (12 cr; prereq 93B or ¶)
IX-X F and ar, Goralski, others
93A Methods of Teaching for Core Majors (3 cr, †93A-93B; prereq sr)
IX-X Th, Psy 109, Bossing
93B Methods of Teaching for Core Majors (2 cr; prereq 93A)
IX-X M, Psy 109, Bossing

Winter and Spring Quarters

50w,s See 50f
51Aw See 51Af
51Bw,s See 51Bf: I TTh, VIII-IX T(w); I TTh, VIII-IX Th(s)
52w,s See 52f
53Aw,s, See 53Af
53Bw,s See 53Bf
54Aw,s See 54Af
54Bw,s See 54Bf

60w,s See 60f

67w,s See 67f: IX-X M and ar

67Bw-67Cs Teaching Secondary School Mathematics (1 cr, †67A-67B-67C; prereq 67A) IX-X W

67Ms See 67Mf

68w,s See 68f: IX-X M and ar

68Bw-68Cs Teaching Secondary School Science (1 cr, †68A-68B-68C; prereq 68A) IX-X W

68Ms Teaching Secondary School Science (3 cr; prereq minor only) IX-X TTh

69w,s See 69f

69Bw-69Cs Teaching Social Studies in Secondary School (1 cr, †69A-69B-69C; prereq 69A) IX-X W

69Mw Teaching Social Studies in Secondary School (3 cr; prereq minor only) IV MWF

70w,s See 70f: IX-X M and ar

70Bw-70Cs Teaching Modern Languages (1 cr, †70A-70B-70C; prereq 70A) IX-X Th

71w,s See 71f: IX-X M and ar

71Bw-71Cs Teaching Latin (1 cr, †71A-71B-71C; prereq 71A) IX-X Th

72w,s See 72f

73w,s See 73f

74w Teaching Journalism (3 cr; prereq Jour 41 or 51) VII MWF

75w,s See 75f: IX-X M and ar

75Bw Teaching Language Arts in Secondary Schools (1 cr, †75A-75B-75C or 75D; prereq 75A) IX-X W

75Cs Teaching Language Arts in Secondary Schools (1 cr, †75A-75B-75C; prereq 75B, Engl, Lang Arts maj, Engl core) IX-X T

75Ds Teaching Language Arts in Secondary Schools (1 cr, †75A-75B-75D; prereq 75B, Spch, Lang Arts maj, Spch core) IX-X W

75Gs Teaching Language Arts in Secondary Schools (3 cr; prereq Engl, Lang Arts min, maj other than Spch) IX-X TTh

76Gs Teaching Language Arts in Secondary Schools (3 cr; prereq spch min, maj other than Engl) IX-X TTh

77w,s See 77f: 4:30-6:00 Th and ar(w); 4:30-6:00 M and ar(s)

78w,s See 78f: 4:30-6:00 Th and ar(w); 4:30-6:00 M and ar(s)

79w,s See 79f: 4:30-6:00 Th and ar(w); 4:30-6:00 M and ar(s)

80s Teaching Typewriting, Bookkeeping (2 cr; prereq Ed 55B or ¶) VIII-IX M

81w Teaching Shorthand (2 cr; prereq Ed 55B or ¶) VIII-IX M

84Aw,s-84Bw,s-84Cw,s See 84Af-84Bf-84Cf

85Aw,s-85Bw,s-85Cw,s See 85Af-85Bf-85Cf

-90Bw-90Cs See 90Af

93w See 93f: IX-X M and ar

93Bw See 93Bf: IX-X Th

HOME ECONOMICS EDUCATION (HEEd)

Fall Quarter

90 Child Development (3 cr; prereq soph, Psy 2)
IV MW, McNH 201, 1 hr ar, Robinson

91 Observation, Materials, Teaching (5 cr; prereq HE 4, 21, 41, Ed 55B, ¶93)
VIII MWF, IX W, McNH 103, Kafka

92 Teaching Probs (2 cr; prereq sr, 91, 93, ¶94, ¶192, ¶194A)
II MWF, I F, McNH 103, Wantoch

93 Supervised Teaching (3 cr; prereq HE 4, 21, 41, Ed 55B)
IX MF, McNH 103, Kafka, Wantoch

94 Supervised Teaching (6 cr; prereq 93)

95 Field Experience for Home Agents (6 cr; prereq 91, 93, △, cons dir agric ext) Ford

190 Readings (1-3 cr; prereq ♯) Ford

192 Evaluation in Home Economics (2-3 cr; prereq sr, 91, 93, Ed 55B)
III-IV TTh, McNH 102, Brown

194A Adult Education (3 cr; prereq 91, 93)
III-IV MWF, McNH 103, Ford

243 Trends (3 cr; prereq ♯)
II-IV S, McNH 103, Holmblade

293 Problems (1-9 cr; prereq ♯...294 rec) Esteros, Brown, Ford, Holmblade

294 Research Methods (3-6 cr; prereq 192, ♯)
7:00-10:00 pm W, McNH 102, Brown

295 Seminar (1 cr)
IX-X Th, McNH 102, Holmblade

Winter and Spring Quarters

90s See 90f

91w,s See 91f

92w,s See 92f

93w,s See 93f

94w,s See 94f

95w,s See 95f

190w,s See 190f

192w,s See 192f

193As Curriculum: Secondary Level (3 cr; prereq 94 or ♯) IX-X T, 1 hr ar

193Bw Curriculum: College Level (3 cr; prereq ♯) IX-X Th, 1 hr ar

194Aw,s See 194Af

197s Organization, Methods of Related Art Teaching (1-3 cr; prereq sr, 91, HE 180) IX-X W

293w,s See 293f

INDUSTRIAL EDUCATION (Ind)

Fall Quarter

1 Handicrafts (3 cr)
I-III TTh, TNCW 1

2 Wood Processing I (3 cr)
III-IV MWF, TNCW 1, Nelson

4 Wood Processing III (3 cr; prereq △)
5 Wood Processing (3 cr; prereq △)
6 **Industrial Arts Teaching** (5 cr)
VII-IX TTh, VIII W, PeikH 32, Randleman
7 **Drafting** (3 cr)
II-IV TTh, TNCW 201
12 **Craftwork** (3 cr)
II-IV TTh, TNCW 218, Flug (OT students only)
15 **Graphic Arts I** (3 cr)
VI-VII MWF, TNCW 14, Nelson
21 **Communication Electronics** (3 cr; prereq 20)
VI-VII MWF, TNCW 15, Kavanaugh
23 Applied Electronics I (3 cr; prereq △)
24 Applied Electronics II (3 cr; prereq △)
25 Metal Processing I (3 cr; prereq △)
26 Metal Processing II (3 cr; prereq △)
27 Metal Processing III (3 cr; prereq △)
28 Metal Processing IV (3 cr; prereq △)
29 Metal Processing V (3 cr; prereq △)
30 Small Gas Engines (3 cr; prereq △)
35 Fundamentals of Vocational Education (3 cr)
IX-X M, TNCW 116, Widdowson
40 Analysis, Course Organization (5 cr)
IX-X WF, TNCW 113, Kavanaugh
60A Student Teaching (3 cr, †60A-60B-60C; prereq 5, 55 or 100, 2.5 GPA) Randleman
60B Student Teaching (3 cr, †60A-60B-60C; prereq 60A) Randleman
60C Student Teaching (3 cr, †60A-60B-60C; prereq 60B) Randleman
90 Independent Study (3 cr; prereq up div or ♯)
VIII W, TNCW 116, Nelson
91 Independent Study (3 cr; prereq 90)
VIII W, TNCW 116, Nelson
92 Independent Study (3 cr; prereq 91)
VIII W, TNCW 116, Nelson
100 Industrial Instruction (3 cr, §70; prereq 40, Ed 55B, ♯)
IX-X Th, TNCW 113, Micheels
109 Conference Leading for Industry (3 cr; prereq ♯)
IX-X T, TNCW 116, Widdowson
200 Research Probs (3, 6 or 9 cr)
III-IV M, TNCW 103, Micheels, Nelson, Kavanaugh
205 Seminar (no cr)
V W, TNCW 116, Micheels

Winter and Spring Quarters

1w,s See 1f
2s See 2f: II-IV TTh (OT students only)
3w Wood Processing II (3 cr) I-II MWF
4w,s See 4f
5w,s See 5f
6s See 6f
8w Design I (3 cr; prereq 7) II-IV TTh
9s Building Construction Drafting (3 cr; prereq 7) II-IV TTh
12w See 12f: III-IV MWF
15w See 15f: II-IV TTh (OT students only)
16s Graphic Arts II (3 cr) III-IV MWF
20w Electricity, Electronics (3 cr) VI-VII MWF
22s Industrial Electronics (3 cr; prereq 21) VI-VII MWF
23w,s See 23f
24w,s See 24f
25w,s See 25f
26w,s See 26f
27w,s See 27f
28w,s See 28f
29w,s See 29f
30w,s See 30f
50w,s Industrial Practices, Processes (3 cr; prereq 35) VI-VIII T
55w Teaching Industrial Arts (5 cr; prereq Ed 55A) VI-VIII TTh
60Aw,s-60Bw,s-60Cw,s See 60Af-60Bf-60Cf
90w,s-91w,s-92w,s See 90f-91f-92f
101w Tests in Industrial Subjects (3 cr; prereq Ed 55B) IX-X W
105w Administration (3 cr; prereq 35) IX-X T
107w Coordination (3 cr; prereq 35 or 125 or ♯) IX-X M
110s Vocational Guidance (3 cr; prereq Ed 55B) IX-X Th
125s Philosophy, Practice (3 cr, §35) IX-X M
135s Course Construction (3 cr, §40) IX-X T
200w,s See 200f
205w See 205f
250w Literature (3 cr; prereq ♯) IX-X Th
251s Research (3 cr; prereq ♯) IX-X W

MUSIC EDUCATION (MuEd)

Fall Quarter

4 **Applied Instrumental Technique** (2 cr; prereq mus educ maj)
VI MTWTh, MusEd 200
5 **Applied Instrumental Technique** (2 cr; prereq 4)
V MTWTh, NMA 4, Prescott
6 **Applied Instrumental Technique** (2 cr; prereq 5)
VII MTWTh, NMA 4, Prescott
51 **Teaching Music** (2 cr; prereq Mus 1)
—1, I MWF, NMA 5
—2, V MWF, ScH 104
—3, VIII MWF, ScH 4
52 **Teaching Music** (2 cr; prereq 51 or ♯)
—1, III MWF, ScH 4, Abelson
—2, VI MWF, ScH 104
53 Teaching Music in Secondary School (3 cr; prereq Mus 2T, ♯)
III MWF, NMA 4, Caswell
60 Supervision, Teaching (3 cr; prereq sr, 50B, 53, Ed 55B, ♯)
IX-X W, 5 hrs ar, ScH 4, Caswell, Ivory
61 Supervision, Teaching (3 cr; prereq 60)
IX-X W, 5 hrs ar, ScH 4, Caswell, Ivory
62 Supervision, Teaching (3 cr; prereq 61)
IX-X W, 5 hrs ar, ScH 4, Caswell, Ivory

63 Conducting I (2 cr; prereq 6 or ♯)
VI TTh, NMA 5, Prescott
65 Instrumentation (3 cr; prereq sr, Mus 6T)
III MWF, ScH 104, Ivory
100 Principles (3 cr)
IX-X T, ScH 104, Ivory
104 Adv Topics: Vocal Music (3 cr; prereq sr, ♯)
IX-X M, ScH 4, Caswell
224 Research Probs (3-9 cr; prereq elem stat)
VIII W, ScH 214, Caswell, Ivory

Winter and Spring Quarters

4w,s See 4f
-5w,s See 5f: III MWF
-6w,s See 6f
-7s See 6f: VII TWThF
50As Teaching in Primary Grades (2 cr; prereq ♯) V WF, 1 hr ar
50Bw Teaching in Interm Grades (2 cr; prereq ♯) V WF, 1 hr ar
51w,s See 51f: I MWF(w,s); IV MWF(w); V MWF(s); VIII MWF(w,s)
52w,s See 52f: III MWF(s); IV MWF(w); VI MWF(w,s)
59w,s Choral Literature, Conducting (2 cr sr, 1 cr others) V MTTh
60w,s-61w,s-62w,s See 60f-61f-62f
64w,s Band Organization (3 cr; prereq 6, ♯) VI MWF
65w See 65f
67s Teaching Instrumental Music in Elem School (2 cr; prereq ♯) III MWF
68s Teaching Instrumental Music in Secondary Schools (2 cr; prereq sr, 65) III TTh
103s Psychological Foundations (3 cr; prereq sr, ♯) IX-X M
105w Adv Topics: Instrumental Music (3 cr; prereq sr, ♯) IV MWF
124w Selection, Conducting of Choral Materials (3 cr; prereq sr) V MWF
224w,s See 224f

PHYSICAL EDUCATION

Undergraduate Courses for Men (PEM)

Fall Quarter

4B Basketball Fundamentals (1 cr)
V-VI TTh, CH Gym, Reed
5A Touch Football, Calisthenics, Tactics (1 cr)
III-IV TTh, CH Gym, Piper, Lewis, Novak
5B **Gymnastics** (1 cr)
III MWF, App Gym, Ostrander, Novak
5C **Stunts, Contests, Softball, Baseball** (1 cr)
II-III TTh, App Gym, Ostrander, Siebert, Gostick
6A Intramural Sports (1 cr)
IV-V TTh, CH Gym, Lewis, Novak
6C Aquatics (1 cr)
IV MWF, CH Pool, Heusner
7A Games, Relays (1 cr)
II-III TTh, CH Gym, Piper, Novak
8 **Tennis, Golf** (1 cr)
V-VI TTh, CH Gym, Bolstad, Lewis, Anderson
11 Survey of Recreation Activities (3 cr)
V-VI T, CH 206, 1 hr ar, Starr
32 Introduction (3 cr)
III MWF, CH 215, Piper, Heusner
43 **Camp Aquatics** (2 cr)
V MWF, CH 214, Ostrander
51 Mechanics of Movement (3 cr; prereq 50 or Anat 57)
II MWF, CH 206, Osell
55 Methods, Materials (4 cr; prereq 55A or ¶)
III MWF and ar, CH 206, Stish, Lewis
60B Athletic Training Lab (1 cr; prereq 60A)
Stein
66 Officiating Football, Basketball (3 cr; prereq 4A-B)
I MWF and ar, CH 215, Mueller
68 Basketball Coaching (2 cr; prereq 4B)
II MWF, CH 215, Kundla
72 Baseball Coaching (2 cr)
V MWF, CH 215, Siebert
73 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander
74 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander
75 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander
76 Directed Teaching—Block Plan (9 cr, not open to students who have taken 73, 74, 75; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander
97 Testing in Physical Education (2 cr; prereq Ed 55B)
VI MWF, CH 215, Heusner

Winter and Spring Quarters

4Aw Football Fundamentals (1 cr) VI-VII TTh; VIII MWF
4Cs Track Fundamentals (1 cr) VI-VII TTh
5Bw See 5Bf: III-IV TTh
5Cs See 5Cf: III-IV TTh
-6Bw See 6Af
6Cw,s See 6Cf: IV MWF(w); V MWF(s)
7Bw Boxing, Wrestling (1 cr) II-III TTh
7Cs Recreational Games (1 cr) II-III TTh
8s See 8f: IV-V TTh
9Aw Fundamental Rhythms (1 cr) V T, IV-V Th
9Bs Square, Ballroom Dancing (1 cr) V T, IV-V Th
23w Recreation Leadership (3 cr) V-VI T, 1 hr ar
45s Camp Craft (2 cr) V-VII Th
46s Camp Leadership (2 cr) VII MW
49w Social Aspects of Leisure (3 cr) IV MWF

52w Leadership in Social Activities (3 cr) VI-VII TTh

55w See 55f

58s Leadership in Community Recreation (3 cr; prereq 57) IV MWF

59s Instructor's Course in First Aid (3 cr; prereq age 20, PEW 25) II MWF

60As Prevention, Care of Injuries (3 cr; prereq 51) IV MWF

60Bw,s See 60Bf

61s History of Physical Education (3 cr) I MWF

63s Organization, Admin (3 cr; prereq 32 or 101, 55) III MWF

64Aw-64Bs Leadership in Nature Recreation (2 cr; prereq 15 cr nat sci) III-IV T(w); V-VII T(s)

65w Adapted Physical Education (3 cr; prereq 51, Anat 57) II MWF

67s Football Coaching (2 cr; prereq 4A or 1 yr squad exper) I MWF

69w Track Coaching (2 cr; prereq 4C) VI MWF

73w,s-74w,s-75w,s‡ See 73f-74f-75f

76w,s See 76f

78w Scout Leadership (2 cr) VII MW

81w Hockey Coaching (2 cr; prereq 6B or ♯) VII MWF

96s Admin of Intramural Sports (2 cr) V MWF

Undergraduate Courses for Women (PEW)

Fall Quarter

A Nonprofessional Physical Education

Aquatics (activity rating 1)

Swimming, Bgn

—1, V TTh, Gy Pool **(StP Campus)** (1 cr)

—2, III MWF, NGW 51 (1½ cr)

—3, IV MWF, NGW 51 (1½ cr)

—4, VIII MWF, NGW 51 (1½ cr)

Swimming, Adv Bgn

—5, IV TTh, NGW 51 (1 cr)

—6, VI TTh, NGW 51 (1 cr)

Swimming, Interm

—7, III TTh, NGW 58, 201 (1 cr)

—8, VII MWF, NGW 58, 201 (1½ cr)

Swimming, Adv

—9, VIII MWF, NGW 58, 201 (1½ cr)

ARC Sr Life Saving

—10, IV MWF, NGW 58, 201 (1½ cr)

Individual Activities (activity rating 1, 2, 3)

Posture, Individual Exercise

—11, IV TTh, Gy 100 **(StP Campus)** (1 cr)

—12, III MWF, NGW 153A (1½ cr)

—13, V MWF, NGW 153A (1½ cr)

—14, VI MWF, NGW 153A (1½ cr)

—15, VIII MWF, NGW 153A (1½ cr)

—16, II TTh, NGW 153A (1 cr)

—17, IV TTh, NGW 153A (1 cr)

—18, V TTh, NGW 153A (1 cr)

Conditioning Exercises (activity rating 1, 2)

—19, VI TTh, NGW 153 (1 cr)

Individual Sports

Archery, Bgn (activity rating 1, 2, 3)

—20, VII TTh, NGW 60 (1 cr)

—21, VI MWF, NGW 60 (1½ cr)

Badminton, Bgn (activity rating 1, 2)

—22, I MWF, NGW 60 (1½ cr)

—23, III MWF, NGW 60 (1½ cr)

—24, IV MWF, NGW 60 (1½ cr)

—25, II TTh, NGW 60 (1 cr)

—26, III TTh, NGW 60 (1 cr)

Bowling, Bgn (activity rating 1, 2, 3)

—27, III MWF, NGW 201, CMU (1½ cr)

—28, IV MWF, NGW 201, CMU (1½ cr)

—29, II TTh, NGW 201, CMU (1 cr)

—30, III TTh, NGW 201, CMU (1 cr)

—31, II TTh, StCen **(StP Campus)** (1 cr)

Fencing, Bgn (activity rating 1, 2)

—32, IV TTh, NGW 151 (1 cr)

Riflemarksmanship (activity rating 1, 2, 3)

—33, VI TTh, NGW 201, Armory (1 cr)

—34, VII TTh, NGW 201, Armory (1 cr)

Social Games, Mixers (activity rating 1, 2, 3)

—35, V TTh, NGW 153, 201 (1 cr)

Skating, Bgn (activity rating 1, 2, 3)

—36, II MWF, NGW 201, Arena (1½ cr)

—37, III MWF, NGW 201, Arena (1½ cr)

Skating, Figure (activity rating 1, 2)

—38, II MWF, NGW 201, Arena (1½ cr)

—39, III MWF, NGW 201, Arena (1½ cr)

Tumbling, Trampoline (activity rating 1, 2)

—40, V MWF, NGW 153 (1½ cr)

Rhythms

Ballroom Dance, Bgn (activity rating 1, 2, 3)

—41, III TTh, NGW 153, 201 (1 cr)

—42, VIII TTh, NGW 153, 201 (1 cr)

Folk, Square Dance (activity rating 1, 2)

—43, III TTh, Gy 100 **(StP Campus)** (1 cr)

—44, VII TTh, NGW 151, 201 (1 cr)

Modern Dance, Bgn (activity rating 1, 2)

—45, V MWF, NGW 151, 201 (1½ cr)

—46, VII MWF, NGW 151, 201 (1½ cr)

Team Sports (activity rating 1, 2)

Volleyball

—47, I TTh, NGW 151 (1 cr)

—48, V TTh, NGW 151 (1 cr)

Professional Courses

20A **Badminton** (½ cr)
—1, V TTh, NGW 60, Tenney
—2, VI TTh, NGW 60, Tenney

20B Skills, Officiating of Fall Team Sports (1 cr)
II MWF, NGW 60, Hauptfuehrer

20C **Archery, Bowling** (1 cr)
—1, VII MWF, NGW 60, CMU, Tinker
—2, VIII MWF, NGW 60, Tinker

21D Posture, Functional Exercise (1 cr)
II MWF, NGW 153A

25 **ARC First Aid: Standard, Adv** (2 cr)
—1, I MWF, NGW 151, 201
—2, IV MWF, NGW 151, 201

40A Elem Modern Dance (½ cr)
II TTh, NGW 151

40B Skills, Officiating of Softball, Volleyball (1 cr)
III MW, NGW 151, Hauptfuehrer

45 **Physical Education Activities for the Elem School** (2 cr; prereq elem educ maj only)
—1, IV MWF, NGW 153, 153A
—2, VII MWF, NGW 153, 153A

47 Teaching Dance, Rhythmic Activities (3 cr; prereq 21B, 22A, 40A)
VIII MTWThF, NGW 153, 201

51 Mechanics of Movement (3 cr; prereq Anat 57)
II MWF, NGW 3, Wells

53 Role of Physical Educator in Recreation (3 cr; prereq phys educ maj)
IV MWF, NGW 151, 153, 201, Tinker

62 Teaching Activities (3 cr; prereq phys educ min, recr maj)
I MTWThF, NGW 3, 153, 153A, Hauptfuehrer

70 **Teaching Health, Physical Education in the Elem School** (3 cr; prereq 3rd qtr soph, elem educ maj)
—1, III TTh, IV T, NGW 153, 153A, 201, Bockstruck, Slocum
—2, VI MWF, NGW 153, 153A, 201, Bockstruck, Slocum

82 Principles (3 cr; prereq sr)
III MWF, NGW 3

86 Adv Physical Education (1 cr)
III MWF, NGW 4, 153, Bockstruck

90A Student Teaching (3 cr; prereq sr, Ed 55B, phys educ maj)
II TTh and ar, NGW 3, Jaeger

90B Student Teaching (3 cr; prereq 90A)
III TTh and ar, NGW 3, Jaeger

90D Orientation to Student Teaching (2-3 cr; prereq 4th qtr student teachers) Jaeger

90E Student Teaching (2-3 cr; prereq 4th qtr student teachers) Jaeger

91 **Prin Play** (3 cr; prereq NKP maj)
III MWF, NGW 151, 201, Tinker

93 Student Teaching for Minors (2 cr; prereq Ed 55B, phys educ min)
III TTh and ar, NGW 4, Hauptfuehrer

94 Student Teaching: School Health Education (2 cr; prereq sr, 83, ‡)
III Th and ar, NGW 202, Slocum

Winter and Spring Quarters

Bw,Cs See Af

ARC Sr Life Saving (1½ cr) V MWF(s); VI MWF(w)

Archery, Bgn (1 cr) VII TTh(w); (1½ cr) VI MWF(w)

Archery, Bgn-Interm (1 cr) VI or VII TTh(s)

Badminton, Bgn (1 cr) III TTh(w); III TTh (StP)(w); (1½ cr) III or IV or V MWF (w)

Badminton, Interm (1 cr) IV TTh(w)

Basketball (1 cr) III TTh(w); V TTh(StP) (w); (1½ cr) I MWF(w)

Bowling, Bgn (1 cr) II or III TTh(w); II TTh(StP)(w); (1½ cr) III or IV MWF (w)

Conditioning Exercises (1 cr) II TTh(w); VIII TTh(s)

Dancing, Ballroom (1 cr) IV or VII TTh(w); I or VII TTh(s)

Dancing, Folk, Square (1 cr) II TTh(w); VIII TTh(s)

Dancing, Modern, Bgn (1½ cr) IV MWF (w); VI MWF(s)

Dancing, Modern, Adv Bgn (1½ cr) VI MWF(w)

Dancing, Modern, Interm (1½ cr) VII MWF(s)

Fencing (1 cr) V TTh(w); (1½ cr) IV MWF(s)

Golf, Bgn (1 cr) II or III TTh(StP)(s); III TTh(s); (1½ cr) III or IV or V or VI MWF(s)

Golf, Interm (1 cr) IV or V TTh(s)

Golf, Adv (ar cr) Ar(s)

Horseback Riding, Bgn (1 cr) VI or VII Th(s)

Posture, Individual Exercise (1 cr) IV TTh (StP)(w); I or VI or VII TTh(w); II or VI TTh(s); (1½ cr) I or II or V MWF (w); II or IV MW or V MWF(s)

Riflemarksmanship (1 cr) I or II TTh(w)

Skating, Bgn (1½ cr) II or III MWF(w)

Skating, Figure (1½ cr) II or III MWF(w)

Social Games, Mixers (1 cr) VII TTh(w)

Softball (1½ cr) II TTh(s)

Swimming, Bgn (1½ cr) II MWF(s); VI MWF(w,s)

Swimming, Adv Bgn (1 cr) VI TTh(s); VII TTh(w); (1½ cr) III or VIII MWF(s)

Swimming, Interm (1 cr) III or VII TTh(s)

Swimming, Interm-Adv (1½ cr) VII MWF (w)

Swimming, Adv, Diving (1½ cr) IV MWF (s)

Swimming, Adv, Synchronized (1½ cr) VII MWF(s)

Tennis, Bgn (1 cr) II or III or VI TTh(s); IV or V TTh(StP)(s); V TTh(w); (1½ cr) I or II or III MWF(s)

Tennis, Interm-Adv (1 cr) IV or V TTh(s)

Tumbling, Trampoline (1½ cr) V MWF(w)

Volleyball (1 cr) I or VI TTh(w)

Water Safety Instructor's Course (1½ cr) IV MWF(w); VIII MWF(s)

Professional Courses

21Aw Adv Basketball (½ cr) VIII TTh
21Bw Rhythmic Fundamentals, Elem Folk Dance (1 cr) V T, IV-V Th
21Ew Winter Sports (½ cr) III TTh
22As Folk, Ballroom Dance (1 cr) V T, IV-V Th
22Bs Golf (1 cr) VII or VIII MWF
22Cs Tennis (1 cr) IV or V MWF
25w,s See 25f: III MWF(s); IV MWF(w); V MWF(s); VII MWF(w)
40Cs Stunts, Tumbling, Apparatus (1½ cr) VII MTWThF
40Dw Interm Modern Dance (1 cr) II MWF
41Aw Adv Aquatics (1 cr) II MWF
41Bw Officiating Basketball (½ cr; prereq 21A) IV MW
42As Senior Life Saving (1 cr; prereq 41A) VI MWF
45w,s See 45f: III or VIII MWF
48w Teaching Individual, Dual Sports (3 cr; prereq ‡) II MWThF, 1 hr ar
49s Teaching Team Sports (2 cr) I MTWTh
54s Camp Leadership (3 cr) IV MWF
70w,s See 70f
77s Teaching Aquatics (2 cr; prereq 42A) II MTWThF
80s History, Trends in Dance (3 cr; prereq ‡) I MWF
83w Methods, Materials of School Health Education (3 cr) III MWF
85w Teaching of Posture, Self-Testing Activities (3 cr) VII MTWThF
90As See 90Af: III TTh and ar
-90Bw-90Cs See 90Af: I T, II Th and ar(w); III F and ar(s)
-90Cw See 90Bf: III Th and ar
90Ew,s See 90Ef
91w See 91f
93w,s See 93f
94w,s See 94f
95s Administration (3 cr; prereq sr) III MWF

Advanced Courses for Men and Women (PE)

101 Principles (3 cr; prereq PEM 55)
VI MWF, CH 214, Stish (for graduate students only)
105 Conservation of Natural Resources (2 cr; prereq sr, PEM 64B)
III-IV Th, CH 214, Chapman
111 Recreation Areas, Facilities (3 cr; prereq PEM 58)
IV MWF, CH 215, Giles
118E Probs: Teacher Education in Health, Physical Education, Recreation (ar cr; prereq ‡) Baker, Jaeger, Slocum, Wells
123 Adv Methods of Teaching (3 cr; prereq ‡) 4:00-5:30 TTh, NGW 3, Baker
125 Curriculum Trends in Professional Preparation of Teachers (3 cr; prereq sr, tchg exper or ‡)
III-IV S, NGW 3, 1 hr ar, Jaeger
141 Introd Hospital Recreation (3 cr; prereq ‡) III MWF, CH 214, Chapman
221 Seminar: Physical Education (no cr) Baker, Jaeger, Slocum, Wells
224 Research Probs: School Health Education, Physical Education, Recreation (ar cr; prereq 236, 135 or EPsy 116 or ‡) Baker, Chapman, Donnelly, Fitzgerald, Heusner, Jaeger, Slocum, Stish, Wells
234 Curriculum in Physical Education (3 cr; prereq 63, 101)
4:00-5:30 MW, CH 214, Donnelly
236 Research: Physical Education, Recreation (3 cr)
I MWF, CH 206, Stish
240 Legal, Financial Aspects of Recreation (3 cr)
III-IV Th, CH 206, 1 hr ar, Fitzgerald
261B Seminar: Contemporary Probs (ar cr; prereq cons adv)
III-IV T, CH 206, Fitzgerald

Winter and Spring Quarters

101w See 101f: II MWF (undergraduate students only)
102w Program in Elementary, Secondary School (3 cr; prereq sr) III MWF
104s Teaching Physical Education for Handicapped Child (3 cr; prereq sr, ‡) III-IV S, 1 hr ar
107w Camp Admin (3 cr; prereq PEM 46, ‡) IX-X W
110w Recreation Surveys (3 cr; prereq PEM 58) VI MWF
112s Programming in Recreation (3 cr; prereq PEM 58) VI MWF
113w Physical Education in Elem School (3 cr; prereq elem sch exper or ‡) 4:00-5:30 TTh
114s Admin of School Health Education Program (3 cr; prereq sr, PEW 83, PubH 50 or ‡) 4:00-5:30 TTh
115w Adv Kinesiology (3 cr; prereq undergrad kinesiology or ‡) 4:00-5:30 MW
117Bw Adv Instruction in School Health for Secondary Schools (3 cr, §117A; prereq PEW 83 or ‡) III-IV S, 1 hr ar
118Ew,s See 118Ef
121s Recreation Methods (3 cr; prereq EdT 84C) II T, II-III Th
124s Supervision (3 cr; prereq ‡) 4:00-5:30 MW
135w Tests, Measurements (3 cr; prereq sr, EPsy 60) II MWF
142s Leadership in Hospital Recreation (3 cr; prereq 141) III MWF
143w Programming in Hospital Recreation (3 cr; prereq 141) III MWF

221w,s See 221f
224w,s See 224f
233w Admin of Physical Education Program in Secondary Schools (3 cr; prereq 63) VI MWF
238s Admin of Physical Education in Colleges, Universities (3 cr; prereq PEM 63 or ‡) II MWF
241w Admin of Public Recreation (3 cr) IV MWF
242s Community Organization for Recreation (3 cr; prereq ‡) III TTh, 1 hr ar
261As Seminar: Contemporary Probs (3 cr; prereq 236, ‡) VI MWF
261Bw See 261Bf: III-IV Th

GENERAL COLLEGE (GC)

Fall Quarter

1A Individual Adjustment (4 cr)
II-III TTh, FolH 6, King

2A Psychology in Modern Society (5 cr)
—1, I MTWThF, FraH 102, Burris
—2, V MTWThF, FraH 102, Burris
—3, VII MTWThF, FraH 101, Martin

2B Fields of Applied Psychology (5 cr; prereq 2A)
III MTWThF, FraH 102, Borow

2C Psychology of Human Development (3 cr)
IV MWF, ChE 240, Anderson

3A Home Life: Marriage, Family Living (5 cr)
—1, II MTWThF, AE 215, Anderson
—2, V MTWThF, P 210, Sudia
—3, VII MTWThF, WeH 202, Sudia

3D Selecting, Furnishing a Home (3 cr)
I MWF, JohH 205, Forsyth

5A Functions, Problems of Philosophy (3 cr)
—1, III MWF, ME 18, Benson
—2, V MWF, NH 213, Petersen

5B Functions, Problems of Logic (3 cr)
—1, II MWF, Bu 211, Petersen
—2, VI MWF, Arch 40, Rice
—3, VIII MWF, NH 209, Petersen

5C Probs of Ethics (3 cr)
I MWF, NH 111, Benson

7A Physical Science: Elements of Physics (5 cr, §6A)
III MTWThF, Ph 170, Vaughan

7B Physical Science: Elements of Light, Astronomy (5 cr)
IV MTWThF and ar, Ph 133, Policoff

7C Physical Science: Elements of Chemistry (5 cr)
—1, IV MTWThF, Ph 170, Schwabacher
—2, VI MTWThF, Ph 170, Stoppel

7D Physical Science: Elements of Geology (5 cr)
I MTWThF, P 2, M Harris

8A Applied Mathematics (5 cr)
—1, I MTWThF, NH 207, 1 hr ar, Stoppel
—2, II MTWThF, NH 207, 1 hr ar, Schwabacher
—3, III MTWThF, NH 207, 1 hr ar, M Harris
—4, IV MTWThF, NH 207, 1 hr ar, Mandeville
—5, V MTWThF, NH 207, 1 hr ar, Baldwin
—6, VI MTWThF, NH 207, 1 hr ar, Policoff
—7, VII MTWThF, NH 207, 1 hr ar, Baldwin
—8, VIII MTWThF, NH 207, 1 hr ar, Schluck

9A Statistics (5 cr)
—1, I MTWThF, JohH 309, Giese
—2, III MTWThF, JohH 309, McCutcheon
—3, VI MTWThF, JohH 309, Giese

10A Human Biology: Fundamental Similarities in Living World (3 cr)
—1, I MWF, NH 211, Jefferson, lab ar
—2, III MWF, NH 211, Jefferson, lab ar
—3, VI MWF, NH 211, Jefferson, lab ar

10B Human Biology: Living Machinery in Man (3 cr; prereq 10A)
V MWF, NH 211, Dearden

10C Human Biology: Healthful Living (3 cr)
—1, II MWF, NH 211, Dearden
—2, VII MWF, NH 211, Dearden

16A Bookkeeping, Accounting Lab (3 cr)
—1, II-III TTh, FraH B25, Donnelly
—2, IV-V TTh, FraH B25, Donnelly

17A Probs of Consumption Economics (3 cr)
VII MWF, P 2

18A Retailing, Selling (5 cr; prereq soph, ‡)
—1, II M, II-III TTh, Bu 103, Wallace
—2, II M, II-III WF, Bu 103, Wallace

19A Probs of Business Transactions (5 cr)
—1, II MTWThF, JohH 309, Rassweiler
—2, IV MTWThF, JohH 309, Larson
—3, V MTWThF, JohH 309, McCutcheon
—4, VII MTWThF, JohH 309, Larson
—5, VIII MTWThF, JohH 309, Stolte

20A Practical Law (5 cr)
—1, I MTWThF, JohH 122, Donnelly
—2, V MTWThF, JohH 113, Newcomb
—3, VIII MTWThF, JohH 205, Newcomb

21 Gen Arts (3 cr)
—1, III MWF, NH 111, Caswell
—2, VII MWF, NH 111, Gates

22A Art Today (3 cr)
IV MWF, NH 111, Safer

23A Art Lab (3 cr)
—1, I-II MW, NH 102, 1 hr ar, MacInnes
—2, VI-VII MW, NH 102, 1 hr ar, Safer
—3, III-IV WF, NH 102, 1 hr ar, Gates
—4, VI-VII TTh, NH 102, 1 hr ar, MacInnes

23B Commercial Art (3 cr)
II-III TTh, NH 102, Safer

24A Music Today: Basic Listening Skills (3 cr)
—1, I-II TTh, NH 111, Seecamp
—2, III-IV TTh, NH 111, Caswell
—3, VI-VII TTh, NH 111, Caswell

25A Chorus: Techniques, Performance (2 cr; prereq ♯)
II MWF, NH 111, Caswell

26A Photography (3 cr)
Lect III T, J 2, Agar
—1, I-II TTh, J 2, Agar
—2, IV-V TTh, J 2, Agar

29A World Literature I (5 cr)
—1, II MTWThF, NH 213, Rice
—2, VIII MTWThF, NH 216, Finnberg

29B World Literature II (5 cr)
IV MTWThF, P 210, Burrows

29C American Literature (3 cr)
I MWF, Arch 130, Draxten

29D Contemporary Books, Periodicals (5 cr)
VI MTWThF, Arch 55, Kivits

29G Literature of the Theater: Film, Drama (3 cr)
III T, III-IV Th, P 110, Sheldon

30A Reading, Vocabulary Development (5 cr)
I MTWThF, NH 216, Stockdale

30B Fundamentals of Usage, Style (3 cr)
—1, I MTWTh, NH 209, Keeler
—2, II MTWTh, NH 209, Kivits
—3, III MTWTh, NH 213, Draxten
—4, V MTWTh, WeH 302, Stockdale

31A Writing Lab: Personal Writing (3 cr)
—1, I-II M, I WF, NH 122, Sheldon
—2, I-II TTh, NH 122, McBride
—3, I-II TTh, JohH 106, Draxten
—4, II-III M, II WF, NH 216, Rathburn
—5, II-III WF, NH 122, Stockdale (for DA students only)
—6, II-III WF, WeH 302, Trachtenberg (for DA students only)
—7, III-IV M, IV WF, NH 122, Finnberg
—8, III-IV M, IV WF, WeH 302, Hansen
—9, III-IV WF, NH 216, Kivits
—10, IV-V M, IV WF, NH 209, Kurak
—11, IV-V M, V WF, NH 216, Rice
—12, IV-V TTh, NH 216, Hansen
—13, V-VI M, V WF, NH 122, Elsenpeter
—14, V-VI TTh, NH 122, Elsenpeter
—15, VI MW, V-VI F, WeH 302, Rathburn
—16, VI-VII M, VII WF, NH 209, Burrows
—17, VI-VII TTh, NH 216, Kurak
—18, VI-VII TTh, WeH 302, Stockdale
—19, VI-VII WF, NH 216, Keeler
—20, VII-VIII TTh, NH 122, Burrows
—21, VII-VIII TTh, NH 209, Sheldon

31B Writing Lab: Organizing Ideas (3 cr; prereq 31A)
—1, I-II TTh, JohH 307, Hansen
—2, I-II TTh, JohH 205, Elsenpeter
—3, III-IV TTh, JohH 106, Keeler
—4, V-VI TTh, NH 209, Rathburn

31C Writing Lab: Communicating in Society (3 cr; prereq 31B)
—1, I-II TTh, WeH 302, Bergstrom
—2, VI-VII WF, NH 122, Finnberg

31D Writing Lab: Business Writing (3 cr; prereq 31A...31B rec)
—1, II-III TTh, NH 216, Reisman
—2, III-IV TTh, NH 209, Kurak
—3, V-VI TTh, NH 107, McBride

32A Oral Communication: Basic Prin (3 cr)
—1, I MWF, NH 107, Blue
—2, I MWF, JohH 126, Amram
—3, II MWF, JohH 126, Hagen
—4, IV MWF, JohH 105, Blue
—5, IV MWF, NH 107, Benson
—6, IV MWF, JohH 307, Manfull
—7, V MWF, NH 107, Hagen
—8, V MWF, JohH 105, Amram
—9, VI MWF, NH 107, Manfull
—10, VI MWF, JohH 126, Hagen
—11, VII MWF, NH 107, Blue
—12, VIII MWF, NH 107, Manfull

32B Oral Communication: Applications of Speech (3 cr; prereq 32A)
III MWF, Arch 140, Blue

32C Oral Communication: Speech Organization (3 cr; prereq 32A)
I-II TTh, NH 107, Hagen

32D Oral Communication: Group Discussion (3 cr; prereq 32A)
III-IV TTh, NH 107, Amram

38A Geography (5 cr)
—1, IV MTWThF, NH 213, Steinhauser
—2, VI MTWThF, NH 213, Steinhauser

39 Anthropology (3 cr)
V MWF, FraH 101, Tefft

40 Problems of Contemporary Society (5 cr)
II MTWThF, Arch 35, McCune

41A Man in Society: His Personal Role (5 cr)
—1, II MTWThF, CW 218, F Harris
—2, III MTWThF, JohH 114, McGarry
—3, V MTWThF, JohH 122, McGarry
—4, VII MTWThF, JohH 114, Traphagen

43A Background of Modern World (5 cr)
VI MTWThF, WeH 202, Jones

43B Historical Biography (3 cr)
I MWF, NH 213, Moen

43C The Far East (5 cr)
III MTWThF, P 2, Matsumoto

44B Current History (2 cr)
—1, V TTh, NH 211, Matsumoto
—2, VII TTh, NH 213, Matsumoto

45A Growth of American Democracy (5 cr)
V MTWThF, P 2, Traphagen

45B Impact of Science, Technology on American History (5 cr)
IV MTWThF, NH 211, McCune

46A Probs of Natl Govt (3 cr)
IV MWF, WuH 202, F Harris
46D Probs of Intl Relations (5 cr)
VIII MTWThF, P 210, Jones

Winter and Spring Quarters

1Aw,s See 1Af
1Bw,s Vocational Planning (5 cr; prereq ‡ or cons couns) II MTWThF
2Aw,s See 2Af: II MTWThF(w,s); VII MTWThF(w); VIII MTWThF(s)
2Bw,s See 2Bf: IV MTWThF
2Cw See 2Cf
3Aw,s See 3Af: II MTWThF(w,s); V MTWThF(s); VI MTWThF(w); VII MTWThF(w,s)
3Bw Food Selection, Purchase (3 cr) V MWF
3Cs Clothing Selection, Purchase, Care (3 cr) VII MWF
3Es Income Mgt: Individual, Household Buying (2 cr) II MW
4w Leisure Today (3 cr) III MWF
5Aw,s See 5Af: IV MWF(w); III MWF(s)
5Bw,s See 5Bf: II MWF(w); V MWF(w,s); VIII MWF(w,s)
5Cw,s See 5Cf
6Cs Related Physical Science (5 cr; prereq 7D) III MTWThF
7Aw,s See 7Af: II MTWThF(s); IV MTWThF(w); VI MTWThF(w)
7Bs See 7Bf
7Cw,s See 7Cf: III MTWThF(s); IV MTWThF(w); VI MTWThF(w)
7Dw,s See 7Df: I MTWThF(s); III MTWThF(w)
7Es Physical Science: Modern (3 cr; prereq HS phys and chem, 1 yr col phys or chem) IV MWF
8Aw,s See 8Af: I MTWThF, 1 hr ar(s); II MTWThF, 1 hr ar(w); III MTWThF, 1 hr ar(w,s); IV MTWThF, 1 hr ar(w); V MTWThF, 1 hr ar(s); VI MTWThF, 1 hr ar(w,s); VII MTWThF, 1 hr ar(w); VIII MTWThF, 1 hr ar(w,s)
8Bw,s Applied Mathematics (5 cr; prereq 8A) I MTWThF(w); III MTWThF(w,s); IV MTWThF(s); V MTWThF(w); VI MTWThF(s)
9Aw,s See 9Af: I MTWThF(w); II MTWThF(s); VII MTWThF(w,s)
10Aw,s See 10Af: Lect I MWF, lab ar(w,s); Lect III MWF, lab ar(w)
10Bw,s See 10Bf: II MWF(w); III MWF(s); V MWF(w)
10Cw,s See 10Cf: II MWF(s); V MWF(s); VI MWF(w)
12s Nature Study (3 cr) VII-VIII MW
16Aw,s See 16Af: II-III WF; II-III TTh
16Bw,s Bookkeeping, Accounting Laboratory (3 cr; prereq 16A or ‡) IV-V TTh
17Bw Probs of Finance, Credit (3 cr) VII MWF
17Cs Small Business Operation (3 cr) VII MWF
-18Bw-18Cs See 18Af
18Ds Salesmanship (3 cr) I MWF
19Aw,s See 19Af: I MTWThF(s); II MTWThF(w); IV MTWThF(w); V MTWThF(s); VI MTWThF(w); VII MTWThF(w,s)
19Bw,s Probs of Investment Transactions (5 cr; prereq 19A or ‡) IV MTWThF(s); V MTWThF(w)
20Aw,s See 20Af: II MTWThF(s); IV MTWThF(s); V MTWThF(w); VIII MTWThF(w)
21w,s See 21f
-22Bw‡ See 22Af
22Cs Creative Personalities of Our Time (3 cr) IV MWF
23Aw,s See 23Af: I-II MW, 1 hr ar(w,s); III-IV WF, 1 hr ar(w,s); VI-VII MW, 1 hr ar(w); VI-VII TTh, 1 hr ar(w,s)
23Bw,s See 23Bf
24Bw Music Today: Background of Contemporary Music (3 cr) I-II TTh; III-IV TTh; VI-VII TTh
24Cs Music Today: Contemporary American Developments (3 cr) I-II TTh; III-IV TTh; VI-VII TTh
25Aw,s See 24Af
26Aw,s See 26Af: Lect III T, rec I-II TTh(w); IV-V TTh(w); I-III T, I-II Th(s)
26Bs Photography (3 cr; prereq 26A or exper, ‡) IV-V TTh
28Aw-28Bs‡ French Language, Civilization (5 cr) Lect II TTh, rec II or VI MWF(w); II MTWThF(s)
29Aw,s See 29Af: I MTWThF(s); III MTWThF(w)
29Bw,s See 29Bf: VI MTWThF
29Cw See 29Cf: VIII MWF
29Dw See 29Df: II MTWThF
29Es Reading Short Stories (3 cr) III MWF
29Gw See 29Gf
29Hw Individual Reading in Literature (3 cr; prereq credit in 29, ‡) II TTh
29Is Reading Novels (3 cr) VII MWF
30Aw,s See 30Af: I MTWThF(w,s); II MTWThF(s); VI MTWThF(w)
30Bs See 30Bf: I MTWTh
31Aw See 31Af: I MW, I-II F; II-III WF; III-IV M, IV WF; IV MW, III-IV F; IV-V M, V WF; V-VI M, V WF; V MW, V-VI F; V-VI TTh
31As See 31Af: II MW, I-II F; III-IV M, III WF; V-VI M, V WF; V-VI M; VI WF
31Bw See 31Bf: I-II M, I WF for DA students; I-II TTh; II-III MW; II-III WF; III-IV TTh; III-IV WF; V-VI M, V WF; V-VI TTh; VI-VII MW; VI-VII WF; VII-VIII TTh
31Bs See 31Bf: I-II TTh; III-IV M, IV WF; III-IV TTh; IV-V TTh; IV-V WF; V-VI M; VI WF
31Cw,s See 31Cf: I-II TTh(s); III-IV TTh(w,s)

31Dw See 31Df: I-II TTh; II-III TTh; III-IV TTh; V-VI TTh
31Ds See 31Df: I-II M, I WF; II-III TTh; III-IV TTh; V-VI M, V WF; V-VI TTh
31Ew,s Writing Lab: Individual Writing (3 cr; prereq 31A, ♯) III-IV TTh
31Fs Writing Lab: Research Writing (3 cr; prereq 31B) I-II TTh; VI-VII WF
32Aw See Af: I MWF; II MWF; III MWF; IV MWF; V MWF; VI MWF
32As See 32Af: I MWF; II MWF; III MWF; VII MWF
32Bw Oral Communication: Applications of Speech (3 cr; prereq 32A) II MWF; VI MWF; VII MWF
32Bs Oral Communication: Applications of Speech (3 cr; prereq 32A) I MWF; V MWF
32Cw,s See 32Cf: II MWF(s); III-IV TTh(w,s); IV MWF(w)
32Ds See 32Df: V-VI TTh
32Es Oral Communication: Business Speech (3 cr; prereq 32A) III MWF
33Aw Oral Communication: Radio, Television Today (3 cr) I MWF
33Bw,s Oral Communication: Creative Speech Activities (3 cr; prereq 32A, ♯) I-II TTh
38Aw,s See 38Af: II MTWThF(w); V MTWThF(s); VI MTWThF(w)
38Bs Conservation, Utilization of Natural Resources (5 cr) I MTWThF
39w,s See 39f
40w See 40f: I MTWThF
41Aw,s See 41Af: III MTWThF(w); V MTWThF(w,s); VII MTWThF(s)
41Bw,s Man in Society: His Organizational Role (5 cr; prereq 41A) II MTWThF(w,s); VII MTWThF(w)
41Cs Man in Society: His Intl Role (5 cr; prereq 41A...41B rec) VI MTWThF
43Aw,s See 43Af
43Bw,s See 43Bf
43Cw,s See 43Cf
44Bw,s See 44Bf
45Aw,s See 45Af: V MTWThF(w); IV MTWThF(s)
45Bw See 45Bf
46Bw,s Probs of State Govt (3 cr) IV MWF
46Dw,s See 46Df

LAW SCHOOL (Law)

First Semester

100 Agency, Partnerships (3½ cr)
IV MT, II W, FraH 101, McClure

101 Contracts (5 cr)
—1, VI MTW, VI Th, FraH B1, Kinyon
—2, VII MTW, VII Th, FraH B25, Daheim
—3, VIII MT, IV W, VIII Th, FraH 101, Kinyon

104 Sources of Law (2 cr)
I M, FraH 101, Lockhart

105 Legal Accounting (1 cr)
I ThF, FraH 101, Schroeder

106 Legal Research I (1½ cr)
VI F, FraH 101, Fitzgerald, Greene

108 Torts (5 cr)
II TThF, VI Th, FraH 101, McCoid

109 Procedure (3 cr)
—1, V ThF, FraH 20, Cound
—2, V ThF, FraH 120, Levy

110 Constitutional Law (2½ cr)
I TW, FraH 101, Lockhart

120 Banking, Negotiable Instruments (4½ cr)
II MTW, FraH 20, Kinyon

122 Legal Research II (1½ cr)
VII F, FraH 20

123 Private Corporations (3 cr)
I ThF, FraH 20, Daheim

124 Property II (6 cr)
III MTWF, FraH 20, Bade

125 Remedies (6 cr)
VII MTWTh, FraH 20, Cound

129 Evidence (3 cr)
II ThF, FraH 20, Hetland

145 Estate Planning (4½ cr)
I MWF, FraH 120, Waterbury

150 Insurance (4½ cr)
VII TThF, FraH 120, Hogg

152 Judicial Admin (3 cr)
II TTh, FraH 120, Pirsig

156 Law of Labor Relations (4½ cr)
VI MWF, FraH 120, McCoid

157 Standards of Legal Profession (1½ cr)
III F, FraH 120, Pirsig

158 Legislation (3 cr)
I TTh, FraH 120, McClure

159 Local Government Law (3 cr)
VII MW, FraH 120, Bade

163 Practice (6 cr)
III MTWTh, FraH 120, Hetland

165 Trade Regulation (4½ cr)
IV MTW, FraH 120, Levy

168 Legislation Seminar (3 cr)
VIII-IX F, FraH 237, McClure

170 Judicial Admin Seminar (3 cr)
VIII-IX T, FraH 237, Pirsig

172 Probs (1½ cr)
173 Taxation II (3 cr)
VI TTh, FraH 120, Waterbury
175 Intl Law (4½ cr)
II MWF, FraH 120, Hogg
178 Adv Law Review (1½ cr)
179 Directed Research (½ cr)
182 Security Transactions Seminar (3 cr)
VIII-IX M, FraH 237, McClure
188 Adv Law Review II (1½ cr)

COLLEGE OF MEDICAL SCIENCES

ANATOMY (Anat)

Fall Quarter

3 Elem Anatomy (4 cr; prereq 3 yr nurs, DH students)
Lect I TThS, Bo B6, Buckman
—1, Lab VIII-IX T, JacH 301, 303
—2, Lab VIII-IX Th, JacH 301, 303
58 Extremities (5 cr; prereq regis OT or PT, 4)
Lect VI MWF, Z 211
Lab VII-VIII MWF, JacH 301, 302
59 Systematic Anatomy (6 cr; prereq regis Dent)
Lect I MWF, JacH 304
Lab II-IV MWF, JacH 301, 303
100 Gross Human Anatomy (8 cr, †100-101; prereq regis Med or ♯)
Lect VI MWThF, MMA 100, Felts, Hartmann, Morgan
Review IX MWF, ChE 240
Lab VII-IX MWF, JacH 306, 308, VII Th, JacH 312, 313
103 Human Histology (4 cr, †103-104; prereq regis Med or Grad)
Lect I TF, IV Th, MMA 100, Carpenter, Lazarow
Lab Preview II TWThF, Owre 12
—1, Lab II-III TTh, JacH 212, 215
—2, Lab II-III WF, JacH 212, 215
105 Microscopic Anatomy (8 cr; prereq 102)
Lect VI MWF, JacH 304
Review VI TTh, JacH 304
Lab VII-IX MWF, JacH 212, 215
140 Skeletal Tissue Biology (2 cr; prereq med or dent hist) Felts
153 Adv Anatomy (ar cr; prereq ♯) Carpenter, Felts, Hartmann, Heggestad, Lazarow, Morgan, Smithberg, Sundberg, Wells
165 Hematology (4 cr; prereq 103 or Zool 54 or ♯)
Lect VII TTh, JacH 304, Sundberg
—1, Lab V-VI TTh, JacH 213
—2, Lab VIII-IX TTh, JacH 213
201 Research (ar cr; prereq ♯) Carpenter, Felts, Hartmann, Lazarow, Morgan, Smithberg, Sundberg, Wells
205 Seminar: Anatomy (1 cr; prereq ♯) Lazarow, others

Winter and Spring Quarters

4s Elem Anatomy (5 cr; prereq MedT, 5 yr nurs, OT, pharm, PT students, Zool 3 or Biol 3A) Lect I MTWF, lab VIII-IX TTh
57s Anatomy for Physical Education Students (4 cr) Lect III MWF, lab IV MWF
-101w See 100f
102s Head, Neck (6 cr; prereq 59) Lect VI MWF, lab VII-IX MWF
104s Human Histology (3 cr, †103-104; prereq 103) Lect I TTh, IV Th, lab II-III TTh; VII-VIII TTh
107w Human Embryology (4 cr; prereq ♯) Lect I TF, IV Th, lab I-II M, II-III F; II-III T, I-II Th
111s Human Neuroanatomy (5 cr; prereq 104 or Zool 150, ♯) Lect I MWF, lab II-IV MF; II-IV WS
131w Biological Electron Microscopy (ar cr; prereq ♯)
132w Experimental Study of Fetus (ar cr; prereq ♯)
-141w See 140f
-154w-155s‡ See 153f
-166w See 165f: Lect VII TTh, lab VIII-IX TTh
167s Seminar: Hematology (1 cr; prereq 166)
-202w-203s‡ See 201f
-206w-207s‡ See 205f

ANESTHESIOLOGY (Anes)

Fall Quarter

165 Clinical Anesthesia (2 cr; prereq regis Med) Van Bergen, others
265 Gen Anesthesia (12 cr)
IX M, MMA 100, Van Bergen, others
266 Regional Anesthesia (4 cr)
X M, MMA 100, Van Bergen, others
267 Preoperative, Postoperative Evaluation (2 cr)
X W, MMA 100, Van Bergen, others
268 Seminar (2 cr)
IX W, MMA 100, Van Bergen, others
269 Research (ar cr)

BACTERIOLOGY AND IMMUNOLOGY (Bact)

Fall Quarter

53 Gen Bacteriology (5 cr; prereq soph with C aver in prereq courses, 10 cr chem, 4 cr biol sci or ‡)
Lect VII MWF, MMA 125, Deal, Verna
Lab VIII-IX MWF, Mayo A205

105 Infectious Disease (6 cr; prereq Anat 103, PhCh 100 or 101 or AgBi 120)
Lect I-II TTh, MMA 125, VI F, MMA 125, Syverton, Scherer, others
Lab II-IV TTh, Mayo A205

111 Adv Laboratory (3 cr; prereq 110 or 112 or ‡)
Lect IX T, MH 213, Bradley
Lab VI-VIII TTh, Mayo A205

121 Physiology of Bacteria (3 cr; prereq 53, 8 cr org chem or biochem)
III TThS, MMA 100, Lichstein

124 Prin of Virology, Animal Cell Cultures (1 or 3 cr; prereq 102 or 105, 116)
VI MW, MMA 125, VI F, Owre 15, McLaren, Ross

152 Problems (ar cr; prereq grad, ‡)

153 Gen Bacteriology (3 cr, §53; prereq grad, 10 cr chem, 4 cr biol sci or ‡) Deal, Verna

201 Research (ar cr)

202 Diagnostic Microbiology (ar cr; prereq bact maj, ‡) Syverton, Bridges

203 Seminar (1 cr)
V W, Mayo 1050, McLaren

204 Adv Bacteriology (ar cr; prereq 122 or ¶, ‡) Lichstein

205 Adv Bacteriology (ar cr; prereq 204) Lichstein

206 Lab Methods: Applied Cell Culture, Virology (3 cr; prereq 124 or ¶, ‡)
II-IV MWF, Mayo A205, Ross, McLaren

Winter and Spring Quarters

1w,s Elem Bacteriology (4 cr, offered by Ext Div, open to DH, PT students without adtl fee winter qtr with △) Lect I MWF, lab II M, II-III F(w); Lect II MWF, lab III M, III-IV F

53w,s See 53f

100s Bacteriology for Dental Students (6 cr; prereq regis Dent or Grad) Lect I TThS, lab II-IV TThS

102s Medical Bacteriology (4 cr; prereq 116, not open to med. students) Lect VI TTh, lab VII-IX TTh

103s Soil Microbiology (4 cr, §Soil 127; prereq 53, 8 cr org chem, ‡) Lect I MWF, lab II-III MF

106w Infectious Disease (5 cr; prereq 105) Lect I-II TTh, VI T, lab II-IV TTh

110w Microbial Genetics (3 cr; prereq 53 or ‡) III TThS

116w Immunology (4 cr; prereq 53) Lect VI MTTh, lab VII-VIII TTh

122w Physiology of Bacteria Lab (3 cr; prereq 121 or ‡) IX T, VI-VIII TTh

152w,s See 152f

153w,s See 153f

201w,s See 201f

202w,s See 202f

203w,s See 203f

204w,s See 204f

205w,s See 205f

COMPREHENSIVE CLINIC (CoCl)

Fall Quarter

150 Clerkship: Comprehensive Care of Ambulatory Patients (ar cr; prereq regis Med)

LABORATORY MEDICINE

Laboratory Medicine (LMed)

Fall Quarter

180 Probs: Fluid, Electrolyte Metabolism A (ar cr; prereq regis Med) Evans, others

183 Topics: Immunology (ar cr; prereq regis Med) Evans, others

184 Probs: Clinical Lab Medicine (ar cr; prereq regis Med) Evans, others

235 Adv Clinical Lab Medicine (ar cr; prereq Anat 166) Evans, others

236 Research: Clinical Lab Probs (ar cr) Evans, others

Medical Technology (MedT)

Fall Quarter

10 Orientation (1 cr; prereq fr only)
VIII W, Owre 12, Hovde

30 Case Presentations (1 cr; prereq soph only)
V Th, Hosp EustisAmph, Hovde

70A Lab Methods in Clinical Chemistry A (10 cr) Peterson

70B Lab Methods in Clinical Chemistry B (5 cr) Hammer

73 Electrocardiography, Basal Metabolism Testing (2 cr) Halsted

75 Clinical Hematology (5 cr) Hanauer

80 Clinical Microbiology (9 cr) Delaney

82 Blood Bank Techniques (4 cr) Ruspino

85 Histologic Techniques (4 cr) McMaster

90 Applied Lab Methods (2 cr)
I W, Mayo C295, Hammer

98 Adv Lab Techniques (4 cr) Gonyea

110 Adv Clinical Lab Techniques (5 cr) Rausch

140 Educational Admin (3 cr)
VI MWF, Mayo C295, Hovde

150 Topics: Bacteriology (ar cr)
III Th, Mayo C295, Delaney
151 Topics: Chemistry (ar cr)
I T, Mayo C295, Freier
152 Topics: Hematology (ar cr)
III M, Mayo C295, Gonyea
153 Topics: Immunology (ar cr)
VII W, Mayo C295, Ruspino

Winter and Spring Quarters

-11w-12s See 10f
-31w-32s See 30f
51w Clinical Diagnosis by Lab Methods (1 cr)
II W
52s Clinical Diagnosis by Lab Methods (3 cr; prereq 51) II MTW
60s Blood Grouping, Cross Matching (2 cr) VI-IX F
61s Clinical Microscopy (2 cr) Lect VI M, lab I-II F, VII-VIII M
62s Clinical Chemistry (3 cr) Lect VI W, lab II-III Th, VII-IX W
70Aw,s See 70Af
70Bw,s See 70Bf
73w,s See 73f
75w,s See 75f
80w,s See 80f
82w,s See 82f
85w,s See 85f
90s See 90f
98w,s See 98f
110w-111s‡ See 110f
-111w‡ See 110f
130w-131s‡ Elements of Admin (3 cr) VI WTh F(w); Ar(s)
-141w‡ See 140f: VII MWF
150w,s See 150f: III W(w); Ar(s)
151w,s See 151f: I T(w); Ar(s)
152w,s See 152f: IIIM(w); Ar(s)
153w,s See 153f: VIII F(w); Ar(s)

MEDICINE (Med)

Fall Quarter

104 Clinical Lecture: Internal Medicine (2 cr per yr; prereq 101, 102)
IX alt W, Hosp EustisAmph, Watson, others
112 Clerkship (16 cr; prereq regis Med)
9:00-12:00, 1:00-3:00 MTWThFS
123 Clinical Lecture: Dermatology, Syphilology (2 cr per yr; prereq 101, 102)
IX M, Bo B6, Lynch, others
201 Clinical Medicine (ar cr) Watson, others
202 Diseases of Cardiovascular Apparatus (ar cr) Watson, others
203 Research: Medicine (ar cr) Watson, others
205 Diseases of Chest (ar cr) MacDonald
206 Clinical Conference (1 cr)
9:00-9:50 F, Hosp ToddAmph, Watson, others
207 Clinical Pathological Conference (1 cr)
11:00-11:50 W, Hosp ToddAmph, Dawson, others
208 Clinical Radiological Conference (1 cr)
9:00-9:50 M, Hosp Todd Amph, Peterson
210 Seminar: Infectious Disease (1 cr) Spink
212 Pigment Metabolism (1 cr) Schwartz
213 Seminar: Psychosomatic Medicine (1 cr, §NPsy 244) Magraw
225 Clinical Dermatology (ar cr) Lynch, others
226 Dermatology (ar cr) Lynch, others
227 Histopathology of Skin (ar cr) Lynch, others
228 Research: Dermatology, Syphilology (ar cr) Lynch, others

NURSING

Nursing (Nurs)

Fall Quarter

17 Clinical Nursing (6 cr) Ryden, others
56 Operating Room Nursing (6 cr) Ellison
58 Orthopedic Nursing (2 cr)
1:00-4:30 MTWTh, PoH 1326, Kume
59 Gynecologic Nursing (4 cr)
1:00-4:30 MTWTh, PoH 1326, Grainger
60 Maternal, Child Nursing (12 cr)
10:30-11:30 TTh, PoH 1326, 1:30-3:30 TTh, MH 116, Whitney
61 Maternal, Child Nursing (12 cr; prereq 60)
2:00-5:00 MTWTh, Owre 113, Cook, Geis
66 Neuropsychiatric Nursing (4 cr)
1:30-3:30 TTh, PoH 2317, Lediger
67 Care of Neuropsychiatric Patients (8 cr)
1:30-2:30 W, PoH 2317, Lediger
79 Tuberculosis Nursing (3 cr) Einerson
88 Rural Nursing (5 cr)
95 Orientation to Nurs Mgt (5 cr; prereq regis Nurs) Titt
96 Out-Patient Nursing (5 cr) Knutson
151A Medical Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, ForH 244, Coe
Lab I-III TTh, ForH 244
152A Obstetric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, PoH 1326, Whitney
Lab II TTh, PoH 1326
153A Operating Room Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, Owre 112, Ellison
Lab I-III TTh, Owre 112
154A Pediatric Nursing (6 cr; prereq CD 40 or 80 or 132 or 140 or ¶ or #)
Lect III MWF, PoH 2317, Cook
Lab I-III TTh, PoH 2317
155A Psychiatric Nursing (6 cr; prereq Psy 144 or NPsy 171A or ¶ or #)
Lect III MWF, MH 128, Lediger
Lab I-III TTh, MH 128

157A Surgical Nursing (6 cr)
Lect III MWF, Owre 113, Peterson
Lab I-III TTh, PoH 2317
158 Tuberculosis Nursing (15 cr) Einerson
165 Work Simplification in Nursing (4 cr)
VI-VII TTh, MH 213, Grainger
190 Foundations of Nursing (3-5 cr; prereq regis MEd or MNA prog)
VI-VII MWF, MH 213, Coe

Winter and Spring Quarters

-18w See 17f
50s Medical, Surgical Nursing (12 cr) I-III T, VI-VIII TTh, III Th
52s Nurse-Patient Relationships (1½ cr; prereq regis Nurs) I-II Th
54s Pathology (2 cr) I-III T, VI-VIII TTh, III Th
56w,s See 56f
58w,s See 58f
59w,s See 59f
60w,s See 60f
61w,s See 61f
66w,s See 66f: 1:30-3:30 TTh(w); VI-VII TTh, IV MTWTh(s)
67w,s See 67f: 1:30-2:30 W and ar(w); VI-VII W, VI-VIII M(s)
79w See 79f
87w Field Experience in Public Health Nursing (10 cr)
88w See 88f
95w See 95f
96w See 96f
98s The Nursing Profession (3 cr)
-151Bw-151Cs‡ See 151Af
-152Bw-153Cs‡ See 152Af
-153Bw-153Cs‡ See 153Af
-154Bw-154Cs‡ See 154Af
-155Bw-155Cs‡ See 155Af
-157Bw-157Cs‡ See 157Af
158w See 158f
165w,s See 165f

Nursing Administration (NuAd)

Fall Quarter

160 Ward Admin (3 cr; prereq 170)
II MWF, Owre 113, Grainger
170 Nursing Service Admin (3 cr, not open to students in MNA prog)
—1, V MWF, MH 128, Harris
—2, V MWF, MH 214, Walseth
177 Practicum (15 cr; prereq 175, ‡)
II-III F, VI-VIII F, MH 214, Harris
191 Nursing Service Admin (6 cr; prereq regis MNA prog or ‡)
III-IV MWF, ForH 175, Harris

Winter and Spring Quarters

110s Field Practice (10-15 cr) I-IV M
160w,s See 160f
167Aw Studies, Experience in Ward Admin (3 cr; prereq 160, Nurs 165, ‡) II TTh
167Bs See 167Bf
170w,s See 170f
173w Fundamentals of Educ in Nursing (3 cr; prereq NuAd maj, 170 or ‡) V MWF
175w Nursing Admin (5 cr; prereq 170) VI-VII MW, VI F
176w Nursing Admin (5 cr; prereq 177) III-IV TTh, VII F
177s See 177f
192w Nursing Service Admin (6 cr; prereq 191) I-II MWF
199Ds Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡) I-IV F
199Ss Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡) VI-IX F

Nursing Education (NuEd)

Fall Quarter

69 Conditions, Trends in Nursing (3 cr)
1:00-4:00 F, PoH 2317, Fritz
168 Evaluation of Achievement (3 cr; prereq sr, Ed 55N or NuAd 173 or ‡)
II MWF, MH 116, Holm
171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51B or ‡)
VII MWF, MH 116, Harrington

Winter and Spring Quarters

69s See 69f: Ar
162w Personnel Work in Nursing (3 cr) II MWF
168s See 168f
171w,s See 171f
175w Educational Admin in Nursing (3 cr; prereq sr or ‡) IV MWF
197Ew Adv Teaching (3 cr; prereq regis MEd prog or ‡) VII-IX Th
198Es Adv Teaching (6 cr; prereq 197E) II-IV, VI-VIII F

Practical Nursing (PNurs)

Fall Quarter

1 Introd to Nursing Care (5 cr)
II-III TTh, PoH Amph, Taylor, Moncure, Hansen
14 Normal Diet, Its Modifications (2 cr)
VI MW, C 115, Gormican

Winter and Spring Quarters

2w Elements of Nursing Care (8 cr) Lect II-III M, VI-VII W, lab ar

3s Elements of Nursing Care (8 cr) Lect 10:30-12:00 M, 1:00-2:30 MW, lab ar

10w Care of Mothers, Infants (3 cr) I M, VI-VII F

11s Child Care (3 cr) 8:30-10:00 M, 1:00-2:30 F

OBSTETRICS AND GYNECOLOGY (Obst)

Fall Quarter

120 Clinical Lecture: Obstetrics (3 cr per yr; prereq regis Med)
IX T, Bo B6, McKelvey, others

135 Clinical Clerkship (16 cr; prereq regis Med) McKelvey, others

201 Adv Obstetrics, Gynecology I (ar cr) McKelvey, others

202 Adv Obstetrics, Gynecology I (ar cr; prereq 201) McKelvey, others

203 Adv Obstetrics, Gynecology I (ar cr; prereq 202) McKelvey, others

204 Adv Obstetrics, Gynecology I (ar cr; prereq 203) McKelvey, others

205 Adv Obstetrics, Gynecology II (ar cr; prereq 204) McKelvey, others

206 Adv Obstetrics, Gynecology II (ar cr; prereq 205) McKelvey, others

207 Adv Obstetrics, Gynecology II (ar cr; prereq 206) McKelvey, others

208 Adv Obstetrics, Gynecology II (ar cr; prereq 207) McKelvey, others

209 Adv Obstetrics, Gynecology III (ar cr; prereq 208) McKelvey, others

210 Adv Obstetrics, Gynecology III (ar cr; prereq 209) McKelvey, others

211 Adv Obstetrics, Gynecology III (ar cr; prereq 210) McKelvey, others

212 Adv Obstetrics, Gynecology III (ar cr; prereq 211) McKelvey, others

OPHTHALMOLOGY (Opth)

Fall Quarter

100 Clinical Lecture: Ophthalmology (2 cr per yr; prereq regis Med)
IX alt Th, Bo B6, Harris, others

201 Clinical Ophthalmology (6 cr)
9:00-5:00 MTWThF, Hosp OPD, Harris, others

204 Surgery of Eye (3 cr)
7:00-9:00 MTTh, Hosp OR, Harris, others

205 Pathology of Eye (2 cr)
3:30-5:00 Th, Monahan

220 Basic, Applied Ophthalmology (2 cr)
8:30-12:00 S, Hosp OPD, Harris, others

OTOLARYNGOLOGY (Otol)

Fall Quarter

101 Clinical Lecture: Otology (2 cr per yr; prereq regis Med)
IX alt Th, Bo B6, Boies, others

230 Clinical Otology (3 cr) Boies, others

231 Clinical Rhinology, Laryngology (3 cr) Boies, others

232 Surgery of Ear, Nose, Throat (3 cr) Boies, others

237 Endoscopy (2 cr) Boies, others

238 Pathology of Ear, Nose, Throat (1 cr) Boies, others

241 Seminar (1 cr) Boies, others

248 Research (ar cr) Boies, others

PATHOLOGY (Path)

Fall Quarter

101 Gen Pathology (8 cr; prereq regis Med or Grad)
Lect VII MTWThF, Owre 15, Dawson, others
Dem I MWF, III MF, VIII MWF, JacH 104
—1, Lab I-II M, JacH 106, VIII-IX MW, JacH 107, III-IV F, JacH 108
—2, Lab III-IV M, JacH 106, I-II WF, JacH 107, VIII-IX F, JacH 108

104 Autopsies (ar cr; prereq 102) Dawson

110 Seminar (1 cr; prereq 102)
V-VI M, JacH 104, Dawson

111 Conference on Autopsies (1 cr; prereq 102)
V-VI T, JacH 104, Dawson, others

113 Surgical Pathology (ar cr; prereq 102) Hebbel

201 Research (ar cr) Dawson

Winter and Spring Quarters

60s Pathology for Physical Therapists (3 cr; prereq regis PT) VII T, VII-VIII Th

100s Pathology for Dental Students (8 cr; prereq regis Dent) Lect I MTWThF, lab II-III MF, VII-VIII TTh

102w Special Pathology (8 cr; prereq 101) Lect VII MTWThF, dem I, III MWFS, lab I-II MF, III-IV WS; III-IV MF, I-II WS

104w,s See 104f

105s Diseases of Kidney (3 cr; prereq 102) V-VI TTh

110w,s See 110f

111w,s See 111f

113w,s See 113f

122w Basic Science of Cancer (4 cr; prereq PhCh 100) VIII-IX MTWF

201w,s See 201f

PEDIATRICS (Ped)

Fall Quarter

120 Clinical Lecture: Pediatrics (2 cr per yr; prereq regis Med)
IX alt W, Hosp EustisAmph, Anderson, others
135 Clerkship (16 cr; prereq regis Med) Anderson, others
181 Externship (16 cr; prereq regis Med) Anderson, others
182 Externship: Pediatric Service (16 cr; prereq regis Med) Anderson, others
183 Clinical Program: Cardiology (16 cr; prereq regis Med) Anderson, others
184 Clinical Training: Neurology (16 cr; prereq regis Med) Anderson, others
185 Clinical Training: Endocrinology, Metabolism (16 cr; prereq regis Med) Anderson, others
186A Hematology (16 cr; prereq regis Med) Anderson, others
186B Infectious Disease (16 cr; prereq regis Med) Anderson, others
186C Immunology, Inflammatory Diseases (16 cr; prereq regis Med) Anderson, others
186D Renal Diseases (16 cr; prereq regis Med) Anderson, others
186E Metabolic, Endocrinologic Research (16 cr; prereq regis Med) Anderson, others
200 Seminar (1½ cr) Anderson, others
202 Clinic (ar cr; prereq ‡) Anderson, others
204 Residency (ar cr; prereq ‡) Anderson, others
206 Pediatric Special Interest (ar cr) Anderson, others
208 Research (ar cr; prereq ‡) Anderson, others

PHARMACOLOGY (Phcl)

Fall Quarter

55 Pharmacology of Official Medicinal Agents (3 cr; prereq Phcg 3, Bact 53) II MWF, WuH 202
101 Introduction (2 cr; prereq Phsl 106-107) I TTh, Owre 15, Wright, Bieter, Cranston, Holte (for Dent, Pharm students)
109 Problems (ar cr; prereq ‡)
110 Toxicology (2 cr) Wright
113 Industrial Toxicology (2 cr) Wright
124 Special Systems (3 cr; prereq ‡)
203 Research (ar cr; prereq 101, 102 or ‡)
204 Adv Pharmacology (1 cr; prereq 101 or ‡)
205 Gen Discussions (1 cr; prereq 101 or 102, ‡)

Winter and Spring Quarters

10s Pharmacology for Nursing Students (2 cr, †9-10; prereq 9) Lect IV TTh, lab VII-VIII Th
101w Introduction (3 cr; prereq Phsl 106-107) VI ThF, VIII T
102s Gen, Experimental Pharmacology (10 cr; prereq regis Med, 101) Lect II MTWThF, lab VII-IX MW; VII-IX TF
105w Gen, Experimental Pharmacology (6 cr; prereq 101) Lect I MWF, 1:00-2:00 T, lab II-IV MW (for dent students); VI-VIII MW (for Pharm students)
106s Gen Pharmacology (2 cr; prereq 105) 1:00-2:00 TTh
108s Prescription Writing for Dental Students (1 cr; prereq 101, 106) 1:00-2:00 F
109w,s See 109f
111s Adv Toxicology (ar cr; prereq 110 or ¶)
112w Forensic Toxicology (6 cr; prereq 110)
124w,s See 124f
203w,s See 203f
204s See 204f
205s See 205f

PHYSICAL MEDICINE AND REHABILITATION (PMed)

Fall Quarter

3 Orientation to Occupational Therapy (2 cr; prereq regis OT)
IV WF, Hosp D138, Lepley
50 Physics for Physical Therapy (2 cr; prereq regis PT)
V T, V-VII Th, Mayo 825, Kubicek
55 Process of Rehabilitation (2 cr; prereq regis OT)
VI MW, Hosp D138, Hansen
57 Ethics, Admin (1 cr; prereq regis PT)
III T, MH 213, Kottke
60A Thermo-, Photo-, Hydrotherapy (6 cr; prereq regis PT)
Lect II TTh, MH 213
Lab I-III MWF, Mayo 825, Allison
71 Theory of Occupational Therapy (3 cr; prereq regis OT)
III MWF, Hosp D138, Hansen
74 Techniques of Occupational Therapy (3 cr; prereq regis OT)
VI-VIII TTh, Hosp D138, Eliason, Esch
76 Techniques of Occupational Therapy (3 cr; prereq 75)
I-III TTh, Hosp D138, Esch, Lepley
78 Prin, Practice of Occupational Therapy (3 cr; prereq regis OT) Eliason
80B Therapeutic Exercises (5 cr; prereq 80A)
Lect II WF, Hosp D138, II-III M, Owre 12, Kottke
Lab VII-VIII TTh, Mayo 825, Mundale
82 Physiology of Muscles, Nerves, Circulation (3 cr; prereq regis PT)
I MWF, Mayo 810, Kubicek
85 Rehabilitation Procedures (3 cr; prereq 84)
Lect I T, Mayo 825
Lab II-III TTh, Mayo 825, Pohtilla

88 Clinical Practice (3 cr; prereq 87)
V-VIII MWF, Moen
91 Conference (1 cr; prereq regis PT) Moen
93 Orientation to Pre-Vocational Therapy (2 cr; prereq sr OT)
VIII MWF, Hosp D138, Hansen
95 Clinical Affiliation (18 cr; prereq 94) Eliason
97 Introd Scientific Research (2 cr; prereq sr, regis OT or PT)
I WF, Hosp D138, Skowlund
98 Probs: Physical Therapy (3 cr; prereq 97)
V-VIII MWF, Skowlund
125 Clinic: Physical Medicine, Rehabilitation (1 cr; prereq regis Med, ‡) Kottke, others
200 Service (ar cr) Kottke, others
203 Clinic: Poliomyelitis (ar cr) Kottke, others
204 Clinic: Peripheral Vascular Disease (ar cr) Kottke, others
205 Readings (1 cr) Kottke
210 Research (ar cr) Kottke, others
220 Seminar (ar cr)
IV M, Hosp EustisAmph, Kubicek

PHYSIOLOGICAL CHEMISTRY (PhCh)

Fall Quarter

30 Physiological Chemistry for Nurses (4 cr, §50)
II-III M, II WF, MH 213, Caster
100 Physiological Chemistry (7 cr; prereq org chem, phys chem, phys)
Lect IV MTWFS, Owre 15
—1, Lab I-III MW, MH 201
—2, Lab I-III ThS, MH 201
—3, Lab VII-IX WF, MH 201
104 Physiological Chemistry for Dental Students (5 cr; prereq org chem)
VI MTWThF, Owre 12, Singer
153 Problems (ar cr; prereq 101, ‡)
200 Seminar: Physiological Chemistry (1 cr)
V T, MH 213
205 Research (ar cr)
210 Metabolic Enzymology (3 cr; prereq 101 or ‡)
VIII MWF, MH 213, Boyer
212 Quantitative Histochemistry Lab (ar cr; prereq 101, ‡) Glick
236 Seminar: Radio-Isotope (1 cr, §Rad 236)
V W

Winter and Spring Quarters

50s Physiological Chemistry for Dental Hygiene, Nursing Students (4 cr, §30) VI MTWTh
-101w See 100f: Lect IV MTWFS, lab I-III WM; I-III ThS; VI-VIII WF
102w Physiological Chemistry for Veterinary Medicine Students (6 cr; prereq org chem) Lect IV MT, VI-VIII Th, lab I-III T, VI-VIII M
103s Physiological Chemistry for Veterinary Medicine (6 cr; prereq 102) Lect IV TTh, VI-VIII F, lab I-III TTh
105w Physiological Chemistry for Dental Students (6 cr; prereq 104) Lect VI TWF, VII W, II Th, lab IV-IX Th
153w,s See 153f
200w,s See 200f
205w,s See 205f
207w Radiotracers, Mineral Metabolism (3 cr; prereq 101) VIII MWF
211s Nucleic Acid, Protein Metabolism (3 cr; prereq 101) IX MWF
212w,s See 212f
214w Kinetics, Mechanisms of Enzymic Reactions (3 cr, §PCh 214; prereq PCh 103, ‡)
236w,s See 236f

PHYSIOLOGY (Phsl)

Fall Quarter

4 Human Physiology (4 cr; prereq 1 qtr chem, 1 qtr zool)
III MWF, IV F, Owre 111
107 Human Physiology for Medical Students (8 cr, †106-107; prereq 106)
Lect VI MT, IX WF, I S, Owre 15
—1, Lab II-IV W, VI-VIII W, MH 307
—2, Lab II-IV, VI-VIII F, MH 307
112 Hemodynamic Measurements (3 cr; prereq ‡)
113 Probs: Physiology (ar cr; prereq 106-107)
202 Readings (ar cr)
203 Research (ar cr)
211 Topics: Heart, Circulation (ar cr; prereq 106-107, ‡)
212 Topics: Respiration (ar cr; prereq 106-107, ‡)

Winter and Spring Quarters

4s See 4f: VII-VIII TTh
51w Human Physiology for Nursing, Physical Therapy Students (6 cr; prereq 1 yr chem, zool) Lect I MWThF, conf II F, lab II-IV T or W
60w Human Physiology for Med Tech, Pharm Students (6 cr; prereq Physiol chem, human or mammalian anat) Lect I MWThF, conf II F, lab II-IV Th
101w Human Physiology for Dental Students (10 cr; prereq physiol chem, human or mammalian anat) Lect IV MTWThFS, conf VI Th, lab I-III M, VI-VIII F; I-III F, VI-VIII M
112s See 112f
113w,s See 113f
202w,s See 202f
203w,s See 203f

210w,s Topics: Permeability (ar cr; prereq 106-107, ‡)
211w,s See 211f
212w See 212f
215s See 215f
216s Topics: Neurophysiology (ar cr; prereq 107, ‡) Terzuolo

PSYCHIATRY AND NEUROLOGY (NPsy)

Fall Quarter

102 Psychiatry (1 cr; prereq regis Med or grad clin psy)
103 Clerkship (16 cr; prereq regis Med)
120 Basic Behavioral Science (1 cr, †3 qtrs; prereq regis Med)
121 Behavior Pathology, Psychiatric Methods (2 cr, †2 qtrs for Med; prereq regis Med or grad clin psy)
145 Readings: Psychiatry (ar cr; prereq regis Med)
145X Readings: Neurology (ar cr; prereq regis Med)
146 Psychiatric Probs: Gen Medical Practice (ar cr; prereq regis Med)
171A Descriptive Psychiatry (2 cr)
III-IV F, Mayo 825, Rowe
171B Descriptive Neurology (2 cr)
9:00-11:00 S, Mayo 825, Iannone
181 Externship: Neurology (ar cr; prereq regis Med, ‡)
182 Probs: Basic, Clinical Neurology (ar cr; prereq regis Med, ‡)
191 Externship: Adult Psychiatry (ar cr; prereq regis Med, ‡)
192 Externship: Child Psychiatry (ar cr; prereq regis Med, ‡)
193 Probs: Psychiatry (ar cr; prereq regis Med, ‡)
201 Clinical Seminar for Psychologists (1 cr; prereq ‡) Schofield
202 Case Conference (1 cr; prereq ‡)
203 Psychometric Clerkship (ar cr; prereq ‡)
204 Seminar: Interm (1 cr; prereq ‡) Hathaway
205 Seminar: Adv (1 cr; prereq ‡) Hathaway
208 Clinical Neurology (ar cr) Baker
209 Research (ar cr)
210 Adv Neuropathology (2 cr, §150 or Path 115) Baker
212 Survey of Neuropathology (1 cr, §151 or Path 119) Cohen
220 Adv Clinical Neurology (1 cr)
222 Seizure Mechanisms (1 cr) Morrell
238 Neurological Clinical Pathological Conference (1 cr)
251 Clinical In-Patient Psychiatry (ar cr; prereq MD degree)
252 Clinical Out-Patient Psychiatry (ar cr; prereq MD degree) Anderson
253 Clinical Child Psychiatry (ar cr; prereq MD degree) Jensen, Lawton
254 Adv Clinical In-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
255 Adv Clinical Out-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
256 Adv Clinical Child Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
257 Special Assignments (1 cr; prereq 251, 252, 253, MD degree)
258 Research (ar cr; prereq MD degree or ‡)
262 Clinical Observation, Evaluation (1 cr; prereq MD degree or ‡) Jenson
265 Personality Development, Psychodynamics (1 cr; prereq MD degree or ‡) Anderson
269 Psychotherapy (3 cr; prereq MD degree or ‡) Meehl
271 Readings: Psychoanalysis I (1 cr; prereq MD degree or ‡) Hambidge
272 Reconstructive Psychotherapy (1 cr; prereq MD degree or ‡) Golden
276 Current Research (1 cr; prereq MD degree or ‡)
277 Psychophysiology for Psychiatrists (1 cr, §old 263; prereq MD degree or ‡) Heistad
278 Family, Community (1 cr, §old 267; prereq MD degree or ‡) Gross
281 Readings: Psychoanalysis II (1 cr; prereq MD degree or ‡) Hambidge
283 Seminar: Special Topics (1 cr; prereq MD degree or ‡) Schiele
284 Readings: Child Psychiatry (1 cr) Jensen
285 Seminar: Current Literature in Child Psychiatry (1 cr) Jensen
286 Diagnostic, Therapeutic Methods in Child Psychiatry (1 cr) Jensen
291 Seminar: Current Literature (1 cr; prereq MD degree or ‡) Simon
292 Special Supervision in Psychotherapy (1 cr; prereq MD degree or ‡)
293 Probs in Teaching Psychiatry (ar cr; prereq MD degree or ‡)
294 Seminar: Adv Critical Examination of Systems, Theories (1 cr; prereq MD degree or ‡) Hathaway
295 Group Therapy (1 cr, §old 274; prereq MD degree or ‡)

PUBLIC HEALTH (PubH)

Fall Quarter

2 **Personal, Public Health** (2 cr, §3 or 50)
VI TTh, Bo B6, Reiter
3 Personal Health (2 cr, §2 or 50)
VI MW, NH 45, Thomson
50 Personal, Community Health (3 cr, §2 or 3 or 3A or 3B or 4 or 51 or 52)
III MWF, C 100, Thomson
52 **Home Nursing, Family Care** (1 cr; prereq HE students, 50 or ‡)
—1, VIII-IX T, MeH 01, Simons
—2, VIII-IX Th, MeH 01, Simons

58 Maternal, Child Health (3 cr; prereq nurses, 53, 133 or ¶)
I-II T, I Th, Mayo 1205, Stocking

62 Public Health Nursing I (3 cr; prereq nurses, 58, 95, 133, Soc 50, ¶65 or Nurs 87)
—1, II-III, VI-VII Th, Mayo 1205, Von Bergen
—2, II-III, VI-VII F, Mayo 1260
—3, II-III, VI-VII Th, Mayo 1238
—4, II-III, VI-VII F, Mayo 1238
—5, II-III, VI-VII F, Mayo 1203

63 Public Health Nursing II (2 cr; prereq nurses, 62, 65 or ♯)
I WF, Murphy, E Anderson

64 Long-term Patient Care (6 cr; prereq 58, 95, 133, Soc 50) E Anderson

65 Field Practice: Public Health Nursing (ar cr; prereq 58, 95, 133, Soc 50, ¶62, C avg) Murphy

69 The Nurse in School (3 cr; prereq nurses, 62, 95, 133 or ♯)
VI-VIII W, Mayo 1205, Stocking

75 Environmental Sanitation (3 cr; prereq 3 cr)
IV MWF, Mayo 1210, Bond

91 Physiological Hygiene (4 cr, †91-92; prereq 8 cr chem, 4 cr anat)
IV MWF, Owre 113, VI-VII Th, MH 307, Taylor

95 Human Nutrition (3 cr; prereq chem, biol or ♯)
II MWF, Owre 111, J Anderson

100A Elements of Public Health I (3 cr; prereq 3, 3A or 50, bact)
Lect IV MWF, MMA 100, Anderson, Thomson, Schuman
—1, Rec IV TTh, Owre 113
—2, Rec IV TTh, MMA 125
—3, Rec IV TTh, Owre 111

101 Admin, Field Work (2 cr; prereq sr Med) Thomson

102 Environmental Sanitation (3 cr; prereq 100A or ¶, ♯)
III MWF, Mayo 1220, Bosch, Olson

103 Bacteriology (ar cr; prereq grad, Bact 102, 116, ♯)
I-II MWF, SBH Lab, Bauer

107 Maternal, Child Health (3 cr; prereq MD or DDS degree or nurses or ♯, ¶100A)
I-II MF, Mayo 1205

110 Biostatistics I (3 cr; prereq ¶111, Math 10 or ♯)
III MWF, Arch 35, Brown

111 **Biostatistics Lab** (2 cr; prereq ¶110)
Lect III TTh, Owre 15, Knatterud, Meinert
—1, Rec II MWF, Arch 15
—2, Rec IV MWF, Arch 15
—3, Rec VI MWF, Arch 15
—4, Rec VI-VIII T, Arch 15
—5, Rec VI-VIII Th, Arch 15

114 Environmental Sanitation Programs (3 cr, §112 or 113 or 116; prereq 100A, ♯)
VI-IX T, VI-VII Th, Mayo 1220, Bosch

117 Sanitary Biology (3 cr; prereq 100A or ¶ or ♯)
Lect I-II MW, Mayo 1138, Olson
—1, Lab VI-IX M
—2, Lab VI-IX W

123 Topics (ar cr; prereq ♯)

125 Education (2 cr; prereq ♯)
III TTh, Mayo 1210, Grout

133 Mental Health (3 cr; prereq ♯)
I MWF, Z 211, Cline

139 Adv Field Practice in Public Health Nursing: Block Placement (ar cr; prereq ♯) Von Bergen

140 Vital Statistics I (3 cr)
I-II TTh, Mayo 1220, VI F, Owre 113, Bearman

160 Admin in Hospitals (6 cr)
I-II, VI-VII TTh, II-III S, Mayo 1250, Hamilton, Stephan, Lentz

161 History, Development of Hospitals (3 cr)
II MWF, Mayo 1250, Hamilton, Stephan

162 Organization, Mgt of Hospitals (3 cr)
III MWF, Mayo 1250, Stephan, Hamilton

168 Orientation to Medical Sciences (3 cr; prereq ♯)
I MWF, Mayo 1250, Thomson

169 Administrative Residency (ar cr) Hamilton

171 Studies: Public Health Nursing (3 cr; prereq PubH nurs)
I-III W, Mayo 1205, Murphy

175 Adv Practice in Public Health Nursing (3 cr; prereq ♯)
Lect VI-VII Th, Mayo 1210, Williams
—1, VI-VII M, Mayo 1238, Von Bergen
—2, VI-VII M, Mayo 1203, Cline
—3, VI-VII T, Mayo 1238, Von Bergen
—4, VI-VII T, Mayo 1203, Cline

181 Principles, Methods Public Health Education (3 cr; prereq ♯)
VI-VII MW, Mayo 1210, Grout

190 Field Work: Health Education (ar cr; prereq 183, 227) Grout

191 Science of Human Nutrition (3 cr; prereq ♯)
VII-VIII MW, J Anderson

200 Research (ar cr)

201 Topics: Biometry (ar cr; prereq 130, ♯) Bearman, others

202 Seminar: Physiological Hygiene (1 cr)

203 Research Design (3 cr; prereq 130 or ♯)
II MWF, Mayo 1220, McHugh

204 Theory of Research Design in Biometry (2 cr; prereq calc, ¶203)
II TTh, Mayo 1205, McHugh

210 Seminar: Public Health (ar cr)
VIII-IX Th, MMA 125

211 Seminar: Biometry (ar cr) Bearman, McHugh, Johnson

212 Seminar: Public Health Engineering, Sanitation (ar cr; prereq ♯)
VI-VII Th, Bosch

213 Seminar: Epidemiology (ar cr)
VI-IX F, Schuman

216 Biomedical Measurement Problems, Assays (3 cr; prereq 120)
I MWF, Mayo 1235, Johnson
217 Theory of Biomedical Measurement Problems, Assays (2 cr; prereq ¶216)
I TTh, Mayo 1235, Johnson
220 Readings: Probs of Physiological Hygiene (ar cr; prereq ‡) Keys, others
227 Probs: Community Health Education Program (ar cr; prereq ‡) Grout
250 Foundations of Biometry (2 cr; prereq 208, 219 or ‡)
290 Research: Physiological Hygiene, Related Areas (ar cr)

Winter and Spring Quarters

2w,s See 2f: VI MW(w); VI TTh(s)
3w,s See 3f: VI TTh(w); VI MW(s)
4s Health Probs of Community (2 cr; prereq 3 or 3A) II TTh
5w Individual, Public Health (3 cr, §2 or 3 or 3A or 3B or 4 or 50 or 51) I MWF
50s See 50f: II MWF
51w Community Hygiene (3 cr, §4 or 5 or 50 or 100; prereq 3 or 3A) IV MWF
52w,s See 52f
53w,s Introduction (5 cr; prereq regis nurs or nurses, 3 or 50, bact) IV MTWThF(w); II MTWThF(s)
57s Health of Infant, Child (2 cr; prereq 4 or 50 or 51 or 52) VII TTh
58w,s See 58f
62w,s See 62f
63w,s See 63f
64w,s See 64f
65w,s See 65f
69w,s See 69f
75s See 75f
76s Public Health for Dental Students (1 cr; prereq regis Dent) I W
77w Dental Public Health (2 cr; prereq sr, 76) 8:00-9:00 MTh
90s Medical Statistics I (2 cr; prereq regis Med or ‡)
92w Physiological Hygiene (4 cr, †91-92; prereq 91) Lect IV MWF, lab VII T
100s Preventive Medicine, Public Health (6 cr; prereq Med students) I MTWThFS
100Bw Elements of Public Health II (1 cr; prereq 100A) IV-V T
100Cs Elements of Public Health III (1 cr; prereq 100B) IV-V M
101w,s See 101f
102As Environmental Sanitation (2 cr; prereq 100A or ‡) I MW
103w,s See 103f
104w Epidemiology I (3 cr; prereq 100A, 111 or 140) II-III TTh, III S
105s Epidemiology II (3 cr; prereq 104) II-III T, II Th
106w Administration (3 cr; prereq 100A) I MWF
107As Maternal, Child Health Program (1 cr, §107; prereq 106 or ‡)
108w Biostatistics, Statistical Decision (2 cr) VI-VII TTh
109s Institutional Sanitation (3 cr; prereq hosp admin maj or ‡, 100A) I-II T, II Th
112Aw Public Health Engineering—Plan Examinations: Water Supplies (1 cr, §114; prereq engr degree, 102, ‡) IV F
112Cs Public Health Engineering—Plant Examinations: Swimming Pools, Plumbing (1 cr, §114; prereq engr degree, 102, ‡)
113Aw Public Health Engineering—Field Investigations: Water Supplies (2 cr, §114; prereq engr degree, 102, ‡) IV MW
113Cs Public Health Engineering—Field Investigations: Swimming Pools, Plumbing (2 cr, §114; prereq engr degree, 102, ‡)
115w Food Sanitation (3 cr; prereq 100A, ‡) VI-VIII F
116s Public Health Engineering Admin (2 cr, §114; prereq ‡) III TTh
-118w-119s See 117f: VI-IX MW(w); VI-IX TF(s)
120w Biostatistics II (3 cr; prereq 110 with grade C, ¶121) III MWF
121w Biostatistics Lab II (2 cr; prereq ¶120) Lect III TTh, rec II MWF; IV MWF; VI MWF; VI-VIII T
122s Admin Probs (3 cr; prereq 106) II MWF
123w,s See 123f
125s See 125f: VI-VII T; VI-VII F
125As Public Health Education (1 cr; prereq hosp admin maj)
130s Biostatistics III (3 cr; prereq 120 with grade C, ¶131) II MWF
131s Biostatistics Lab III (2 cr; prereq ¶130) Lect III TTh, rec II MWF; IV MWF; VI MWF; VI-VIII T
132s Mental Health Program (1 cr; prereq 106 or ‡)
133w,s See 133f: I MWF(w,s); VI-VIII F(w)
135w Conservation of Hearing (1 cr; prereq 62 or 62A) II F
137w Dental Health (1 cr; prereq 62 or 62A) II M
139s See 139f
141s Social, Economic Aspects of Medical Care (ar cr; prereq ‡)
142s Medical Economics (2 cr; prereq regis Med)
150s Vital Statistics II (3 cr; prereq ‡) I MWF
152w Industrial Hygiene Engineering (3 cr; prereq ‡) II MW, II-III F
153s Hospital, Community (1 cr; prereq ‡)
154s Control of Radiation Hazards (ar cr; prereq ‡) Lect IV TTh, lab VI-VII W; VIII-IX W
155w Air Pollution Probs (3 cr; prereq ‡) III MW; I-II S
156s Air Pollution Surveys (2 cr; prereq 155, ‡) VI-IX M
163w Organization, Mgt of Hospitals (6 cr; prereq 162) II-III MTWF, VI-VII F, I-II S

164s Organization, Mgt of Hospitals (6 cr; prereq 163) VI-VII MTWThF
166w Hospital Clerkship (5 cr) VI-IX MW, I-IV Th
167s Mgt Probs in Hospital Admin (6 cr; prereq ¶164) II-III MWFS, III-IV TTh
169w,s See 169f
170w Seminar: Public Health Nursing (2 cr, §170A; prereq health officers or ‡) VI TTh
170Aw,s Public Health Nursing (1 cr, §170; prereq ‡) I W or ar(s); IV Th(w)
172w,s Studies: Public Health Nursing (3 cr; prereq 171)
174Aw-174Bs Seminar: Admin, Supervision, Consultation (2 cr; prereq PubH nurs, 171, 175 or ‡) VI-VII W
-176w-177s See 175f
178w,s Seminar: Mental Health (ar cr; prereq ‡)
-182w-183s See 181f
190w,s See 190f
192w Physiology of Exercise (ar cr; prereq Phsl 107, ‡)
195w Aspects of Cardiovascular Disease (3 cr; prereq ‡) VII-VIII MW
200w,s See 200f
201w,s See 201f
202w,s See 202f
-205w-207s‡ See 203f
-206w-207s‡ See 204f
210w,s See 210f
211w,s See 211f
212w,s See 212f
213w,s See 213f
214w School Health Programs (2 cr; prereq 107 or ‡)
215s Maternal, Child Health (ar cr; prereq MD degree, ‡)
-218w‡ See 216f
-219w‡ See 217f
220w,s See 220f
227w,s See 227f
230w,s Field Practice: Environmental Sanitation (ar cr; prereq ‡)
241s Epidemiology of Noncommunicable Diseases (3 cr; prereq 104) III Th, II-III S
-251w-252s See 250f
290w,s See 290f

RADIOLOGY (Rad)

Fall Quarter

102 X-Ray Conference (1 cr; prereq ‡)
5:00-6:00 T, Hosp EustisAmph, Peterson, others
104 Radiological Physics I (2 cr; prereq 1st yr res)
4:00-5:00 T, Hosp C-239, Loken
111 Medical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 M, Hosp ToddAmph, Peterson, others
124 Pediatric-Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 T, Hosp EustisAmph, Lester, Feinberg
135 Surgical Roentgenologic Conference for Graduate Students (1 cr)
9:00-9:50 S, Hosp ToddAmph, Carey
163 Neurosurgical-Roentgenologic Conference for Graduate Students (1 cr)
1:00-2:30 F, Hosp ToddAmph, Peterson, others
180 Externship (ar cr; prereq regis Med) Peterson, others
181 Externship: Diagnostic Radiology (ar cr; prereq regis Med) Peterson, Lester
182 Externship: Radiation Therapy (ar cr; prereq regis Med) Mosser, others
183 Probs: Radiation Biology, Radioactive Isotope Methods (ar cr; prereq regis Med) Mosser, others
184 Probs: Diagnostic Radiology (ar cr; prereq regis Med) Lester, others
200 Research: Roentgenology (ar cr) Peterson, others
201 Neuroradiology (2 cr) Peterson
202 Cardiovascular Roentgenologic Conference (1 cr)
2:30-4:30 M, Hosp ToddAmph, Lester
204 Tumor Clinic Conference (ar cr)
11:00-12:00 MF, Hosp ToddAmph, Mosser, others
205 Research: Radiation Therapy, Nuclear Medicine, Radiobiology (ar cr; prereq ‡) Mosser, others
206 Roentgenoscopy (3 cr) Peterson, others
207 Roentgen, Radium Therapy (ar cr) Mosser, others
209 Roentgen Diagnosis (3 cr) Peterson, others
210 Roentgen Technique (2 cr) Peterson, others
217 Roentgenologic Conference on Chest Diseases (1 cr)
4:00-5:00 F, Hosp ToddAmph, Berger
218 Seminar: Radiobiology (1 cr; prereq ‡) Mosser, others
220 Urologic-Roentgenologic Conference (1 cr)
5:00-6:00 M, Hosp EustisAmph, Creevy, Baggenstoss, Peterson
236 Seminar: Radioactive Isotope (1 cr, §PhCh 236)
12:30-1:20 W, Hosp C-239, Mosser, others
237 Radiological Physics II (2 cr; prereq 104)
4:00-5:00 F, Hosp C-239, Loken
238 Roentgen-Surgical Pathology Conference (1 cr)
4:00-6:00 Th, Hosp ToddAmph, Peterson, Lober, others
240 Radiation Therapy Conference (1 cr)
4:00-5:00 M, Hosp C-239, Mosser, others

SURGERY (Surg)

Fall Quarter

134 Clinical Lecture: Frontiers (1 cr per yr; prereq regis Med)
IX F, Bo B6
135 Clerkship (16 cr; prereq regis Med) Wangensteen, others
140 Clinical Lecture: Orthopedic (1½ cr per yr; prereq regis Med)
IX F, Bo B6
173 Clinical Lecture: Urology (1½ cr per yr; prereq regis Med)
IX F, Bo B6
200 Out-Patient Clinic in Surgery (1 cr) Wangensteen, others
202 Applied Surgical Anatomy on Cadaver (1 cr) Wangensteen, others
203 Proctoscopy, Sigmoidoscopy (1 cr) Wangensteen, others
204 Tumor Clinic (1 cr) Wangensteen, others
205 Surgical Diagnosis (1 cr) Wangensteen, others
208 Surgical Service (1 cr) Wangensteen, others
211 Operative Surgery (1 cr) Wangensteen, others
214 Surgical Ward Conference (1 cr) Wangensteen, others
215 Roentgenological-Surgical Conference (1 cr)
II-IV S, Hosp ToddAmph, Wangensteen, others
216 Research: Surgery (1 cr) Wangensteen, others
217 Seminar: Surgery (1 cr) Wangensteen, others
218 Medical, Surgical Pathological Conference (1 cr)
IV W, Hosp ToddAmph, Wangensteen, others
219 Surgical Literature Conference (1 cr)
I T, Mayo SurgLib, Wangensteen, others
220 Peripheral Vascular Surgery (1 cr)
II-IV T, Mayo SurgClinic, Wangensteen, others
221 Seminar: Surgery-Physiology (1 cr)
VIII-IX T, MMA 125, Wangensteen, others
250 Urological Surgery (4 cr) Creevy, others
251 Cystoscopy, Urological Diagnosis (4 cr) Creevy, others
252 Urological Conference (4 cr) Creevy, others
253 Research: Urology (4 cr) Creevy, others
254 Urological Seminar (3 cr) Creevy, others
255 Urological Radiological Conference (3 cr) Creevy, others
256 Urological Pathological Conference (3 cr) Creevy, others
305 Neurosurgical Diagnosis (3 cr) French, others
308 Neurosurgical Service (4 cr) French, others
311 Operative Neurosurgery (4 cr) French, others
316 Neurosurgical Research (3 cr) French, others
318 Neurosurgical Conference (1 cr)
VI-VIII F, Hosp ToddAmph, French, others
405 Orthopedic Diagnosis (ar cr) Moe, others
408 Orthopedic Service (ar cr) Moe, others
411 Orthopedic Operative Surgery (ar cr) Moe, others
416 Orthopedic Research (ar cr) Moe, others

UNATTACHED COURSES

Biophysics (BPhy)

Fall Quarter

138 Seminar: Gen Physiology, Biophysics (ar cr)
170 Radiation (3 cr; prereq #)
204 Research: Biophysics, Physiology of Radiation (ar cr)
221 Research: Biophysics (ar cr)
222 Research: Biophysics (ar cr)
223 Research: Biophysics (ar cr)

Cancer Biology (CBio)

Fall Quarter

140 Seminar (1 cr)
12:30-1:30 Th, LyonL 271, Halberg
141 Problems (ar cr) Bittner
207 Research (ar cr) Bittner

COLLEGE OF PHARMACY

Pharmaceutical Chemistry (PhmC)

Fall Quarter

53 Pharmaceutical Biochemistry (5 cr; prereq OrCh 62)
Lect III MWF, WuH 202, DiGangi
Lab VI-VIII TTh, WuH 1
161 Organic Medicinal Agents (3 cr; prereq OrCh 62)
IV MWF, WuH 201, Gisvold
164 Analytical Methods (3 cr; prereq 55)
Lect IV W, Soine
Lab II-IV TTh, WuH 301
166 Special Probs (ar cr)
201 Seminar (1 cr) Gisvold

209 Alkaloids (3-5 cr; prereq OrCh 63 or ‡)
Soine

214 Research (ar cr)

Pharmaceutical Technology (PhmT)

Fall Quarter

1A Orientation (1 cr)
IV T, WuH 202, Netz, Hager

3 Pharmaceutical Calculations (3 cr)
I MWF, WuH 202, Rippie

54 Fundamental Principles, Processes (4 cr; prereq 3, Phys 3A, PhmC 2, OrCh 62)
Lect IV TTh, WuH 201, Rippie
Lab VI-VIII MW, WuH 302

58 Prescription Compounding (5 cr; prereq sr, 56, PhmC 55, PhmC 163, Phcl 57)
Lect II MWF, WuH 201, Hadley
Rec VI TTh, WuH 201
Lab VI-VIII TTh, WuH 205, Hadley, Miller

64 Pharmaceutical Jurisprudence (3 cr; prereq sr)
I MWF, WuH 201, Bachelder

68 Hospital Pharmacy (3 cr; prereq sr, 56, PhmC 163)
Lect IV W, Mayo A355, Perreault
Lab II-IV TTh, Mayo D189

70 First Aid (2 cr; prereq sr)
1:30-3:00 MW, WuH 202, White

166 Pharmaceutical Manufacturing (3 cr; prereq 56 or ‡)
Lect IV W, Psy 109, Miller
Lab II-IV TTh, WuH 2A, Miller

173 Special Probs (ar cr; prereq 56, PhmC 163)

201 Seminar (1 cr)

215 Pharmaceutical Development (5 cr; prereq 167 or ‡) Miller

221 Homogeneous Systems in Pharmacy (3-5 cr; prereq PhmC 163, PCh 103 or ‡) Hadley

Pharmacognosy (Phcg)

Fall Quarter

1 Drug Collection, Medicinal Plant Study (3 cr; prereq soph, Bot 2)
Lect VI MW, WuH 104, Fischer
Lab VI-VIII Th, WuH 104

60 Pharmacognosy, Pharmaco-Histology (3 cr; prereq sr, 3)
Lect IV W, Fischer
Lab II-IV TTh

173 Special Probs (ar cr)

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AmSt)

Fall Quarter

90 Proseminar (3 cr; prereq sr, △)
VIII-IX Th, FolH 103, Weber

200 Introduction (3 cr; prereq MA degree cand)
VIII-IX T, FolH 103, Bowron

210 Seminar: Bibliography (3 cr; prereq PhD cand)
VIII-IX M, FolH 103, Weber

211 Seminar (3 cr; prereq PhD cand)
VIII-IX W, FolH 103, Foster

Winter and Spring Quarters

-91w-92s See 90f

-201w-202s See 200f

-212w-213s See 211f

241w-242s Materials for Study of American Civilization (2 cr; prereq 240) VIII-IX F

ANTHROPOLOGY (Anth)

Fall Quarter

1A Introduction: Prehistoric Man, Culture (5 cr)
Lect II MWThF, MNH Aud, Murrill
—1, I T, ForH 120
—2, II T, ForH 120
—3, II T, ForH 180
—4, II T, ForH 185
—5, II T, ForH 85
—6, III T, ForH 120
—7, III T, ForH 180
—8, IV T, ForH 180

2A Introduction: Cultural Anthropology (5 cr)
Lect IV MTWF, MNH Aud, Gibbs
—1, I Th, ForH 120
—2, II Th, ForH 120
—3, III Th, ForH 120
—4, III Th, ForH 180

—5, IV Th, ForH 180
—6, IV Th, ForH 185
—7, IV Th, ForH 150
—8, IV Th, ForH 15

80 The American Indian (3 cr; prereq 2A or 100 rec)
VI MWF, ForH 85, Johnson

100 Principles (3 cr, §1A, 2A)
1:30-3:00 TTh, ForH 185, Johnson

117 Indians of South America (3 cr; prereq 2A or 100)
9:30-11:00 TTh, ForH 15, Johnson

120 Peoples, Cultures of Africa (3 cr; prereq 1A, 2A or 100)
II MWF, ForH 160, Gibbs

125 Peoples, Cultures of India (3 cr; prereq 2A or 100 or △)
IV MWF, ForH 170, Spencer

150 Contact of Cultures (3 cr; prereq 1A, 2A or 100)
IV MWF, ForH 130, Merrill

165 **Culture, Personality** (3 cr; prereq sr, 2A or 100 or △...or none for PubH nurs, psy, soc, SW maj)
II MWF, ForH 155, Spencer

170 Primate, Human Evolution (3 cr; prereq 1A or 100, △)
III MWF, ForH 150, Murrill

190 Research (ar cr; prereq sr, △)

202 Proseminar: Research Methods (3 cr)
VI-VII W, ForH 244, Gibbs, Merrill

Winter and Spring Quarters

1Aw,s See 1Af: Lect IV MWThF(w); II MW ThF(s), rec I T; II T; III T; IV T

2Aw,s See 2Af: Lect II MTWF(w); IV MT WF(s), rec I Th; II Th; III Th; IV Th

90s Archaeology of North America (3 cr; prereq 1A) IV MWF

118w Pre-Columbian Civilizations of Middle America (3 cr; prereq 1A or 100 or △) 9:30-11:00 TTh

119s Contemporary Middle American Communities (3 cr; prereq 2A or 100...or none for Lat Am Area St maj) 9:30-11:00 TTh

121w Peoples, Cultures of the South Seas (3 cr; prereq 1A, 2A or 100) VI MWF

126s Peoples, Cultures of SE Asia, Indonesia (3 cr; prereq 2A or 100 or △) II MWF

132w Archaeology of Mississippi Drainage (3 cr; prereq 90 or △) 1:30-3:00 TTh

151w Applied Anthropology (3 cr; prereq 150 or △) III MWF

154s Ethnological Field Techniques (3 cr; prereq ‡) 1:30-3:00 MF

160w Law-ways of Primitive Man (3 cr; prereq 2A or 100...or none for law or other soc sci maj) IV MWF

164w Social Anthropology (3 cr; prereq 2A or 100) II MWF

165w,s See 165f: II MWF(w); III MWF(s)

169s Comprehensive Survey (3 cr; prereq sr, △) 8:30-10:00 MF

171w-172s Physical Anthropology (4 cr) Lect III TTh, lab 1:30-3:00 TTh

181w Descriptive Linguistics (3 cr; prereq 2A or 100 or △) IV MWF

182s Language, Culture (3 cr; prereq 181) IV MWF

-191w-192s See 190f

196s Proseminar: East, South Asia (3 cr, §Geog 196, Pol 196; prereq sr) 3:30-5:00 F

205w-206s Seminar: Anthropology (3 cr) VIII-IX W

ART (Art)

Fall Quarter

1 Principles (5 cr, §50)
Lect III MWF, NH 45, Torbert
Lab 2 hrs ar

2 Ancient, Medieval Art (3 cr; prereq 1)
III MWF, Arch 55, Simon

10 **Photography** (3 cr)
—1. I-II MWF, J 2, Liebling
—2, III-IV MWF, J 2, Liebling

20 **Drawing** (2 cr)
I-II TTh, J 200a, Quirt

23 **Drawing, Design I** (3 cr; prereq 1 or ¶)
—1, I-II MWF, J 104, Downs
—2, III-IV MWF, J 104, Downs
—3, V-VI MWF, J 104
—4, VII-VIII MWF, J 104
—5, III-IV TThS, J 200a, Quirt
—6, VII-IX TTh, J 104, Mitra

23A **Drawing, Painting for Architects I** (2 cr)
—1, II-IV TTh, J 11, Crowell
—2, II-IV TTh, J 10, Kutzik
—3, II-IV TTh, J 4, Perez
—4, VI-VIII TTh, J 10, Priede

32 **Printmaking** (3 cr)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers

33 **Printmaking** (3 cr; prereq 32)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers

40 **Sculpture I** (3 cr; prereq 1 or ¶)
—1, I-II MWF, HolB 154, Morton
—2, III-IV MWF, HolB 154, Morton
—3, I-II TThS, HolB 154, Rood
—4, III-IV TThS, HolB 154, Rood

45 **Ceramic Processes** (3 cr)
—1, I-II MWF, HolB 134, MacKenzie
—2, III-IV MWF, HolB 134, MacKenzie
—3, VI-VII MWF, HolB 134, MacKenzie

50 Visual Arts (3 cr, §1)
III MWF, NH 45, Torbert

51 **Pictorial Design** (2 cr; prereq 25)
III-IV MW, J 4, Corbett

52 **Drawing II** (3 cr; prereq 25, △)
I-II MWF, J 10

53 **Drawing II** (3 cr; prereq 52)
I-II MWF, J 10

54 **Life Drawing** (3 cr; prereq 52, △)
III-IV MWF, J 10, Munoz

55 **Life Drawing** (3 cr; prereq 54)
III-IV MWF, J 10, Munoz

56 Renaissance, Baroque Art: 1300-1500 (3 cr; prereq 1 or 50 or △)
II MWF, J 207b, Waldfogel

60A **Drawing, Painting for Architects II** (2 cr; prereq 25A)
—1, VI-VIII T, II-IV S, J 4, Michener
—2, VI-VIII T, II-IV S, J 11, Munoz
—3, 6:00-9:00 pm TTh, J 4, Munoz

66 **Modern Art: Classicism, Romanticism** (3 cr; prereq 1 or 50 or △)
IV MWF, Arch 55, Waldfogel

70 **Oil Painting** (3 cr; prereq 54)
—1, VI-VIII MW, J 200a, Corbett
—2, VI-VIII TTh, J 200a, Quirt

71 **Oil Painting** (3 cr; prereq 70)
—1, VI-VIII MW, J 200a, Corbett
—2, VI-VIII TTh, J 200a, Quirt

72 **Oil Painting** (3 cr; prereq 71)
—1, VI-VIII MW, J 200a, Corbett
—2, VI-VIII TTh, J 200a, Quirt

80 **Sculpture II** (3 cr; prereq 42)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

80A **Direct Metal Sculpture, Constructions** (3 cr; prereq 42 or △)
VI-VII MWF, HolB 154, Morton

81 **Sculpture II** (3 cr; prereq 80)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

81A **Metal Sculpture in Relief, Repousse** (3 cr; prereq 80A)
VI-VII MWF, HolB 154, Morton

82 **Sculpture II** (3 cr; prereq 81)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

82A **Bronze Casting, Wax Modeling** (3 cr; prereq 81A)
VI-VII MWF, HolB 154, Morton

83 **Photography II** (3 cr; prereq 12 or Jour 12 or △)
VI-VII MWF, J 2, Liebling

86 Art of the Film (3 cr; prereq 9 cr or 9 cr spch incl 31)
VII-VIII MW, VII F, J 207a, Amberg

90 **Printmaking** (3 cr; prereq 32 or △)
VI-VIII TTh, J 203, Myers

91 **Printmaking** (3 cr; prereq 90)
VI-VIII TTh, J 203, Myers

92 **Printmaking** (3 cr; prereq 91)
VI-VIII TTh, J 203, Myers

100 Ancient Egypt, Mesopotamia, Greece (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
II MWF, J 207a, Tselos

111 Art of China (3 cr; prereq 9 cr art hist... or 9 cr hist or lit with △...Hist 62, 63 rec)
I MWF, J 207a, Mather

116 Renaissance, Baroque Painting (3 cr; prereq sr, maj, 9 cr art hist...or 9 cr hist or lit with △)
VI MWF, J 207a, Thomas

123 **Film Workshop** (3 cr; prereq art or hum or mus or theat maj, △)
VI-VII MWF, J 4, Downs

126 18th Century Art (3 cr; prereq sr, maj, 9 cr art hist...or 9 cr hist or lit with △)
IV MWF, J 207b, Thomas

136 **Art in the United States** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
V MWF, J 207b, Torbert

140 Scandinavian Architecture (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
I MWF, J 207b, Nelson

150 **Probs: Painting** (ar cr; prereq 72, △)
—1, VI-VIII MW, J 200a, Corbett
—2, VI-VIII TTh, J 200a, Quirt

151 **Probs: Painting** (ar cr; prereq 150)
—1, VI-VIII MW, J 200a, Corbett
—2, VI-VIII TTh, J 200a, Quirt

152 **Probs: Painting** (ar cr; prereq 151)
—1, VI-VIII MW, J 200a, Corbett
—2, VI-VIII TTh, J 200a, Quirt

166 Renaissance Tradition in Sculpture (3 cr; prereq sr, 1 or 50, 9 cr art hist...or 9 cr hist or lit with △)
III MWF, J 207a, Arnason

176 **20th Century European, American Painting** (3 cr; prereq sr, 1 or 50) 9 cr art hist... or 9 cr hist or lit with △)
IV MWF, J 207b, Tselos

180 **Probs: Sculpture** (ar cr; prereq 82, 82A or △)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

181 **Probs: Sculpture** (ar cr; prereq 180)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

182 **Probs: Sculpture** (ar cr; prereq 181)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

190 **Probs: Printmaking** (ar cr; prereq 92 or △)
VI-VIII TTh, J 203, Myers

191 **Probs: Printmaking** (ar cr; prereq 190)
VI-VIII TTh, J 203, Myers

192 **Probs: Printmaking** (ar cr; prereq 191)
VI-VIII TTh, J 203, Myers

193 Adv Probs: Design (ar cr; prereq 9 up div cr in design, cons maj adv)

194 Adv Probs: Design (ar cr; prereq 193)

195 Adv Probs: Design (ar cr; prereq 194)

196 Readings: Art History, Criticism (3 cr; prereq sr, △)

197 Readings: Art History, Criticism (3 cr; prereq sr, △)

198 Readings: Art History, Criticism (3 cr; prereq sr, △)

200 Adv Probs: Studio Work (ar cr; prereq ‡)

201 Adv Probs: Studio Work (ar cr; prereq 200)

202 Adv Probs: Studio Work (ar cr; prereq 201)

216 Seminar: European, American Painting, Sculpture (3 cr; prereq ‡)
III MWF, J 207a, Arnason
217 Seminar: European, American Painting, Sculpture (3 cr; prereq 216)
III MWF, J 207a, Arnason
218 Seminar: European, American Painting, Sculpture (3 cr; prereq 217)
III MWF, J 207a, Arnason
236 Seminar: Probs in Art History, Criticism (ar cr; prereq ‡) Tselos
237 Seminar: Probs in Art History, Criticism (ar cr; prereq 236) Tselos
238 Seminar: Probs in Art History, Criticism (ar cr; prereq 237) Tselos
250 Thesis Seminar (no cr; prereq cons adv)
251 Thesis Seminar (no cr; prereq 250)
252 Thesis Seminar (no cr; prereq 251)

Winter and Spring Quarters

1w,s See 1f
2w See 2f
3w,s Renaissance, Modern Art (3 cr; prereq 1) III MWF
10w,s See 10f: I-II MWF
11w Photography (3 cr; prereq 10 or prac exper, △) III-IV MWF
12s Photography (3 cr; prereq 11 or △) III-IV MWF
20w,s See 20f: I-II TTh(w); I-II TThS(s)
-24w-25s See 23f
-24Aw-25As See 23f
32w,s See 32f: I-II TThS or III-IV TThS
33w,s See 33f: I-II TThS or III-IV TThS
-41w See 40f
42s Sculpture I: Design Workshop (3 cr; prereq 1) I-II MWF; I-II TThS; III-IV TThS
45w,s See 45f: I-II MWF; III-IV MWF
50w,s See 50f
51w,s See 51f
52w,s See 52f
53w,s See 53f
54w,s See 53f
55w,s See 55f
57w Renaissance, Baroque Art: 1500-1650 (3 cr; prereq 1 or 50 or △) II MWF
58s Renaissance, Baroque Art: 1650-1800 (3 cr; prereq 1 or 50 or △) II MWF
-61Aw-62As See 60Af
67w Modern Art: Realism, Impressionism (3 cr; prereq 1 or 50 or △) IV MWF
68s Modern Art: Contemporary European, American (3 cr; prereq 1 or 50 or △) IV MWF
70w,s-71w,s-72w,s See 70f-71f-72f
80w,s-81w,s-82w,s See 80f-81f-82f
80Aw,s-81Aw,s-82Aw,s See 80Af-81Af-82Af
-84w-85s See 83f
-87w-88s See 86f
90w,s-91w,s-92w,s See 90f-91f-92f
94w,s-95w,s Ceramic Design (3 cr; prereq 45 or △) VI-VII MWF
97w Seminar for Superior Students (3 cr; prereq 96)
101w Hellenistic Through Early Christian (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △) II MWF
102s Romanesque, Gothic (3 cr; prereq 9 cr art hist...or 9 cr hist lit with △) II MWF
112w Art of Japan (3 cr; prereq 9 cr art hist... or 9 cr hist or lit with △) I MWF
113s Design in Jewelry (3 cr; prereq 25, △) III-IV MWF
114s Adv Design in Jewelry (3 cr; prereq 113) III-IV MWF
115s Probs: Jewelry Design (3 cr; prereq 114) III-IV MWF
-117w-118s See 116f
-124w-125s See 123f
-127w-128s See 126f
-137w-138s‡ See 136f
141w Scandinavian Painting (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △) I MWF
142s Scandinavian Sculpture, Minor Arts (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △) I MWF
150w,s-151w,s-152w,s See 150f-151f-152f
157w-158s European, American Painting: 1775-1900 (3 cr; prereq 156) V MWF
167w Origins of Modern Sculpture (3 cr; prereq 166) III MWF
168s Contemporary Sculpture (3 cr; prereq 167) III MWF
-177w-178s‡ See 176f
180w,s-181w,s-182w,s See 180f-181f-182f
190w,s-191w,s-192w,s See 190f-191f-192f
193w,s-194w,s-195w,s See 193f-194f-195f
196w,s-197w,s-198w,s See 196f-197f-198f
200w,s-201w,s-202w,s See 200f-201f-202f
216w,s-217w,s-218w,s See 216f-217f-218f
236w,s-237w,s-238w,s See 236f-237f
250w,s-251w,s-252w,s See 250f-251f-252f

ASTRONOMY (Ast)

Fall Quarter

11 **Descriptive Astronomy** (5 cr, §51)
—1, IV MTWF, Ph 166, Luyten
—2, VII MTWF, Ph 166, Luyten, Danby
104 Celestial Mechanics (3 cr; prereq Math 59) V MWF, AE 211, Danby

Winter and Spring Quarters

11s See 11f
20w Celestial Navigation (5 cr)
51w Gen Astronomy (3 cr, §11; prereq Math T) IV MWF
52w Astrophysics (4 cr; prereq Math 53, Phys 50 or Phys 9, ‡) II MWF
53s Stellar Astronomy (3 cr; prereq 11 or Phys 9, Math 53) II MWF
-105w-106s See 104f

BOTANY (Bot)

Fall Quarter

50 Plant Ecology (3 cr, §130; prereq 3 or 5 or Biol 3 or NSci 9)
IV MWF, HS 45, Lawrence, Martin

50A **Plant Ecology Lab** (2 cr; prereq 10 cr bot or biol or ‡)
—1, VI-IX M, Bo 214, Lawrence, Martin
—2, VI-IX T, Bo 214, Lawrence, Martin
—3, VI-IX W, Bo 214, Lawrence, Martin

52 **Taxonomy** (3 cr; prereq 3 or 5 or Biol 3 or NSci 9)
VI-VIII MW, Bo 401, Morley

110 Gymnosperms (3 cr; prereq 52 or 54 or ‡)
II-IV TTh, Bo 401, Ownbey

118 **Gen Cytology** (5 cr; prereq 10 cr bot or biol or zool or elem genetics or ‡)
Lect IV MWF, Z 211, Dahl
—1, II-III MWF, Bo 202, Dahl
—2, VI-VII MWF, Bo 202, Dahl

127 **Morphology of Vascular Plants** (5 cr; prereq 54 or 104 or ‡)
II-IV MWF, Bo 209, Abbe

130 Plant Ecology (3 cr, §50; prereq sr, 10 cr bot or biol)
IV MWF, HS 45, Lawrence, Martin

130A **Plant Ecology Lab** (2 cr, §50A; prereq 10 cr bot or biol or ‡)
—1, VI-IX M, Bo 214, Lawrence, Martin
—2, VI-IX T. Bo 214, Lawrence, Martin
—3, VI-IX W, Bo 214, Lawrence, Martin

150 **Phycology I** (5 cr; prereq 10 cr bot or biol or ‡)
Lect VI MWF, Bo 209, Norris
Lab VII-VIII MWF, Bo 209

182 Adv Topics (3 cr; prereq 51 or 140 or ‡)
8:30-9:45 TTh, Bo 110, Brown

197 Problems (1-5 cr; prereq 20 cr nat sci, ‡)

201 Research Probs: Morphology of Vascular Plants (ar cr) Abbe

205 Research Probs: Taxonomy (ar cr) Morley, Ownbey

221 Research Probs: Ecology (ar cr) Lawrence, Martin

225 Research Probs: Plant Physiology (ar cr) Brown

229 Research Probs: Cytology (ar cr) Dahl

233 Probs: Phycology (ar cr) Norris

240 Seminar: Morphology (1 cr) Abbe

243 Seminar: Taxonomy (1 cr) Morley, Ownbey

249 Seminar: Ecology (1 cr) Lawrence, Martin

252 Seminar: Plant Physiology (1 cr) Brown

255 Seminar: Cytology (1 cr) Dahl

258 Seminar: Cryptogramic Plants (1 cr) Norris

Winter and Spring Quarters

10s Minnesota Plant Life (3 cr) VI-VII T, VI-VIII Th

12w Plants Useful to Man (4 cr) III or V MWF

51s Plant Physiology (5 cr; prereq bot or biol, InCh 5 or 25) Lect VI MW, lab II-III MW, conf IV M; Lect VI MW, lab VII-VIII MW, conf IX M

52s See 52f

53w Plant Anatomy (5 cr, §121; prereq 3 or 5 or Biol 3 or NSci 9) Lect III MWF, lab I-II MWF; IV-V MWF; VI-VII MWF

54s The Plant Kingdom (5 cr, §104; prereq 3 or 5 or Biol 3, or NSci 9) II-IV MWF

104s The Plant Kingdom (5 cr, §54; prereq 3 or 5 or Biol 3 or NSci 9) II-IV MWF

106w Angiosperm Families (5 cr; prereq 52 or ‡) VI-VIII MWF

115s Flora of Minnesota (4 cr; prereq 52 or ‡) VI-VIII TTh

119w Experimental Cytology (5 cr; prereq 118 or Zool 161)

120s Research Methods: Cytology (3-5 cr; prereq 3 or 5 or Biol 3 or NSci 9, 118 or 119, ‡)

121w Plant Anatomy (5 cr, §53; prereq 10 cr bot or zool) Lect III MWF, lab I-II MWF; IV-V MWF; VI-VII MWF

133w Phytogeography (3 or 5 cr; prereq 50 or 130 or ‡) VII-VIII MWF

137s Adv Ecology (5 cr; prereq 50, 50A or 130, 130A, ‡) V T

140s Adv Survey of Plant Physiology (3 or 5 cr, §51; prereq elem biol or bot or zool or ‡, org chem or biochem) Lect VI MW, lab II-III MW, conf IV M; Lect VI MW, lab VII-VIII MW, conf IX M

155s Fresh-water Algae (4 cr; prereq 10 cr biol or ‡) VI-VIII MW

177w Photosynthesis (3 cr; prereq sr, 51 or 140, 20 cr chem or biochem, PCh 101, 102, 103 or ‡) 8:30-9:45 TTh

-198w-199s‡ See 197f
-202w-203s‡ See 201f
-206w-207s‡ See 205f
-222w-223s‡ See 221f
-226w-227s‡ See 225f
-230w-231s‡ See 229f
-234w-235s‡ See 233f
-241w-242s‡ See 240f
-244w-245s‡ See 243f
-250w-251s‡ See 249f
-253w-254s‡ See 252f
-256w-257s‡ See 255f
-259w-260s‡ See 258f

CLASSICS

Classics (Clas)

Fall Quarter

24 Technical Terms of Science, Medicine, Humanities (3 cr, §124; prereq soph)
I MWF, FolH 204, D Swanson

42 Greek Mythology (2 cr; prereq soph)
VI MWF, FolH 303, Forbes

56 Linguistics (3 cr; prereq 1 yr col foreign lang or ♯)
VII MWF, FolH 213, D Swanson
81 Greek Tragedy in Translation (3 cr, §181; prereq 9 cr lit or △)
IV MWF, FolH 304, Furley
122 Greek Archaeology (3 cr)
VII MWF, FolH 303, McDonald
124 Technical Terminology (3 cr, §24)
I MWF, FolH 204, D Swanson
181 Greek Tragedy in Translation (3 cr, §81; prereq grad, 9 cr lit or △)
IV MWF, FolH 304, Furley
191 Classical Literary Traditions (3 cr; prereq 9 cr lit)
VII MWF, FolH 304, DeWitt

Winter and Spring Quarters

24w,s See 24f: VI MWF
42s See 42f
43w Ancient Mythology in Relation to Literature, Art (2 cr; prereq soph) VI MW
82w Aristophanes, Roman Drama in Translation (3 cr, §182; prereq 9 cr lit or △) IV MWF
106w-107s Study of Language (3 cr; prereq 56 or △) VII MWF
124w,s See 124f: VI MWF
182w Aristophanes, Roman Drama in Translation (3 cr, §82; prereq grad, 9 cr lit or △) IV MWF
190w Proseminar: Classical Archaeology (3 cr; prereq 122, 123 or ♯) VII MWF
-192w-193s‡ See 191f

Greek (Grk)

Fall Quarter

1 Bgn Greek (5 cr, †1-2)
Lect II MWThF, FolH 303, R Swanson
—1, II T, FolH 205½
—2, III T, FolH 205½
51 Plato: Selections (3 cr, §151; prereq 3)
IV MWF, FolH 302, Allen
151 Plato: Selections (3 cr, §51; prereq 3)
IV MWF, FolH 302, Allen
171 Advanced Reading (3 cr; prereq 53 or △)
III-IV TTh, FolH 302, McDonald
201 Seminar: Greek Literary Bibliography, Criticism (3 cr)
VIII-IX T, Lib 317, D Swanson

Winter and Spring Quarters

-2w See 1f
3s Attic Prose (5 cr; prereq 2) Lect II MWThF, rec II or III T
52w Greek Tragic Drama (3 cr, §152; prereq 3) IV MWF
53s Homer (3 cr, §153; prereq 3) IV MWF
73s Hellenistic Greek (3 cr; prereq △)
152w Greek Tragic Drama (3 cr, §52; prereq 3) IV MWF
153s Homer (3 cr, §53; prereq 3) IV MWF
-172w-173s See 171f
-202w-203s See 201f

Latin (Lat)

Fall Quarter

1 Bgn Latin (5 cr, †1-2)
Lect I MTWF, FolH 303, Forbes
—1, I Th, FolH 205½
—2, II Th, FolH 205½
10 Reading (5 cr; prereq 1 yr HS Lat or △)
III MTWThF, FolH 303, Forbes
51 Survey of Literature (3 cr, §151; prereq 3 or 21 or △)
VI MWF, FolH 304, McDonald
151 Survey of Literature (3 cr, §51; prereq 3 or 21 or ♯)
VI MWF, FolH 304, McDonald
171 Adv Reading (3 cr; prereq 53 or △)
II-III S, FolH 304, Furley
221 Seminar: Lyric Poetry (3 cr)
VIII-IX Th, Lib 317, R Swanson

Winter and Spring Quarters

-2w See 1f
3s Interm Latin (5 cr; prereq 2 or 1 yr HS Lat) Lect I MTWF, rec I or II Th
-52w-53s See 51f
73s Prose Composition (3 cr; prereq 3 yrs HS Lat or △)
133s Vulgar Latin (3 cr; prereq ♯) VI MWF
-152w-153s See 151f
-172w-173s‡ II-III S
-222w-223s See 221f

Sanskrit (Skt)

Fall Quarter

128 Readings (3 cr; prereq sr with ♯ or grad, 2 up div courses in early Eur lang)
VIII MWF, FolH 304, D Swanson

Winter and Spring Quarters

-129w-130s See 128f

ENGLISH

English (Engl)

Fall Quarter

A Literature, Composition (5 cr, §1A or 1B or Comm 1; prereq classif card 1 or 1A or 2)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud

—3, Lect VIII M, C 100
—1, Rec I MTWF, FolH 5
—2, Rec I MTWF, Ph 143
—3, Rec I MTWF, TSF 109
—4, Rec I MTWF, FolH 12
—5, Rec I MTWF, C 111
—6, Rec I MTWF, C 115
—7, Rec II MWThF, FolH 5
—8, Rec II MWThF, ChE 150
—9, Rec II MWThF, TSF 109
—10, Rec II MWThF, Arch 145
—11, Rec III MWThF, FolH 5
—12, Rec III MWThF, Arch 135
—13, Rec III MWThF, TSF 109
—14, Rec III MWThF, ChE 40
—15, Rec IV MTWF, FolH 5
—16, Rec IV MTWF, FolH 114
—17, Rec IV MTWF, FolH 213
—18, Rec V MTWF, FolH 5
—19, Rec V MTWF, ChE 150
—20, Rec V MTWF, Ph 143
—21, Rec V, MTWF, TNM 106
—22, Rec V MTWF, TNM 115
—23, Rec V MTWF, TSF 109
—24, Rec V MTWF, FolH 6
—25, Rec V MTWF, P 218
—26, Rec VI MTWF, FolH 5
—27, Rec VI MTWF, FolH 8
—28, Rec VI MTWF, TSF 109
—29, Rec VI MTWF, TNM 115
—30, Rec VI MTWF, FolH 209½

C Literature, Composition (5 cr, §3A or 3B or Comm 3; prereq B)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
Rec V MWThF, FolH 204

1A Freshman English (4 cr, §A or 1B or Comm 1; prereq classif card 1 or 1A or 2)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MWF, EE 237
—2, Rec I MWF, Arch 135
—3, Rec II MWF, FolH 114
—4, Rec II MWF, Arch 135
—5, Rec III MWF, ChE 54
—6, Rec III MWF, JohH 306
—7, Rec III MWF, EE 237
—8, Rec IV MWF, FolH 110
—9, Rec IV MWF, ChE 150
—10, Rec IV MWF, MinMet 124
—11, Rec V MWF, ForH 150
—12, Rec V MWF, FolH 113
—13, Rec V MWF, ChE 54
—14, Rec V MWF, ForH 15
—15, Rec VI MWF, FolH 11
—16, Rec VI MWF, E 4
—17, Rec VII MWF, FolH 5
—18, Rec VII MWF, E 4

1B Freshman English (4 cr, §A or 1A or Comm 1; prereq classif card 1 or 1A or 2 or 3)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MWF, ChE 54
—2, Rec I MWF, ChE 154
—3, Rec I MWF, JohH 313
—4, Rec I MWF, ForH 170
—5, Rec I MWF, Psy 115
—6, Rec I MWF, C 215
—7, Rec I MWF, AE 211
—8, Rec I MWF, TNCW 113
—9, Rec II MWF, FolH 110
—10, Rec II MWF, ChE 50
—11, Rec II MWF, Ex 193
—12, Rec II MWF, P 210
—13, Rec II MWF, TNCW 113
—14, Rec II MWF, ChE 54
—15, Rec III MWF, ME 102
—16, Rec III MWF, FraH B25
—17, Rec III MWF, MurH 420
—18, Rec III MWF, CW 206
—19, Rec III MWF, C 115
—20, Rec III MWF, FraH B1
—21, Rec III MWF, JohH 105
—22, Rec III MWF, FolH 4
—23, Rec III MWF, Arch 60
—24, Rec IV MWF, FolH 105
—25, Rec IV MWF, FolH 109
—26, Rec IV MWF, FolH 303
—27, Rec IV MWF, E 215
—28, Rec IV MWF, Arch 30
—29, Rec IV MWF, TNM 115
—30, Rec IV MWF, TSF 109
—31, Rec IV MWF, ChE 54
—32, Rec V MWF, FolH 114
—33, Rec V MWF, ME 102
—34, Rec V MWF, ChE 40
—35, Rec V MWF, EE 137
—36, Rec V MWF, JohH 313
—37, Rec V MWF, FolH 303
—38, Rec V MWF, Arch 45
—39, Rec V MWF, ForH 85
—40, Rec V MWF, AE 15
—41, Rec V MWF, AE 9
—42, Rec VI MWF, FolH 9
—43, Rec VI MWF, Arch 30
—44, Rec VI MWF, ChE 150
—45, Rec VI MWF, ChE 54
—46, Rec VI MWF, FolH 306
—47, Rec VII MWF, FolH 11
—48, Rec VII MWF, ME 102
—49, Rec VII MWF, ChE 40
—50, Rec VIII MWF, FolH 206

3B Freshman English (4 cr, §C or 3A or Comm 3; prereq 2B)
—1, Lect IV M, Bo B6
—2, Lect V T, MNA Aud
—1, Rec II MWF, Arch 30
—2, Rec II MWF, TNM 115
—3, Rec III MWF, Bu 123
—4, Rec III MWF, EE 137
—5, Rec IV MWF, EE 137
—6, Rec V MWF, Arch 135
—7, Rec V MWF, ForH 120
—8, Rec VI MWF, ChE 154

10H Honors Course: Literature, Composition A (5 cr; prereq △)
Lect II T or III T or VIII M (See A)
Rec III MWThF; P 218, McClure

21 Introd Literature (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
—1, III MTWThF, FolH 207, Moore
—2, IV MTWThF, FolH 204, R Foster
—3, VI MTWThF, FolH 202, Buckley

23 Introd Literature (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
II MTWThF, FolH 204, Montgomery

37 Modern Literature (3 cr; prereq soph, C or 3A or 3B or Comm 3)
—1, III MWF, FolH 308, R Foster
—2, VII MWF, FolH 9, Myers

52 English Novel (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
II MWF, FolH 213, Frank

55 Shakespeare: Early Plays (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
—1, I MWF, FolH 107, Steinmann
—2, II MWF, FolH 107, Hurrell
—3, III MWF, FolH 107, Buckley
—4, IV MWF, FolH 107, Youngblood
—5, VI MWF, FolH 207, Hurrell
—6, VI MWF, FolH 213, Myers
—7, VII MWF, FolH 207, Youngblood

56 Shakespeare: Later Plays (3 cr; prereq 55 or △)
9:30-10:45 TTh, FolH 107, Frank

66 Literature of the Bible (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
VI MWF, FolH 107, Jackson

72 American Literature (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
—1, II MWF, FolH 308, Turpie
—2, VII MWF, FolH 308, C Foster

74 American Literature (3 cr; prereq 72 or ♯)
II MWF, FolH 207, Kwiat

75 Chaucer (4 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 5 cr in 21-22-23)
IV MWThF, FolH 207, Jones

85 Adv Technical Communication for Engineers (3 cr; prereq C or 3A or 3B)
—1, I MWF, E 215
—2, I MWF, E 4, Haga
—3, II MWF, E 215, Guthrie
—4, II MWF, E 4, Haga
—5, III MWF, E 215
—6, III MWF, E 4, Guthrie
—7, IV MWF, E 4, Haga
—8, V MWF, E 215
—9, V MWF, E 4, Guthrie
—10, VI MWF, E 215

100 Old English (4 cr; prereq 5 cr above C)
VII MWThF, FolH 202, Allen

109 Romantic Poets of Early 19th Century (3 cr; prereq 5 cr above C)
VI TTh, VII T, FolH 107, Jackson

120 Interpretation of Poetry (3 cr; prereq 5 cr above C)
1:30-2:45 TTh, FolH 206, Tate

126 Drama: Restoration, Early 18th Century (3 cr; prereq 5 cr above C)
IV MWF, FolH 206, Moore

136 Adv Shakespeare (4 cr; prereq 56)
8:30-10:00 TTh, FolH 206, Brown

137 19th Century Literature (3 cr; prereq 5 cr above C)
III MWF, FolH 206, Stange

162 Milton (3 cr; prereq 21, 22 or 56)
VII MWF, FolH 107, Jackson

165 Modern English (3 cr; prereq 5 cr above C)
VI MWF, FolH 206, Allen

171 18th Century Novel (3 cr, §52; prereq 5 cr above C)
VI-VII T, FolH 205, Montgomery

181 Modern Literary Criticism (3 cr; prereq 5 cr above C)
VII MWF, FolH 108, O'Connor

184 Form, Idea in Dramatic Literature (3 cr; prereq 5 cr above C...56 rec)
VII MWF, FolH 205, Hurrell

187 18th Century Literature (3 cr; prereq 5 cr above C)
II MWF, FolH 206, Davis

194 Elizabethan Literature: Prose, Poetry, Drama (3 cr; prereq 5 cr above C)
2:00-3:15 TTh, FolH 207, Brown

197 17th Century Literature (3 cr; prereq 5 cr above C)
IV MWF, FolH 108, Madsen

205 Structure of Modern English (3 cr, §165)
VI TTh, VII T, FolH 302, Allen

210 17th Century Literature (3 cr)
VIII-IX M, FolH 108, Madsen

213 Bibliography, Methods of Literary Research (2 cr)
VIII-IX W, FolH 207, O'Connor

225 Elizabethan Drama (3 cr)
VIII-IX M, FolH 203, Brown

234 Medieval English Culture (3 cr; prereq 75 or 175)
VIII-IX Th, FolH 302, Clark

250 Modern Literature (3 cr; prereq ♯)
VIII-IX M, FolH 208, O'Connor

265 American Renaissance II: Hawthorne, Dickinson, Thoreau (3 cr)
VIII-IX Th, FolH 203, C Foster

274 The Age of Queen Anne (3 cr)
VIII-IX W, FolH 302, Davis

287 Victorian Literature (3 cr)
VIII-IX W, FolH 208, Stange

290 Critical Theory (3 cr)
VIII-IX W, FolH 203, Tate

297 Independent Reading (3 cr; prereq MA degree)

Winter and Spring Quarters

Aw-Bs See Af: Lect IV M or V T, rec I MTWF or V MWThF
-Bw-Cs See Af
1Aw-2As See 1Af: Lect IV M or V T, rec V MWF
1Bw-2Bs See 1Bf: Lect IV M or V T; rec I MWF; III MWF; V MWF; VI MWF; VII MWF
-2Aw-3As See 1Af
-2Bw-3Bs See 1Bf
-11Hw-12Hs See 10Hf
21w-22s‡ See 21f: II MTWThF
-22w-23s‡ See 21f
-38w-39s‡ See 37f
-53w-54s‡ See 52f
55w,s See 55f: I MWF(w); II MWF(w,s); III MWF(s); IV MWF(w); VI MWF(s); VII MWF(w)
56w,s See 56f: II MWF(w,s); III MWF(w,s); IV MWF(w); VI MWF(w,s); VII MWF(w)
-67w‡ See 66f
72w-73s See 72f: II MWF
-73w-74s‡ See 72f
75w,s See 75f
85w See 85f: II MWF; IV MWF; VI MWF; VIII MWF
-86w,s See 85f: I MWF(w,s); II MWF(s); III MWF(w); IV MWF(s); V MWF(w,s); VI MWF(s); VII MWF(w)
100s See 100f
102w Readings: Old English Prose, Verse (3 cr; prereq 100) VII MWF
103s Beowulf (3 cr; prereq 100) VII MWF
105w Hawthorne, Melville (3 cr; prereq 5 cr above C) II MWF
106s Whitman, Mark Twain (3 cr; prereq 5 cr above C) II MWF
-110w‡ See 109f
113s American Short Story (3 cr; prereq 5 cr above C) II MWF
-121w-122s See 120f
-127w‡ See 126f
129s Modern Drama (3 cr; prereq 56 or 126, 127) IV MWF
-138w-139s‡ See 137f
140w-141s Adv Chaucer (3 cr; prereq 75 or 175) VI MWF
142w-143s‡ 20th Century Literature (3 cr; prereq 5 cr above C) VII MWF
154w-155s‡ American Novel (3 cr; prereq 5 cr above C) II TThS
157w-158s‡ American Poetry (3 cr; prereq 5 cr above C) 1:30-2:45 TTh
162s See 162f: IV MWF
165w See 165f
166s Historical Backgrounds of Modern English (3 cr; prereq 5 cr above C) VI MWF
170w Shakespeare's Later Contemporaries (3 cr; prereq 56) 8:30-9:45 TTh
-172w‡ See 171f
173s Dr Johnson, His Circle (3 cr; prereq 5 cr above C, △) II MWF
174s American English (3 cr) VI TTh, VII T
175s Chaucer (4 cr, §75; prereq 100) VI MTWF
178s The South in Literature (3 cr; prereq 5 cr above C) 10:30-12:00 TTh
180w Influence of Poe (3 cr; prereq 5 cr above C) 10:30-12:00 TTh
183s Poetry of T S Eliot (3 cr; prereq 5 cr above C) VII MWF
-185w-186s‡ See 184f
-188w‡ See 187f
-195w-196s‡ See 194f
-198w-199s‡ See 197f
204w History of English Language (3 cr, §166) VI TTh, VII Th
-211w-212s See 210f
213s See 213f
-226w-227s See 225f
-235w-236s See 234f
-251w See 250f
-266w-267s See 265f
268w-269s Aesthetics (3 cr; prereq Engl or phil grad students or ♯) VIII-IX Th
-275w See 274f
278s American Realism (3 cr; prereq 277) VIII-IX F
279w American Realism (3 cr) VIII-IX F
-288w See 287f
-298w-299s See 297f

English Composition (Comp)

Fall Quarter

X Preparatory Composition (0 cr)
—1, I MWF, Bu 123
—2, I T, I-II Th, P 218
—3, II MWF, FraH B25
—4, II-III T, III Th, E 215
—5, III MWF, MurH 302
—6, IV MWF, P 218
—7, IV MWF, Bu 123
—8, IV T, IV-V Th, FolH 305
—9, V MWF, FolH 12
—10, V MWF, ForH 160
—11, V MWF, ForH 170
—12, V-VI T, VI Th, FolH 213
—13, VI MWF, P 218
—14, VII MWF, FolH 113
—15, VIII MWF, FolH 201

27 Adv Writing (3 cr; prereq C or 3A or 3B or Comm 3)
—1, I MWF, FolH 205, Ryley
—2, I MWF, FolH 206, Cody
—3, II MWF, FolH 205, Myers
—4, II TTh, III Th, FolH 205, Schneider
—5, III MWF, FolH 205, Cody
—6, III TTh, IV Th, FolH 306, Fraser
—7, IV MWF, FolH 205, Ryley
—8, IV TTh, V T, FolH 205, Schneider
—9, V MWF, FolH 205
—10, VI MWF, FolH 205, Hart

—11, VI TTh, VII T, FolH 305, Fraser
—12, VII MWF, FolH 226, Hart

28 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3...27 rec)
—1, III MWF, FolH 305, Wright
—2, VI MWF, FolH 226, Jones

101 **Writing of Fiction, Poetry** (3 cr; prereq 6 cr above 50 in lit or ‡)
VIII-IX M, FolH 302, Blum

200 Seminar: Writing (3 cr; prereq ‡)
VIII-IX T, FolH 302, Tate

Winter and Spring Quarters

Xw,s See Xf: I MWF; IV MWF; V MWF

27w See 27f: I MWF; II MWF; IV MWF; V MWF; V T, V-VI Th; VII MWF

27s See 27f: II MWF; III MWF; IV MWF; VI MWF; VII MWF

28w See 28f: I MWF; III MWF; IV MWF; V T, V-VI Th; VI MWF

28s See 28f: II MWF; IV MWF; V MWF; VII MWF

58s Business Reports, Letters (3 cr; prereq regis BA or ‡, C or 3A or 3B or Comm 3)
II MWF

-102w-103s See 101f

-201w-202s‡ See 200f

GEOGRAPHY (Geog)

Fall Quarter

1 **Natural Resources** (5 cr)
Lect II MWThF, Owre 15, Borchart
—1, I T, ForH 60
—2, I Th, ForH 60
—3, III M, ForH 60
—4, III T, ForH 60
—5, III W, ForH 60
—6, III Th, ForH 60
—7, III F, ForH 60
—8, IV F, ForH 60
—9, V M, ForH 60
—10, V W, ForH 60
—11, V F, ForH 60
—12, VI F, ForH 60

4 **Human Geography** (5 cr)
Lect III MWF, Owre 15, Broeck
—1, I MW, ForH 70
—2, I TTh, ForH 70
—3, II TTh, ForH 70
—4, II WF, ForH 70
—5, III TTh, ForH 70
—6, IV MW, ForH 70
—7, IV TTh, ForH 70
—8, V MW, ForH 70
—9, V TTh, ForH 70
—10, VI MW, ForH 70
—11, VI TTh, ForH 70
—12, VII MW, ForH 70

41 **Primary Production** (5 cr)
Lect VI MWThF, ForH 55, Lukermann
—1, I W, ForH 60
—2, II T, ForH 60
—3, II Th, ForH 60
—4, IV T, ForH 60
—5, IV Th, ForH 60
—6, VI T, ForH 60

60 **Maps, Map Interpretation** (3 cr; prereq 5 cr or ‡)
V-VI TTh, ForH 80, Porter

70 **Cartography** (3 cr; prereq 5 cr or ‡)
I-II TTh, ForH 80, Porter

105 Mediterranean Region (3 cr; prereq 10 cr or ‡)
VI MWF, ForH 285, Webb

111 Canada, Alaska (3 cr; prereq 10 cr or ‡)
I MWF, ForH 285, Mather

114 Historical Geography of North America (3 cr; prereq 10 cr or ‡)
IV MWF, ForH 285, Lukermann

118 Africa (3 cr; prereq 10 cr or ‡)
V MWF, ForH 285, Porter

133 Climatology (3 cr; prereq 1 or ‡)
IV MWF, ForH 150, Barrett

150 **Rural Geography** (3 cr; prereq 10 cr or ‡)
—1, II MWF, ForH 285, Mather
—2, IV MWF, HE 48 (StP Campus), Mather

153 Urban Geography (3 cr; prereq 4 or ‡)
III MWF, ForH 285, Webb

160 Development of Geographic Thought (3 cr; prereq sr, 15 cr)
VII MWF, ForH 285, Broek

190 Readings (1-3 cr; prereq sr)

251 Seminar: Settlement Geography (ar cr; prereq ‡)
VIII-IX Th, ForH 175, Webb

253 Seminar: Land-Use Planning in American Cities (ar cr; prereq ‡)
7:30-9:30 T, ForH 290C, Borchart

254 Seminar: Statistical Methods in Climatology (ar cr; prereq ‡)
VIII-IX T, ForH 175, Barrett

301 Research Probs (ar cr)

Winter and Spring Quarters

1w,s See 1f

4w,s See 4f

41w,s See 41f

67s Minnesota (3 cr; prereq 5 or ‡) IV MWF

70w See 70f: VI-VII TTh

100s Geographical Exploration, Discovery (3 cr; prereq 10 or ‡) III MWF

101w Western Europe (3 cr; prereq 10 cr or ‡)
VI MWF

107w Soviet Union (3 cr; prereq 10 cr or ‡)
V MWF

110w South America (3 cr; prereq 10 cr or ‡)
III MWF

112s Western United States (3 cr; prereq 10 cr or ‡) I MWF

113w Eastern United States (3 cr; prereq 10 cr or ‡) I MWF
117w Middle East (3 cr; prereq 10 or ‡) VII MWF
121w Southeast Asia (3 cr; prereq 10 cr or ‡) II MWF
126s Australia, New Zealand, Oceania (3 cr; prereq 10 cr or ‡) VII MWF
134w Adv Climatology (3 cr; prereq 133 or ‡) IV MWF
135s Adv Physical Geography (3 cr; prereq 134 or ‡) IV MWF
138w Statistical Cartography (3 cr; prereq 70 or ‡) I-II TTh
139s Air Photo Interpretation (3 cr; prereq 70 or ‡) I-II TTh
140s Adv Cartography (3 cr; prereq 138) V MWF
143w Political Geography (3 cr; prereq 4 or ‡) IV MWF
152s Industrial Geography (3 cr; prereq 41 or ‡) II MWF
170s Field Course (3 cr; prereq sr, 15 cr) VIII M
190w,s See 190f
251w See 251f
252w,s Seminar: Agricultural Geography (ar cr; prereq ‡) VIII-IX M
253s Seminar: Comparative Geography of the Tropics (ar cr; prereq ‡) VIII-IX W
255w Seminar: Cultural Geography (ar cr; prereq ‡) VIII-IX T
301w,s See 301f

GEOLOGY AND MINERALOGY (Geol)

Fall Quarter

A Gen Geol Lab (2 cr; prereq 1 or 8 or 51 or ¶)
—1, V-VI TTh, P 22
—2, III-IV TTh, P 22
—3, I-II TTh, P 22
—4, III-IV MW, P 22
—5, V-VI MW, P 22
—6, I-II MF, P 22
—7, VII-VIII MW, P 22
—8, VII-VIII TTh, P 22
—9, I-II W, V-VI F, P 22

B Gen Geol Lab (2 cr; prereq A, 2 or ¶2)
—1, I-II TTh, P 20
—2, V-VI MW, P 20

1 Gen Geology (3 cr, §5)
—1, VI MWF, P 210, Gast
—2, IV MWF, P 2, Thiel
—3, II MWF, P 2, Walton

2 Gen Geology (3 cr, §6; prereq 1 or 8 or 51)
II MWF, P 110, Sloan

5 Geology for Engineers (3 cr, §1; prereq InCh 15)
I MWF, P 210, Schwartz

23 Mineralogy (4 cr; prereq soph, 1 qtr chem)
Lect I MWF, P 110, Zoltai
—1, Lab VI-VII TTh, P 100
—2, Lab VII-VIII MW, P 100

101 Sedimentation (3 cr; prereq 24)
VII MWF, P 210, Thiel

103 Micropaleontology (3 cr; prereq 107)
VIII MWF, P 13, Swain

106 Petrography (3 cr; prereq 25)
Lect II T, P 210, Phinney
Rec II Th, P 210, Phinney
—1, Lab VI-VII TTh, P 200
—2, Lab ar

107 Invertebrate Paleontology (3 cr; prereq B or △)
Lect V MW, P 110, Sloan
Rec V F, P 110
—1, Lab III-IV T, P 105
—2, Lab III-IV Th, P 105

112 Petroleum Geology (3 cr; prereq sr, 125, 151 for SLA, 125 for IT students)
I MWF, P 218, Swain

118 Geomorphology (3 cr; prereq B)
VI MWF, P 110, Wright

121 Crystallography (3 cr; prereq trig, 1 yr col chem)
II TTh, P 110, Zoltai

125 Structural Geology (4 cr; prereq 25 or ‡)
Lect III MWF, P 210, Walton
Lab VI-VII Th, P 125

146 Soil Mineralogy (3 cr; prereq 1 qtr chem) Zoltai

170 Geologic Probs (1-3 cr)

171 Preparation of Geologic Report (1 cr; prereq sr, 150 or △) Walton, Phinney

181 Geochemistry (3 cr; prereq 1 yr col chem, 25)
II MWF, P 218, Gast

267 X-ray Crystallography (3 cr; prereq 266) Zoltai

271 Phase Equilibrium in Mineral Systems (3 cr; prereq phys chem, diff equat or ‡) Phinney

Winter and Spring Quarters

Aw,s See Af: I-II MW(w,s); I-II TTh(w); III-IV MW(w,s); III-IV TTh(w,s); V-VI MW(w,s); V-VI TTh(s); VI-VII TTh(w); VII-VIII MW(w,s); VII-VIII TTh(s)
Bw,s See Bf: I-II MW(s); I-II TTh(w); III-IV MW(s); III-IV TTh(w); VI-VII TTh(w,s)
1w,s See 1f: II MWF(w,s); IV MWF(w); VI MWF(s); VII MWF(w)
2w,s See 2f: IV MWF(w,s); VI MWF(w); VII MWF(s)
-6w See 5f
-24w See 23f
25s Rock Study (2 cr; prereq soph, 24) Lect I T, rec I Th, lab VI-VII T; VIII-IX T

102w Methods of Study of Sediments (3 cr; prereq 101, 106) Lect VI T, lab VI-VII Th; VII-VIII T
-104w See 103f: VIII TTh
108w Stratigraphic Paleontology (3 cr; prereq 107) VIII-IX F
110w-111s Economic Geology (3 cr; prereq sr, 125) III MWF(w); I TTh, VIII F(s)
119Bw Geomorphology of Western United States (3 cr; prereq 118 or 125) II TTh, 1 hr ar
120s Glacial Geology (3 cr; prereq B) I MWF
126s Adv Structural Geology (3 cr; prereq 125) VI TTh
131w-132s Petrology (4 cr; prereq 106) Lect II MW, rec II F, lab VI-VII WF or ar(w); Lect III MW, rec III F, lab VI-VII WF(s)
-147w See 146f
151w Stratigraphy I (3 cr; prereq 25, 107) I MWF
152s Stratigraphy II (3 cr; prereq 151) II MWF
153s Subsurface Stratigraphy (2 cr; prereq 151) VII-VIII TTh
155w Vertebrate Paleontology (3 cr; prereq 107 or Zool 22 or ♯)
166w-167s Mineralography (3 cr; prereq sr, 111, 131) VI-VII MWF(w); Ar(s)
170w,s See 170f
171s See 171f
176w Pleistocene Geology (3 cr; prereq 120)
179s Mining Geology (3 cr; prereq 111)
182w Isotopic, Nuclear Processes (3 cr; prereq 25, phys chem or ♯) II-III MWF
183s Adv Geochemistry (3 cr; prereq 182, diff equat or ♯)
248w Seminar: Geomorphology, Pleistocene Geology (ar cr; prereq 118, 120) Wright
261w Theoretical Mineralogy (3 cr; prereq 121, 161 or ♯) II TTh
266s X-ray Mineralogy (3 cr; prereq 24, 121 or ♯) II TTh
272w Adv Igneous Petrology (3 cr; prereq 131, 171)
273s Adv Metamorphic Petrology (3 cr; prereq 132, 272)

GERMAN (Ger)

Fall Quarter

1A Bgn German: Conversational (5 cr, §1B or 1C or HS Ger)
Lect I MWF, FolH 209½
Lab I TTh
1B Bgn German: Language, Culture (5 cr, §1A or 1C or HS Ger)
Lect II MWF, FolH 209½
Lab II TTh
1C Bgn German (5 cr, §1A or 1B or HS Ger)
—1, Lect I MWF, FolH 209
Lab I TTh
—2, Lect II MWF, FolH 209
Lab II TTh
—3, Lect III MWF, FolH 209
Lab III TTh
—4, Lect IV MWF, FolH 209
Lab IV TTh
—5, V MTWThF, FolH 209
—6, V MTWThF, FolH 209½
2C Bgn German (5 cr, §2A or 2B; prereq 1C or 1 yr HS Ger)
VII MTWThF, FolH 209
3C Bgn German (5 cr, §3A or 3B; prereq 2C or 2 yrs HS Ger)
—1, IV MTWThF, FolH 209½
—2, IV MTWThF, FolH 8
—3, V MTWThF, FolH 207
—4, V MTWThF, FolH 11
4 Interm German (3 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
—1, III MWF, FolH 209½
—2, VI MWF, FolH 209
5 Interm German (2 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
—1, III TTh, FolH 209½
—2, VI TTh, FolH 209
50 Reading German: Bgn for Juniors, Seniors (3 cr, §1A or 1B or 1C or HS Ger)
—1, I MWF, FolH 8
—2, II MWF, FolH 109
—3, II MWF, FolH 8
—4, II MWF, C 215
—5, VII MWF, FolH 8
—6, VII MWF, FolH 206
56 Reading, Analysis of Literary Texts (3 cr; prereq 4 or 4 yrs HS Ger)
—1, IV MWF, CW 206
—2, IV MWF, FolH 10
57 Composition (2 cr; prereq 4, 5)
—1, VI MF, FolH 208
—2, VI MF, FolH 108
—3, VI MF, FolH 4
61 Conversation (2 cr; prereq 4, 5)
—1, VI TTh, FolH 208
—2, VI TTh, FolH 108
—3, VI TTh, FolH 203
64 Adv Conversation, Essay Writing (2 cr; prereq 59, 63)
VII TTh, FolH 208
70 Lyric Poetry from Goethe to Rilke (2-3 cr; prereq 56...or 4, △)
IV TTh, FolH 208
73 Drama from Lessing to the Present (3 cr; prereq 56...or 4, △)
IV MWF, FolH 208
76 Prose of the 19th, 20th Century (2-3 cr; prereq 56...or 4, △)
III TTh, FolH 208
91 Civilization, Culture (3 cr; prereq 3 cr above 69)
VII MWF, FolH 208
94 Survey of Literature (3 cr; prereq 3 cr above 69)
III MWF, FolH 208
103 Syntax, Composition (1 cr; prereq sr, 66)

110 Middle High German (3 cr; prereq 94, 11 cr above 69)
VIII-IX M, FolH 305½, C Wood
149 Directed Readings (2-3 cr)
160 Klopstock, Wieland, Lessing, Herder (3 cr; prereq sr, 14 cr above 69)
VIII-IX Th, FolH 208, Ramras
170 Romanticism (3 cr; prereq sr, 14 cr above 69)
VIII-IX W, FolH 305½, Menze
186 Lyric Poetry (3 cr; prereq sr, 14 cr above 69)
VIII-IX T, FolH 208, F Wood

Winter and Spring Quarters

1Cw-2Cs See 1Cf: III MTWThF; VI MTWThF
1Cs See 1Cf: IV MTWThF; V MTWThF
-2Aw-3As See 1Af
-2Bw-3Bs See 1Bf
-2Cw-3Cs See 1Cf
-3Cw See 2Cf
4w,s See 4f: IV MWF(w); V MWF(w); VII MWF(s)
5w,s See 5f: IV TTh(w); V TTh(w); VII MWF(s)
-51w-52s See 50f
56w,s See 56f
-58w-59s‡ See 57f
-62w-63s‡ See 61f
-65w-66s‡ See 64f
-71w-72s‡ See 70f
-74w-75s‡ See 73f
-77w-78s‡ See 76f
92w-93s‡ See 91f
-95w-96s‡ See 94f
-104w-105s‡ See 103f
149w,s See 149f
-161w-162s‡ See 160f
-187w-188s‡ See 186f

HISTORY (Hist)

Fall Quarter

1 Civilization of the Modern World (3 cr)
Lect II TTh, NH 45, Wolf
—1, I M, ForH 50
—2, I T, ForH 50
—3, I W, ForH 50
—4, I Th, ForH 50
—5, I F, ForH 50
—6, II M, ForH 50
—7, II F, ForH 50
—8, III T, ForH 50
—9, III Th, ForH 50
—10, IV T, ForH 50
—11, VI M, ForH 30
—12, VI W, ForH 50
—13, VI F, ForH 50
—14, VII T, ForH 50
—15, II W, ForH 50
—16, III W, ForH 50
—17, VI T, ForH 30
Lect III TTh, NH 45, Payne
—18, I Th, ForH 30
—19, I T, ForH 30
—20, I F, ForH 30
—21, II M, ForH 30
—22, II Th, ForH 50
—23, III M, ForH 50
—24, IV Th, ForH 30
—25, VII Th, ForH 50
—26, III W, ForH 30
Lect VI TTh, NH 45, Taylor
—27, I M, ForH 30
—28, I W, ForH 30
—29, I Th, ForH 180
—30, II W, ForH 30
—31, III T, ForH 30
—32, III Th, ForH 30
—33, IV F, ForH 70

1H Honors Course: Civilization of the Modern World (3 cr; prereq △)
—1, Lect II TTh, NH 45, Wolf
Honors Rec VI Th, ForH 50
—2, Lect III TTh, NH 45, Payne
Honors Rec VI W, ForH 60
—3, Lect VI TTh, NH 45, Taylor
Honors Rec VI W, ForH 30

3 Civilization of the Modern World (3 cr)
Lect II MW, FraH 102, Wright
—1, II Th, ForH 30
—2, II F, ForH 30
—3, I T, ForH 160
—4, I Th, ForH 160
—5, I F, ForH 60
—6, II F, ForH 60
—7, VI Th, ForH 30

3H Honors Course: Civilization of the Modern World (3 cr; prereq △)
Lect II MW, FraH 101, Wright
Honors Rec IV W, ForH 244

4 English History (3 cr)
Lect IV MW, FraH 102, Willson
—1, I M, ForH 160
—2, IV T, ForH 30
—3, IV T, ForH 160
—4, VI W, EE 137
—5, VI F, ForH 30

11 Medieval, Renaissance History (3 cr; prereq art or mus maj or △)
IV MWF, ForH 115, Thompson

14 Ancient Civilization (3 cr, §14A)
VII TWTh, ForH 155, Jones

14A Ancient Civilization with Readings (5 cr, §14)
VII TWTh, ForH 155, VII MF, ForH 115, Jones

17 Asia (3 cr, §59)
VI MWF, ForH 180

20 American History (3 cr; prereq soph)
Lect I MW, Bo B6, Rutman
—1, II M, ForH 70
—2, I T, ForH 180
—3, VI T, ForH 50

—4, III W, MH 213
—5, III Th, ForH 160
—6, I Th, E 4
—7, II Th, ForH 85
—8, II T, ForH 50
Lect II TTh, ScH 108, Berkhofer
—9, I M, AE 327
—10, VI M, ForH 50
—11, III T, ForH 185
—12, IV T, ForH 170
—13, III W, Owre 12
—14, IV W, Owre 12
—15, VII W, ForH 50
—16, III Th, E 4
—17, VI Th, ForH 130
—18, I Th, ForH 85
—19, II M, ForH 244
Lect VIII MW, ForH 155, Chambers
—20, III M, ForH 30
—21, II T, ForH 30
—22, VII T, ForH 30
—23, I W, ForH 160

20H Honors Course: American History (3 cr; prereq soph, △)
—1, Lect I MW, Bo B6, Rutman
Honors Rec IV W, ForH 30
—2, Lect II TTh, ScH 108, Berkhofer
Honors Rec I T, ForH 15
—3, Lect VIII MW, ForH 155, Chambers
Honors Rec VIII T, ForH 75

22 American History (3 cr; prereq soph)
Lect II MW, MMA 125, Murphy
—1, VI T, MinMet 116
—2, I Th, ForH 15
—3, I M, Bu 211
—4, II T, ForH 160
—5, II Th, ForH 180
—6, III T, ForH 160

22H Honors Course: American History (3 cr; prereq soph, △)
Lect II MW, MMA 125, Murphy
Honors Rec II F, ForH 175

50 Ancient Civilization (3 cr, §14)
VII TWTh, ForH 155, Jones

53 Civilization of the Modern World (3 cr, §1)
Altholz
Lect II TTh, ForH 55
—1, II M, ForH 60
—2, III M, ForH 70
—3, II F, Psy 115
—4, VI W, VH 205

56 England (3 cr, §4)
Lect IV MW, FraH 102, Willson
Rec IV F, ForH 30

59 Asia (3 cr, §17)
—1, VI MWF, ForH 180, Stein
—2, VI TTh, ForH 180, Taylor

70 English Constitutional History (3 cr; prereq prelegal soph, C avg or jr)
I MWF, ForH 115, Thompson

79 United States in 20th Century (3 cr)
VI MWF, MNH Aud, Chambers

86 American Colonies (3 cr)
II MWF, Arch 55, Rutman

90 The American West (3 cr)
III MWF, ForH 130, Berkhofer

93 American Diplomatic History (3 cr)
I MWF, ForH 155, Beatty

97 Minnesota, the Northwest (3 cr)
III MWF, ForH 155, Jordan

100 The Ancient Near East (3 cr)
VIII MWF, ForH 115, Jones

103 Europe in the Middle Ages (3 cr)
III MWF, ForH 185, Martin

103A Renaissance, Reformation (3 cr)
1:30-3:00 TTh, ForH 120, Giesey

106 Early Modern Europe (3 cr)
1:30-3:00 TTh, Lib 4a, Wolf

106A Europe in the 19th Century (3 cr)
1:30-3:00 TTh, ForH 115, Altholz

109 Europe in the 20th Century (3 cr)
II MWF, Bo B6

125 Russia (3 cr)
IV MWF, ForH 55, Anderson

125A Eastern Europe, Middle East in 19th, 20th Centuries (3 cr; prereq 1-2-3)
III MWF, ForH 160, Anderson

128 Modern England: Tudor, Stuart Periods (3 cr)
II MWF, ForH 150, Willson

134 World War II (3 cr)
I MWF, MNH Aud, Deutsch

137 Early Natl Period in United States History (3 cr)
I MWF, ForH 150, Jordan

137A American History: 1850-1900 (3 cr)
II MWF, ForH 120, Loehr

140 Germany (3 cr; prereq 1-2-3 or Ger maj or ♯)
VI MWF, ForH 160, Wright

146 American Economic, Social History (3 cr)
III MWF, ForH 85, Loehr

146A The South (3 cr)
10:30-12:00 TTh, ForH 55, Noble

149 Social, Intellectual History of the United States (3 cr)
VI MWF, ForH 115, Noble

149A American Constitutional History (3 cr)
IV MWF, ForH 50, Murphy

154B South Asia, Especially India (3 cr)
VI TTh, ForH 170, Stein

157 Latin-American History (3 cr)
III MWF, ForH 170, Beatty

160A Readings: 18th Century Europe (3 cr, †160A-161A-162A) Wright

164 History of China: Prehistoric to Present (3 cr)
III TTh, ForH 170, Taylor

167 Readings: Works of Great Historians (2 cr; prereq sr)
VIII-IX T, ForH 244, Giesey

170 Readings: Ancient History (3 cr, †170-171-172; prereq sr, ♯) Jones

173 Readings: Medieval, Renaissance History (3 cr, †173-174-175; prereq sr, ‡)
VI-VII M, ForH 244, Giesey

173A Readings: Medieval English History (3 cr, †173A-174A-175A; prereq sr, ‡)
1:30-3:00 Th, ForH 244, Thompson

176 Readings: 17th Century France (3 cr, †176-177-178; prereq sr, rdg Fren, ‡)
VII-VIII W, CW 206, Wolf

176A Readings: Russian History (3 cr, †176A-177A-178A; prereq sr, 125-126-127, reg Fren or Ger or Russ, ‡)
VI-VII F, ForH 256, Anderson

176B Readings: India (3 cr, †176B-177B-178B; prereq sr, ‡) Stein

176C Readings: Recent European History (3 cr, †176C-177C-178C; prereq sr, course in 20th cent Europe or World War II, ‡)
1:00-2:40 M, ForH 175, Deutsch

182 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq sr, ‡)
VI-VII F, ForH 175, Willson

185 Readings: American Political, Constitutional History (3 cr, †185-186-187; prereq sr, ‡)
VIII-X W, ForH 244, Murphy

185B Readings: American Diplomatic History (3 cr, †185B-186B-187B; prereq sr, ‡)
VI-VII M, ForH 185, Beatty

185C Readings: 20th Century American History (3 cr, †185C-186C-187C; prereq sr, ‡)
VI-VII T, ForH 75, Chambers

185D Readings: 19th Century American History (3 cr, †185D-186D-187D; prereq sr, ‡)
VI-VII W, ForH 256, Jordan

185E Readings: Probs of 18th Century American History (3 cr, †185E-186E-187E; prereq sr, ‡)
VI-VII Th, ForH 256, Rutman

188 Readings: American Economic History (3 cr, †188-189-190; prereq sr, ‡)
VI-VII M, ForH 346, Loehr

188B Intellectual History of United States in 19th, 20th Centuries (3 cr)
VI-VII Th, Noble

200 Historical Bibliography, Criticism (2 cr, †200-201-202)
VI-VII W, ForH 185, Jordan

210 Ancient History (3 cr, †210-211-212) Jones

220 Medieval English History (3 cr, †220-221-222) Thompson

223 English History, Tudor-Stuart Period (3 cr, †223-224-225) Willson

253 Russian History (3 cr, †253-254-255) Anderson

260 Latin-American History (3 cr, †260-261-262) Beatty

263 History of India (3 cr, †263-264-265) Stein

273 19th Century American History (3 cr, †273-274-275) Jordan

283 American Economic History (3 cr, †283-284-285) Loehr

286 American Political, Constitutional History (3 cr, †286-287-288)
VIII-IX W, ForH 244, Murphy

290 The West in American History (3 cr, †290-291-292) Berkhofer

293 American Diplomatic History (3 cr, †293-294-295) Beatty

Winter and Spring Quarters

1w-2s‡ See 1f: Lect II MW, rec I T; I Th; I F; II Th; II F; VI Th

1Hw-2Hs‡ See 1Hf: Lect II MW, rec IV W

-2w-3s‡ See 1f

-2Hw-3Hs‡ See 1Hf

-5w-6s‡ See 4f

-12w-13s‡ See 11f

-15w-16s See 14f

-15Aw-16As See 14Af

-18w-19s‡ See 17f

20w-21s‡ American History (3 cr; prereq soph) Lect II MW, rec VI T; I Th; I M; II T; II Th; III T

20Hw-21Hs‡ Honors Course: American History (3 cr; prereq soph, △) Lect II MW, rec II F

-21w-22s‡ See 20f

-21Hw-22Hs‡ See 20Hf

-51w-52s‡ See 50f

-54w-55s‡ See 53f

-57w-58s‡ See 56f

-60w-61s‡ See 59f

-71w-72s‡ See 70f

-80w-81s‡ See 79f

-87w-88s‡ See 86f

-91w-92s‡ See 90f

-94w-95s‡ See 93f

-98w-99s‡ See 97f

-101w-102s‡ See 100f

-104w-105s‡ See 103f

-104Aw-105As‡ See 103Af

-107w-108s‡ See 106f

-107Aw-108As‡ See 106Af

-110w-111s‡ See 109f

-126w-127s‡ See 125f

-126Aw-127As‡ See 125Af

-129w-130s‡ See 128f

-135w-136s‡ See 134f

-138w-139s‡ See 137f

-138Aw-139As‡ See 137Af

-141w-142s‡ See 140f

-147w-148s‡ See 146f

-147Aw-148As‡ See 146Af

-150w-151s‡ See 149f

-150Aw-151As‡ See 149Af

-155Bw-156Bs‡ See 154Bf

-158w-159s‡ See 157f

-161Aw-162As‡ See 160Af

-165w-166s‡ See 164f

-168w-169s‡ See 167f

-171w-172s See 170f

-174w-175s See 173f

-174Aw-175As See 173Af
-177w-178s See 176f
-177Aw-178As See 176Af
-177Bw-178Bs See 176Bf
-177Cw-178Cs See 176Cf
-183w-184s See 182f
-186w-187s See 185f
-186Bw-187Bs See 185Bf
-186Cw-187Cs See 185Cf
-186Dw-187Ds See 185Df
-186Ew-187Es See 185Ef
-189w-190s See 188f
-189Bw-190Bs See 188Bf
-201w-202s See 200f
-211w-212s See 210f
-221w-222s See 220f
-224w-225s See 223f
-254w-255s See 253f
-261w-262s See 260f
-264w-265s See 263f
-274w-275s See 273f
-284w-285s See 283f
-287w-288s See 286f
-291w-292s See 290f
-294w-295s See 293f
-297w-298s See 296f

INTERDEPARTMENTAL COURSES AND GENERAL EDUCATION

Communication (Comm)

Fall Quarter

1 **Communication** (4 cr, §Engl A or 1A or 1B; prereq classif card 1 or 1A or 2 or 3)
—1, I MTWF, TNM 114
—2, I MTWF, TNM 106, White
—3, I MTWF, TNM 107
—4, I MTWF, TNM 115
—5, II MTWF, TNM 114, Bryan
—6, II MTWF, TNM 106, Jensen
—7, II MTWF, TNM 107, Morrison
—8, III MTWF, TNM 114, Willcoxon
—9, III MTWF, TNM 106, Cox
—10, III MTWF, TNM 107
—11, III MTWF, TNM 115
—12, IV MTWF, TNM 114, O'Hara
—13, IV MTWF, TNM 106, Greis
—14, IV MTWF, TNM 107, Giltner
—15, V MTWF, TNM 114, Hausdorff
—16, VI MTWF, TNM 114, Bryan

2 **Communication** (4 cr, §Engl B or 2A or 2B; prereq 1)
—1, II MTWF, TNM 9, O'Hara
—2, VI MTWF, TNM 107, Willcoxon

3 **Communication** (4 cr, §Engl C or 3A or 3B; prereq 2)
—1, I MTWF, TNM 9, Giltner
—2, V MTWF, TNM 107, White
—3, VI MTWF, TNM 106, Hausdorff

Winter and Spring Quarters

1w-2s See 1f: I MTWF(w,s); III MTWF(w,s); IV MTWF(w,s); V MTWF(w,s); VI MTWF(w)
1s See 1f: II MTWF; IV MTWF; V MTWF
-2w-3s See 1f
3w See 3f: II MTWF; VI MTWF

Family Life (FL)

Fall Quarter

1 **Preparation for Marriage** (3 cr, §1A)
—1, I MWF, JohH 106, Mandel
—2, II MWF, JohH 306, Torbett
—3, II T, II-III Th, JohH 306, Torbett
—4, III MWF, JohH 106, Pitzer
—5, IV MWF, JohH 306, Johnson
—6, V MWF, JohH 106, Pitzer

1A **Preparation for Marriage** (3 cr, §1; prereq married students)
V MWF, JohH 306, Hansen

15 **The Home, Its Furnishing** (3 cr but cr added to SLA grad req)
II MWF, JohH 205, Ludwig

25 **Child Development, Adjustment** (3 cr, §CD 40 or 80, not open to NKP or psy maj)
III MWF, JohH 205, Peterson

Winter and Spring Quarters

1w,s See 1f: I MWF(w,s); II MWF(w,s); II T, II-III Th(w,s); IV MWF(w,s); V MWF(w,s); IV MWF(s)
1Aw,s See 1Af: II T, II-III Th (engaged, married students only) (s); V MWF (older students only) (w,s)
15w,s See 15f
20s Consumer Education (3 cr but cr added to SLA grad req) II MWF
25w,s See 25f

Humanities (Hum)

Fall Quarter

1 **Modern World I** (5 cr)
—1, I MTWThF, JohH 114, Blum
—2, III MTWThF, FolH 9, Wood
—3, III MTWThF, JohH 113, Ames
—4, IV MTWThF, JohH 113, Ramsland
—5, IV MTWThF, JohH 122, Siegelman
—6, V MTWThF, JohH 114
—7, V MTWThF, JohH 115, Vogelbaum
—8, VI MTWThF, JohH 122, J Wright
—9, VI MTWThF, JohH 313, Fredricks
—10, VII MTWThF, JohH 115, W Wright

1A **Age of Enlightenment** (3 cr)
—1, I MWF, DI 15 (StP Campus), Drake
—2, II MWF, AgEng 109 (StP Campus), Carr

—3, III MWF, AgEng 108 (StP Campus)
—4, 1:30-2:50 TTh, AgEng 108 (StP Campus), Drake

2 **Modern World II** (5 cr; prereq 1)
IV MTWThF, FraH B1, Frank

2A **Romanticism, Industrial Revolution** (3 cr; prereq 1A)
III MWF, HH 100 (StP Campus), Drake

4 **Modern World IV** (5 cr; prereq 1 or 2 or 3)
VII MTWThF, JohH 113, Ludwig

11 **Greek Heritage** (5 cr)
II MTWThF, JohH 105, DeWitt

21 **American Life I** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
—1, II MWF, FolH 6
—2, III MWF, FolH 6
—3, IV MWF, FolH 6, Turpie
—4, VI MWF, FolH 6, Berkhofer

51 **Modern World** (5 cr, §1)
—1, III MTWThF, FolH 204, Kwiat
—2, VI MTWThF, JohH 113, Ludwig
—3, VII MTWThF, JohH 122, Ramsland

53 **Modern World** (5 cr, §3)
II MTWThF, JohH 114, Siegelman

54 **Modern World** (5 cr, §4)
—1, VI MTWThF, JohH 115, Amberg
—2, III-IV TTh, 1 hr ar, JohH 205, Berryman

61 **European Heritage** (5 cr, §11)
—1, II MTWThF, JohH 115, Ames
—2, III-IV TTh, 1 hr ar, JohH 115, Vogelbaum

71 **Humanities in the United States** (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
VII MWF, FolH 6, Levenson

131 **Proseminar** (3 cr; prereq sr)
VII-VIII T, JohH 105, Berryman

Winter and Spring Quarters

1w See 1f: II MTWThF; IV MTWThF; V MTWThF; VII MTWThF

1s See 1f: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF

1Aw,s See 1Af: III MWF

2w See 2f: I MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF

2Hw Honors Course: Modern World II (5 cr; prereq 1, △) III or VII MTWThF

2s See 2f: III MTWThF; IV MTWThF; VI MTWThF

2Aw,s See 2Af: I MWF(w); III MWF(w,s); 1:30-2:50 TTh(w)

3w Modern World III (5 cr; prereq 2) IV MTWThF

3s Modern World III (5 cr; prereq 2) I MTWThF; V MTWThF

3Hs Honors Course: Modern World III (5 cr; prereq 2, △) III or VII MTWThF

3As Science, Humanism (3 cr; prereq 1A) I MWF; 1:30-2:50 TTh

4w,s See 4f: IV MTWThF(s); VII MTWThF(w)

12w Roman, Medieval Heritage (5 cr) II MTWThF

13s Renaissance, Reformation (5 cr) II MTWThF

22w American Life II (3 cr, §9 cr in 21, 22, 23, 71, 72, 73) II MWF; III MWF; IV MWF; VI MWF

23s American Life III (3 cr, §9 cr in 21, 22, 23, 71, 72, 73) II MWF; III MWF; IV MWF; VI MWF

24w,s American Humanities (3 cr; prereq 1A) II MWF

-52w-53s‡ See 51f: III MTWThF; VII MTWThF

52Hw-53Hs Honors Course: Modern World (5 cr, §2; prereq △) VI MTWThF

54w,s See 54f: III-IV TTh, 1 hr ar(w,s); VI MTWThF(s); VII MTWThF(w)

-62w-63s‡ See 61f

-72w-73s‡ See 71f

-132w-133s‡ See 131f

Natural Science (NSci)

Fall Quarter

1 **Orientation** (5 cr, §4 or Biol 1 or 1A or any elem sci, †1-2)
III MTWThF, Ph 166, Graubard

4 **Physical World** (3 cr, §1 or elem phy sci, †4-5; prereq 1 yr HS algebra)
VII MWF, Ph 133, Winter, lab ar

171 Development of Sciences (3 cr; prereq 1 yr of HS biol, 1 yr of HS phy sci or ‡)
IV MWF, Ph 236a, Graubard

Winter and Spring Quarters

-2w-3s See 1f

-5w See 4f

6s Physical World (4 cr, §Geol 1 or 8; prereq 5) Lect VII MWF, lab I-II T; III-IV F; V-VI F

-172w-173s‡ See 171f

Personal Orientation (PO)

Fall Quarter

1 **How to Study** (2 cr but cr added to SLA grad req)
—1, I MWF, JohH 307, Wark
—2, II MWF, JohH 307, Wark
—3, VI MWF, JohH 307, Carlson
—4, VII MWF, JohH 307, Carlson

Winter and Spring Quarters

1w,s See 1f: I MWF(w,s); II MWF(w,s); V MWF(w,s); VI MWF(w); VII MWF(s)

Social Science (SSci)

Fall Quarter

1 **Introduction** (3 cr)
—1, I MWF, JohH 113, Engelbourg
—2, II MWF, JohH 122, Blum
—3, II MWF, JohH 113, Kanun
—4, 9:00-10:20 TTh, JohH 113, Kanun
—5, III MWF, MurH 311, Sibley
—6, III MWF, JohH 115, Engelbourg
—7, IV MWF, JohH 114, Roshwald
—8, V MWF, JohH 205, Roshwald
—9, VI MWF, JohH 114, Cooperman
—10, VII MWF, ForH 180, Lukermann

2 **Introduction** (3 cr; prereq 1)
—1, IV MWF, JohH 205, Engelbourg
—2, VI MWF, JohH 205, Uppal

3 **Introduction** (3 cr; prereq 2)
—1, III MWF, JohH 122, Roshwald
—2, VI MWF, WuH 201, Blum

51 **Introduction** (4 cr, §1)
IV MWF, JohH 313, 1 hr ar, Cooperman

Winter and Spring Quarters

1w,s See 1f: III MWF; IV MWF; VI MWF
-2w-3s See 2f
2s See 2f: IV MWF; VI MWF; VII MWF
3w See 3f: IV MWF; VI MWF
-52w-53s‡ See 51f

JOURNALISM (Jour)

Fall Quarter

11 **Reporting for Nonmajors** (3 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3 or Rhet 3)
—1, I MWF, MurH 311, Sim
—2, IV MWF, MurH 210, Schuneman
—3, VII MWF, MurH 210

12 **Bgn News Photography** (3 cr; prereq soph)
VI-VIII TTh, MurH 20, Schuneman

13 **Journalistic Writing for Majors** (4 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3, typ 35 words/min or BA 32 or 33)
Lect IV T, MurH 308
—1, I-II MWF, MurH 212, Hage
—2, I-III TTh, MurH 212, Emery
—3, VI-VIII TTh, MurH 212, Charnley
—4, I-III TTh, MurH 210

15 Newspaper Reporting for Majors (3 cr; prereq 14 with grade C or ‡, ¶Comp 27 or 28)
III-IV MWF, MurH 212, Gerald

18 **Prin Advertising** (3 cr; prereq 13, C avg, ¶Comp 27 or 28)
VI MWF, MurH 311, Mindak

51 **News Editing** (3 cr; prereq 15 or B avg in 13, 14)
Lect VII M, MurH 311, Sim
—1, I-II TTh, MurH 206
—2, VI-VII TTh, MurH 206
—3, I-II TTh, MurH 207

54 **Advertising Layout, Typography** (3 cr; prereq jour adv maj or min in Educ or BA or AFHE or ‡)
Lect III T, MurH 308, Wilson
—1, III-IV MW, MurH 315, 320, Wilson
—2, VI-VII TTh, MurH 315, 320, Wilson

65 Graphic Arts: Processes (3 cr)
8:30-10:00 TTh, MurH 308, Wilson

73 **Magazine Writing** (3 cr; prereq 15 or 41, ‡)
—1, IV MWF, MurH 308, Hage
—2, VI MWF, MurH 302

78 Public Relations Methods (3 cr; prereq 51, 55, 73...or 41, 54, 69)
I MWF, MurH 308, Lindsay

79 **Advertising Copy Writing** (3 cr; prereq 41 or 51, 54, 65)
III MWF, MurH 210, Watters

84 Radio News, Public Affairs (3 cr; prereq 15, ‡)
VI MWF, MurH 212, Lindsay

93 Community Newspaper (3 cr; prereq 41 or 51 or ¶)
10:00-11:30 TTh, MurH 311, Sim

106 Critical Writing (3 cr; prereq up div writing course, ‡)
II TTh, 1 hr ar, MurH 302, Hage

109 History of Journalism (3 cr)
II MWF, MurH 308, Emery

113 Mass Communication Theory (3 cr; prereq jour maj or ‡)
IV MWF, MurH 311, Nixon

118 **Adv Projects** (1-3 cr; prereq sr, jour maj, B avg, ‡)

120 Development of Radio, Television Communications (3 cr; prereq jour maj, 15 or 18... or others, 13 or ‡)
I MWF, MurH 302, Charnley

124 Intl Communications, Foreign Affairs (3 cr, §111; prereq 15 cr soc sci... up div hist or pol sci or intl rel rec)
VII MWF, MurH 302, Nixon

130 Public Opinion, Propaganda (3 cr; prereq 15 cr soc sci)
III MWF, MurH 308, Carter

140 **Interpretation of Contemporary Affairs** (3 cr; prereq sr, 51, 15 cr soc sci)
—1, VI TTh, VII T, MurH 302, Gerald
—2, VI TTh, VII T, MurH 311, Emery

161 Advertising: Newspapers, Other Print Media (3 cr; prereq 18, 54, 79 or ‡...or 41, 54, ‡)
2:30-4:00 TTh, MurH 308, Watters

162 Advertising: Radio, Television Media (3 cr; prereq 18, 79 or ‡)
II MWF, MurH 311, Mindak

163 Advertising Media Analysis (3 cr; prereq sr, 18, 161, 162, ‡...or 161, 162, BA 77 or ‡)
VII MWF, MurH 308, Mindak

177 Freedom of Press, Communications Law (3 cr; prereq 15 cr soc sci) Gerald

200 Scope, Methods of Communications Research (3 cr; prereq cons adv)
VIII-IX W, MurH 311, Jones

224 Seminar: Intl News Communication, Comparative Foreign Journalism (3 cr; prereq 124, 125 or 126, rdg fgn lang) Nixon

277 Govt, Mass Communications (3 cr; prereq 12 cr incl 177, ‡)
III TTh, MurH 206, Gerald

290 Probs: Mass Communications (3 cr; prereq ‡)

Winter and Spring Quarters

11w See 11f: VI MWF

12w See 12f

13w,s See 13f: Lect IV T, rec I-III TTh; VI-VIII TTh(w); I-II MWF, IV T(s)

14w,s Newspaper Reporting for Majors (3 cr; prereq 13 with grade C or ‡, ¶Comp 27 or 28, typ 35 words/min or ¶BA 33) I-II MWF(w); I-III TTh(s); VI-VII TTh(w)

15s See 15f: I-II TTh, 1 hr ar; VI-VII TTh, 1 hr ar

18w,s See 18f: I MWF(s); II MWF(w); VI MWF(w)

41w,s Publications Editing (3 cr; prereq soph, 11 or 13) Lect IV M, lab I-II TTh(w,s); IV-V WF(w,s); VI-VII TTh(s); VIII-IX TTh(w)

51s See 51f: Lect III T, lab VIII-IX MW

53w Picture Editing (3 cr; prereq 41, 51 or ‡) Lect I T, lab II-III TTh

54s See 54f: Lect III T, rec I-II TTh; III-IV MW

55w Newspaper Make-up, Typography (3 cr; prereq maj, 51, ¶56 or ‡) Lect II MTWTh, rec III-IV MW; III-IV TTh; VI-VII WF; VIII-IX TTh

56w Newspaper Editing (3 cr; prereq 55 or ¶) Lect II MTWTh, rec III-IV MW; III-IV TTh; VI-VII WF; VIII-IX TTh

58s Newspaper, Periodical Design, Typography (3 cr; prereq 55, ‡) VI-VII TTh

59w Adv Advertising Typography, Layout (3 cr; prereq 54)) VI-VII TTh

65s See 65f

66s News, Feature Photography (3 cr; prereq 12, 13 or ‡) VI-VIII TTh

69s Business News, Feature Writing (3 cr; prereq 1) II TTh, 1 hr ar; VII MWF

73w See 73f: VI MWF

74w Magazine Editing (3 cr; prereq 55, 73, ‡) VII-VIII M, 1 hr ar

79w,s See 79f: IV MWF(s); VII MWF(w)

82s Supervision of School Publications (3 cr; prereq 41 or 51) VI MWF

85w Television News, Public Affairs (3 cr; prereq 84) VI MWF

90s Mass Communications, News (3 cr; prereq non-jour maj) III MWF

95s Newspaper Mgt (3 cr; prereq 41 or 51) 8:30-10:00 TTh

101w,s Reporting Public Affairs (3 cr; prereq sr, 51) III MWF

103s Literary Aspects (3 cr; prereq ‡) VII MWF

-110w See 109f

113s See 113f: II MWF

115s Communications Analysis: Content, Audiences, Effects (3 cr; prereq BA 5 or Soc 45 or Psy 70 or ‡..Psy 167 rec) II TTh, 1 hr ar

118w,s See 118f

121w The Press in Dynamic Society (3 cr; prereq jour maj, 15 or 18...or others, ‡) IV MWF

122s Current Communications Probs (3 cr; prereq sr, 51) VI-VII T, 1 hr ar

125w Communciation Systems of Free World (3 cr; prereq 15 cr soc sci...up div course intl rel or compar govt rec) VII MWF

126s Communications in Authoritarian Society (3 cr; prereq 15 cr soc sci...up div course in intl rel or compar govt rec) VII MWF

-131w See 130f

-141w See 140f

142s News Interpretation for Radio, Television (3 cr; prereq jour maj, 85, 140...or others, ‡) VI MWF

149w Public Relations Theory (3 cr; prereq sr, 78, 113 or 130...or 15 cr soc sci, ‡) 9:30-11:00 TTh

150s Institutional Public Relations (3 cr; prereq non-jour maj, sr, ‡) 3:30-5:00 MW

161w See 161f: 9:30-11:00 TTh

162w See 162f: III MWF

163s See 163f

164w,s Current Advertising Developments, Probs (3 cr; prereq 54, 79, 163 or ‡) III MWF(s); VII MWF(w)

177s See 177f: IV MWF

190s Adv Probs: Journalistic Writing (3 cr; prereq grad, ‡)

209w Seminar: History of Communications (3 cr; prereq 109, 110, cons adv)

213w Seminar: Mass Communication Theory (3 cr; prereq 113, ‡)

215w-216s‡ Seminar: Communications Analysis (3 cr; prereq 113 or 115, 200, stat or ‡)

221w-222s Communication Agencies as Social Institutions (3 cr; prereq ‡)

-225s See 224f

230s Seminar: Public Opinion, Propaganda (3 cr; prereq 131, cons adv)

264s Seminar: Advertising Research (3 cr; prereq 115 or 218 or ‡)

-278w-279s See 277f

-291w-292s‡ See 290f

LIBRARY (Lib)

Fall Quarter

50 History of Libraries, Librarianship (3 cr)
4:30-5:45 TTh, Lib 4A, Shove

55 Administration (3 cr)
II MWF, Lib 4A, Berninghausen

62 Reference I (3 cr)
III MWF, Lib 4A, Wezeman

70 Selection Library Materials (3 cr)
I MWF, Lib 4A, Zimmerman

83 **Cataloguing, Classification** (3 cr)
—1, IV MWF, Lib 4A, Simonton
—2, 6:30-9:00 M, Lib 4A, Simonton

160 Literature of Social Sciences (3 cr; prereq 62)
9:00-10:30 TTh, Lib 4A, Shove

165 Adv Bibliography (3 cr)
II MWF, Lib 4B, Shove

166 Reference Work (3 cr; prereq 62)
V MWF, Lib 4A, Wezeman

168 Research Methods (3 cr; prereq ‡)
VI MWF, Lib 4A, Simonton

171 Reading Guidance for Children (3 cr; prereq 70)
III MWF, Lib 4B, Zimmerman

177 History of Children's Literature (3 cr)
IV MWF, Lib 4B, Zimmerman

Winter and Spring Quarters

53w School Library Mgt (3 cr; prereq school librarians on cert prog) 4:30-5:45 MW

55w See 55f: 4:30-5:45 TTh

62w See 62f

70s See 70f: 6:30-9:00 Th

74s Materials in Classroom (3 cr; prereq school librarians on cert prog) III MWF

131s Public Library Extension, Development (3 cr; prereq 55) 10:30-12:00 MW

153s History of Books, Printing (3 cr) II MWF

154w The Public Library (3 cr; prereq 55) 1:30-3:00 MW

155w College, University Library (3 cr; prereq 55) VI MWF

156w Special Libraries (3 cr; prereq 55) 1:00-3:00 T

157w School Library Probs (3 cr; prereq 55) VI MWF

161w Literature of the Humanities (3 cr; prereq 62) 9:00-10:30 TTh

162s Literature of Natural Sciences (3 cr; prereq 62) 9:00-10:30 TTh

168w See 168f: II MWF

172w Reading Guidance for Adolescents (3 cr; prereq 70) IV MWF

173w Reading Guidance for Adults (3 cr; prereq 70) II MWF

175s Publishers, Publishing (3 cr) IV MWF

176s Communication Media, Library (3 cr) 10:30-12:00 TTh

181w Adv Subject Cataloguing (3 cr; prereq 83) III MWF

182s Adv Descriptive Cataloguing (3 cr; prereq 83) III MWF

259s Seminar: Probs in Public Librarianship (3 cr; prereq 154) 1:00-3:00 W

272s Seminar: Children's, Young People's Work (3 cr) 1:00-3:00 M

281s Seminar: Theories of Bibliographical Organization (3 cr; prereq 184) 1:00-3:00 W

MATHEMATICS (Math)

Fall Quarter

X **Preparatory Mathematics** (no cr; prereq △)
—1, I MTWThF, FolH 113
—2, III MTWThF, FolH 2
—3, VI MTWThF, FolH 113
—4, VII MTWThF, FolH 2

H **Higher Algebra** (3 or 5 cr; prereq 1 yr elem alg)
—1, I MTWThF, FolH 109
—2, III MTWThF, FolH 113
—3, V MTWThF, FolH 308
—4, VI MTWThF, FolH 301
—5, VII MTWThF, FolH 109
—6, II MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)
—7, IV MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

T **Trigonometry** (3 cr; prereq plane geom, H or HS higher alg)
—1, I MWF, FolH 102
—2, II TThS, FolH 104
—3, V MWF, FolH 2
—4, VI MWF, ME 214
—5, VII MWF, Bu 123
—6, III MWF, AgEng 103 **(StP Campus)** (for AFHE students)

5 Foundations of Arithmetic (3 cr; prereq 1 yr elem alg, 1 yr HS geom)
VII MWF, FolH 301, Miracle

10 **College Algebra** (5 cr; prereq plane geom or △, H or HS higher alg)
—1, I MTWThF, FolH 308
—2, II MTWThF, FolH 301
—3, III MTWThF, FolH 105
—4, IV MTWThF, FolH 308
—5, V MTWThF, FolH 301
—6, VI MTWThF, FolH 2

10H **Honors Course: College Algebra** (5 cr; prereq geom or △, H or HS higher alg △)
II MTWThF, FolH 4

40 **Mathematical Analysis I** (5 cr; prereq 10, T or ¶ or HS trig)
—1, I MTWThF, FolH 301
—2, IV MTWThF, FolH 301
—3, VII MTWThF, FolH 104

40H **Honors Course: Mathematical Analysis I** (5 cr; prereq 10, T or ¶ or HS trig △)
IV MTWThF, FolH 4

53 **Mathematical Analysis II** (5 cr; prereq 40)
—1, III MTWThF, FolH 301
—2, VII MTWThF, FolH 105

54 **Mathematical Analysis III** (5 cr; prereq 53)
—1, I MTWThF, FolH 101
—2, VI MTWThF, FolH 105

55 **Interm Calculus** (3 cr; prereq 54)
—1, I MWF, FolH 105
—2, V MWF, FolH 101

59 Elem Differential Equations (2 cr; prereq 53)
V TTh, FolH 105

60 Synthetic Metric Geometry (3 cr; prereq 40)
VI MWF, FolH 101

62 Theory of Equations (3 cr; prereq 53 or ¶)
VII MWF, FolH 101

100A **Foundations of Arithmetic, Algebra, Geometry** (3 cr; prereq 54, Acad Year Inst or △)
—1, IV MWF, FolH 102, Engeler
—2, VIII MWF, FolH 102, Parker

102A Probability, Statistics (3 cr; prereq 54, Acad Year Inst or △)
II MWF, FolH 104, Hart

106 Differential Equations (3 cr; prereq 55)
III MWF, FolH 101

107 Adv Calculus (3 cr; prereq 55)
II MWF, FolH 101, Gil de Lamadrid

115A Differential Geometry (3 cr; prereq 108)
V MWF, FolH 102, Guggenheimer

121 **Theory of Statistics** (3 cr; prereq 55)
IV MWF, FolH 101, Pruitt

157 Methods of Applied Mathematics (3 cr; prereq 55 or ♯)
II TThS, FolH 101, Turner

170 Modern Algebra (3 cr; prereq 131A)
VI MWF, FolH 110, Kalisch

178A Introd to Probability (3 cr; prereq 108 or 123 or ♯)
11:30-12:45 TTh, FolH 102, Jamison

206 Theory of Functions of Real, Complex Variables (3 cr; prereq 108 or 125B or 159 or ♯)
II MWF, FolH 105, Orey

209A Theory of Finite Riemann Surfaces (3 cr; prereq 174 or 208 or ♯)
V TTh, FolH 101, 1 hr ar, Garsia

210A Foundation of Algebra (3 cr; prereq 172 or ♯)
IV TTh, FolH 101, 1 hr ar, Jonsson

211A Adv Methods of Applied Mathematics (3 cr; prereq 159 or ♯)
1:30-3:00 TTh, FolH 101, Kalisch

212A Point Set Topology (3 cr; prereq 206)
III TTh, FolH 102, 1 hr ar, Slye

244 Wiener's Integral in Function Space (3 cr; prereq course func theory)
VII MWF, FolH 102, Cameron

271 Ordinary Differential Equations (3 cr; prereq 208 or ♯)
III MWF, FolH 102, Loud

284A Stochastic Processes (3 cr; prereq 245 or ♯)
1:30-3:00 TTh, FolH 102, Orey

Winter and Spring Quarters

Xw,s See Xf: I MTWThF(w); III MTWThF(s); V MTWThF(w,s); VI MTWThF(w)

Hw See Hf: I MTWThF; IV MTWThF(StP); V MTWThF; VI MTWThF

Hs See Hf: II MTWThF(StP); III MTWThF; V MTWThF

Tw See Tf: I MWF; I TThS; III MWF; VI MWF; III MWF(StP)

Ts See Tf: I MWF; I TThS; IV MWF; VI MWF; IV MWF(StP)

5w,s See 5f: II MWF(s); VI MWF(w)

10w See 10f: I MTWThF; II MTWThF; V MTWThF; VII MTWThF; II MTWThF(StP)

10s See 10f: I MTWThF; III MTWThF(StP); V MTWThF; VI MTWThF

10Hw Honors Course: College Algebra (5 cr; prereq plane geom or △, H or HS higher alg, △) I MTWThF

20w,s Investment (5 cr; prereq 10) I MTWThF(s); IV MTWThF(w)

21w Life Insurance (3 cr, §BA 113; prereq 20 or 40 or BA 53 or 153 or ♯) II MWF

40w,s See 40f: I MTWThF(s); II MTWThF(w,s); III MTWThF(w); V MTWThF(w,s); VI MTWThF(w); VII MTWThF(s)

40Aw,s Mathematical Analysis I (5 cr; prereq pre-acctg students, 10) I MTWThF(s); III MTWThF(w)

40Hw,s Honors Course: Mathematical Analysis I (5 cr; prereq 10, T or ¶ or HS trig, △) I MTWThF(s); II MTWThF(w)

53w See 53f: I MTWThF; IV MTWThF

53s See 53f: II MTWThF; III MTWThF; V MTWThF

54w See 54f: III MTWThF; VII MTWThF

54s See 54f: I MTWThF; IV MTWThF

55w,s See 55f: I or VI MWF(w); III or VII MWF(s)

59w,s See 59f: I TTh(w); III TTh(s)

60s See 60f: II MWF

62w See 62f: VI MWF

-100Bw-100Cs See 100Af

102Bw Probability, Statistics (3 cr; prereq 102A) II MWF

106s See 106f: I MWF

107w-108s See 107f: V MWF

-108w See 107f

-115Bw-115Cs See 115Af

-122w-123s See 121f

125s Theory of Geometrical Constructions (3 cr; prereq 40) II MWF

125Aw-125Bs Critical Reasoning in Mathematical Analysis (3 cr; prereq 54) III MWF

131Aw-131Bs Adv Algebraic Theory (3 cr; prereq 54) VII MWF

-158w-159s See 157f

-171w-172s See 170f

-178Bw-178Cs See 178Af
-187As Finite Planes, Orthogonal Latin Squares (3 cr; prereq 100B or 131A or ♯) VIII MWF
-207w-208s See 206f
-209Bw-209Cs See 209Af
-210Bw-210Cs See 210Af
-211Bw-211Cs See 211Af
-212Bw-212Cs See 212Af
245Aw-245Bs Lebesgue Integrals (3 cr; prereq 206 or ♯) VII MWF
246w-247s Integration in Function Space (3 cr; prereq 245, ♯) II TTh, 1 hr ar
-272w-273s See 271f
-284Bw-284Cs See 284Af

MUSIC (Mus)

Fall Quarter

A Piano (no cr)
Ar, ScH 107, Weiser, Freed, Hunter

D Voice (no cr)
Ar, ScH 107, Knowles

1 **Fundamentals** (2 cr; prereq non-mus maj)
—1, I MTWTh, NMA 4, Oja
—2, II MTWTh, ScH 104, Oja
—3, V MTWTh, ScH 4, Glemming
—4, VIII-IX TTh, ScH 4, Oja

1T **Theory** (3 cr)
—1, I MTWThF, ScH 3, Barry
—2, III MTWThF, ScH 3, Barry
—3, VI MTWThF, ScH 3, Argento
—4, VII MTWThF, ScH 3, Barry

3T **Theory** (3 cr; prereq 2T)
V MTWThF, ScH 3, Collins

4T **Theory** (4 cr; prereq 3T)
—1, II MTWThF, ScH 103, Malcolm
—2, III MTWThF, ScH 103, Malcolm
—3, VI MTWThF, ScH 103, Malcolm

6T **Theory** (4 cr; prereq 5T)
V MTWThF, ScH 103, Argento

7A Ear Training (2 cr)
I TWThF, ScH 103, Malcolm

10 **Introduction** (5 cr)
VI MTWThF, ScH 4, Houle

11 Piano (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Weiser, Freed, Hunter

11A **Piano: Class Lessons** (2 cr; prereq 1 for non maj, ♯ for others)
Mu Hr IV T, ScH 108
—1, III MWF, MusEd 103, Duckworth (2-3 yrs piano training)
—2, V MWF, MusEd 103, Duckworth (no piano training)
—3, VI MWF, MusEd 103, Duckworth (1-2 yrs piano training)

11H **Honors Course: Piano Class Lessons** (2 cr; prereq maj only, ♯)
III TTh, MusEd 103, Duckworth

12 Voice (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Knowles

12C **Voice: Class Lessons** (2 cr)
Mu Hr IV T, ScH 108
—1, V MWF, MusEd 104, Knowles
—2, VI MWF, MusEd 104, Knowles
—3, VII MWF, MusEd 104, Knowles
—4, IV MWF, MusEd 4, Abelson

13 Violin (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

14 Viola (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

15 Cello (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Jamieson

16 Double Bass (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch

17 Flute (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Opava

18 Oboe (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Angelucci

19 Clarinet or Saxophone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch, Williams, Handlon

20 Bassoon (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Santucci

21 Trumpet (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

22 French Horn (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Speyer

23 Trombone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

24 Tuba (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Walton

25 Percussion (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Dahlgren

26 Harp (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Miller

27 Organ (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, organ lab IV Th, lesson ar, ScH 107, Fleischer

31 Music Literature (2 cr)
II MWF, ScH 108, Ivory

34 **History of Music** (2 cr; prereq 3T)
I MTWThF, ScH 4, Houle

39 Women's Glee Club (1 cr; prereq ♯)
VI MWF, NMA 4, Barry

40 Orchestra (1 cr; prereq ♯)
7:00 pm W, NMA Stage, sectionals ar, Oberg

43 **Chorus** (1 cr, †3 qtrs; prereq ♯)
—1, IV MWF, NMA 4, 5, 7:30 pm T, NH 45, Collins

—2, VIII MWF, NMA 5, NH 45, 7:30 pm T, NH 45, Collins

43S St Paul Campus Chorus (1 cr; prereq ‡) 4:30-6:00 TTh, CofH 225 (StP Campus), Abelson

46 Concert Band (1 cr; prereq ‡)
—1, VIII-IX MWThFS, NMA 4, 5
—2, VIII-IX TWThFS, NMA 4, 5

49 Men's Glee Club (1 cr; prereq ‡)
V MWF, NMA 5, Abelson

60 Instrumental Ensemble (2 cr)
VII MTWThF, ScH 104, Oberg

66 Chamber Singers (2 cr; prereq ‡)
VII MWF, NMA 5, Collins

70 Normal Piano (2 cr; prereq 2 yrs piano)
II TTh, MusEd 103, IV ar, MusEd 2, Duckworth

76 Form, Analysis (3 cr; prereq 6T)
I MWF, ScH 104, Argento

90 Adv Instrumental Ensemble (2 cr; prereq sr, 62)
VII MTWThF, ScH 104, Oberg

97 Counterpoint (2 cr; prereq 6T)
III TTh, ScH 4, Fetler

100 Adv Applied Music (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

104 American Music (2 cr; prereq 36 or 9 cr Amer hist or Amer st, ‡)
III TTh, ScH 104, Riedel

110 Bibliography (3 cr; prereq 36 or 62 or 72 or 99 or ‡)
II MWF, ScH 4, Riedel

118 Piano Literature (2 cr; prereq 12 cr in 11 or ‡)
VI TTh, ScH 104, Weiser

121 Adv Harmony (2 cr; prereq 6T)
II TTh, ScH 3, Argento

124 History of Opera (3 cr; prereq 9 cr mus hist or art hist or theat hist or Eur hist from 1600 or ‡)
VII MWF, ScH 103

127 Composition (2 cr; prereq 99, 123)
II MW, ScH 2, 1 hr ar, Fetler

130A Music of Romantic Period (3 cr; prereq 36)
VII MWF, ScH 4, Riedel

134 History of Church Music (2 cr; prereq 36 or ‡)
VIII-IX T, ScH 103, Riedel

141 Orchestration (2 cr; prereq 6T)
I TTh, ScH 104, Argento

147 Opera Workshop (2 cr)
6:30-8:00 pm M, MusEd 104, Knowles

164 Baroque Era (2 cr; prereq 36)
VII TTh, ScH 4, Houle

204 Applied Music (3 cr, †3 qtrs; prereq entr exam)
Ar, ScH 107

212 Problems (3-9 cr; prereq 110)
VIII W, ScH 2, Riedel, others

227 Seminar: Composition, Orchestration (3 cr)
VI MW, ScH 2, 1 hr ar, Fetler

270 Organization, Guidance of Piano Classes (2 cr, §70, 80; prereq ‡)
II TTh, MusEd 103, IV ar, MusEd 2, Duckworth

Winter and Spring Quarters

Aw,s See Af
Dw,s See Df
1w,s See 1f
1Tw-2Ts See 1Tf: V MTWThF
-2Tw-3Ts See 1Tf
4Tw-5Ts See 4Tf: V MTWThF
-5Tw-6Ts See 4Tf
-7Bw-7Cs See 7Af
11w,s See 11f
-11Bw-11Cs See 11Af
12w,s See 12f
12Cw,s See 12Cf
13w,s See 13f
14w,s See 14f
15w,s See 15f
16w,s See 16f
17w,s See 17f
18w,s See 18f
19w,s See 19f
20w,s See 20f
21w,s See 21f
22w,s See 22f
23w,s See 23f
24w,s See 24f
25w,s See 25f
26w,s See 26f
27w,s See 27f
-32w-33s‡ See 31f: II TTh, 1 hr ar
-35w-36s See 34f
39w,s See 39f
-41w-42s‡ See 40f
43w,s See 43f
-44Sw-45Ss‡ See 43Sf
-47w-48s‡ See 46f: VIII MTTh; VIII MWF; VIII-IX TThF
49w,s See 49f
50w,s Introduction (5 cr) VI MTWThF(w); VII-VIII TTh(s)
-61w-62s‡ See 60f
-67w-68s‡ See 66f
-91w-92s‡ See 90f
-98w-99s See 97f
100w,s See 100f
-105w-106s See 104f
109w Lasso, Palestrina (3 cr; prereq 6 cr mus hist or Renaissance and Baroque art or pol hist to 1700 or gen hist of western phil or ‡) VIII-IX F
-119w-120s‡ See 118f
-122w-123s See 121f
-125w-126s See 124f
-128w-129s See 127f
-131Aw-132As See 130Af
-135w-136s See 134f
-142w-143s See 141f

-148w-149s See 147f
152s Musicology (3 cr; prereq 151) I MWF
-165w-166s See 164f
175w Training in Adv Musicianship (3 cr; prereq 6T) IV MWF
177s Analysis of Contemporary Music (3 cr; prereq 6T) IV MWF
203s Notation of Polyphonic Music (3 cr; prereq ‡) VIII-IX F
204w,s See 204f
212w,s See 212f
-228w-229s See 227f

PHILOSOPHY (Phil)

Fall Quarter

1 **Probs of Philosophy** (5 cr, §1A; prereq 3rd qtr fr)
Lect II MWF, WeH 202, Potter
—1, I TTh, JohH 115
—2, II TTh, JohH 122
Lect IV MWF, WeH 202, Raab
—3, III TTh, WeH 202
—4, IV TTh, JohH 114
2 **Logic** (5 cr, §2A)
Lect I MWF, Bu 120, Potter
—1, I TTh, JohH 313
—2, II TTh, Ph 145
—3, III TTh, WuH 201
Lect III MWF, Bu 120, Maxwell
—4, II TTh, WeH 202
—5, III TTh, Lib 4A
—6, IV TTh, JohH 313
3 Ethics (5 cr; prereq 3rd qtr fr)
II MTWThF, JohH 313, Mason
10 Science, Religion (2 cr; prereq soph)
III MW, WeH 202, Ross
50 History of Western Philosophy (5 cr)
II MTWThF, MMA 100, Allen
105 American Philosophy: Puritanism to Pragmatism (3 cr)
VI MWF, P 2, Ross
108 Political, Social Ethics (3 cr; prereq 3 or ‡)
VI MWF, JohH 106, Raab
112 Plato (3 cr; prereq 50 or ‡)
VI MWF, JohH 306, Allen
154 Symbolic Logic (4 cr; prereq 2 or ‡)
III MTWF, JohH 313, Brodbeck
157 Metaphysics (4 cr; prereq 50 or 51 or 52 or ‡)
II MTWF, Arch 140, Brodbeck
167 Philosophy of History (3 cr; prereq 6 cr phil or 10 cr hist)
IV MWF, JohH 106, Mason
190 Seminar (3 cr; prereq sr, 9 cr or ‡)
210 Seminar: Moral Philosophy (3 cr; prereq 150) Raab
217 Seminar: Social, Political Philosophy (3 cr; prereq ‡) Ross
220 Seminar: Philosophical Analysis (3 cr; prereq 154, 157 or 158) Mason
225 Seminar: Epistemology (3 cr; prereq 158 or ‡) Maxwell
230 Adv History of Philosophy (3 cr)
VII MWF, JohH 105, Allen
244 Seminar: Philosophy of Psychology (3 cr; prereq writ ‡) Feigl

Winter and Spring Quarters

1w,s See 1f: II MTWThF(w,s); IV MTWThF(w); VI MTWThF(s)
2w,s See 2f: I MTWThF(s); II MTWThF(w); III MTWThF(w,s); IV MTWThF(s)
3w,s See 3f: III MTWThF(w,s); IV MTWThF(w)
10w See 10f: III TTh
11s World Religions (5 cr) I MTWThF
40s Logic of Scientific Reasoning (3 cr; prereq 2) IV MWF
-51w-52s‡ See 50f
109s History of Ethics (3 cr; prereq 3 or hist of phil or ‡) IV MWF
-113w See 112f
118w Readings: Medieval Philosophy (3 cr; prereq 50, 51 or ‡) VII MWF
121w Descartes (2 cr; prereq 50 or 51 or 52 or ‡) VII WF
123s Leibniz (2 cr; prereq 121 or ‡) III TTh
131w Hume (3 cr; prereq 52 or ‡) IV MWF
134s Kant (3 cr; prereq 52 or ‡) IV MWF
137w Kierkegaard, Scandinavian Philosophy (3 cr; prereq 50 or 51 or 52 or ‡) VI MWF
138s Contemporary Existentialism (3 cr; prereq 52 or 137 or ‡) VI MWF
140s Contemporary Philosophy (3 cr; prereq 52 or ‡) IV MWF
150s Ethical Theory (3 cr; prereq 3 or ‡) III MWF
151s Aesthetics (3 cr; prereq ‡) III MWF
155w Interm Symbolic Logic (3 cr; prereq 154) III MWF
158w Theory of Knowledge (4 cr; prereq 2 or ‡) II MWF
160s Philosophy of Science (4 cr; prereq 2 or ‡) II MWF
164w Logic of Social Sciences I (3 cr; prereq 15 cr educ or hist or phil or psy or soc sci or ‡) IV MWF
171w Philosophies of India (3 cr; prereq 5 cr or ‡) VII MWF
181w Psychology of Religion (3 cr; prereq 6 cr) VII MWF
182s Philosophy of Religion (3 cr; prereq 6 cr) VII MWF
191w-192s‡ See 190f
194s History and Philosophy of Theology (3 cr; prereq △)
-218w-219s‡ See 217f
-221w‡ See 220f
226s‡ See 225f
231w-232s‡ See 230f: VII MWF
233s Seminar: Philosophy of Religion (3 cr; prereq 182, ‡)

236s Seminar: History of Philosophy of Religion (3 cr; prereq 182, ♯)
241s Seminar: Philosophy of Physical Sciences (3 cr; prereq ♯)
260w-261s‡ Seminar: Metaphysics (3 cr; prereq 157 or ♯)
268w-269s Seminar: Studies in Aesthetics (3 cr; prereq ♯)

POLITICAL SCIENCE (Pol)

Fall Quarter

A State in Modern World (3 cr, †A-B)
III MWF, Bo B6, Lippincott
1 **American Govt, Politics** (3 cr, †1-2, §5)
IV MWF, NH 45, Christensen
5 **American Govt, Politics** (5 cr, §1-2)
VI MTWThF, FraH 102, Hathaway
25 **World Politics** (3 cr)
VI MWF, ChE 240, Mills
51 Field Work: Govt, Politics (3 cr, †51-52; prereq 2 or 5)
III-IV T, ForH 75, Backstrom
60 Legal Systems (3 cr; prereq jr or ♯)
1:30-3:00 TTh, ForH 150, McLaughlin
80 Natl Govt in United States (3 cr, §1-2 or 5)
IV MWF, ForH 185
91H Honors Work (ar cr; prereq 18 cr, cons maj adv)
95 Major Paper (no cr; prereq pol sci maj)
101 American Constitution I (3 cr; prereq 2 or 5)
10:30-12:00 TTh, ForH 115, Chase
116 Local Government (3 cr; prereq 2 or 5 or ♯)
IV MWF, ForH 85, Backstrom
120 Municipal Functions (3 cr; prereq 2 or 5 or ♯)
8:30-10:00 TTh, ForH 150, Peterson
123 Planning (3 cr, §Arch 104 or Econ 110 or Soc 106; prereq sr)
III MWF, Arch 130, Broek, Holloway, Warp, Peterson, Vivrett
124 Recent Social Legislation (3 cr; prereq 6 cr)
10:30-12:00 TTh, ChE 240, Warp
131 Public Administration (3 cr; prereq 2 or 5 or ♯)
II MWF, ForH 185, Short
137 American Political Parties (3 cr; prereq 2 or 5 or ♯)
VII MWF, ME 110, Christensen
141 European Govt, Politics (3 cr, §141-142; prereq B or 12 cr soc sci or ♯)
III MWF, ForH 120, Holt
145 Govt, Politics of Scandinavian Countries (3 cr; prereq 6 cr or 12 cr soc sci)
VI MWF, FolH 12
149 Govt, Politics of British Empire: India, Tropical Colonies (3 cr)
III MWF, ForH 180, Mills
153 Japanese Govt, Politics (3 cr)
IV MWF, ForH 160, Turner
155 Govt, Intl Relations in Latin America (3 cr; prereq 6 cr or ♯)
II MWF, ForH 170, Christensen
160 American Political Thought (3 cr; prereq B or 9 cr soc sci or ♯)
IV MWF, ForH 155, Sibley
164 Development of Political Thought: Ancient (3 cr; prereq B or 9 cr soc sci or ♯)
I MWF, ForH 120, Sibley
167 Political Behavior (3 cr)
1:30-3:00 TTh, ForH 285, Hoffman
180 Intl Law: Pacific Relations (3 cr, †180-181)
8:30-10:00 TTh, ForH 130, McLaughlin
184 Intl Relations, Organization I (3 cr)
I MWF, ForH 180, Levi
194 Intl Politics of Asia (3 cr, §193)
III MWF, ForH 115, Levi
202 Seminar: Constitutional Law (3 cr; prereq 102, 103 or ♯)
VI-VII T, ForH 175, Chase
210 Seminar: Public Admin (3 cr, †210-211-212, cons staff)
3:30-5:00 TTh, Lib 13, Warp
216 Seminar: Comparative European Govt (3 cr; prereq ♯)
VIII-IX W, ForH 75, Turner
225 Readings: Classics of Politics (3 cr; prereq 164, 165 or ¶ or ♯)
VIII-IX T, ForH 346, Lippincott
229 Scope, Methods (3 cr; prereq ♯)
VI-VII W, ForH 175, Lippincott
230 Seminar: Political Behavior (3 cr; prereq 169 or ♯)
VIII-IX Th, ForH 244, Holt
238 Seminar: History, System of Intl Law (3 cr; prereq 181 or ♯)
VI-VII F, ForH 75, McLaughlin
242 Topics: Colonization (3 cr; prereq 195 or ♯)
3:00-5:00 W, ForH 346, Mills
248 Seminar: Intl Organization (3 cr; prereq ♯)
IV-V F, ForH 346, Levi

Winter and Spring Quarters

Aw-Bs See Af: II MWF
-Bw-Cs See Af
1w-2s See 1f: II MWF
-2w-3s See 1f
5w,s See 5f
26w American Foreign Policy (3 cr) VI MWF
27s Analysis of Intl Relations (3 cr; prereq 25 or 26 or ♯) VI MWF
-52w See 51f
-61w‡ See 60f
85w Probs of World Politics (3 cr) VI MWF
93Hw,s Honors Work (ar cr; prereq 18 cr, cons maj adv)
95w,s See 95f
102w American Constitution II (3 cr; prereq 101)) 10:30-12:00 TTh
103s American Constitution III (3 cr; prereq 101 or 102) 10:30-12:00 TTh

108w Legislative Organization, Procedure (3 cr; prereq 2 or 5 or ‡) IV MWF
-117w See 116f
121w Municipal Admin (3 cr; prereq 2 or 5 or ‡) 8:30-10:00 TTh
122s Municipal Probs (3 cr; prereq 121 or ‡)
126w Govt, Economic Order I (3 cr; prereq 2 or 5) 10:30-12:00 TTh
127s Govt, Economic Order II (3 cr; prereq 2 or 5 or ‡) 10:30-12:00 TTh
-132w-133s See 131f
138s American Political Campaigns, Elections (3 cr; prereq 2 or 5 or ‡) VII MWF
-142w See 141f: III MWF
143s Govt of USSR (3 cr; prereq B or 12 cr soc sci or ‡) VI MWF
146w Social Legislation, Social Institutions in Scandinavian Countries (3 cr; prereq 2 or 5 or Soc 1) VI MWF
150w Govt, Politics of British Empire: Development of Dominion Status (3 cr) III MWF
154w Chinese Govt, Politics (3 cr) IV MWF
-156w See 155f
157s Topics: Latin-American Govt (3 cr; prereq 155 or 156 or ‡) II MWF
158w-159s Comparative Govt Systems: Principles, Probs (3 cr; prereq 6 cr up div compar govt or ‡) 1:30-3:00 TTh
161w Probs of Democracy (3 cr; prereq B or 9 cr soc sci or ‡) IV MWF
162s Recent Political Thought (3 cr; prereq B or 9 cr soc sci or ‡) IV MWF
165w Development of Political Thought: Middle Ages (3 cr; prereq B or 9 cr soc sci or ‡) I MWF
166s Development of Political Thought: Early Modern (3 cr; prereq B or 9 cr soc sci or ‡) I MWF
-168w-169s See 167f
-181w-182s See 180f
185w Intl Relations, Organization II (3 cr) I MWF
186s Intl Relations, Organization III (3 cr) I MWF
-203w-204s See 202f
205w-206s Seminar: Administrative Law (3 cr; prereq 18 cr or ‡) VI-VII W
-211w-212s See 210f
213s Probs: Contemporary Latin-American Govt, Politics (3 cr; prereq 155 or 156 or ‡) II MWF
214w Seminar: Political Parties (3 cr; prereq 12 cr or ‡) 1:30-3:30 Th
215s Seminar: Comparative Public Admin (3 cr; prereq 9 cr pub admin and/or comp govt or ‡) 1:30-3:00 Th
-217w-218s See 216f
-226w-227s See 225f
-239w See 238f
240s Intl Constitutional Law (3 cr; prereq 181 or ‡) VI-VII F
-243w-244s See 242f
246w Seminar: East Asian Govt, Intl Relations (3 cr; prereq 245) VIII-IX W
247w Seminar: East Asian Govt, Intl Relations (3 cr; prereq 246) IV-V F

PSYCHOLOGY (Psy)

Fall Quarter

1 **Gen Psychology** (3 cr, †1-2; prereq soph or 3rd qtr fr with B avg)
—1, III MWF, ScH 108, Wright
—2, V MWF, ScH 108, LaBerge
—3, V MWF, NH 45, Sperling
—4, VI MWF, ScH 108, Jenkins
4 **Lab Psychology** (2 cr, †4-5; prereq 2 or ¶1-2)
—1, Lect V T, Bo B6, Russell, others
—2, Lect VII T, Bo B6
—1, Lab VII-VIII M, Psy 211, Russell, others
—2, Lab IX-X T, Psy 211
—3, Lab I-II W, Psy 211
—4, Lab III-IV W, Psy 211
—5, Lab V-VI W, Psy 211
—6, Lab VII-VIII W, Psy 211
—7, Lab IX-X W, Psy 211
—8, Lab III-IV Th, Psy 211
—9, Lab V-VI Th, Psy 211
—10, Lab VII-VIII Th, Psy 211
—11, Lab IX-X Th, Psy 211
—12, Lab I-II F, Psy 211
—13, Lab V-VI F, Psy 211
—14, Lab VII-VIII F, Psy 211
4H **Honors Course: Lab Psychology** (2 cr, †4H-5H; prereq 2 or ¶1-2, △)
—1, Lect V T, Bo B6
—2, Lect VII T, Bo B6
Lab V-VI M, Psy 211, Russell
70 Psychological Measurement (3 cr; prereq 5)
VI MWF, FraH 20, Sperling
101 Experimental Psychology (3 cr, †101-102; prereq 70)
VII MWF, Psy 115, LaBerge
117 Analysis of Behavior (3 cr, §old 165; prereq 2, course above 50)
12:30-1:45 TTh, Ph 133, MacCorquodale
125 **Individual Differences** (3 cr; prereq sr, 5 or 5 cr in stat)
II MWF, C 225, Jenkins
128 Learning (3 cr; prereq 9 cr)
IV MWF, Bu 120, Heron
132 Motivation (3 cr, †132-133; prereq 9 cr)
VI MWF, FraH B25, Russell
135 Occupational Counseling (2 cr; prereq sr, 9 cr or ‡)
VIII-IX M, Psy 115, Lofquist
144 **Abnormal Psychology** (3 cr, †144-145; prereq 9 cr or 6 cr, Zool 3 or 12 cr soc sci)
9:30-10:45 TTh, NH 211, Rosen
151 Animal Psychology (3 cr; prereq 5 or equiv in other sci)
VI MWF, Psy 115, Heron

156 **Psychology of Advertising** (3 cr; prereq 2, prin of econ)
II MWF, Arch 25, Longstaff
160 Personnel Work (3 cr; prereq 5 or 3 cr in stat, prin of econ or ‡)
III MWF, Arch 25, Longstaff
166 Opinion, Communication: Social Factors (3 cr; prereq sr, 140 or Soc 1 or 120 or ‡)
1:30-2:45 TTh, ForH 160, Hall
171 Clinical Psychology (3 cr, †171-172; prereq sr, 145, course in ment meas or stat)
VI MWF, EE 237, Meehl
190 Project (ar cr; prereq sr, ‡)
200 **Systematic Psychology** (3 cr; prereq ‡)
VIII-IX Th, Psy 115, Russell, Lykken
207 Group Dynamics (2 cr; prereq ‡) Schachter
210 Research Probs (ar cr)
221 **Seminar: Personality Research** (3 cr; prereq ‡) Wirt
224 Seminar: Adv Clinical Child Psychology (1 cr; prereq CD 248, ‡) Hafner
227 Seminar: Vocational Rehabilitation Counseling (1 cr; prereq ‡)
IX-X alt F, Psy 109, Lofquist
230 Field Work: Psychometric, Applied Psychology (ar cr; prereq written cons)
235 Clinical Practice in Counseling (1-3 cr; prereq cons adv, ‡) Berdie, Snoxell
240 Seminar: Student Personnel Work (1 cr; prereq ‡) Williamson
244 Research Probs: Experimental Psycho-dynamics (3 cr; prereq 243) Russell
250 Adv Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 229)
IX-X alt F, Psy 109, Lofquist
260 Seminar: Industrial Psychology (3 cr; prereq 1 yr grad work or ‡) Dunnette
265 Seminar: Adv Clinical Psychology (1 cr; prereq 172, adv stat, ‡) Hathaway
270 Adv Psychological Measurement (3 cr)
VI MWF, FraH 20, Sperling
271 Clinical Psychology II: Treatment (3 cr, †271-272-273; prereq 173, 246, PhD cand clin psy)
4:00-5:50 Th, Mayo C-608, Meehl, others
275 Seminar: Student Personnel Work (1 cr; prereq ‡) Volsky
284 Seminar: Psychology of Language (3 cr; prereq ‡) Jenkins
290 Projective Techniques (3 cr; prereq 145, 172)
VIII-IX T, Psy 115, Rosen
295 Seminar: Individual Differences, Applied Psychology (1 cr; prereq written ‡)
VIII-IX alt W, Psy 109, Dunnette

Winter and Spring Quarters

1w-2s See 1f: VII MWF
1s-2s Gen Psychology (6 cr; prereq soph or 3rd qtr fr with B avg) VI MTWThFS
-2w See 1f
4w-5s See 4f: Lect I T, lab I-II Th; II-III T; III-IV F; V-VI T; VII-VIII T; IX-X F
4s-5s Lab Psychology (4 cr; prereq 2 cr or ¶1-2) Lect IV MW, lab V-VI MW; VII-VIII MW; IX-X TTh
-5w See 4f: Lect V T; VII T, lab I-II W; I-II F; III-IV W; III-IV Th; V-VI M; V-VI W; V-VI Th; V-VI F; VII-VIII M; VII-VIII W; VII-VIII Th; IX-X T; IX-X W; IX-X Th
-6s See 4f: Lect VI Th, lab VII-VIII Th
10s Applications of Psychology (3 cr; prereq soph, 2) I MWF
52s Genetic Psychology (3 cr; prereq 2) IV MWF
55s Sensation, Perception (3 cr; prereq 2) 10:30-11:45 MW
70w,s See 70f
-102w See 101f
-118w‡ See 117f
-126w See 125f
-129w See 128f
130w,s Vocational, Occupational Psychology (3 cr; prereq 5 or 5 cr in stat) Lect III TTh, lab III-IV M or VII-VIII F(w); lab V-VI F or VII-VIII F(s)
-133w See 132f
-136w See 135f
137s Occupational Counseling (2 cr; prereq sr, 130) VIII-IX M
140w Social Psychology (3 cr; prereq 5, 9 cr soc sci) 10:50-12:10 TTh
141s Social Psychology of Small Groups (3 cr; prereq 5, 9 cr soc sci) 1:30-2:45 TTh
144w-145s See 144f: 10:50-12:05 TTh
-145w See 144f
148s Physiological Psychology (3 cr; prereq 5 or Zool 3 or ‡) III MWF
155s Industrial Psychology (3 cr; prereq 2, Math 10 or 10 cr in stat) V MWF
156w See 156f: VII MWF
160w See 160f: VI MWF
167w Measurement of Opinions, Attitudes (3 cr; prereq sr, 70) VII MWF
-172w-173s See 171f
190w,s See 190f
-201w-202s See 200f
-208w-209s See 207f
211w, 212s See 210f
219w-220s Psychology of Personality (3 cr; prereq abnor psy, undergrad psy major or ‡) IV MWF(w); Ar(s)
222w, 223s See 221f
225w, 226s See 224f
-228w-229s See 227f
231w, 232s See 230f
-236w-237s‡ See 235f
241w, 242s See 240f
243s Experimental Psychodynamics (3 cr; prereq 145, 129 or 117 or ‡) VI MWF
244w,s See 244f
246s Psycho-Analytic Theory (3 cr; prereq 145, 172) 1:00-3:00 T
-251w-252s See 250f
-261w-262s See 260f

-266w-267s See 265f

270w,s See 270f

-272w-273s See 271f

274s Pre-Clinical Practicum: Clinical Psychology (2 cr; prereq clin psy maj, 172, 291 or ¶291)

-276w-277s See 275f

-285w-286s See 284f

-291w See 290f

296w, 297s See 295f

299w Tabulating Equipment Lab (1 cr; prereq PubH 111)

ROMANCE LANGUAGES

French (Fren)

Fall Quarter

1B **Bgn French: Language, Culture** (5 cr, §1A or 1C or HS Ger)
—1, I MWF, FolH 9, Burks, I TTh, FolH 9, Schaefer
—2, I MWF, FolH 9, Burks, I TTh, FolH 8, Schubert
—3, II MTWThF, FolH 103, Lampert
—4, III MWF, FolH 226, Falk, III TTh, FolH 226, Schaefer
—5, III MWF, FolH 226, Falk, III TTh, FolH 202, Schubert
—6, IV MTWThF, FolH 104, Bieter
—7, V MTWThF, FolH 201, Christianson

1C **Bgn French: Standard** (5 cr, §1A or 1B or HS Fren)
—1, I MTWThF, FolH 226, Kalb
—2, II MTWThF, C 115, Brackney
—3, II MTWThF, FolH 305, Poisson
—4, IV MTWThF, FolH 113, Blodgett
—5, V MTWThF, FolH 226, Gale
—6, V MTWThF, FolH 206, Bjerkness

2C **Bgn French: Standard** (5 cr, §2A or 2B; prereq 1C)
V MTWThF, FolH 8, Green

3C **Bgn French: Standard** (5 cr, §3A or 3B; prereq 2C)
—1, I MTWThF, FolH 201, Green
—2, II MTWThF, FolH 113, Erickson
—3, III MTWThF, FolH 201, Gale
—4, V MTWThF, FolH 202, Lynch

4 **Interm French** (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Fren)
—1, II MWF, FolH 226, Vartanian, II TTh, FolH 226, Christianson
—2, II MWF, FolH 226, Vartanian, II TTh, FolH 108, Kalb
—3, IV MWF, FolH 226, Burks, IV TTh, FolH 226, Green
—4, IV MWF, FolH 226, Burks, IV TTh, FolH 108, Lynch

20 Literary Texts (3 cr; prereq 4)
III MWF, FolH 103, Burks

50 **Reading French: Bgn Course for Juniors, Seniors** (3 cr, §1A or 1B or 1C or HS Fren)
V MWF, FolH 9, Burks

54 **Conversation, Pronunciation** (3 cr; prereq 4)
—1, IV MTThF, FolH 202, Sullivan
—2, V MTThF, FolH 302, Montier

60 Civilization, Culture (4 cr; prereq 4)
II MTWThF, FolH 202

65 Survey of Literature (3 cr; prereq 4)
VI MWF, FolH 302, Brackney

70 17th Century Literature (2 cr, §65; prereq 20)
IV TTh, FolH 304

80 18th Century Literature (2 cr, §66; prereq 20)
III TTh, FolH 103, Vartanian

90 19th Century Literature (2 cr, §67; prereq 20)
IV MF, FolH 103, Falk

100 Phonetics (3 cr; prereq maj or ‡)
III MWF, FolH 203, Sullivan

103 Syntax, Composition (2 cr; prereq maj or ‡)
III TTh, FolH 203, Sullivan

111 19th Century Literature: Drama (2 cr; prereq sr with ‡)
VII-VIII W, FolH 305, Falk

131 19th Century Poetry: Parnassian Poetry, Baudelaire (2 cr; prereq sr with ‡)
VII MF, FolH 305

144 Rousseau (3 cr; prereq sr with ‡)
VI MWF, FolH 203, Vartanian

171 History of Language (3 cr; prereq 1 yr Lat or ‡)
IV T, IV-V Th, FolH 303, Brackney

259 Readings (ar cr)

Winter and Spring Quarters

1Cw-2Cs See 1Cf: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF

-2Bw-3Bs See 1Bf

-2Cw-3Cs See 1Cf

-3Cs See 2Cf

4w,s See 4f: Dem IV MWF, rec IV TTh

20w,s See 20f

-51w-52s See 50f

54w,s See 54f: II MTThF(w,s); III MTThF(w,s); IV MTThF(w,s); V MTThF(w)

55s Adv Conversation (3 cr; prereq 54)
V MWF

56s History of Language (3 cr; prereq 20)
VII MWF

-61w-62s See 60f

-66w-67s‡ See 65f

-71w-72s‡ See 70f

-81w-82s‡ See 80f: III TTh(w); IV TTh(s)

-91w-92s‡ See 90f

-104w-105s See 103f

127s Classical Drama: Moliere (3 cr; prereq sr with ‡) VI MWF

132w 19th Century Poetry: Verlaine, Rimbaud, Mallarme (2 cr; prereq sr with ‡) VII MF

140w 18th Century Novel (3 cr; prereq sr with ♯) VI MWF
157s 20th Century Novel: Gide (2 cr; prereq sr with ♯) VII-VIII W
158s 20th Century Novel: Proust (2 cr; prereq sr with ♯) VII MF
-172w-173s See 171f
-260w-261s See 259f

Italian (Ital)

Fall Quarter

1 **Bgn Italian** (5 cr, §5)
I MTWThF, FolH 302, Paolini
4 Interm Italian (4 cr; prereq 3)
III MTThF, FolH 305½, Paolini

Winter and Spring Quarters

-2w-3s See 1f

Portuguese (Port)

Fall Quarter

1 Bgn Portuguese (3 cr)
III MWF, FolH 409, Floripe

Winter and Spring Quarters

-2w See 1f
3s Interm Portuguese (3 cr; prereq 2) III MWF

Spanish (Span)

Fall Quarter

1A **Bgn Spanish: Conversational** (5 cr, §1B or 1C)
Dem II MTWThF, FolH 201, Cuneo
—1, Lab I MTWThF, FolH 108, Shamblin
—2, Lab I MTWThF, FolH 103, Garofalo
1C **Bgn Spanish: Standard** (5 cr, §1A or 1B)
—1, I MTWThF, FolH 202, Barta
—2, I MTWThF, FolH 207, Courteau
—3, II MTWThF, FolH 3, Jones
—4, V MTWThF, FolH 107, Dudley
1H **Honors Course: Bgn Spanish-Standard** (5 cr, §1A or 1B; prereq △)
—1, III MTWThF, FolH 108, Pattison
—2, IV MTWThF, FolH 203, Estelle
2C **Bgn Spanish: Standard** (5 cr, §2A or 2B; prereq 1C)
III MTWThF, FolH 213, Reyes
3C **Bgn Spanish: Standard** (5 cr, §3A or 3B; prereq 2C)
—1, I MTWThF, FolH 11, Franklin
—2, II MTWThF, FolH 2, Estelle
—3, III MTWThF, FolH 110, Franklin
—4, VI MTWThF, FolH 201, Grismer
20 Interm Grammar, Composition (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
III MTWThF, FolH 11, Narvaez
21 Spanish, Spanish-American Literature, Culture (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
II MTWThF, FolH 208, Rundorff
53 **Composition, Conversation** (3 cr; prereq 20)
—1, IV MWF, Bu 103, Paolini
—2, IV MWF, FolH 11, Narvaez
60 Adv Composition, Conversation (3 cr; prereq 55)
I MWF, FolH 203, Narvaez
65 Spanish Literature: The Middle Ages (3 cr, §68, 69; prereq soph, 21)
VII MWF, FolH 203, Grismer
70 Latin-American Civilization, Culture (3 cr; prereq 20 or 21 or ♯)
III MWF, FolH 202, Cuneo
74 Literature of Spanish America (3 cr; prereq 21)
II MWF, FolH 203, Floripe
80 Spanish American Novel, Social Probs (2 cr; prereq jr or ♯, 6 qtrs)
IV TTh, FolH 201, Cuneo
103 Syntax, Composition (1 cr; prereq 60 or ¶)
V T, FolH 203, Narvaez
110 19th Century Literature (3 cr; prereq 65, 66, 67 or 68, 69)
IV MWF, FolH 201, Pattison
146 Spanish-American Novel, Short Story (3 cr; prereq 65, 66, 67 or 68, 69 or 76)
VII MWF, FolH 201, Floripe
171 History of Language (1 cr, †171-172-173; prereq 20, 1 yr Lat or ♯)
VIII-X Th, FolH 201, Grismer
172 History of Language (1 cr, †171-172-173; prereq 171)
VIII-X Th, FolH 201, Grismer
173 History of Language (1 cr, †171-172-173; prereq 172)
VIII-X Th, FolH 201, Grismer

Winter and Spring Quarters

1Cw-2Cs See 1Cf: I MTWThF; II MTWThF; III MTWThF; IV MTWThF
-2Aw-3As See 1Af
-2Cw-3Cs See 1Cf
-2Hw-3Hs See 1Hf
-3Cw See 2Cf
20w,s See 20f
21w,s See 21f
-54w-55s See 53f
-61w-62s See 60f
66w Spanish Literature: The Renaissance (3 cr, §68, 69; prereq soph, 21) VII MWF
67s Spanish Literature: The Modern Period (3 cr, §68, 69; prereq soph, 21) VII MWF
68w Spanish Literature: Middle Ages through 18th Century (5 cr, §65, 66, 67; prereq soph, 21) VI MTWThF

60s Spanish Literature: 19th Century to Present (5 cr, §65, 66, 67; prereq soph, 21) VI MTWThF
-71w-72s‡ See 70f
-75w-76s See 74f
79s Latin-American Thought: 1850-1957 (2 cr; prereq jr or ♯, 6 qtrs) IV TTh
81w Spanish American Novel, Social Probs (2 cr; prereq jr or ♯, 6 qtrs) IV TTh
-104w-105s See 103f
-111w-112s See 110f
-147w-148s‡ See 146f

SCANDINAVIAN (Scan)

Fall Quarter

1 Bgn Norwegian (5 cr)
II MTWThF, FolH 9, Nelson
4 Adv Norwegian (3 cr; prereq 3)
III TTh and ar, FolH 12, Nelson
7 Bgn Swedish (5 cr)
II MTWThF, FolH 12, Lorenzen
10 Adv Swedish (3 cr; prereq 9)
III MWF, FolH 12, Lorenzen
171 Ibsen, Bgn of Modern Drama (3 cr; prereq 6 or 12 or 8 cr lit)
IV MWF, FolH 12, Gustafson

Winter and Spring Quarters

-2w See 1f
3s Interm Norwegian (5 cr; prereq 2) II MTWThF
-5w-6s See 4f
-8w See 7f
9s Interm Swedish (5 cr; prereq 8) II MTWThF
-11w-12s See 10f
61s Norwegian Conversation (3 cr; prereq 3)
71s Swedish Conversation (3 cr; prereq 9)
161w Late 19th Century Novel (3 cr; prereq 6 or 12 or 8 cr lit) V MWF
162s Contemporary Novel (3 cr; prereq 6 or 12 or 8 cr lit) V MWF
172w Strindberg, Drama in Revolt, Transition (3 cr; prereq 6 or 12 or 8 cr lit) IV MWF
173s Contemporary Theater (3 cr; prereq 6 or 12 or 8 cr lit) IV MWF

SLAVIC AND ORIENTAL LANGUAGES

Arabic (Arab)

Fall Quarter

1 Spoken Arabic (5 cr)
I MTWThF, FolH 304, VII MTWThF, FolH 305½, Saada
51 Dialect Analysis (3 cr; prereq 3 or ♯)
I MWF, FolH 304, VII MTWThF, FolH 305½
61 Arabic Grammar, Reading (3 cr; prereq 2 courses above 50 in foreign lang)
V MTWThF, FolH 304, Rundorff
71 Interm Arabic (3 cr; prereq 63)

Winter and Spring Quarters

-2w-3s See 1f
-52w-53s See 51f
-62w-63s See 61f
-72w-73s See 71f

Chinese (Chin)

Fall Quarter

1 Bgn Chinese (5 cr)
VI MTWThF, FolH 305½, Mather
51 Interm Chinese (3 cr; prereq 3)
II MWF, FolH 302, Wang
56 Composition (2 cr; prereq 3)
II TTh, FolH 305½, Wang
101 Adv Chinese (3 cr; prereq 53)
III WF, Lib 329, Mather
110 Literature in Translation (3 cr; prereq 6 cr lit)
VII MWF, FolH 302, Mather
151 Readings (1-3 cr, §old 161; prereq 103 or ♯)
Mather
191H Honors Course (1-3 cr; prereq 153 or ♯)
Mather

Winter and Spring Quarters

-2w-3s See 1f
-52w-53s See 51f
-57w-58s See 56f
-102w-103s See 101f: III WF(w); III MWF(s)
-111w See 110f
-152w-153s See 151f
-192Hw-193Hs See 191Hf

Japanese (Jap)

Fall Quarter

1 Bgn Japanese (5 cr)
III MTWThF, FolH 304, Copeland
51 Interm Japanese (3 cr; prereq 3)
II MWF, FolH 305½, Copeland
56 Composition (2 cr; prereq 3)
II TTh, FolH 302, Copeland
101 Adv Japanese (3 cr; prereq 53)
IV MWF, FolH 305½, Copeland
110 Literature in Translation (3 cr; prereq 6 cr lit)
I MWF, FolH 305½, Copeland
151 Readings (1-3 cr, §old 161; prereq 103 or ♯)
Copeland
191H Honors Course (1-3 cr; prereq 153 or ♯)
Copeland

Winter and Spring Quarters

-2w-3s See 1f
-52w-53s See 51f
-102w-103s See 101f: II TTh
-111w See 110f
-152w-153s See 151f: IV MWF
-192Hw-193Hs See 191Hf

Oriental (Ortl)

Fall Quarter

75 Asian Civilization: India (3 cr; prereq soph with ‡)
III MWF, ForH 75, Potter

Winter and Spring Quarters

76w Asian Civilization: China (3 cr; prereq soph with ‡) I MWF
78s Asian Civilization: Islamic World (3 cr; prereq soph with ‡) VI MWF

Russian (Russ)

Fall Quarter

1 **Bgn Russian** (5 cr)
—1, I MTWThF, FolH 6, L Alexeev
—2, III MTWThF, FolH 8, Nice
—3, VI MTWThF, FolH 204, Niemi
—4, VII MTWThF, FolH 204, Donchenko
4 Interm Russian (3 cr, §old 51; prereq 3)
II MWF, FolH 11, Nice
56 Conversation (3 cr; prereq 3)
I MWF, FolH 305, W Alexeev
61 Composition (2 cr; prereq 53)
I TTh, FolH 305½, W Alexeev
71 Readings in Literature (3 cr; prereq 53 or ‡)
III MWF, FolH 302, Niemi
75 Civilization, Culture (3 cr; prereq 10 cr hist or lit)
VI MWF, FolH 305, Nice
110 Literature in Translation (3 cr, §old 101; prereq 9 cr lit)
V MWF, FolH 305, Niemi
131 19th Century Poetry (3 cr; prereq 73 or ‡)
II MWF, FolH 108, Niemi
151 Readings (1-3 cr, §old 161) Niemi

Winter and Spring Quarters

-2w-3s See 1f
-5w-6s See 4f
-57w-58s See 56f
-62w-63s See 61f
-72w-73s See 71f
-76w-77s See 75f
-111w-112s See 110f
-132w-133s See 131f
-152w-153s See 151f

Slavic (Slav)

Fall Quarter

113 Old Church Slavic (3 cr; prereq Clas 56) Nice

Winter and Spring Quarters

-114w-115s See 113f

SOCIAL WORK (SW)

Fall Quarter

201 Topics (ar cr; prereq ‡)
206 Readings (ar cr; prereq ‡)
210 Field Instruction (ar cr; prereq ¶265 or ¶275) Whitmore, others
215 Field Instruction (ar cr; prereq 212 Boehm, others
225 Social Policy, Programs I (3 cr)
8:00-9:20 TTh, ForH 115, Newhouse
241 Seminar: History of Social Work (ar cr)
VI-VII T, ForH 467, Konopka
248 Concepts of Human Growth, Behavior in Practice I (3 cr; prereq ¶210 or ‡)
VIII-IX T, VIII Th, ForH 115, Saloshin, Lewis, Hall, Crane
251 Concepts of Human Growth, Behavior in Practice IV (2 cr; prereq ¶215, 250)
IX-X Th, Simon
262 Supervision in Social Group Work (2 cr; prereq ¶215, 260, 277)
II-III T, ForH 346, Pernell
264 Seminar: Admin (ar cr; prereq 226, 260, or ‡)
II-III S, ForH 467, Kidneigh
265 **Social Casework I** (3 cr; prereq ¶210)
—1, II TThS, ForH 175, Whitmore
—2, IV TThS, ForH 175, Whitmore
268 **Social Casework IV** (2 cr; prereq ¶215, 267)
—1, II-III T, ForH 467, Scott
—2, II-III T, ForH 447, Boehm
271 Community Organization (2 cr)
I TTh, ForH 185, Francel
275 **Social Group Work I** (3 cr; prereq SW maj)
Lect III TTh, ForH 150, Konopka
—1, IV Th, ForH 160
—2, II T, ForH 75
278 Social Group Work IV (2 cr; prereq ¶215, 277)
VI-VII Th, ForH 346, Konopka
282 Use of Program in Groups II (1 cr; prereq 275)
II-III Th, ForH 346, Pernell
285 Special Studies (ar cr)
VI-VII T, ForH 130, Francel
298 Seminar: Social Work (ar cr; prereq MSW degree)
3:00-5:00 Th, ForH 467, Kidneigh, Scott

Winter and Spring Quarters

-202w-203s‡ See 201f
-207w-208s‡ See 206f
-211w-212s See 210f
-216w-217s See 215f
221w Seminar for Clinical Field Instructors (ar cr; prereq superv students in field work) I-II W
226w Social Policy, Programs II (2 cr; prereq 225) IV-V T
227s Social Policy, Programs III (2 cr; prereq 226) VI-VII T
228w Social Policy, Programs IV (2 cr; prereq 227) IV-V Th
229s Social Policy, Programs V (2 cr; prereq 228) IV-V Th
242s Seminar: Social Work Education (ar cr; prereq MSW degree) VI-VII T
249w Concepts of Human Growth, Behavior in Practice II (3 cr; prereq 248, ¶211 or ♯) VIII-IX T, VIII Th
250s Concepts of Human Growth, Behavior in Practice III (3 cr; prereq 249, ¶212 or ♯) VIII-IX TTh
252w Concepts of Human Growth, Behavior in Practice V (2 cr; prereq ¶216, 250) IX-X Th
253s Concepts of Human Growth, Behavior in Practice VI (2 cr; prereq ¶217, 250) IX-X Th
260s Prin Administration (3 cr) 8:00-9:30 TTh
263w Admin in Social Group Work (2 cr; prereq ¶216, 260, 278) IV-V T
266w Social Casework II (2 cr; prereq ¶211, 265) I or III TTh
267s Social Casework III (2 cr; prereq ¶212, 265) II or IV TTh
269w Social Casework V (2 cr; prereq ¶216, 267) II-III T
270s Social Casework VI (2 cr; prereq ¶216, 267) II-III T
274w Seminar: Community Organization (ar cr; prereq 271) II-III S
275s See 275f: IV-V TTh
276w Social Group Work II (2 cr; prereq ¶211, 275) IV-V Th
277s Social Group Work III (2 cr; prereq ¶212, 276) II TTh
279w Social Group Work V (2 cr; prereq 278) I-II Th
280s Social Group Work VI (2 cr; prereq 279) II-III Th
281Aw Use of Program in Groups I (2 cr; prereq 275) III TTh
281Bs Use of Program in Groups I (1 cr; prereq 281A) IV Th
285w,s See 285f: III TTh(s); VI-VII T(w)
290w-291s Seminar: Recent Research (ar cr) II-III M
-299w-300s See 298f: 3:00-5:00 W

SOCIOLOGY (Soc)

Fall Quarter

1 Introduction: Man in Modern Society (3 cr)
—1, II MWF, NH 45, Sirjamaki
—2, II MWF, ForH 55, Forster
—3, VII MWF, NH 45, Taylor

1H Honors Course: Introduction—Man in Modern Society (3 cr)
V MWF, ForH 115, Forster

1A Man in Modern Society (3 cr; prereq regis AFHE)
II MWF, Agr 202 (**StP Campus**), Taylor

2 American Community (3 cr; prereq 1 or 1A or 3)
I MWF, ForH 55, Martindale

3 Social Probs (3 cr)
VI MWF, Bo B6, Johnson

14A Rural Sociology for Agriculture Students (3 cr)
V MWF, Hr 102 (**StP Campus**)

45 Social Statistics (5 cr, §BA 5)
Lect VII MWF, ForH 85, Francis
—1, Lab III-IV TTh, ForH 85, Francis, others
—2, Lab VI-VII TTh, ForH 85, Francis, others

50 Theory, Practice of Social Work (5 cr; prereq 3)
IV MTWThF, ForH 120, Cohn

53 Criminology (3 cr; prereq 1 or 1A or ♯)
VII MWF, ForH 55, Donohue

91 Case Method Applied to Study of Human Probs (3 cr; prereq 50 or cons maj adv)
VI MWF, ForH 170, Cohn

97H Tutorial, Honors Work (3 cr; prereq cons maj adv in soc)

106 Planning (3 cr, §Arch 104 or Econ 110 or Pol 123; prereq sr)
III MWF, Arch 130

111 Population Trends (3 cr; prereq 1 or ♯)
V MWF, ForH 155, Francis

118 Delinquent Behavior (3 cr; prereq 53)
10:30-11:45 TTh, ForH 130, Monachesi

120 Social Psychology (3 cr; prereq 1 or ♯)
8:30-9:45 TTh, ForH 155, Rose

125 Opinion, Communication: Social Factors (3 cr; prereq sr, 1 or 120 or Psy 140 or ♯)
1:30-2:45 TTh, ForH 160, Hall

140 Social Organization (3 cr; prereq 1 or ♯)
VI MWF, ForH 120, Gross

141 The Family (3 cr; prereq 1 or ♯)
11:30-12:45 TTh, ForH 155, Johnson

145 Urban Sociology (3 cr; prereq 1 or ♯)
IV MWF, ForH 15, Sirjamaki

146 Industrial, Occupational Sociology (3 cr; prereq 1, 15 cr soc, econ, pol or psy)
II MWF, ForH 180, Gross

160 Rural Community Organization (3 cr; prereq 1 or ♯)
IV MWF, ForH 180, Taylor

162 Rural Social Institutions (3 cr; prereq 1 or ‡)
VI MWF, ForH 155, Taves
170 Analytical Social Theory (3 cr; prereq 1 or ‡)
III MWF, ForH 15, Martindale
203 Seminar: Research Probs in Juvenile Delinquency (2 cr) Monachesi
220 Seminar: Social Psychology (2 cr)
VIII-IX T, ForH 467, Rose
238 Seminar: Principles (3 cr, †238-239)
VI-VII M, ForH 467, Sirjamaki
247 Seminar: Research in Large Scale Organization (2 cr)
VIII-IX W, ForH 175, Gross
251 Probs: Comparative Sociology (2 cr)
VIII-IX Th, ForH 346, Forster
270 Seminar: Social Theory (2 cr)
VI-VII W, ForH 75, Martindale
284 Seminar: Statistical Theory in Relation to Social Theory, Practice (2 cr)
VI-VII F, ForH 467, Monachesi
297 Seminar (ar cr)

Winter and Spring Quarters

1w,s See 1f: I MWF(w); II MWF(s); V MWF(w); VII MWF(s)
1Aw,s See 1Af
2w,s See 2f: I MWF(s); II MWF(w); V MWF (honors section)(w); VII MWF(w)
3w,s See 3f: II MWF(w,s); V MWF(honors section)(s); VII MWF(s)
14w,s Rural Sociology (3 cr) IV MWF(s); VI MWF(w)
14Aw See 14Af
45w,s See 45f
50w See 50f
53w,s See 53f: II MWF
91s See 91f: IV MWF
-98w-99s See 97f
101s Criminological Theories: Historical, Contemporary (3 cr; prereq 1, 53 or ‡) IV MWF
112w World Population Probs (3 cr; prereq 1 or ‡) 12:30-1:45 TTh
117s Scandinavian Folk Movements: Social, Political Significance (3 cr; prereq 1 or ‡) VI MWF
119w Modern Agencies for Control of Juvenile Delinquency (3 cr; prereq 53, 118) 10:30-11:45 TTh
120w See 120f: III MWF
121s Adv Social Psychology (3 cr; prereq 120 or ‡) IV MWF
122w Conflict (3 cr; prereq 1 or ‡) IV MWF
123w Minority Group Relations (3 cr; prereq 1 or ‡) III MWF
126w Family Development (4 cr; prereq 1, CD 80 or ‡) VI-VII TTh
140s See 140f: V MWF
141w,s See 141f: IV MWF(w); 11:30-12:45 TTh(s)
142w Religion as a Social Institution (3 cr; prereq 1 or ‡) VII MWF
144s Social Stratification, Mobility (3 cr; prereq 1 or ‡) VI MWF
151s Comparative Social Organization (3 cr; prereq 20 cr soc or econ or pol or ‡) III MWF
161s Rural Community Analysis (3 cr; prereq sr, 1 or ‡) VI MWF
162w See 162f
171w Social Life, Cultural Change (3 cr; prereq 1 or ‡) IV MWF
172s Backgrounds of Modern Social Thought (3 cr; prereq 1 or ‡) III MWF
180w,s Methods of Social Research (3 cr; prereq 45) II TTh, VII T for SW students(w); VII MWF(s)
182w Statistical Methods (3 cr; prereq 45) V MWF
183s Probs: Social Measurement (3 cr; prereq 45 or 182) V MWF
201w-202s‡ Seminar: Research Probs in Crime, Social Conflict (2 cr) VI-VII TTh
-204w-205s‡ See 203f
227w-228s Seminar: Contemporary Research on Marriage, Family I (3 cr; prereq ‡) II-III TTh
-239w See 238f: VI-VII M
245w-246s‡ Seminar: Research in Urban Sociology (2 cr) VIII-IX M
247w,s See 247f
-252w-253s See 251f
-271w-272s‡ See 270f
-285w-286s‡ See 284f
-298w-299s‡ See 297f

SPEECH AND THEATER ARTS (Spch)

Fall Quarter

5 **Fundamentals** (5 cr, §old 1-2; prereq soph or fr with △)
—1, I MTWThF, FolH 306, Smith, Fletcher, others
—2, II MTWThF, FolH 307, Smith, Fletcher, others
—3, III MTWThF, FolH 307
—4, IV MTWThF, FolH 3
—5, V MTWThF, FolH 306
—6, VI MTWThF, FolH 307
—7, VII MTWThF, FolH 307
6 **Fundamentals** (3 cr, §old 3; prereq 5)
—1, I MWF, FolH 208, Smith, Fletcher, others
—2, IV MWF, FolH 305
9 Freshman Discussion, Debate (1 cr; prereq fr with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro
31 **Theater Arts** (4 cr)
II MWF, ShH 115, Ballet
32 **Bgn Acting: Creative Approach** (3 cr; prereq soph, 31)
II MWF, ScH 19, Adey
33 **Bgn Acting: Technique** (3 cr; prereq 32)
II MWF, NH 304, Rumley

34 **Stagecraft: Construction, Painting** (3 cr; prereq soph, 31)
I-II TS, II Th, ShH 110, Adey

39 Parliamentary Procedures (2 cr; prereq △)
IV MWF, FolH 307, Shapiro

51 **Adv Public Speaking** (3 cr; prereq 5)
—1, II MWF, FolH 306, Shapiro
—2, IV MWF, FolH 306, Scott

55 **Speech Writing, Platform Speaking** (3 cr; prereq 5 or ‡)
II MWF, FolH 409, Smith

65 **Radio, Television Speech** (3 cr; prereq 5)
—1, II MWF, MurH 302, Bormann
—2, III T, III-IV Th, MurH 302, Bormann

66 **Radio, Television Drama** (3 cr; prereq 32, 65)
IV MWF, MurH 302, Snook

67 **Phonetics** (3 cr; prereq 5)
III T, III-IV Th, FolH 409, Fletcher

74 **Play Production in Secondary School** (3 cr; prereq 31)
III MWF, lab ar, ShH 110, Josal

78 **Adv Acting** (3 cr; prereq 32)
IV MWF, NH 304, Backlin

81 **Interpretative Reading** (3 cr; prereq 5)
—1, IV MWF, WeH 306, Fredricks
—2, III-IV T, III Th, WeH 306, Fredricks
—3, VI MWF, WeH 306, Thompson

83 **Interpretative Reading** (3 cr; prereq 81)
III MWF, WeH 306, Thompson

90 **Costuming** (3 cr; prereq 5, 31, 34)
III Th, III-IV TS, NH 304, Moulton

92 **Lighting** (3 cr; prereq 5, 31, 34)
VIII MF, ShH 110, VIII-IX W, ScH Aud, Josal

97 Intercollegiate Oratory, Debate (1-3 cr; prereq soph with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro

101 **Argumentation, Persuasion** (3 cr; prereq 5, Psy 2, 10 cr soc sci)
—1, III MWF, FolH 306, Scott
—2, VI-VII T, VI Th, FolH 306, Howell

106 **Discussion** (3 cr; prereq 5)
VII MWF, FolH 306, Bormann

111 **Stage Direction** (3 cr; prereq sr, 5, 90 or 91 or 92, △)
III MWF, ScH 19, Whiting

115 **Playwriting, Production** (3 cr; prereq 5, 33 or △)
II MWF, WeH 306, Thompson

122 **Research** (3 cr; prereq sr, 5, Psy 2)
I-II T, II Th, FolH 203, Bormann

135 **Production of Television Drama** (3 cr; prereq 65, 66, 78, 111, 112, ‡) Ballet

140 **Voice Science** (3 cr; prereq 5, Psy 2)
IV MWF, FolH 409, Fletcher

152 Hearing Disorders (3 cr; prereq 61, 67, Psy 2 or ‡)
III MWF, Mayo A675, Lassman

157 Clinical Practice in Audiology (3 cr; prereq 153, 155 or ‡) Lassman

161 **Speech Correction** (3 cr, §old 119; prereq 5 or △)
II TThS, FolH 409, Henrikson

164 Clinical Methods, Practice in Speech Pathology (3 cr, §EdCI 174; prereq sr, 162, 163) Henrikson, Starr

171 **History of Theater** (3 cr; prereq sr, 5, 31)
VI T, VI-VII Th, NH 304, Moulton

177 Theater on Tour (3-6 cr; prereq sr, 12 cr above 50, cons fac comm)

181 Readings (ar cr; prereq 5, 6 addtl cr, ‡)

190 Technical Stage Probs (3 cr; prereq 111, 112, 113) Moulton

201 Seminar (1 cr; prereq ‡) Smith, Fletcher

207 Seminar: Persuasion (3 cr; prereq 101, 102, 103, Psy 140) Howell

211 Seminar: Dramatic Theory (3 cr; prereq 171, 172, 173, 9 cr dram lit) Ballet

214 Seminar: Stage Direction (3 cr; prereq 111, 112, 113) Whiting

221 Seminar: Oral Interpretation of Literature (3 cr; prereq 105, 122) Thompson

241 Seminar: Radio Research (2 cr; prereq ‡) Ziebarth

251 Seminar: Listening Comprehension (2 cr; prereq undergrad maj spch, ‡)
VIII-IX W, AgEng 221 (StP Campus), Nichols

261 Seminar: Speech Pathology (3 cr; prereq 122, 163 or ‡) Henrikson

267 Seminar: Experimental Phonetics (2 cr; prereq 67, 142) Fletcher

270 Adv Clinical Audiology (3 cr; prereq 153, ¶157, ‡) Lassman

271 Seminar: Hearing (3 cr; prereq 153, 155, ‡) Lassman

281 Seminar: Organic Disorders (2 cr; prereq 261, 262, 263, ‡) Henrikson

291 Research (ar cr)

Winter and Spring Quarters

5w,s See 5f

6w,s See 6f: I MWF(w,s); II MWF(w,s); III MWF(s); IV MWF(w)

6As Voice, Articulation (3 cr; §old 3A; prereq 5, ‡) VII MWF

9w See 9f

31w,s See 31f

32w,s See 32f: II MWF(w,s); III MWF(w); IV MWF(s); VI MWF(w,s)

33w,s See 33f

34w See 34f: I-II MF, II W

34s See 34f

51w,s See 51f

55s See 55f: II MWF; IV MWF

56w‡ See 55f

65w,s See 65f: II MWF

66w See 66f

67w,s See 67f: I MWF(s); II MWF(w)

69w Radio, Television Production (3 cr; prereq 65) II T, II-III Th

75w Play Production in Secondary School (3 cr; prereq 5, 32, 74) III MWF
76s Play Production in Secondary School (3 cr; prereq 75 or 112 or ♯) III MWF
78w-79s‡ See 78f
81w-82s See 81f: II MWF(w); III MWF(s); III-IV T, III Th(w); VI MWF(w)
81s See 81f: III-IV T, III Th
82w-83s‡ See 83f: IV MWF
83w See 83f
91w Scene Design (3 cr; prereq 5, 31, 34) III TThS, IV ThS
92s Lighting (3 cr; prereq 5, 31, 34) III TThS, IV ThS
97w See 97f
-102w-103s‡ See 101f
105s Theory of Reading, Acting (3 cr; prereq 5, 82, 83, Psy 2) VI MWF
106w,s See 106f
-112w-113s‡ See 111f
117s Writing Radio, Television Drama (3 cr; prereq 5, 32 or △) II MWF
126s History, Criticism of Public Address (3 cr; prereq 5, Psy 2) VI MWF
131w Creative Dramatics (3 cr; prereq 5, 31 or elem educ maj or ♯...32 rec) VII MWF
132s Children's Theater (3 cr; prereq 5, 31 or ♯) VII MWF
-136w-137s‡ See 135f
141w Anatomy, Physiology of Voice Mechanism (3 cr; prereq 67 or ♯, Psy 5) IV MWF
142s Physical Bases, Instrumentation of Speech (3 cr; prereq 67, 140 or ♯, Psy 5) IV MWF
153w Audiometry, Hearing Aids (3 cr; prereq 152 or ♯) III MWF
155s Lip Reading, Lip Reading Methods (3 cr; prereq 152 or ♯) III MWF
157w,s See 157f
162w-163s‡ Speech Pathology (3 cr, †162-163; prereq 61, 67, 161) VI M, VI-VII T(w); Ar(s)
-165w-166s See 164f
169w Speech, Language in Human Behavior (3 cr) VI MWF
170s Radio, Television Programming (3 cr; prereq 65 or 66 or ♯) II MWF
-172w-173s‡ See 171f
178s Theater on Tour (3-6 cr; prereq sr, 12 cr above 50, cons fac comm)
-182w-183s‡ See 181f
-191w-192s‡ See 190f
201w,s See 201f
-208w‡ See 207f
-212w-213s‡ See 211f
-215w-216s See 214f
-222w-223s‡ See 221f
233s Seminar: Adv Probs (3 cr; prereq undergrad maj spch, ♯)
-242w-243s‡ See 241f
251w,s See 251f
-262w-263s‡ See 261f
268w See 267f
-272w-273s See 271f
276w Seminar: Rhetoric (3 cr; prereq 109 or ♯)
-282w-283s‡ See 281f
-292w-293s‡ See 291f

STATISTICS (Stat)

Fall Quarter

181A Topics (3 cr, §Econ 181A; prereq Econ 121C or ¶ or ♯)
221A Statistical Theory A (3 cr; prereq Econ 121C, Math 123 or ITM 134, ¶Math 107 or ITM 151A or ♯)
8:30-10:00 TTh, JohH 126, Olkin
231A Linear Models (3 cr; prereq ¶221A or ♯) 10:30-12:00 MW, JohH 126, Sobel
301 Seminar, Workshop (1-3 cr; prereq ♯) 11:30-1:30 F, JohH 126

Winter and Spring Quarters

†181Bw-181Cs‡ See 181Af
221Bw Statistical Theory B (3 cr; prereq 221A, ¶Math 131A or ITM 142 or ♯) 8:30-10:00 TTh
221Cs Statistical Theory C (3 cr; prereq 221B or ♯) 8:30-10:00 TTh
231Bw Linear Models (3 cr; prereq ¶221B) 10:30-12:00 MW
231Cs Linear Models (3 cr; prereq ¶221C) 10:30-12:00 MW
281As Adv Topics (3 cr; prereq ♯)
301w,s See 301f

ZOOLOGY (Zool)

Fall Quarter

51 Animal Parasitology (5 cr, §Ent 51; prereq 3 or Biol 3)
Lect VI MWF, Z 313, Wallace
—1, Lab III-IV MWF, Z 208
—2, Lab VII-VIII MWF, Z 208
—3, Lab I-II MWF, Z 208 (Med Tech only)
54 Histology (5 cr; prereq 3 or Biol 3, not open to predent or premed students)
Lect I TThS, Z 313, Olson
—1, Lab II-IV TTh, Z 201
—2, Lab VI-VIII TTh, Z 201
65 Animal Ecology (3 cr; prereq 3 or Biol 3A)
Lect VII TTh, Z 211, Underhill, lab ar
82 Organic Evolution (3 cr; prereq 3 or Bot 3 or Biol 3)
VIII MWF, Z 211, Merrell
83 Genetics, Eugenics (3 cr; prereq 3 or Bot 3 or Biol 3)
II MWF, Z 313, Reed
84 Genetics Lab (1 cr; prereq 83 or ¶ or ♯)
—1, VII-VIII T, Z 202, Merrell
—2, VII-VIII W, Z 202
100 Zoological Techniques (ar cr; prereq grad)

112 **Adv Gen Physiology** (3 cr; prereq 15 cr incl 3 or Biol 3, ‡)
II MWF, Z 323, Brokaw

121 **Ichthyology** (3 cr, §Ent 121; prereq 15 cr incl 3 or Biol 3)
Lect III MWF, Z 211, Eddy
Lab IV MWF, Z S3

125 **Adv Entomology** (4 cr, §Ent 125; prereq 15 cr incl 52 or ‡)
Lect I TTh, Z 402, Cook
Lab II-IV TTh, Z 402

138 Seminar: Biophysics (2 cr; prereq grad) 3:00-5:00 T, Z 323, Schmitt

144 **Medical Entomology** (3 cr, §Ent 144; prereq 15 cr incl 52, ‡)
Lect VI TTh, Z 208, Price
Lab VII-VIII TTh, Z 208

155 Biophysics (3 cr; prereq 28 cr betw phys, biol, ‡...phys chem, physiol rec) Schmitt, Benolken

170 **Adv Genetics** (3 cr; prereq 15 cr incl 83, ‡) VI MWF, Z 323, Merrell

184 Physiology of Development (4 cr; prereq 182, ‡) Spratt

197 Problems (ar cr; prereq 3 or Biol 3 or ‡)

201 Research: Entomology (ar cr)

211 Research: Ecology (ar cr) Eddy, Underhill

217 Research: Physiology (ar cr) Brokaw, Richards

221 Research: Biophysics (ar cr) Schmitt

229 Research: Histology (ar cr) Olson

233 Research: Embryology (ar cr) Spratt

237 Research: Cytology (ar cr) Gall

242 Insect Physiology (4 cr, §Ent 242; prereq 15 cr zool or ent, ‡...50 rec)
Lect VI WF, CofH 8, Richards
Lab VII-IX WF, CofH 8

244 Research: Protozoology (ar cr) Kerr

251 Research: Genetics (ar cr) Reed, Merrell

261 Research: Parasitology (ar cr) Wallace

291 Seminar (no cr)

296 Seminar: Research Fields (ar cr)

Winter and Spring Quarters

50s Gen Physiology (5 cr; prereq 3 or Biol 3 or 15 cr bot, 10 cr chem or ‡) Lect IV MWF, lab I-III TTh; VI-VIII WF; VII-IX TTh

52w Entomology (5 cr, §Ent 52; prereq 3 or Biol 3) Lect VII MWF, lab V-VI MWF; VIII-IX MWF

53s Fauna of Central United States (5 cr; prereq 3 or Biol 3) Lect VII MWF, lab V-VI MWF; VIII-IX MWF; VI-VIII TTh

56w Comparative Anatomy (5 cr; prereq soph, 3 or Biol 3) Lect III TThS, lab III-IV MWF; VI-VIII MW; VI-VIII TTh

57w-58s Ornithology (3 cr, †57-58; prereq 3 or Biol 3) Lect VII TTh, lab VIII-IX TTh (w); Lect III TTh, lab I-II TTh(s)

59 Gen, Comparative Embryology (5 cr; prereq 3 or Biol 3) Lect I TTh, lab VI-VIII TTh, conf II and/or III S

81w Invertebrate Zoology (3 cr; prereq 3 or biol 3) Lect II TTh, lab I-II WF

83s See 83f

84s See 84f

-101w See 100f

102s See 100f

107s Protozoology (4 cr; prereq 15 cr incl 3 or Biol 3 or Bot 3 or ‡) Lect VI TTh, lab VII-VIII TTh

110s Animal Behavior (3 cr; prereq 15 cr incl 3 or Biol 3, ‡) IV MWF

113w Topics: Adv Gen Physiology (3 cr; prereq 15 cr incl 3 or Biol 3, ‡) Lect II TTh, lab ar

117s Field Ecology (3 cr, §Ent 117; prereq 15 cr incl 3 or Biol 3) II TTh; lab ar

118w Animal Ecology (3 cr, §Ent 118; prereq 15 cr incl 3 or Biol 3, ‡) VI T, VI-VII Th

-126w-127s See 125f: I MWF, lab II-V M

138w,s See 138f

140s Biological Microscopy (4 cr, §Ent 140; prereq sr, 15 cr zool or bot or ent, ‡) Lect VI WF, lab VII-IX WF

145w Parasitic Protozoa (3 cr, §Ent 145; prereq 15 cr incl 3 or Biol 3, ‡) Lect VI TTh, lab VII-VIII TTh

146s Helminthology (3 cr, §Ent 146; prereq 15 cr incl 3 or Biol 3, ‡) Lect VI TTh, lab VII-VIII TTh

-156w-157s See 155f

160w-161s Cytology (3 cr; prereq 15 cr incl 3 or Biol 3, ‡) Lect II MF, lab III-IV MF

171w Genetics of Speciation (3 cr; prereq 15 cr incl 83 or ‡) VI MWF

175s Human Genetics (3 cr; prereq 83, ‡) VIII MWF

182s Experimental Embryology (5 cr; prereq sr, 50, 59, ‡) Lect III-IV MW, lab ar

-198w-199s See 197f

-202w-203s See 201f

-212w-213s See 211f

-218w-219s See 217f

-222w-223s See 221f

-230w-231s See 229f

-234w-235s See 233f

236s Gen Ecology of Insects (3 cr; prereq 15 cr zool or ent) Lect VI TTh, lab VII-VIII TTh

-238w-239s See 237f

-243w See 242f

-245w-246s See 244f

-252w-253s See 251f

259w Experimental Ecology Lab (2 cr; prereq 118 or ¶)

-262w-263s See 261f

-292w-293s See 291f

-297w-298s See 296f

UNATTACHED COURSES

Biology (Biol)

Fall Quarter

1 **Gen Biol** (3 cr, †1-2-3, §Bot 1 or 4 or Zool 1, §old Zool 14 or NSci 7)
—1, Lect II TTh, Bo B6
—2, Lect III TTh, MNH Aud
—3, Lect IV TTh, NH 45
—4, Lect VI TTh, ScH 108
—5, Lect IV WF, Bo B6
—1, Lab I-II MF, Z 101
—2, Lab III-IV MF, Z 101
—3, Lab V-VI MF, Z 101
—4, Lab VII-VIII MF, Z 101
—5, Lab I-II TTh, Z 101
—6, Lab III-IV TTh, Z 101
—7, Lab V-VI TTh, Z 101
—8, Lab VII-VIII TTh, Z 101

1A **Gen Biol** (2 cr, †1A-2A-3A, §Bot 1 or 4 or Zool 1, §old Zool 14 or NSci 7)
—1, Lect II TTh, Bo B6
—2, Lect III TTh, MNH Aud
—3, Lect IV TTh, NH 45
—4, Lect VI TTh, ScH 108
—5, Lect IV WF, Bo B6
—1, Dem I W, Z 101
—2, Dem II W, Z 101
—3, Dem III W, Z 101
—4, Dem IV W, Z 101
—5, Dem V W, Z 101
—6, Dem VI W, Z 101
—7, Dem VII W, Z 101
—8, Dem VIII W, Z 101

Winter and Spring Quarters

-2w-3s See 1f
-2Aw-3As See 1Af

Linguistics and Comparative Philology (Ling)

Fall Quarter

151H Honors Course (1-3 cr)

Winter and Spring Quarters

-152Hw-153Hs‡ See 151Hf

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING

Aeronautical Engineering (Aero)

Fall Quarter

4 **Aero-Space Survey, Laboratory** (1 cr)
VIII M, AE 209

20 **Flying: Theory, Practice** (2 cr)
V Th, ME 321

21 **Flying: Theory, Practice** (2 cr; prereq 20)
VI Th, ME 321

22 **Flying: Theory, Practice** (2 cr; prereq 21)
VI Th, ME 321

46 **Link Instrument Flying** (no cr; prereq ♯)

102A **Theoretical Aerodynamics III** (3 cr; prereq 101A or 107)
III MWF, AE 215

108 **Applied Aerodynamics III** (3 cr; prereq 107A)
III MWF, AE 209

115A **Structural System Analysis I** (3 cr; prereq 114, MM 193)
IV MWF, AE 209

130A **Aero-Space System Design** (4 cr; prereq ¶108, ¶115A)
—1, VI-VIII MW, AE 305
—2, VI-VIII T, III-V Th, AE 305

138 **Summer Engineering Employment** (1-3 cr; prereq 4th yr, ♯)

139 **Summer Engineering Employment** (1-3 cr; prereq 138)

180 **Flight Trajectory in Atmosphere, Space** (3 cr; prereq 102A or ♯)
II-III T, III Th, AE 211

193 **Probs: Aero-Space Engineering** (2-6 cr; prereq ♯)

201 Aerodynamics of Compressible Fluid (3 Cr; prereq 106 or ♯)
I T, I-II Th, AE 211

205 Boundary Layer Theory (3 cr; prereq 103 or ♯)

272 Research (3-6 cr; prereq ♯)

Winter and Spring Quarters

-5w-6s See 4f
20w,s See 20f
21w,s See 21f
22w,s See 22f
46w,s See 46f
100Aw,s Theoretical Aerodynamics I (3 cr; prereq ITM 26A, Hydr 101) II MWF(s); III MWF(w)
101As Theoretical Aerodynamics II (3 cr; prereq 100A) III MWF

106Aw Applied Aerodynamics I (3 cr; prereq 102A) III MWF
107As Applied Aerodynamics II (3 cr; prereq 106A) III MWF
110w Compressible Viscous Flow (3 cr; prereq 102A) II MWF
114s Analysis of Structural Components (3 cr; prereq MM 41, 150) II MWF •
116Aw Structural System Analysis II (3 cr; prereq 115A) IV MWF
117As Analysis of Load-Carrying Surfaces (3 cr; prereq 115A) II MWF
-131Aw-132As See 130Af
141s Experimental Aerodynamics (3 cr; prereq 102A) VII-IX MW; VII-IX TW
150s Aeroelasticity I (3 cr; prereq 107...or 102, MM 193) 3:30-5:00 MW
159w Aerodynamic Retardation (3 cr; prereq 102 or 107 or ‡) 3:30-5:00 MW
184w Interm Gas Dynamics (3 cr; prereq 102A) IV MWF
185s Rarefied Gas Dynamics (3 cr; prereq 110 or ‡) IV MWF
-194w-195s See 193f
-202w-203s† See 201f
-206w-207s See 205f
220w Astronautics (3 cr; prereq 201, ITM 152, 153 or ‡) II-III T, III Th
-273w-274s See 272f

Mechanics and Materials (MM)

Fall Quarter

27 **Rigid-Body Mechanics I** (3 cr; prereq ITM 25A, Phys 14)
—1, II MWF, AE 209
—2, VII MWF, AE 209
28 **Rigid-Body Mechanics II** (3 cr; prereq 27, ITM 26A)
—1, I MWF, AE 215
—2, III MWF, AE 327
—3, III MWF, AE 321
—4, III MWF, AE 319
—5, III MWF, AE 317
—6, III MWF, AE 309
—7, III MWF, AE 211
—8, VI MWF, AE 215
—9, VII MWF, AE 215
40 **Deformable-Body Mechanics I** (3 cr; prereq 27)
—1, II MWF, AE 327
—2, II MWF, AE 321
—3, II MWF, AE 319
—4, II MWF, AE 317
—5, II MWF, AE 309
—6, II MWF, AE 211
—7, IV MWF, AE 327
—8, IV MWF, AE 321
—9, IV MWF, AE 319
—10, IV MWF, AE 317
—11, IV MWF, AE 309
—12, IV MWF, AE 211
142 **Experimental Mechanics** (2 cr; prereq 40)
—1, Lect V TTh, AE 327
Lab VI-VII M, Ex 130
—2, Lect V TTh, AE 327
Lab VIII-IX M, Ex 130
—3, Lect V TTh, AE 321
Lab VI-VII T, Ex 130
—4, Lect V TTh, AE 321
Lab VIII-IX T, Ex 130
—5, Lect V TTh, AE 319
Lab VI-VII Th, Ex 130
164 **Problems** (3 cr; prereq ‡)
180 **Introd to Theory of Elasticity** (3 cr; prereq 40, ITM 149)
V MWF, AE 327
183 **Applied Plasticity** (3 cr; prereq 28, 41)
VI MWF, AE 15
187 **Theory of Linear Viscoelasticity** (3 cr; prereq 41, ITM 148 or 150A)
VII MWF, AE 15
193 **Introd to Theory of Mechanical Vibrations** (3 cr; prereq 29, ITM 26 or 26A or 80)
IV MWF, AE 215
199 **Thermal Stresses** (3 cr; prereq 180, ME 133)
V MWF, AE 19
213 Theory of Non-linear Vibrations (3 cr; prereq 211, 212, or ‡)
VI MWF, AE 19
297 Seminar (0-3 cr)
VII-IX Th, AE 215

Winter and Spring Quarters

27w,s See 27f: II MWF(s); IV MWF(w,s)
28w,s See 28f: II MWF(w); VI MWF(s); VII MWF(w)
29w,s Rigid-Body Mechanics III (3 cr, §Phys 100; prereq 28) I MWF(w); III MWF(w); IV MWF(s); VI MWF(w)
40w,s See 40f: II MWF(s); VI MWF(w); VII MWF(s)
41w,s Deformable-Body Mechanics II (3 cr; prereq 40) II MWF(w); IV MWF(w,s)
92w Statics (4 cr; prereq arch or combined engr-bus students, ITM 24A or 91) I MTWTh
93s Solid Mechanics for Architects (4 cr; prereq 92) Lect I MTTh, lab I W; II W; I F; II F
142w See 142f: Lect V TTh, lab I-II T; VI-VII M; VI-VII T; VI-VII Th; VI-VII F; VIII-IX M; VIII-IX T
142s See 142f: Lect V TTh, lab I-II Th; III-IV T; VI-VII M; VI-VII T; VI-VII W; VI-VII Th; VI-VII F; VIII-IX M; VIII-IX T
150w Rheology, Strength of Solids (3 cr; prereq 41, Met 56) 9:30-11:00 TTh
-165w-166s See 164f
181w Deformable-Body Mechanics III (3 cr; prereq 41 or 180) V MWF
182s Deformable-Body Mechanics IV (3 cr; prereq 41 or 180) V MWF
193s See 193f: VI MWF

196w Probs: Adv Rigid-Body Dynamics (3 cr; prereq 193 or ITM 162 or EE 150 or Phys 102) III MWF

202s Gyroscopic Instruments, Other Applications of Adv Dynamics (3 cr; prereq 196) III MWF

211w Theory of Vibrations I (3 cr; prereq 193, ITM 148 or 150A) VI MWF

212s Theory of Vibrations II (3 cr; prereq 193, ITM 148 or 150A) VI MWF

295w-296s Theory of Elasticity with Applications (3 cr; prereq 180, ¶ITM 173, 174) V MWF

-298w-299s‡ See 297f

AGRICULTURAL ENGINEERING (AgEn)

Fall Quarter

8 **Laboratory: Units, Measurements** (1 cr) VIII-IX T, AgEng 101, Flikke, Larson

82 **Soil, Water Mgt** (3 cr) 1:00-2:30 TTh, AgEng 305, Manson

101 **Summer Employment I** (2 cr; prereq 4th yr or △) Schwantes

102 **Summer Employment II** (2 cr; prereq 101) Schwantes

141 **Agricultural Drainage** (3 cr; prereq 82, Hydr 103, Soil 19) I MWF, AgEng 305, Manson

191F **Probs: Farmstead Equipment, Operations** (2-6 cr; prereq ‡)

191P **Probs: Power, Machinery** (2-6 cr; prereq ‡)

191S **Probs: Soil Moisture** (2-6 cr; prereq ‡)

200 Seminar (1 cr; prereq ‡)

211 Adv Probs, Research (2-6 cr; prereq 191 or 192 or 193)

Winter and Spring Quarters

9w Laboratory: Materials (1 cr) VIII-IX T

10s Laboratory: Applications (1 cr) VIII-IX T

62w Farm Structures (3 cr; prereq MM 41 or ¶) Lect VI WF, lab VII-IX F

72s Principles of Farm Machinery (3 cr; prereq ME 24 or ¶) VI TTh, lab VII-IX Th

125s Topics: Agricultural Physics (3 cr; prereq Phys 50 or inte calc, 25)

142w Erosion Control (3 cr; prereq 82, Hydr 103, Soil 19) I MWF

143s Irrigation (3 cr; prereq 82, Hydr 103, Soil 19) I MWF

147w Design, Mgt of Farm Machinery (3 cr; prereq 72) Lect VI TTh, lab VII-IX Th

159s Instrumentation (3 cr; prereq EE 37) Lect VII MW, lab VIII-X W

167w Adv Farm Structures (3 cr; prereq ME 160, CE 37) Lect VI TTh, lab VII-IX Th

170w Agricultural Tractors (3 cr; prereq ME 121, 150) Lect II TTh, lab VII-IX T

171w Design of Agricultural Machinery (3 cr; prereq 147, ME 121) Lect VII M, lab VIII-X M, VII-IX W

172s Agricultural Machine Analysis (3 cr; prereq 171, MM 142) Lect VI T, lab VII-IX T, VI-VIII Th

176s Mgt of Power, Machinery (3 cr; prereq 147) Lect IV MW, lab ar

179w Agricultural Process Engineering (3 cr; prereq ME 160) Lect IV TTh, lab VII-IX F

180w Agricultural Hydrology, Flood Control (3 cr; prereq 142 or ¶) VI MWF

181s Field Probs in Soil-Water Mgt (3 cr; prereq 141, 142, 143 or ¶143) Lect I T, lab II-IV TTh

-192Sw-193Ss‡ See 191Sf

-192Pw-193Ps‡ See 191Pf

-192Fw-193Fs‡ See 191Ff

200w,s See 200f

-212w-213s‡ See 211f

ARCHITECTURE (Arch)

Fall Quarter

51 **History** (4 cr; prereq 2nd yr for IT or 3rd yr for SLA) II MTWF, Arch 130

71 **Building Technology** (4 cr; prereq 2nd yr) III-IV TTh, Arch 130

74 **Building Technology** (4 cr; prereq 73) III-IV TTh, Arch 145

81 **Architectural Design I** (6 cr, †81-82-83; prereq 2nd yr for IT or 3rd yr for SLA, △) VI W, VI-IX MThF, VII-IX W, Arch 210, VI W, Arch 130

82 **Architectural Design I** (6 cr, †81-82-83; prereq 81) VI W, VI-IX MThF, VII-IX W, Arch 210, VI W, Arch 130

83 **Architectural Design I** (6 cr, †81-82-83; prereq 82) VI W, VI-IX MThF, VII-IX W, Arch 210, VI W, Arch 130

91 **Architectural Design II** (6 cr, †91-92-93; prereq 83) VI-IX MWThF, Arch 220, VI M, Arch 130

92 **Architectural Design II** (6 cr, †91-92-93; prereq 91) VI-IX MWThF, Arch 220, VI M, Arch 130

93 **Architectural Design II** (6 cr, †91-92-93; prereq 92) VI-IX MWThF, Arch 220, VI M, Arch 130

101 **Tutorial Work in History** (2 cr; prereq 53)

104 **Planning** (3 cr, §Econ 110 or Pol 123 or Soc 106; prereq 4th yr) III MWF, Arch 130

110 **Planning** (ar cr; prereq 105)

111 **Architectural Design III** (8 cr, †111-112-113; prereq 93, MM 93) VI-IX MTWThF, 4 hrs ar, Arch 230, VI Th, Arch 130

112 **Architectural Design III** (8 cr, †111-112-113; prereq 111)
VI-IX MTWThF, 4 hrs ar, Arch 230, VI Th, Arch 130
113 **Architectural Design III** (8 cr, †111-112-113; prereq 112)
VI-IX MTWThF, 4 hrs ar, Arch 230, VI Th, Arch 130
121 **Architectural Design IV** (9 cr, †121-122; prereq 113, CE 41)
VI-IX MTWThF, 7 hrs ar, Arch 240, VI F, Arch 130
122 **Architectural Design IV** (9 cr, †121-122; prereq 121)
VI-IX MTWThF, 7 hrs ar, Arch 240, VI F, Arch 130
123 **Thesis** (12 cr; prereq 122)
36 hrs ar, Arch 240
201 Research: History (ar cr; prereq 53)
231 Planning (ar cr; prereq cons grad adv)
251 Architectural Design VI (ar cr; prereq 123)

Winter and Spring Quarters

1s Introduction (1 cr) VI T
-52w-53s See 51f
54s Structures in Architecture (1 cr) IX Th
-72w-73s See 71f
-75w-76s See 74f
-82w-83s See 81f
91w,s-92w,s-93w,s See 91f-92f-93f
-102w-103s See 101f
105w Planning (3 cr; prereq 104)
106s Planning (3 cr; prereq 104 or Econ 110 or Pol 123 or Soc 106)
110w,s See 110f
111w,s-112w,s-113w,s See 111f-112f-113f
121w,s-122w,s See 121f-122f
123w,s See 123f
201w,s See 201f
-232w-233s See 231f
-251w-252s See 250f

CHEMICAL ENGINEERING (ChEn)

Fall Quarter

100 **Stoichiometry** (3 cr; prereq 3rd yr)
—1, I MWF, ChE 162, Tsuchiya
—2, III MWF, ChE 150, Madden
—3, VII MWF, ChE 50, Ceaglske
101 **Principles** (5 cr; prereq 3rd yr, ¶PCh 101)
Lect II MWF, ChE 240, Ranz
—1, Rec I TThS, ChE 154, Fredrickson
—2, Rec II TThS, ChE 40, Scriven
—3, Rec II TThS, ChE 50, Isbin
—4, Rec III TTh, ChE 150, II S, ChE 154, Ranz
111 **Laboratory** (2 cr; prereq 101)
Conf II T, ChE 240, Fredrickson
—1, Lab VI-IX M, ChE 3 fl, Fredrickson
—2, Lab VI-IX W, ChE 3 fl, Scriven
—3, Lab VI-IX Th, ChE 3 fl, Preckshot
—4, Lab VI-IX F, ChE 3 fl, Madden
116 **Process Evaluation, Design** (3 cr; prereq 103)
III MWF, MinMet 116, Preckshot
153 **Problems** (ar cr)
155 **Problems** (ar cr)
161 **Nuclear Reactor Design** (3 cr; prereq ‡)
I MWF, ChE 40, Isbin
171 **Process Control** (3 cr; prereq 4th yr or ‡)
IV MWF, ChE 50, Ceaglske
201 Seminar (1 cr)
VI T, ChE 240, Isbin
205 Physical Rate Processes, Transfer Operations (3 cr; prereq 103, ‡)
208 Physical Rate Processes, Transfer Operations (3 cr; prereq 103, ‡)
VI MWF, ChE 40, Ranz
211 Molecular Theory of Transport Processes (3 cr; prereq PCh 110, 111, 212 or ‡) Dahler
214 Adv Mathematics for Chemical Engineers, Chemists (3 cr; prereq diff equat)
VIII-IX TTh, ChE 240, Amundson
225 Fluid Mechanics, Related Topics (3 cr; prereq ‡)
I-II TTh, ChE 54, Aris
264 Survey (1 cr; prereq ‡)
301 Research (ar cr)
302 Research (ar cr; prereq 301)

Winter and Spring Quarters

-102w See 101f, Lect II TThS, rec I MWF; II MWF; III MWF
103s Principles (3 cr; prereq 102) Lect II TTh, rec I MW, II MW; III MW
-112w-113s See 111f
-117w-118s See 116f: VII-VIII T, VIII -IX Th
119w-120s Thermodynamics (3 cr; prereq PCh 101) Lect I TTh, rec II MW; VII WF; VII W, II F; VIII MW
122w Biochemical Engineering (3 cr; prereq 103, Bact 53 or ‡) I TThS
123s Biochemical Engineering Lab (3 cr; prereq 122) VI-IX TTh
131w-132s Chemical Reactor Analysis (3 cr; prereq 120, PCh 109) I MTWF
153w-154s‡ See 153f
-154w-155s‡ See 153f
-162w-163s See 161f
-172w-173s See 171f: Lect IV TTh, lab VI-IX W or F(w); IV MWF(s)
-202w-203s‡ See201f
-206w-207s‡ See 205f
-209w-210s See 208f
-212w-213s See 211f
-215w-216s See 214f
217w Analysis of Probs (3 cr; prereq 216)
218s Adv Topics (3 cr) V MWF
219w-220s Adv Thermodynamics (3 cr; prereq 120 or ‡)
-226w-227s See 225f
264w,s See 264f

301s See 301f
-302w-303s See 301f
-303w See 302f

CHEMISTRY

Analytical Chemistry (AnCh)

Fall Quarter

57 **Quantitative Analysis** (4 cr; prereq InCh 11 or 26)
Lect VI MWF, C 410, Herr
—1, Lab VII-IX MW, VIII-IX F, C 310
—2, Lab VI-IX TTh, C 310 (for premed, dent, med tech, IT phys students)
96 **Senior Thesis** (ar cr; 4th yr)
100 **Quantitative Analysis: Gravimetric** (2 cr; prereq InCh 26)
VI MWF, C 325, Meehan
104 **Qualitative Inorganic Microanalysis** (3 cr; prereq 102 or 102A)
Lect VI F, C 315, Sandell, lab ar
106 **Technical Analysis** (2 or 3 cr; prereq 102 or 102A) Sandell
111 **Physico-Chemical Methods of Analysis** (3 cr; prereq 102 or 102A, PCh 103 or 103H)
III TWTh, C 315, Kolthoff
123 **Analysis of Complex Materials** (1-3 cr; prereq 112) Meehan
131 **Solution Equilibria** (2 cr; prereq PCh 103 or 103H)
II TTh, C 215, Bruckenstein
141 **Seminar: Modern Probs** (1 cr; prereq 102 or 102A, PCh 103 or 103H)
IV T, C 325
201 Topics (ar cr; prereq 102 or 102A)
235 Seminar: Research (ar cr)
VIII-IX Th, C 315
262 Survey (1 cr; prereq ♯)
301 Research: Quantitative Analysis (ar cr)

Winter and Spring Quarters

57s See 57f
-97w-98‡ See 96f
101w Theory of Volumetric Analysis (3 cr; prereq 100) VI MWF
102s Gravimetric, Volumetric Analysis Lab (4 cr; prereq 101) VI-IX MWF
102As Gravimetric, Volumetric Analysis Lab (3 cr; prereq 101, chem engr) VI-IX TTh
103s Quantitative Inorganic Microanalysis (3 cr; prereq 102 or 102A) Lect VI F, lab ar
105w Polarizing Microscope (3 cr; prereq PCh 101 or 101A) Lect VI F, lab ar
-107-108s‡ See 106f
112w Physico-Chemical Methods of Analysis Lab (2 cr; prereq 111) VI-IX MW; VI-IX TTh
122s Adv Analytical Chemistry (2 cr; prereq 102 or 102A) III TTh
132w Electrochemical Methods of Analysis (2 cr; prereq PCh 103 or 103H) II TTh
133s Electrochemical Methods of Analysis (2 cr; prereq 132) II TTh
134w Electrochemical Methods of Analysis Lab (1-2 cr; prereq 132 or ¶)
135s Electrochemical Methods of Analysis Lab (1-2 cr; prereq 133 or ¶)
138s Adv Volumetric Analysis (3 cr; prereq 131)
140w Water Analysis (2 cr; prereq 102 or 102A)
142w Seminar: Modern Probs (1 cr; prereq 141) IV T
143s Seminar: Modern Probs (1 cr; prereq 142) IV T
-202w-203s‡ See 201f
-236w-237s‡ See 235f
262w,s See 262f
-302w-303s‡ See 301f

Inorganic Chemistry (InCh)

Fall Quarter

4 **Gen Inorganic Chemistry** (5 cr, †4-5; prereq HS alg)
—1, Lect VI MWThF, C 100, Britton
Lab VI-IX T (for med, med tech, SLA, dent, ed students)
—2, Lect VII MTWF, C 100, Brasted
Lab VI-IX Th (for med, med tech, dent, SLA, nurs, nurs ed, PubH nurs students)
—3, Lect VII TWF, C 325, Conroy
Quiz VII Th, C 100
Lab VI-IX M (VII M, C 410, Sept 26 only) (for AFHE students)
—4, Lect VIII TWThF, C 100, Bent
Lab VI-IX M (VIII M, C 410, Sept 26 only) (for AFHE, SLA students)
11 **Semimicro Qualitative Analysis** (4 cr; prereq 5 or 15 or 25)
Lect I MWF, C 325, Johnson
Lab VI-IX W (for AFHE, SLA students)
14 **Inorganic Chemistry** (4 cr, †14-15; prereq Phys 12 or △)
—1, Lect I MTWThF, C 100, Tobias
Lab VII-IX Th
—2, Lect I MTWThF, C 100, Tobias
Lab VII-IX F
—3, Lect IV MTWThF, C 100, Johnson
Lab VII-IX T
—4, Lect IV MTWThF, C 100, Johnson
Lab VII-IX W
24 **Chemical Principles** (5 cr, †24-25)
Lect II MWF, C 100, O'Connor
Lab I-III TTh (for IT chem, SLA chem, pharm, ed students)
26 **Chemical Principles** (5 cr; prereq 25)
Lect I MWF, C 325, Johnson
Lab VI-VIII MW (for IT chem, SLA chem students)
96 **Senior Thesis** (ar cr; prereq 4th yr)

103 **Atomic Structure, Properties of Elements Based Thereon** (3 cr; prereq PCh 103 or 103H)
III MWF, C 225, Reynolds
134 **Seminar: Modern Probs** (1 cr; prereq PCh 103 or 103H)
IV Th, C 215
203 Atomic Structure, Chemical Bond (4 cr; prereq PCh 103, OrCh 62)
III MWF, C 215, Hugus
211 Topics (ar cr; prereq △)
222 Adv Lab Methods (ar cr; prereq ♯) Tobias
260 General Survey (1 cr)
301 Research (ar cr)

Winter and Spring Quarters

4w-5s See 4f: Lect III MWThF, lab VI-IX M; VI-IX T; Lect V MWThF, lab VI-IX W; VI-IX Th; VI-IX F
-5w See 4f
11s Semimicro Qualitative Analysis (4 cr; prereq 5 or 15 or 25) Lect VI MWF, lab VI-IX T; Lect VII MWF, lab VI-IX Th; Lect IV MWF, lab VI-IX M
-15w See 14f
-25w-26s See 24f
25Hw-26Hs Honors Course: Chemical Principles (5 cr, †24-25; prereq 24) Lect II MWF, lab I-III TTh
-97w-98s‡ See 96f
104w The More Representative Elements (3 cr, grad 4 cr; prereq 103 or ♯) III MWF
107s Oxidation-Reduction Systematics (3 cr; prereq PCh 101 or 101H) VII MWF
122s Adv Inorganic Chemistry Lab (2 cr; prereq AnCh 102 or 102A, PCh 103 or 103H, 105) Lect V Th, lab VII-IX TTh; VII-IX WF
-135w-136s‡ See 134f: IV Th(w,s)
204w Adv Inorganic Chemistry (4 cr; prereq 203 or ♯) III MWF
205s Adv Inorganic Chemistry (4 cr; prereq 204 or ♯) III MWF
-212w-213s‡ See 211f
260w,s See 260f
-302w-303s‡ See 301f

Organic Chemistry (OrCh)

Fall Quarter

42 **Organic Chemistry** (4 cr; prereq 41)
Lect V MTWThF, C 100, Leete
—1, Lab VI-IX Th, C 390
—2, Lab VI-IX F, C 390
61 **Organic Chemistry** (4 cr, †61-62; prereq 12 cr chem)
Lect I MTWF, C 410, Kreevoy
Lab Conf V T, C 410
—1, Lab VI-IX T, C 390
—2, Lab VI-IX W, C 390
—3, Lab I-IV Th, C 390 (for chem, pharm students)
Lect III MWThF, C 410, Dodson
Lab Conf IV Th, C 410
—4, Lab VI-IX M, C 390
—5, Lab II-IV T, C 390
—6, Lab VI-IX T, C 390
—7, Lab VI-IX Th, C 390
63 **Organic Chemistry** (3 cr; prereq 42 or 62)
III MWThF, C 325, Noland
64 **Laboratory** (3 cr; prereq 63 or ¶)
Lab Conf VII M, C 325, Dodson
—1, Lab VI-VIII TTh, C 390
—2, Lab VII-IX WF, C 390
96 **Senior Thesis** (ar cr; prereq 4th yr)
102 **Qualitative Analysis** (4 cr; prereq 63, 64)
III T, C 225, Fenton
201 Seminar (1 cr)
7:30-8:30 pm W, C 325
220 Survey (4 cr; prereq 63, 64)
I MTWThF, C 315, Parham
223 Stereochemistry (3 cr; prereq 220 or ♯)
II MWF, C 315, Lauer
238 Research (4 cr; prereq 63, 102)
III TTh, C 215, Koelsch
261 General Survey (1 cr)
301 Research (ar cr; prereq 102, △)

Winter and Spring Quarters

16s Carbon Compounds (4 cr; prereq InCh 15) I MTWF
17s Carbon Compounds Lab (1 cr; prereq 16 or ¶) Lab conf I Th, lab III-IV T; VI-VII M; VIII-IX M
41s Organic Chemistry (4 cr; prereq InCh 5) Lect IV MTWThF, lab VI-IX Th; VI-IX F
61w-62s See 61f: Lect IV MTWF, lab conf IV Th, lab I-IV Th; VI-IX M; VI-IX T; VI-IX W; VI-IX Th
-62w See 61f: Lect I MTWF, lab conf V Th, lab I-IV Th; VI-IX T; VI-IX W; Lect III MWThF, lab conf IV Th, lab II-V T; VI-IV M; VI-IX T; VI-IX Th
63s See 63f
64s See 64f: Lab conf VII M, lab II-IV, VI-VIII T; VI-VIII TTh; VII-IX WF
-97w-98s‡ See 96f
101w Interm Organic Chemistry (3 cr; prereq 63, 64) III MWF
130s Quantitative Analysis (3 cr; prereq 63, 64, AnCh 101, 102 or 102A, ♯)
139w Adv Laboratory (2-5 cr; prereq 63, 64) IX T
143s Chemistry of Natural Products (3 cr; prereq 63, 64) II TThS
144w Heterocyclic Compounds (3 cr; prereq 63, 64) III TThS
-202w-203s‡ See 201f
221w Survey (4 cr; prereq 220 or ♯) I MWF, II Th
222s Theoretical Organic Chemistry (3 cr; prereq 220, PCh 103, calc or ♯) I MWF

224w Survey (4 cr; prereq 220 or ‡) II MWF, I Th
239w-240s Research (4 cr; prereq 102, 238 or ‡)
246s Organic Instrumental Analysis (3 cr; prereq ‡) VI-IX F
250s Theoretical Organic Chemistry (3 cr; prereq 222 or ‡, inte calc) III TThS
261w,s See 261f
-302w-303s See 301f

Physical Chemistry (PCh)

Fall Quarter

96 **Senior Thesis** (ar cr; prereq 4th yr)
101 **Physical Chemistry** (4 cr; prereq 1 yr col chem, Phys 9 or ¶ with △, ITM 25A or Math 53)
IV MWFS, ME 18, Livingston
101H **Honors Course: Physical Chemistry** (4 cr; prereq 1 yr col chem, Phys 9 or ¶ with △, ITM 25A or Math 53, △)
IV MWFS, C 410, Prager
104 **Laboratory** (1-2 cr; prereq 101 or 101H or ¶)
Lect V M, C 325, Lipsky
—1, Lab VII-VIII M, VI-VIII W, C 190
—2, Lab VI-VIII T, VII-VIII Th, C 190
—3, Lab III-IV T, II-IV Th, C 190
107 **Physical Chemistry for Premedical Students** (3 cr, †107-108; prereq 1 yr col chem, 1 yr col phys, Math 40)
Lect IV MWF, C 325, Lumry
—1, Lab II-IV T, C 190
—2, Lab II-IV Th, C 190
—3, Lab VI-VIII F, C 190
109 **Physical Chemistry** (4 cr; prereq 103 or 103H)
I MWFS, C 225, Moscowitz
110 **Thermodynamics, Chemistry** (4 cr; prereq 103 or 103H, calc)
IV MWF, C 225, Wertz
118 **Quantum Theory** (3 cr; prereq 103 or 103H, calc)
IV MWF, C 111
128 **Colloid Chemistry** (3 cr; prereq 103 or 103H)
II MWF, C 111, Reyerson
132 **Colloid Chemistry Lab** (1-2 cr; prereq 128 or ¶) Reyerson
204 Atomistics (4 cr; prereq 118, 212)
III TThS, C 115, Mead
221 Seminar: Radiation Chemistry (ar cr) Reyerson
250 Seminar: Physical Chemistry (1 cr)
7:30 pm W, C 225, Overend
259 Seminar: Chemical Kinetics (ar cr) Livingston
263 General Survey (1 cr)
265 Seminar: Magnetochemistry (ar cr) Wertz
268 Seminar: Statistical Mechanics (ar cr) Prager
271 Seminar: Biological Systems (ar cr) Lumry
274 Seminar: Quantum Mechanics (ar cr) Mead
290 Topics (ar cr)
301 Research (ar cr)

Winter and Spring Quarters

-97w-98s‡ See 96f
-102w-103s See 101f
-102Hw-103Hs See 101Hf
-105w-106s See 104f
-108w See 107f
111w See 110f
115w History of Chemistry (3 cr) VIII TTh
117s Fundamentals of Reaction Kinetics (3 cr; prereq 103 or 103H) IV MWF
129w Adsorption, Catalysis (3 cr; prereq 128) II MWF
130s Colloids in Industry (3 cr; prereq 128) II MWF
-133w-134s‡ See 132f
175s Photochemistry (3 cr; prereq 103 or 103H, Phys 9) IV TThS, Livingston
-205w-206s See 205f
212 Statistical Mechanics (4 cr; prereq 111)
214w Kinetics, Mechanism of Enzymic Reactions (3 cr, §PhCh 214; prereq 103 or 103H, ‡)
-222w-223‡ See 221f
-251w-252s‡ See 250f
-260w-261s‡ See 259f
263w,s See 263f
-266w-267s‡ See 265f
-269w-270s‡ See 268f
-272w-273s‡ See 271f
-275w-276s‡ See 274f
-291w-292s‡ See 290f
-302w-303s‡ See 301f

CIVIL ENGINEERING

Civil Engineering (CE)

Fall Quarter

1 **Laboratory** (1 cr)
VII-IX M, ME 18
18 **Surveying** (3 cr; prereq ITM 12, EG 14)
—1, Lect I TTh, E 215
—2, Lect I TTh, E 203
—3, Lect IV TTh, E 215
—4, Lect VII TTh, E 215
—1, Lab VI-IX M, E 316A
—2, Lab VI-IX T, E 316A
—3, Lab VI-IX W, E 316A
—4, Lab VI-IX Th, E 316A
—5, Lab VI-IX F, E 316A
—6, Lab I-IV S, E 316A
—7, Lab I-IV T, E 316A
—8, Lab I-IV Th, E 316A
31 **Structural Analysis** (3 cr; prereq EG 14, MM 27)
—1, Lect II MWF, E 305
—2, Lect VI MWF, E 305
—1, Lab VII-IX M, E 315

—2, Lab II-IV T, E 315
—3, Lab VII-IX T, E 315
—4, Lab II-IV Th, E 315

37 Structural Engineering (3 cr; prereq MM 40)
Lect V TTh, Ex 22
Lab VI-VII T, Ex 22

38 Structural Design: Steel (3 cr; prereq MM 93)
—1, I MWF, E 305
—2, III MWF, E 305

51 Highways, Pavements (3 cr; prereq ¶MM 40)
—1, Lect V M, Ex 193, V F, ChE 240
—2, Lect V T, AE 19, V F, ChE 240
—3, Lect V W, Ex 193, V F, ChE 240
—1, Lab VII-IX M, Ex 177
—2, Lab VII-IX T, Ex 177
—3, Lab II-IV W, Ex 177
—4, Lab VII-IX W, Ex 177
—5, Lab VII-IX Th, Ex 177
—6, Lab VII-IX F, Ex 177

109 Geodetic Surveying (3 cr; prereq 23 or ‡)
III MWF, E 316A

124 Railway Engineering (3 cr; prereq 23 or ‡)

130 Statically Indeterminate Structures (3 cr; prereq 33)
—1, Lect IV TTh, Ex 193
—2, Lect VI TTh, Ex 193
—1, Lab VII-VIII T, Ex 193
—2, Lab VII-VIII Th, Ex 193

136 Adv Structural Analysis (3 cr; prereq 132)
II MWF, Ex 22

141 Reinforced Concrete (3 cr; prereq 33)
—1, Lect I TTh, Ex 22
—2, Lect II TTh, Ex 22
—1, Lab VII-IX M, TSCE 220
—2, Lab VII-IX W, TSCE 220
—3, Lab VII-IX Th, TSCE 220
—4, Lab VII-IX F, TSCE 220

144 Prestressed Reinforced Concrete (3 cr; prereq 142)
VI MWF, Ex 193

146 Concrete, Concrete Materials (3 cr; prereq 51 or ¶)
Lect II TTh, Ex 193
—1, Lab VI-IX T, Ex 93
—2, Lab VI-IX F, Ex 93

153 Soils in Highway Engineering (3 cr; prereq 53)
IV MWF, Ex 193

156 Highway Traffic Engineering (3 cr; prereq 52)
Lect IV TTh, Ex 22
Lab VII-IX Th, E 302

158 Airport Design (3 cr; prereq 52)
I MWF, ChE 150

160 Applied Hydraulics (3 cr; prereq Hydr 103, 104)
Lect III MW, Ex 193
—1, Lab VII-IX M, E 302
—2, Lab VII-IX W, E 302

161 Hydrology (3 cr; prereq Hydr 101 or 103)
Lect VI MW, Ex 22
Lab VII-IX F, E 315

166 Water Power (3 cr; prereq 161)
Lect V TTh, E 315
Lab VI-VIII Th, E 315

169 Public Works Engineering (3 cr; prereq 52)
III TTh, Ex 250

170 Water Supply (3 cr; prereq 160)
Lect I MWF, Ex 22
Lab VII-IX T, E 302

172 Sanitary Lab (3 cr; prereq 5th yr)

173 Sanitary Engineering Probs: Water (3 cr; prereq 170)
II MWF, Ex 250

176 Seminar: Sanitary Engineering (1 cr; prereq 5th yr)

234 Adv Theory of Structures (3-5 cr; prereq 132, 142)
I MWF, AE 19

276 Adv Sanitary Engineering: Water (3-5 cr; prereq 173)

280 Research (3-5 cr; prereq ‡)

281 Research (3-5 cr; prereq 280)

282 Research (3-5 cr; prereq 281)

Winter and Spring Quarters

-2w-3s See 1f: VII-IX M(s); VII-IX T(w); VII-IX W (w,s)

17s Surveying (3 cr; prereq not open to IT students, ITM 12) Lect IV TTh, lab VI-IX F

-19w-20s See 18f: Lect I TTh(w,s); IV TTh(w,s); VI TTh(s); VII TTh(w), lab I-IV T(w,s); I-IV Th(w,s); I-IV S(s); VI-IX M(s); VI-IX T(w,s); VI-IX W(w,s); VI-IX Th (w,s); VI-IX F(w,s)

32w-33s Structural Design (3 cr; prereq 31, MM 40) Lect II MWF; VI MWF, lab I-III Th(w); II-IV T(s); VII-IX M(w,s); VII-IX T(w); VII-IX W(s); VII-IX F(w,s)

34s Drafting Room Practice (2 cr; prereq ¶33) Lect IV T; V F, lab II-IV Th; VII-IX M; VII-IX W; VII-IX Th

39w Structural Design: Steel, Timber (3 cr; prereq 38) I MWF; III MWF

41s Structural Design: Concrete (3 cr; prereq 39) I MWF; III MWF

52w Highways, Pavements (3 cr; prereq 51) Lect V MF; V TF; V WF, lab I-III T; VII-IX M; VII-IX T; VII-IX W; VII-IX Th; VII-IX F

53s Soil Mechanics (3 cr; prereq 52 or none for Min, Geol majors) Lect III TTh; V MW; V TTh, lab I-III Th; IV-VI W; VII-IX M; VII-IX W; VII-IX Th; VII-IX F

111s Land Surveying (3 cr; prereq 23 or ‡) III MWF

112w Aerial Surveying, Photogrammetry (3 cr; prereq 23 or ‡) III MWF

131w Structural Analysis (2 cr; prereq 130) Lect VI T, lab VII-IX T; Lect VI Th, lab VII-IX Th

132s Structural Design (2 cr; prereq 131) Lect VI T, lab VII-IX T; Lect VI Th, lab VII-IX Th

136s See 136f

137w Structural Lab (3 cr; prereq 141, ¶131) Lect III TTh, lab VI-VIII T; VII-IX W; VI-VIII Th

142w Reinforced Concrete Design (3 cr; prereq 130, 141) Lect I TTh; II TTh; lab VIII-IX M; VIII-IX T; VIII-IX Th; VIII-IX F

143s Arch Analysis, Design (3 cr; prereq ‡) I TTh, II T

144s See 144f: IV MWF

146s See 146f: Lect I TTh, lab VI-IX T

147w,s Foundations (3 cr; prereq 141) I MWF (w,s); II MWF(w)

148w Probs: Concrete (2-3 cr; prereq 146) VII-IX MW

151s Adv Highway Lab (3 cr; prereq 52) VI-IX MW

152s Highway Design (3 cr; prereq 52) III MWF

153s See 153f

159w Soil Mechanics (3 cr; prereq 53) IV MWF

160s See 160f: Lect II TTh, lab VII-IX T or F

161w See 161f: Lect I TTh, lab II-IV T; VII-IX W

171w,s Sewerage, Sewage Treatment (3 cr; prereq 161, 170) Lect III MWF, lab VII-IX W(w); Lect I MWF: VI MWF, lab VII-IX T; VII-IX F(s)

174w Sanitary Engineering Probs: Sewage, Industrial Wastes (3 cr; prereq 171) II MWF

175s Industrial Waste Disposal (3 cr; prereq 174) II MWF

-177w-178s‡ See 176f

-235w-236s‡ See 234f: II MWF

251w,s Adv Soil Mechanics Lab (3 cr; prereq 159 or ¶) VI-IX MF(w); VI-IX TF(s)

252w,s Adv Soil Mechanics Lab (3 cr; prereq 251) VI-IX MF(w); VI-IX TF(s)

261w Water Plant Design (3-5 cr; prereq 173)

262s Sewage Plant Design (3-5 cr; prereq 174)

264w Sanitary Engineering Unit Operations (3 cr)

277s Adv Sanitary Engineering: Sewage, Industrial Waste (3-5 cr; prereq 174)

280w,s-281w,s-282w,s See 280f-281f-282f

Hydromechanics (Hydr)

Fall Quarter

101 Fluid Mechanics for Aeronautical, Electrical Engineering Students (3 cr; prereq MM 27)
—1, I-II T, III Th, AE 209
—2, III MWF, AE 227
—3, IV MWF, Ex 22

103 Fluid Mechanics (5 cr; prereq MM 27)
—1, I MTWThF, Ex 193
—2, III MTWThF, Ex 22
—3, V MTWThF, E 305

104 Fluid Mechanics Lab (1 cr; prereq 101 or 103 or ChEn 101 or ¶)
—1, VIII-IX M, Ex 138
—2, VI-VII T, Ex 138
—3, VIII-IX W, Ex 138
—4, VIII-IX Th, Ex 138
—5, VI-VII T, Ex 138

183 Open Channel Flow (3 cr; prereq 101 or 103, 104)
3:00-4:30 WF, HL 307

184 Adv Hydraulic Probs (2 cr; prereq 183 or ¶ or ‡)

187 Interm Fluid Mechanics (3 cr; prereq 101 or 103, 104)
1:15-2:45 WF, HL 307

293 Hydrodynamics (3 cr; prereq 187, ITM 151 or ‡)
8:00-9:30 TTh, HL 307

Winter and Spring Quarters

101w,s See 101f: I MWF(w,s); III MWF(s); IV MWF(s); VI MWF(w,s)

103w,s See 103f: I MTWThF(w,s); II MTWThF(s); III MTWThF(w,s); IV MTWThF(w); V MTWThF(w,s); VI MTWThF(w)

104w,s See 104f: II-III T(w); II-III Th(w); III-IV M(w,s); III-IV T(s); III-IV W(w); III-IV Th(s); VI-VII M(w,s); VI-VII T(w,s); VI-VII W(w,s); VI-VII Th(w,s); VI-VII F(s); VIII-IX M(w,s); VIII-IX W(w,s)

-185w-186s See 184f

187s See 187f: II MWF

190w Mechanics of Similitude, Dimensional Analysis (3 cr; prereq 101 or 103 or ‡) 3:00-4:30 WF

191w Hydraulic Motors, Pumps (3 cr; prereq 187 or ‡) 1:15-2:45 WF

192s Natural, Artificial Waterways (3 cr; prereq 183 or ‡) 3:00-4:30 WF

193s Hydraulic Measurements (3 cr; prereq 187 or ‡) 1:15-2:45 WF

-294w-295s See 293f

ELECTRICAL ENGINEERING (EE)

Fall Quarter

12 Laboratory (1 cr; prereq ITM 13A)
—1, VIII-IX M, EE 237
—2, VIII-IX T, EE 237
—3, VIII-IX W, EE 237

36 Elements (3 cr; prereq ITM 26A or 80)
—1, Lect I MWF, Arch 55
—2, Lect 10:30-11:45 TTh, ME 18
—1, Lab VIII-IX M, ME 208
—2, Lab I-II T, ME 208
—3, Lab VI-VII T, ME 321
—4, Lab VIII-IX T, ME 102
—5, Lab VIII-IX W, ME 208
—6, Lab V-VI Th, ME 214

37 Elements (3 cr; prereq 36)
V MWF, Arch 35

37A Laboratory (1 cr; prereq ¶37)
—1, VI-VII M, EE 118
—2, VIII-IX M, EE 118
—3, VIII-IX T, EE 118
—4, VII-VIII Th, EE 118
—5, VI-VII F, EE 118

51 Electrical Engineering (5 cr; prereq ITM 26A or 80, Phys 50)
—1, I MTWThF, Arch 50
—2, VI MTWThF, Arch 35

51H Honors Course: Electrical Engineering and Prob Solving Lab (6 cr; prereq ITM 26A or 80, Phys 50, △)
II MTWThF, EE 137, VIII-IX M, ME 102

52 Laboratory (1 cr; prereq ¶51)
—1, IV-V M, EE 216
—2, VI-VII M, EE 216
—3, VIII-IX M, EE 216
—4, I-II T, EE 216
—5, IV-V T, EE 216
—6, VI-VII T, EE 216
—7, VIII-IX T, EE 216
—8, IV-V W, EE 216
—9, VI-VII W, EE 216
—10, VIII-IX W, EE 216
—11, I-II Th, EE 216
—12, III-IV Th, EE 216
—13, VII-VIII Th, EE 216
—14, VI-VII F, EE 216

52H Honors Course: Laboratory (1 cr; prereq ¶51, △)
V-VI Th, EE 216

52A Prob Solving Lab (1 cr; prereq ¶51)
For EE 51, Lect 1 students only
—1, VI-VII M, EE 137
—2, IV-V T, EE 137
—3, VI-VII T, EE 137
—4, V-VI Th, EE 137
For EE 51, Lect 2 students only
—5, I-II T, ME 214
—6, VIII-IX T, ME 214
—7, VIII-IX W, ME 214
—8, I-II Th, ME 208
—9, VII-VIII Th, ME 214

101 Summer Engineering Employment (1-3 cr; prereq 2 yrs engin, ‡)

102 Summer Engineering Employment (1-3 cr; prereq 101, ‡)

103 Summer Engineering Employment (1-3 cr; prereq 102, ‡)

109 Electromagnetic Fields (3 cr; prereq 55, 56)
—1, I MWF, Arch 35
—2, VII MWF, Arch 35

109A Electromagnetic Fields Lab (1 cr; prereq ¶109)
—1, VIII-IX M, ME 214
—2, III-IV T, ME 208
—3, VI-VII T, ME 214
—4, I-II Th, ME 214
—5, III-IV Th, ME 208

121 Analysis of Electromagnetic Devices (3 cr; prereq 55, 56)
—1, V MWF, Arch 50
—2, VI MWF, Arch 50

121H Honors Course: Analysis of Electromagnetic Devices (3 cr; prereq 55, 56, △)
II MWF, EE 237

122 Experimental Study of Electromagnetic Devices (1 cr; prereq ¶121)
—1, VII-IX M, VII W, EE 107 (¶sec 1, EE 161A)
—2, I-III T, VII T, EE 107 (¶sec 2, EE 161A)
—3, VII-IX T, VIII W, EE 107 (¶sec 3, EE 161A)
—4, VII-IX W, VII M, EE 107 (¶sec 4, EE 161A)
—5, I-III Th, VII Th, EE 107 (¶sec 5, EE 161A)

122H Honors Course: Experimental Study of Electromagnetic Devices (1 cr; prereq ¶121H, △)
VII-IX F, VIII M, EE 121

131 Electronic Circuit Design (3 cr; prereq 163)
Lect II TTh, Arch 50
—1, Lab I-II M, EE 35
—2, Lab VIII-IX M, EE 35
—3, Lab III-IV T, EE 35
—4, Lab VI-VII T, EE 35
—5, Lab I-II W, EE 35
—6, Lab VI-VII W, EE 35
—7, Lab VIII-IX W, EE 35
—8, Lab III-IV Th, EE 35
—9, Lab V-VI Th, EE 35
—10, Lab I-II F, EE 35

132 Electric Machines (3 cr; prereq 125)
Lect III TTh, EE 137
—1, Lab VII-VIII Th, EE 116
—2, Lab II-III F, EE 116

138 Electric Power Control (3 cr; prereq 109, 125, 161)
Lect IV TTh, EE 237
—1, Lab I-II M, EE 107
—2, Lab I-II W, EE 107
—3, Lab VI-VII W, EE 107

143 Engineering Acoustics (3 cr; prereq 53, ITM 26A or 80, MM 29)
VIII MWF, ME 321

150 Dynamical Methods (3 cr; prereq MM 29, ITM 153, ‡)
3:30-4:45 T, 2:30-3:45 Th, EE 137

153 Properties of Solids (3 cr; prereq 152, Phys 109 or Phys 110, ‡)
4:00-5:15 MF, EE 137

157 Electronic Control (3 cr; prereq 125, 163)
Lect I TTh, Arch 35
—1, Lab I-II M, EE 21
—2, Lab VI-VII M, EE 21
—3, Lab III-IV T, EE 21
—4, Lab VI-VII T, EE 21
—5, Lab VI-VII W, EE 21
—6, Lab III-IV Th, EE 21
—7, Lab V-VI Th, EE 21

—8, Lab VII-VIII Th, EE 21
—9, Lab VI-VII F, EE 21

161 Networks (3 cr; prereq 53, 54, 59, 60)
—1, II MWF, Arch 50
—2, III MWF, Arch 50

161A Networks Lab (1 cr; prereq ¶161)
—1, VII-IX M, VII W, EE 208 (¶sec 1, EE 122)
—2, I-III T, VII T, EE 208 (¶sec 2, EE 122)
—3, VII-IX T, VIII W, EE 208 (¶sec 3, EE 122)
—4, VII-IX W, VII M, EE 208 (¶sec 4, EE 122)
—5, I-III Th, VII Th, EE 208 (¶sec 5, EE 122)

161H Honors Course: Networks and Lab (4 cr; prereq 53, 54, 59, 60, △)
Lect 9:00-10:20 TTh, EE 237, lab VII-IX F, VIII M, EE 121

164 Communication Circuits (3 cr; prereq 163)
Lect III TTh, EE 237
—1, Lab VI-VII M, EE 204
—2, Lab VIII-IX M, EE 204
—3, Lab VI-VII W, EE 204
—4, Lab IV-V Th, EE 204

167 Electromagnetic Theory, Application (3 cr; prereq 109, ‡)
Lect IV TTh, ME 102
—1, Lab VIII-IX T, EE 218
—2, Lab VI-VII W, EE 218

173 Physical Electronics (3 cr; prereq 141, ‡)
I MWF, EE 137

178 Nonlinear Active Circuits (3 cr; prereq 163)
VI-VII TTh, EE 237

182A Transistor Principles, Circuits (3 cr, §133; prereq 163, Phys 50, ‡)
7:00-8:15 am TTh, EE 237

183 Electrical Lab (1-3 cr; prereq ‡)

187 Problems (3 cr; prereq 109, 125, 163)
Lect IV MWF, Arch 50
—1, Rec VIII M, ME 106
—2, Rec V T, EE 237
—3, Rec VIII T, ME 106
—4, Rec VIII W, ME 106

191 Active Network Theory (3 cr; prereq 163, ITM 153, ‡)
VII MWF, EE 237

194 Servomechanisms (3 cr; prereq 125, 163, ‡)
V MWF, EE 237

197 Electrical Design of Machines I (3 cr; prereq 125, ‡)

211 Network Analysis, Synthesis (3 cr; prereq 163, ‡)
V-VI TTh

227 Stability of AC Power Systems (3 cr; prereq 140, ‡)

242 Gaseous Electronics (3 cr; prereq 152, ‡)

261 Probs: Electromagnetism (3 cr; prereq 169, ‡)

267 Theory of Communication (3 cr; prereq ‡)

272 Acoustics (3 cr; prereq ‡)

281 Seminar: Energy Conversion (ar cr; prereq 155)

294 Adv Control Theory (3 cr; prereq ‡)

Winter and Spring Quarters

-14w-16s See 12f

36s See 36f: Lect V MWF, lab I-II T; V-VI Th; VI-VII T; VIII-IX M

-37w-38s See 36f: I MWF

37Aw-38As See 37Af: I-II T(w,s); I-II Th(w,s); III-IV T(w,s); III-IV Th(w); IV-V F(w); V-VI M(s); V-VI Th(w,s); VI-VII T(w,s); VI-VII W(w); VII-VIII Th(s); VIII-IX M(s); VIII-IX W(w,s)

-38w See 37f

-38Aw See 37Af

40w Survey for Civil, Mining Engineering Students (4 cr; prereq 36) Lect VII MWF, lab IV-V F; VI-VII T; VIII-IX W; VIII-IX F

-53w-55s See 51f

-53Hw-55Hs See 51Hf

-54w-56s See 52f: I-II T; I-II Th; III-IV T; III-IV Th; VI-VII T; VI-VII W; VI-VII F; VII-VIII Th; VIII-IX M; VIII-IX T; VIII-IX W

-54Hw-56Hs See 52Hf

-54Aw-56As See 52Af: VI-VII M; IV-V T; VI-VII T; V-VI Th, open to EE 53, Lect 1 registrants only; I-II T; VIII-IX W; I-II Th; VII-VIII Th, open to EE 53, Lect 2 registrants only

57w-59s Engineering Electronics (3 cr; prereq 51) II MWF; VII MWF

57Hw-59Hs Honors Course: Engineering Electronics (3 cr; prereq 51, △) VI MWF

58w-60s Engineering Electronics Lab (1 cr; prereq ¶57) I-II M; I-II T; I-II Th; III-IV T; III-IV Th; III-IV F; VI-VII M; VI-VII T; VI-VII W; VI-VII Th; VIII-IX M; VIII-IX T; VIII-IX F

-58Hw-60Hs Honors Course: Engineering Electronics Lab (1 cr; prereq ¶57, △) VIII-IX W

101w,s-102w,s-103w,s See 101f-102f-103f

-123w-125s See 121f

123Hw-125Hs See 121Hf

-124w-126s See 122f

-124Hw-126Hs See 122Hf

-133w-135s See 131f

-134w-136s See 132f

-139w-140s See 138f

141s Materials (3 cr; prereq 109) I MWF; VII MWF

141As Materials Lab (1 cr; prereq ¶141) I-II T; III-IV T; III-IV Th; V-VI Th; VI-VII T

-144w-145s See 143f

151w Thermodynamic Methods (3 cr; prereq Phys 51 or ME 30, ITM 153, ‡) 3:30-4:45 T, 2:30-3:45 Th

152s Statistical-Mechanical Methods (3 cr; prereq 150, 151, ‡) 3:30-4:45 T, 2:30-3:45 Th

-154w-155s See 153f

-158w-159s See 157f

-162w-163s See 161f

-162Hw-163Hs See 161Hf

-162Aw-163As See 161Af

-165w-166s See 164f
-168w-169s See 167f
-174w-175s See 173f: Lect I MW, VI-VII T; VI-VII Th
-179w-180s See 178f
-182Bw-182Cs See 182Af
-184w-185s See 183f
-188w-189s See 187f
-192w-193s See 191f
-195w-196s See 194f
-198w-199s See 197f
-212w-213s See 211f
-228w-229s See 227f
-243w-244s See 242f
-263w-265s See 261f
-268w-269s See 267f
-273w-274s See 272f
-282w-283s See 281f
-295w-296s See 294f

MATHEMATICS (ITM)

Fall Quarter

8 Solid Geometry (no cr; prereq plane geom)
—1, V MWF, E 227
—2, VI MWF, ChE 50
—3, VI MWF, Ex 25
—4, VII MWF, E 227

11 College Algebra, Trigonometry I (5 cr; prereq 9)
—1, I MTWThF, AE 15
—2, I MTWThF, E 206
—3, I MTWThF, AE 21
—4, I MTWThF, ChE 50
—5, I MTWThF, AE 9
—6, I MTWThF, ChE 158
—7, I MTWThF, AE 227
—8, II MTWThF, E 106
—9, II MTWThF, E 227
—10, II MTWThF, AE 19
—11, II MTWThF, AE 227
—12, II MTWThF, AE 21
—13, II MTWThF, AE 9
—14, III MTWThF, ChE 154
—15, III MTWThF, AE 9
—16, III MTWThF, ChE 162
—17, III MTWThF, ChE 158
—18, III MTWThF, ChE 50
—19, III MTWThF, AE 21
—20, IV MTWThF, E 227
—21, IV MTWThF, ChE 158
—22, IV MTWThF, ChE 154
—23, IV MTWThF, AE 15
—24, IV MTWThF, AE 227
—25, V MTWThF, AE 227
—26, V MTWThF, Ex 25
—27, V MTWThF, ChE 158
—28, V MTWThF, ChE 154
—29, V MTWThF, ChE 50
—30, VI MTWThF, MinMet 120
—31, VI MTWThF, MinMet 124
—32, VI MTWThF, ChE 158
—33, VI MTWThF, E 227
—34, VII MTWThF, E 106
—35, VII MTWThF, E 203
—36, VII MTWThF, E 205
—37, VII MTWThF, E 217

12 College Algebra, Trigonometry II (5 cr; prereq 11)
—1, VI MTWThF, AE 227
—2, VII MTWThF, E 229

13A Calculus I: Analytic Geometry, Calculus (5 cr; prereq 8, 12)
—1, IV MTWThF, AE 21
—2, V MTWThF, MinMet 116
—3, V MTWThF, MinMet 120
—4, VI MTWThF, AE 21
—5, VI MTWThF, AE 9
—6, VII MTWThF, E 206

24A Calculus II: Analytic Geometry, Calculus (5 cr; prereq 13A)
—1, I MTWThF, Ex 25
—2, I MTWThF, AE 321
—3, II MTWThF, E 229
—4, II MTWThF, AE 15
—5, II MTWThF, ChE 158
—6, II MTWThF, ChE 154
—7, III MTWThF, AE 19
—8, III MTWThF, Ex 25
—9, III MTWThF, AE 15
—10, IV MTWThF, E 106
—11, IV MTWThF, E 305
—12, V MTWThF, E 106
—13, V MTWThF, E 203
—14, V MTWThF, MinMet 124
—15, VI MTWThF, E 106
—16, VI MTWThF, E 205

24H Honors Course: Calculus II—Analytic Geometry, Calculus (5 cr; prereq 13A, △) IV MTWThF, ChE 162

25A Calculus III: Analytic Geometry, Calculus (5 cr; prereq 24A)
—1, IV MTWThF, AE 9
—2, VI MTWThF, E 229

26A Calculus IV: Differential Equations, Calculus (5 cr; §80; prereq 25A)
—1, II MTWThF, E 217
—2, II MTWThF, Ex 25
—3, IV MTWThF, Ex 25
—4, IV MTWThF, E 217
—5, VI MTWThF, E 203

90 Engineering Statistics (3 cr; prereq 25 or 25A or ¶25A)
—1, I MWF, E 217
—2, I MWF, E 229
—3, V MWF, E 229

105A Summer Employment (2 cr; prereq 4th yr, △)

132 Statistics, Probability (3 cr; prereq 25 or 25A)
—1, V MWF, E 217
—2, VI MWF, E 217

142 Vector, Matrix Theory with Applications (3 cr; §149; prereq 25 or 25A)
—1, II MWF, E 203
—2, II-III TTh, E 203

147 **Vector Analysis** (3 cr, §152, §old 154; prereq 25 or 25A)
—1, I MWF, E 205
—2, III MWF, E 205
—3, III MWF, E 227
—4, V MWF, E 205

151 **Calculus V: Adv** (3 cr, §old 151A; prereq 26 or 26A or 80)
—1, I MWF, E 203
—2, I MWF, E 106
—3, I MWF, E 104
—4, III MWF, E 104
—5, III MWF, E 106
—6, III MWF, E 229
—7, IV MWF, E 203
—8, IV MWF, E 229

153 **Calculus VII: Adv** (3 cr; prereq 151)
IV MWF, E 205

161 **Analytical Dynamics** (3 cr; prereq MM 28, 29 or MM 127 or ♯)
IV MWF, E 206

165A **Programming Modern Digital Calculators** (3 cr, §165; prereq 25 or 25A)
I MWF, E 227

173 **Partial Differential Equations** (3 cr; prereq 148 or 153)
—1, II MWF, E 104
—2, II MWF, E 205
—3, III MWF, E 217

181 **Topics: Theory of Numbers** (3 cr; prereq 152, 153 or ♯)
II MWF, ChE 162

184 **Numerical Analysis** (3 cr; prereq 26 or 26A or 80)
III MWF, E 203

190A **Combinatorial Topology** (3 cr; prereq 142 or ¶ or ♯)
VI MWF, E 206

192 **Theory of Approximation in Numerical Analysis** (3 cr, §old 270E; prereq 174, 186 or ♯)
V MWF, E 104

193A **Higher Geometry** (3 cr; prereq 143 or ♯)
VI MWF, ChE 162, Calabi

199A **Prob Course** (3 cr; prereq ♯)
III-IV TTh, E 206

227 Computers, Control Devices (3 cr; prereq 186 or ♯)
V MWF, E 206, Munro

248 Reading, Research (1-3 cr; prereq ♯)

261 Functions of a Complex Variable (3 cr; prereq 152, 153 or ♯)
IV MWF, E 104, Warschawski

267 Topics: Theory of Analytic Functions (3 cr; prereq 263)
III-IV TTh, E 104, Warschawski

274 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 150A, 152, 153, 174 or ♯)
II MWF, E 206, Weinberger

280A Galois Theory (3 cr; prereq 180 or ♯)
III MWF, E 206, Milgram

287 Hilbert Space, Functional Analysis (3 cr; prereq 143, 261 or ♯)
VI MWF, E 104, Milgram

294A Theory of Local Rings (3 cr; prereq 143, ♯)
V MWF, ChE 162, Rohrl

307 Probs: Theoretical Physics (3 cr; prereq 168A or 174 or 263 or Math 208 or ♯)
VII MWF, E 104, Friedman

Winter and Spring Quarters

8w,s See 8f: V MWF

11w See 11f: I MTWThF; II MTWThF; IV MTWThF; V MTWThF; VI MTWThF

11s See 11f: VI MTWThF

12w,s See 12f: I MTWThF(w); II MTWThF (w,s); III MTWThF(w,s); IV MTWThF (w,s); V MTWThF(w,s); VI MTWThF (w,s); VII MTWThF(w)

13Aw See 13Af: IV or V MTWThF

13As See 13Af: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF

14s Laboratory (1 cr; prereq 2nd yr) VI-VII T

24Aw See 24Af: II MTWThF; III MTWThF; IV MTWThF; VI MTWThF

24As See 24Af: IV or V MTWThF

25Aw See 25Af: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF

25As See 25Af: I MTWThF; III MTWThF; IV MTWThF; VI MTWThF

26Aw See 26Af: V or VI MTWThF

26As See 26Af: I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF

90w,s See 90f: I MWF(w); II MWF(s); III MWF(w); V MWF(s)

99s Mathematical Probs Seminar (3 cr; prereq 25 or 25A) I-II TTh

133w-134s Statistical Theory with Applications (3 cr; prereq 132) V MWF

133Bw-134Bs Probability with Technological Applications (3 cr; prereq 132, 153...or 132, 148, 149...or ♯) VI MWF

-143w See 142f

147w,s See 147f: I MWF

148w Differential Equations (3 cr, §150A; prereq 26 or 26A or 80) I MWF; III MWF; V MWF

149s Determinants, Matrices (3 cr, §142; prereq 25 or 25A) I MWF; III MWF; V MWF

150Aw,s Ordinary Differential Equations (3 cr, §148; prereq 26 or 26A or 80) I MWF(s); IV MWF(w)

151w See 151f: IV MWF

152w,s Calculus VI: Adv (3 cr, §147; prereq 151) I MWF(w); III MWF(w); IV MWF (w,s)

153s Calculus VII: Adv (3 cr; prereq 151) I MWF; III MWF; IV MWF

-162w-163s See 161f

165Aw,s See 165Af: VI MWF

168Bs Applications of Complex Variables (3 cr; prereq 168A or 174 or ‡) I MWF
169s Mathematical Theory of Fluid Flow (3 cr; prereq 152, 168A or 152, 174 or 147, 168A or 147, 174 or ‡) VII MWF
174w Theory of Complex Variables (3 cr; prereq 26 or 26A) II or III MWF
175s Integral Transforms (3 cr; prereq 168A or 174) II or III MWF
180s Finite Groups (3 cr; prereq 143 or ‡) III-IV TTh
-182w-183s See 181f
185w-186s Numerical Analysis (3 cr; prereq 147, 148, 149, 184...or 152, 153, 184 or ‡) III MWF
-190Bw-190Cs See 190Af
-193Bw-193Cs See 193Af
-199Bw-199Cs See 199Af
-228w-229s See 227f
-249w-250s‡ See 248f
-262w-263s See 261f
-268w-269s See 267f
270Aw Adv Numerical Analysis of Partial Differential Equations (3 cr, §old 270B; prereq 173, 186 or ‡) V MWF
270Bs Adv Numerical Analysis of Linear Systems (3 cr, §old 270C; prereq 186, 142 or 149 or ‡) V MWF
-275w-276s See 274f
280Bw Rings, Ideals (3 cr; prereq 180 or ‡) III MWF
280Cs Algebraic Numbers (3 cr; prereq 180 or ‡) III MWF
-288w-289s See 287f
-294Bw-294Cs See 294Af
-308w-309s See 307f

MECHANICAL ENGINEERING

Engineering Graphics (EG)

Fall Quarter

14 **Engineering Graphics** (3 cr; prereq solid geom)
Lect I MW, Arch 10
—1, Rec I F, Arch 10
—2, Rec I Th, E 201
Lab open hrs, E 101
Lect III MW, Arch 10
—3, Rec III F, Arch 10
—4, Rec III Th, E 201
Lab open hrs, E 306
Lect V MW, Arch 10
—5, Rec V F, Arch 10
—6, Rec V Th, E 201
Lab open hrs, E 101
Lect VII MW, Arch 10
—7, Rec VII F, Arch 10
—8, Rec VII Th, E 201
Lab open hrs, E 306
Lect II TTh, Arch 10
—9, Rec IV Th, E 201
—10, Rec II F, Arch 10
Lab open hrs, E 101
Lect IV TTh, Arch 10
—11, Rec VI Th, E 201
—12, Rec IV F, Arch 10
Lab open hrs, E 411
Lect VI TTh, Arch 10
—13, Rec VIII Th, E 201
—14, Rec VI F, Arch 10
Lab open hrs, E 306
Lect VIII TTh, Arch 10
—15, Rec VIII F, Arch 10
—16, Rec VIII M, Arch 10
Lab open hrs, E 411
15 **Engineering Graphics** (3 cr; prereq 14)
Lect IV MW, Arch 10
Lab III-IV TTh, E 18
16 **Engineering Graphics** (3 cr; prereq 15)
Lect I TTh, Arch 10
—1, Lab I-II WF, E 201
Lect II MW, Arch 10
—2, Lab I-II TTh, E 18
Lect VI MW, Arch 10
—3, Lab V-VI TTh, E 18
Lect VII TTh, Arch 10
—4, Lab VII-VIII WF, E 201
50 **Diagrams, Charts** (2 cr; prereq 14)
II TTh, E 201
55 **Production Illustration** (2 cr; prereq 16)
III-IV MWF, E 201
152 **Nomography** (3 cr; prereq 52, ITM 25A or ‡)
V MWF, E 201

Winter and Spring Quarters

14w See 14f: Lect II MW, rec II Th or F, lab ar; Lect VI MW, rec VI Th or F, lab ar; Lect VII TTh, rec VII F; VIII Th, lab ar
14s See 14f: Lect IV MW, rec IV Th, lab ar
15w See 15f; Lect I MW, rec I Th or F, lab ar; Lect II TTh, rec II F; III Th, lab ar; Lect III MW, rec III Th or F, lab ar; Lect IV TTh, rec IV F; V Th, lab ar; Lect V MW, rec V Th or F, lab ar; Lect VI TTh, rec VI F; VIII Th, lab ar; Lect VII MW, rec VII Th or F, lab ar
15s See 15f: Lect II MW, rec II Th or F, lab ar; Lect VI MW, rec VI Th or F, lab ar
16w See 16f: Lect IV MW, rec IV F, lab ar
16s See 16f: Lect I MW, rec I Th or F, lab ar; Lect II TTh, rec II F; III Th, lab ar; Lect III MW, rec III Th or F, lab ar; Lect IV TTh, rec IV F; V Th, lab ar; Lect V MW, rec V Th or F, lab ar; Lect VI TTh, rec VI F; VIII Th, lab ar; Lect VII MW, rec VII Th or F, lab ar
50s See 50f: I TTh
51w Graphic Representation, Computation (3 cr; prereq 15, ITM 11) V MWF
52s Alignment Charts (3 cr; prereq 15, ITM 12) V MWF

55w,s See 55f: III-IV MWF(s); VI MW, V-VII T(w)
118s Curve Fitting (3 cr; prereq 16, ITM 25A, or ‡) I MWF
-153w-154s See 152f: III MWF(w); VII MWF(s)

Industrial Engineering (IE)

Fall Quarter

50 **Elements, Mgt** (3 cr, §old 150; prereq 3rd yr)
—1, II MWF, Arch 45
—2, IV MWF, Arch 45
—3, VI MWF, ME 106
153 **Methods Engineering, Work Measurement** (3 cr; prereq 50 or ¶)
Lect III TTh, ME 106
—1, Lab VII-IX M, ME 180
—2, Lab VII-IX T, ME 180
163 **Process Planning, Development** (3 cr; prereq 50, ME 15, 16)
Lect I TTh, ME 106
Lab VII-IX W, ME 180
165 **Industrial Plants** (3 cr; prereq 153)
Lect VI TTh, ME 102
Lab VII-IX Th, ME 180
170 **Production Planning, Control** (3 cr; prereq 50)
II MWF, ME 106
171 **Quality Control** (3 cr; prereq ITM 90 or 132 or ‡)
I MWF, ME 208
173 **Engineering Economic Analysis** (3 cr; prereq 50)
V MWF, ME 106
180 **Supervision** (3 cr; prereq 50)
IV MWF, ME 106
182 **Industrial Safety** (3 cr; prereq 50)
I MWF, ME 106
195 **Applied Industrial Engineering** (3 cr; prereq 15 cr)
197 **Industrial Sampling Techniques** (3 cr; prereq 171, ITM 132 or ‡)
VI MWF, ME 102
251 Adv Industrial Engineering (3 cr; prereq ‡)
261 Probs: Production Engineering (3-5 cr; prereq ‡)
271 Research (3-5 cr; prereq ‡)

Winter and Spring Quarters

50w,s See 50f: I MWF(w,s); II MWF(w); V MWF(w); VI MWF(s)
153w,s See 153f: Lect II TTh(s); III TTh(w), lab VII-IX M; VII-IX T
154w Adv Methods Engineering, Work Measurement (3 cr; prereq 153) Lect III TTh, lab VII-IX W; VII-IX Th
155s Industrial Wage Admin (3 cr; prereq 153) III MWF
163w,s See 163f: Lect IV TTh, lab VII-IX F(w); Lect V TTh, VII-IX Th(s)
167w Materials Handling, Packaging (3 cr; prereq 153) I MWF
170w,s See 170f: I MWF(s); IV MWF(w,s)
171w,s See 171f: III MWF(w); IV MWF(s)
173w,s See 173f: II MWF(w); VI MWF(s)
174s Analysis for Prod Mgt (3 cr; prereq 50, 171 or ‡) V MWF
180s See 180f: I MWF
190w,s Seminar (1 cr; prereq 12 cr) II-III T(s); VII-VIII M(w)
194w,s Applied Industrial Engineering (3 cr; prereq 15 cr) II MWF(s); V MWF(w)
195w-196s See 195f
-196w See 195f
198w Sequential Analysis of Industrial Data (3 cr; prereq ITM 133 or ‡) VI MWF
199s Design of Industrial Experiments (3 cr; prereq ITM 133 or ‡) VI MWF
-252w-253s See 251f
-262w-263s See 261f
-272w-273s See 271f

Mechanical Engineering (ME)

Fall Quarter

15 **Casting, Working, Welding Engineering Materials** (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 18
—1, Lab VII-IX, T, ME 50
—2, Lab VII-IX Th, ME 50
16 **Cold Processing Materials** (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 106
Lab VII-IX T, ME 171
21 **Kinematics, Mechanisms** (3 cr; prereq ITM 26A or ¶, EG 16)
Lect V TTh, ME 302
—1, Lab VI-VII F, ME 325
—2, Lab VIII-IX F, ME 325
22 **Mechanisms of Automatic Machines** (3 cr; prereq 21)
—1, Lect III TTh, ME 110
—2, Lect IV TTh, ME 110
—1, Lab VII-IX M, ME 314
—2, Lab VII-IX T, ME 314
—3, Lab VII-IX W, ME 314
—4, Lab VII-IX W, ME 308
—5, Lab VII-IX Th, ME 314
—6, Lab VII-IX F, ME 314
—7, Lab VII-IX F, ME 308
24 **Machine Design** (3 cr; prereq MM 41)
Lect II TTh, ME 321
—1, Lab VII-IX M, ME 308
—2, Lab VII-IX T, ME 308
—3, Lab VII-IX Th, ME 308
30 **Thermodynamics** (3 cr, §old 130; prereq ITM 26A or ¶, Phys 14)
—1, Lect I MWF, Arch 40
—2, Lect II MWF, Arch 40
—3, Lect III MWF, Arch 40
—4, Lect IV MWF, Arch 40

32 Thermodynamics (3 cr, §old 132; prereq 31)
V MWF, Arch 40

33 Laboratory I (2 cr; prereq 30 or ¶)
—1, Lect IV T, Arch 40
—2, Lect V T, Arch 40
—1, Lab VII-IX M, ME 370
—2, Lab VII-IX M, ME 370
—3, Lab VII-IX T, ME 370
—4, Lab VII-IX T, ME 370
—5, Lab VII-IX W, ME 370
—6, Lab VII-IX W, ME 370
—7, Lab VII-IX Th, ME 370
—8, Lab VII-IX Th, ME 370
—9, Lab VII-IX F, ME 370
—10, Lab VII-IX F, ME 370

90 Industrial Assignment (4 cr, †90-91-92-93; prereq regis coop work-study program)

91 Industrial Assignment (4 cr, †90-91-92-93; prereq 90)

92 Industrial Assignment (4 cr, †90-91-92-93; prereq 91)

93 Industrial Assignment (4 cr, †90-91-92-93; prereq 92)

101 Summer Employment I (2 cr; prereq 4th yr, △)

102 Summer Employment II (2 cr; prereq 101)

112 Properties, Fabrication of Plastics (3 cr; prereq 15, 16 or ♯)
Lect III TTh, ME 102
—1, Lab VII-IX M, ME 251
—2, Lab VII-IX W, ME 251

121 Machine Design (3 cr; prereq 24)
Lect II TTh, ME 110
—1, Lab VII-IX M, ME 302
—2, Lab VII-IX W, ME 302
—3, Lab VII-IX F, ME 302

122 Design (3 cr; prereq 121)
Lect VI T, ME 302
Lab VII-IX TTh, ME 302

125 Machine Design Lab (2 cr; prereq 24)
—1, Lect VI M, ME 321
Lab VII-IX M, ME 357
—2, Lect VI W, ME 321
Lab VII-IX W, ME 357
—3, Lect VI F, ME 321
Lab VII-IX F, ME 357

128 Photoelastic Stress Analysis (3 cr; prereq MM 41)
Lect III TTh, ME 351
Lab VII-IX M, ME 351

133 Heat Transmission (3 cr; prereq 32, Hydr 101 or 103 or ¶...or Hydr 101 or 103, ♯)
—1, Lect I MWF, ME 321
—2, Lect II MWF, Arch 60
—3, Lect III MWF, ME 106
—4, Lect IV MWF, AE 19
—5, Lect V MWF, ME 208
—6, Lect VI MWF, ME 208

134 Thermodynamics of Fluid Flow (3 cr; prereq 32, Hydr 103)
—1, Lect V MWF, ME 214
—2, Lect VI MWF, AE 309

143 Turbomachinery (3 cr; prereq 134 or ¶)
—1, Lect IV MWF, ME 302
—2, Lect V MWF, ME 302

146 Combustion (3 cr; prereq 133 or ¶)
—1, Lect I MWF, ME 302
—2, Lect II MWF, ME 302
—3, Lect III MWF, ME 302
—4, Lect IV MWF, ME 321

150 Internal Combustion Engines (3 cr; prereq 32)
II MWF, ME 321

155 Rocket Propulsion (3 cr; prereq 146, 134 or Aero 102A)
V MWF, ME 321

157 Gas Turbine, Jet Propulsion Power Plants (3 cr; prereq 143)
III MWF, ME 321

159 Heat Power Lab (2 cr; prereq 143, 146)
—1, Lab VI-IX M, ME 480
—2, Lab VI-IX T, ME 480
—3, Lab VI-IX W, ME 480
—4, Lab VI-IX F, ME 480

160 Psychrometrics, Air Conditioning (3 cr; prereq 133 or ¶)
—1, Lect II MWF, ME 102
—2, Lect III MWF, ME 214

161 Heating, Air Conditioning Design (3 cr; prereq 160, 180)
Lect VI T, ME 208
Lab VII-IX TTh, ME 208

163 Particle Technology (3 cr; prereq 32 or ♯)
I-II TTh, ME 302

169 Air Conditioning, Refrigeration Lab (2 cr; prereq 34, 160, 180)
—1, Lab VI-IX M, ME 362
—2, Lab VI-IX W, ME 362
—3, Lab VI-IX F, ME 362

170 Tool Design (3 cr; prereq 15, 16)
Lect VI T, ME 325
Lab VII-IX TTh, ME 325

180 Mechanical Refrigeration (3 cr; prereq 32)
—1, Lect I MWF, ME 214
—2, Lect II MWF, ME 214
—3, Lect IV MWF, ME 214

194 Adv Problems (2-4 cr; prereq 5th yr, ME maj, 2.5 GPA, △)

198 Industrial Instrumentation, Automatic Control (3 cr; prereq EE 38 or ¶)
Lect I TTh, ME 110
—1, Lab VII-IX M, ME 359
—2, Lab VII-IX T, ME 359
—3, Lab VII-IX W, ME 359
—4, Lab VII-IX Th, ME 359

199 Servomechanisms (3 cr; prereq EE 37, ITM 26A)
Lect IV TTh, ME 321
—1, Lab VII-IX T, ME 358
—2, Lab VII-IX F, ME 358

224 Adv Applied Dynamics (3 cr; prereq 129)

228 Photoelasticity (3 cr; prereq 128)

230 Adv Thermodynamics (3 cr, §old 231; prereq 32)
IV MWF, ME 102

233 Conduction (3 cr; prereq 133)
II MWF, ME 208
246 Flames in Homogeneous Mixtures (3 cr; prereq 146)
III MWF, ME 208
250 Dynamics of High Speed Engines (3 cr; prereq 121, 150)
VI MWF, ME 302
265 Adv Psychrometric Theory, Atmospheric Environmental Control (3 cr; prereq 160, 180)
IV MWF, ME 208
290 Research (ar cr; prereq △)
291 Research (ar cr; prereq 290)
292 Research (ar cr; prereq 291)

Winter and Spring Quarters

15w,s See 15f: Lect VI TTh, lab VII-IX M(s); VII-IX T(w,s); VII-IX W(w,s); VII-IX Th(w,s)
16w,s See 16f: Lect VI TTh, lab VII-IX M(w); VII-IX T(w,s); VII-IX W(w,s); VII-IX Th(w,s)
21s See 21f: Lect III or IV TTh, lab VI-VII M; VI-VII T; VI-VII W; VI-VII Th; VIII-IX M; VIII-IX T; VIII-IX W
22w See 22f: Lect V TTh, lab VII-IX M; VII-IX W; VII-IX F
23w,s Dynamics of Machinery (3 cr; prereq 22, MM 29) Lect III TTh(w); IV TTh(w); V TTh(s), lab VII-IX M(w); VII-IX T(w); VII-IX W(w,s); VII-IX Th(w); VII-IX F(w,s)
24w,s See 24f: Lect II TTh(s); II TTh(w), lab VII-IX M(s); VII-IX T(w); VII-IX W(w); VII-IX Th(w); VII-IX F(s)
30w-31s See 30f: I MWF(w); IV MWF(w); V MWF(w,s); VI MWF(w)
-31w-32s See 30f
33w See 33f: Lect II T, lab VII-IX Th or F
34w,s Laboratory II (2 cr; prereq 33) Lect I or II T(s); IV T(w), lab VII-IX M(w,s); VII-IX T(w,s); VII-IX W(w,s); VII-IX Th(w,s); VII-IX F(s)
90w,s-91w,s-92w,s-93w,s See 90f-91f-92f-93f
110w Control of Metal Working Processes (3 cr; prereq 15, 16) Lect III TTh, lab VII-IX M
121w,s See 121f: Lect II TTh, lab VII-IX M(w,s); VII-IX T(w); VII-IX W(w,s); VII-IX Th(w); VII-IX F(s)
122s See 122f
123w Creative Engineering (3 cr; prereq 4th yr) Lect VI T, lab VII-IX TTh
124w Experimental Stress Analysis (3 cr; prereq MM 41) Lect III TTh, lab VII-IX M
125w,s See 125f: VI-IX M(w,s); VI-IX W(w,s); VI-IX F(w)
127s Lubrication (3 cr; prereq 121) V MWF
129s Vibration Engineering (3 cr; prereq MM 193) I MWF
133w,s See 133f: I MWF(s); II MWF(w); III MWF(w); IV MWF(w); VI MWF(s)
134w,s See 134f: I MWF(w); II MWF(s); IV MWF(s); VI MWF(w)
136s Reactor Heat Transfer (3 cr; prereq 133) III MWF
141w Heat Power Engineering (3 cr; prereq 32) I MWF
142s Adv Heat Power Engineering (3 cr; prereq 141) IV MWF
143w,s See 143f: I MWF; II MWF
146w,s See 146f: III MWF(w); IV MWF(w); V MWF(s); VI MWF(s)
147w,s Heat Power Design (3 cr; prereq 143, 146) Lect VI T, lab VII-IX TTh
148w-149s Chemistry of Combustion (3 cr; prereq 146, InCh 15) V MWF
150w,s See 150f: III MWF(s); V MWF(w)
151s Adv Internal Combustion Engines (3 cr; prereq 150) III MWF
152w Diesel, Free Piston Engines (3 cr; prereq 150) II MWF
154s Internal Combustion Engines (3 cr; prereq 121, 150) II MWF
159w,s See 159f: VI-IX M(w,s); VI-IX T(w); VI-IX W(w,s); VI-IX F(w,s)
160w,s See 160f: II MWF(s); III MWF(s); IV MWF(s); V MWF(w); VI MWF(w)
161w See 161f: Lect VI T, lab VII TTh
166s Industrial Ventilation, Exhaust System (3 cr; prereq 160) II MWF
169w,s See 169f
180w,s See 180f: I MWF(s); II MWF(w); IV MWF(w); V MWF(s)
181w Adv Mechanical Refrigeration (3 cr; prereq 180) III MWF
194w,s See 194f
198w,s See 198f: Lect I TTh, lab VII-IX M(w,s); VII-IX T(w,s); VII-IX W(w,s); VII-IX Th(w,s); VII-IX F(w)
-225w-226s See 224f
229w Adv Vibration Engineering (3 cr; prereq 129)
231w Statistical, Non-equilibrium Thermodynamics (3 cr; prereq 230) IV MWF
232s Adv Thermodynamics of Fluid Flow (3 cr; prereq 134, 230 or ‡) IV MWF
234w Convection (3 cr; prereq 233) II MWF
235s Radiation (3 cr; prereq 234) II MWF
236w Adv Theory of Heat Transfer (3 cr; prereq 133) V MWF
242w Adv Power Plants (3 cr; prereq 142)
247w Diffusion Flames (3 cr; prereq 146) III MWF
248s Atomization, Vaporization, Mixing (3 cr; prereq 32) III MWF
253w Adv Gas Turbines, Jet Propulsion (3 cr; prereq 157) V TTh, VII-IX M
255s Adv Rocket Propulsion (3 cr; prereq 134, 155) VI MWF
266w Adv Psychrometric Processing (3 cr; prereq 265) IV MWF
267s Adv Air Conditioning (3 cr; prereq 266 or ‡) IV MWF

280w Theoretical Refrigeration (3 cr; prereq 180) III MWF
282s Reverse Applications of Refrigeration: Heat Pump (3 cr; prereq 180) III MWF
290w,s-291w,s-292w,s See 290f-291f-292f
296w-297s Adv Servomechanisms (3 cr; prereq 199, ITM 174 or ¶)
298s Adv Instrumentation, Automatic Control (3 cr; prereq 198)

METALLURGY (Met)

Fall Quarter

53 **Physical Metallurgy I** (3 cr; prereq 3rd yr) I MWF, MinMet 120, Nicholson
53A **Physical Metallurgy Lab** (2 cr; prereq ¶53) VI-IX Th, MinMet 410, Jerabek
56 **Physical Metallurgy** (3 cr; prereq 3rd yr)
—1, I MWF, MinMet 116, Sivertsen
—2, III MWF, ChE 240, Jerabek
—3, VI MWF, MinMet 116, Jerabek
90 **Industrial Employment** (2 cr; prereq ‡)
91 **Industrial Employment** (2 cr; prereq ‡)
92 **Industrial Employment** (2 cr; prereq ‡)
162A **Irradiation Effects Lab** (2 cr; prereq 162) Sivertsen
167 **Control of Mechanical Properties in Metals, Alloys** (3 cr; prereq 155) VI-IX T, MinMet 104, Johnston
170 **Probs: Physical Metallurgy** (1-3 cr)
173 **Crystalline Properties of Metals** (3 cr; prereq 155) 9:00-10:20 TTh, MinMet 124, Sivertsen
180 **Thermodynamics of Alloys, Solid State Reactions** (3 cr; prereq PCh 103 or 103H or ‡) II MWF, MinMet 410, Swalin
207 Physical Metallurgy (ar cr)
213 Seminar: Physical Metallurgy (ar cr)
250 Thermodynamics of Alloys (3 cr; prereq 180 or ‡) Swalin

Winter and Spring Quarters

1s Metallurgy Lab (1 cr) VII-IX Th
56w,s See 56f: VII MWF
57w Physical Metallurgy Industrial Alloys (2-3 cr; prereq 53 or 56 or 60) III MWF
60s Physical Metallurgy for Chemical Engineering Students (3 cr; prereq 3rd yr) VII MWF
90w,s-91w,s-92w,s See 90f-91f-92f
154w Physical Metallurgy II (3 cr; prereq 53 or ‡) II MWF
154Aw Physical Metallurgy Lab (2 cr; prereq ¶154) VI-IX Th
155s Physical Metallurgy III (3 cr; prereq 154 or ‡) I MWF
155As Physical Metallurgy Lab (2 cr; prereq 154 or ¶155) VI-IX Th or F
161s Corrosion of Metals (2 cr; prereq PCh 101 or 101H) II TTh
162w Nuclear Metallurgy (1 cr; prereq 56 or ‡) II Th
168w Metal Fabrication (3 cr, §old 158; prereq 155) Lect VII TF, lab VII-IX W
169s Analysis of Metallurgical Probs (3 cr, §old 165; prereq 155, 182 or ‡) Lect I TTh, lab VI-VIII T
-171w-172s‡ See 170f
174w Modern Theory of Metals, Alloys (3 cr, §old 164A; prereq Phys 51 or ‡) 9:00-10:20 TTh
175s Imperfections in Metals (3 cr; prereq 174 or ‡) 10:30-11:50 TTh
-181w-182s See 180f
-208w-209s‡ See 207f
-214w-215s‡ See 213f
251w Kinetics of Solid State Reactions (3 cr; prereq 182 or ‡)
252s Kinetics of Solid State Reactions (3 cr; prereq 251 or ‡)
255s Transformations, Microstructure (3 cr; prereq 155, 182 or ‡)
260s Dislocation Theory of Crystals (3 cr; prereq 155 or ‡)

MINES AND METALLURGY

Metallurgical Engineering (MetE)

Fall Quarter

11 **Metallurgical Engineering** (3 cr; prereq 8 cr inorg chem) II MWF, MinMet 124, Joseph
12 **Processes** (3 cr; prereq 8 cr inorg chem) III MWF, MinMet 124, Bitsianes
90 **Industrial Employment** (2 cr; prereq ‡)
91 **Industrial Employment** (2 cr; prereq ‡)
106 **Prin Process Metallurgy** (3 cr; prereq 8 cr inorg chem) III MWF, MinMet 104, Bitsianes
110 **Mineral Dressing** (4 cr) Lect I TThS, MinMet 120, Cooke
—1, Lab VI, VIII M, MinMet 16, 22, VII M, MinMet 120
—2, Lab VI, VIII Th, MinMet 16, 22, VII Th, MinMet 120
118 **Practice** (ar cr; prereq ‡)
121 **Iron Ore Beneficiation** (3 cr; prereq 111) Lect VI W, MEx, Wade Lab VII-IX W
124 **Probs: Mineral Dressing** (ar cr; prereq 112) Cooke
134 **Unit Processes** (3 cr; prereq 108) I MWF, MinMet 124, Bitsianes
141 **Probs: Process Metallurgy** (ar cr; prereq 108) Joseph, Bitsianes
201 Research: Process Metallurgy (ar cr) Joseph, Bitsianes
204 Research: Mineral Dressing (ar cr) Cooke

210 Seminar (ar cr)
IV T, MinMet 104
220 Flotation Theory (3 cr) Cooke

Winter and Spring Quarters

1s Laboratory (1 cr) VII Th
90w See 90f
-91w-92s‡ See 90f
107w-108s Prin Process Metallurgy (3-4 cr; prereq 106) Lect III MWF(w); III MWF, VI W(s), lab VI-IX W(w); VII-IX W(s)
-111w See 110f: Lect III TTh, I Th, lab VI-VIII T; VI-VIII F; or ar
-112s See 110f; Lect III TTh, I S, lab VI-VIII M; VI-VIII W; VI-VIII F
-119w‡ See 118f
122w-123s Adv Mineral Dressing (3 cr; prereq 112) VI M, VII MTh(w); VI MWF(s)
-125w-126s‡ See 124f
135w Unit Processes (3 cr; prereq 11) II MWF
136s Unit Processes (3 cr; prereq 108) III MWF
138s Adv Process Metallurgy (2 cr; prereq 134) III TTh
-142w-143s‡ See 141f
144s Metallurgical Unit Operations (2 cr; prereq 111 or ‡) IV TTh
-202w-203s‡ See 201f
-205w-206s‡ See 204f
-211w-212s‡ See 210f

Mining Engineering (MinE)

Fall Quarter

16 **Mine Maps** (1-2 cr; prereq 15A or 15B)
VI-IX Th, MinMet 321, Yardley
90 **Industrial Employment** (2 cr; prereq ‡)
91 **Industrial Employment** (2 cr; prereq 90)
111 **Exploration of Mineral Deposits** (3 cr; prereq 3rd yr or ‡)
II MTWF, MinMet 104, Yardley
123 **Mine Air Conditioning** (3 cr; prereq 113, Hydr 103)
Lect I MWF, MinMet 104, Dorenfeld
Lab VI-VIII F, MinMet 210
131 **Rock Mechanics I** (3 cr; prereq MM 142 or ‡)
10:30-12:00 TTh, MinMet 124, Fairhurst
141 **Mineral Economics** (3 cr; prereq 113 or PetE 112 or ‡)
II MWThF, MinMet 120, Pfleider
151 **Problems** (ar cr; prereq 113)
160 **Mining, Processing Industrial Minerals** (ar cr; prereq 112 or ‡) Yardley
201 Seminar: Mineral Engineering (ar cr) Pfleider
251 Adv Rock Mechanics I (3 cr; prereq MM 180)
VI MWF, MinMet 104, Fairhurst

Winter and Spring Quarters

1s Mineral Engineering Lab (1 cr) VII TTh
13s Mine Surveying (3 cr; prereq CE 13 or ‡) II MWThF
16w See 16f: VI-IX T
90w-91s See 90f
90s See 90f
-91w See 90f
-92w See 91f
112w Development of Mineral Deposits (3 cr; prereq 111 or ‡) II MTWF
113s Exploitation of Mineral Deposits (3 cr; prereq 112 or ‡) I MWF, II T
121w Mine Plant Engineering (3 cr; prereq 113, MM 28 or ‡) IV-VI F, VI-VIII Th
122s Mine, Petroleum Plant Engineering (3 cr; prereq EE 37, Hydr 103, ME 30 or ‡) V-VI TTh, 1 hr ar
132w Rock Mechanics II (3 cr; prereq 131) IV MWF
133s Adv Rock Mechanics (3 cr; prereq 132 or ‡) IV MWF
142w Surface Mining Engineering (3 cr; prereq 112 or ‡) II MWF, IV T
143w Coal Mining Engineering (3 cr; prereq 113)
144w Adv Mining Engineering (2 cr; prereq 141) VI-VIII MW
-145s Adv Mining Engineering (4 cr; prereq 144) VI-IX M, VI-VIII WF
-152w-153s‡ See 151f
160s See 160f
180w Geochemical Exploration (3 cr; prereq ‡)
-202w-203s‡ See 201f
214s Research Probs (ar cr)
230s Adv Geochemical Exploration (ar cr; prereq ‡)
-252w See 251f: IV MWF

Petroleum Engineering (PetE)

Fall Quarter

90 **Industrial Employment** (2 cr; prereq ‡) Lacabanne
111 **Oil Field Development** (3 cr; prereq Geol 25 or ‡)
IV MWThF, MinMet 104, Lacabanne
152 **Petroleum Production Technology** (3 cr; prereq 112 or ‡)
Lect IV W, MinMet 216, Lacabanne
—1, Lab VII-IX WF, MinMet 216, 220, Lacabanne
—2, Lab ar
201 Seminar: Petroleum, Natural Gas Engineering (ar cr) Lacabanne

Winter and Spring Quarters

90w See 90f
-91w-92s See 90f
112w Oil Field Production (3 cr; prereq 111 or ‡) III MTWF
131s Reservoir Mechanics (3 cr; prereq 134, Hydr 103 or ‡) 10:30-11:45 TTh
134w Natural Gas Engineering (2 cr; prereq 112 or ‡) IV TTh
144w-145s Adv Petroleum Engineering (2 cr; prereq MinE 141) VI-IX M, VI-VIII WF

-153w-154s See 152f: Lect III Th, lab VII-IX Th, VI-VIII F or ar; Lect I Th, lab VI-VIII TTh or ar
156w Problems (ar cr; prereq ¶144 or ¶145 or ♯) IV T
-202w-203s See 201f
206w Engineering Study: Oil Field (ar cr)
208w Research Probs (ar cr)

PHYSICS (Phys)

Fall Quarter

1 Physical Science (3 cr; prereq HS alg, plane geometry)
III MWF, Ph 150, Wall
1A Physical Science Lab (1 cr; prereq 1 or ¶)
4 Gen Physics: Mechanics (5 cr; prereq Math 40 or ¶)
I MTWThF, Ph 166, Buchta
Lab sec assigned during first 2 days of class
7 **Gen Physics** (5 cr; prereq ¶ITM 13A or Math 40)
II MTWThF, Ph 166, Freier
Lab sec assigned during first 2 days of class
11 **Gen Physics** (5 cr; prereq ¶ITM 11 or ¶Math T)
—1, I MTWThF, Ph 150
—2, II MTWThF, Ph 150, Verbrugge
—3, IV MTWThF, Ph 150, Earl
—4, VI MTWThF, Ph 150, Nestvold
Lab and rec sec assigned during first 2 days of class
13 **Gen Physics** (5 cr; prereq 12, ¶ITM 13A or ¶Math 40)
V MTWThF, Ph 150, Valasek
Lab sec assigned during first 2 days of class
14 **Interm Physics** (4 cr; prereq 13, ¶ITM 24A or Math 53)
—1, I MTWThF, Ph 133, Hwang
—2, III MTWThF, Ph 133, Winckler
—3, VI MTWThF, Ph 166, Norbeck
14H **Honors Course: Interm Physics** (4 cr; prereq 13, ¶ITM 24A or Math 53, △)
II MTWThF, Ph 170, Ney
14A Laboratory (1 cr; prereq ¶14)
15H Honors Course: Laboratory (1 cr; prereq §14H, △) Likely
100 **Mechanics, Electromagnetism** (4 cr, §MM 29; prereq 3rd yr, 9 or 14, ITM 26 or 26A or Math 55)
—1, I MTWF, Ph 170
—2, I MTWF, Ph 145, Zimmerman
107 Modern Physics (3 cr; prereq ITM 26 or 26A or Math 55)
VI MWF, Ph 145
108 Atomic, Nuclear Physics (3 cr; prereq 50, ITM 153 or Math 108, △)
VI MWF, Ph 236a
114 Physical Investigation (3 cr; prereq △)
120 **Atomic Physics** (3 cr; prereq 50 or ¶107 or ¶108)
—1, VI-IX TTh, Ph 250, Johnson
—2, VII-X MF, Ph 250, Benson
123 Thermodynamics, Statistical Mechanics, Theories of Structure of Matter (3 cr; prereq 50, ITM 152, 153)
IV MWF, Ph 145, Lowe
131 Geometrical Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
II TTh, Ph 143, Valasek
134 Experimental Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
Lect VII T, Ph 143, Valasek
Lab VIII-X TTh, Ph 348
144 **Electrical Measurements** (4 cr; prereq 9 or 14, ITM 25A or Math 54)
Lect II MWF, Ph 133, Blair
—1, Lab VII M, Ph 256
—2, Lab VI T, Ph 256
—3, Lab VI W, Ph 256
—4, Lab VI Th, Ph 256
—5, Lab VII F, Ph 256
—6, Lab II S, Ph 256
165 Physics of Atmosphere (3 cr; prereq 50, ITM 26A) Mantis
171 Theoretical Physics (3 cr; prereq 104, ITM 153 or Math 108)
II MWF, Ph 145, Cheston
181 Atomistics, Quantum Mechanics (3 cr; prereq 111 or 112 or ♯)
IV MWF, Ph 143, Sanders
204 Statistical Thermodynamics (3 cr; prereq 191, 192, 193, △)
III TThS, Ph 145, Wall
210 Quantum Mechanics (3 cr; prereq 173, 185)
VI MWF, Ph 143, Bolsterli
213 Seminar: Contemporary Experimental Physics (ar cr)
216 Seminar: Contemporary Theoretical Physics (ar cr) Cheston, Bolsterli, others
222 Mathematical Physics (3 cr; prereq 101, 103, 105, Math 106, 108 or 159 or 80, 150, 152, 153)
III MWF, Ph 145, Hill
228 Nuclear Physics (3 cr; prereq 185 or 233)
III MWF, Ph 143
237 Seminar: Radiofrequency Spectroscopy (ar cr; prereq 191, 192, 193, △) Sanders, Lowe
240 Seminar: Solid State, Low Temperature Physics (ar cr) Sanders, Werntz
249 Solid State Physics (3 cr) Sanders
252 Seminar: Nuclear Physics (ar cr; prereq 191, 192, 193, △)
VIII-IX F, Ph 145, Johnston, Lee, others
255 Seminar: Mass Spectroscopy (ar cr; prereq 191, 192, 193, △) Nier, Johnson
258 Seminar: Cosmic Rays (ar cr; prereq 191, 192, 193, △) Ney, Winckler, others
261 Mathematical Foundations of Quantum Mechanics (ar cr; prereq 191, 192, 193, △)
VII MWF, Ph 143, Hill

273 Plasma Physics (3 cr; prereq 173) II MWF, Ph 143, Kellogg
301 Research (ar cr; prereq 191, 192, 193, △)

Winter and Spring Quarters

1w See 1f: IV MWF
1Aw See 1Af
-2w See 1f
-2Aw See 1Af
-3s See 1f
-3As See 1Af
5w Gen Physics: Heat, Electricity (5 cr; prereq 4) I MTWThF
6s Gen Physics: Sound, Light (5 cr; prereq 5) I MTWThF
8w Gen Physics (5 cr; prereq 7, ¶ITM 24A or Math 53) II MTWThF
9s Gen Physics (5 cr; prereq 8, ¶ITM 25A or Math 54) II MTWThF
11w See 11f: V MTWThF; VII MTWThF
12w,s Gen Physics (5 cr; prereq 11, ¶ITM 12 or ¶Math 10) I MTWThF(w); IV MTWThF(w); VI MTWThF(w); VII MTWThF(s)
13s See 13f: I MTWThF; IV MTWThF; VI MTWThF
14w See 14f: V MTWThF
14Aw See 14Af
50w,s Interm Physics (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54) I MTWThF(w); III MTWThF(w); V MTWThF(s); VI MTWThF(w)
50Hw Honors Course: Interm Physics (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54, △) II MTWThF
50Aw,s Physics Lab (1 cr; prereq ¶50)
51s Interm Physics (4 cr; prereq 50, ITM 25A or Math 54) I MTWThF; III MTWThF; VI MTWThF
51Hs Honors Course: Interm Physics (4 cr; prereq 50, ITM 25A or Math 54, △) II MTWThF
51As Physics Lab (1 cr; prereq ¶51)
52Hw Honors Course: Physics Lab (1 cr; prereq ¶50H, △)
53Hs Honors Course: Physics Lab (1 cr; prereq ¶51H, △)
-102w-104s See 100f
-109w-111s See 107f
-110w-112s See 108f
-116w-118s‡ See 114f
121w Experimental Nuclear Physics I (3 cr; prereq 50 or 107 or 108) VI-IX TTh; VII-X MF
122s Experimental Nuclear Physics (3 cr; prereq 50 or 107 or 108 or ♯) VI-IX TTh
-124w-125s See 123f
133s Physical Optics (3 cr; prereq 15 cr, ITM 25A or Math 54) II TThS
133As Physical Optics Lab (1 cr; prereq ¶133) Lect VII T, lab VIII-X T or Th
134w See 134f
136s Spectrum Analysis (3 cr; prereq 15 cr, ITM 25A or Math 54) Lect VII T, lab VIII-X TTh
146w Vacuum Tubes, Associated Circuits (4 cr; prereq 144 or ♯) Lect II MWF, lab ar
148s Application of Electronic Circuits (4 cr; prereq 146 or ♯) Lect II MWF, lab ar
166w Meteorology I (3 cr; prereq 165 or ♯)
167s Meteorology II (3 cr; prereq 166, vec anal or ♯)
-172w-173s See 171f
-183w-185s See 181f
-205w-206s See 204f
-211w-212s See 210f
-214w-215s See 213f
-217w-218s‡ See 216f
-223w-224s See 222f
-229w-230s See 228f
-238w-239s See 237f
-241w-242s See 240f
-250w-251s See 249f
-253w-254s See 252f
-256w-257s See 255f
-259w-260s See 258f
-262w-263s See 261f
-274w-275s See 273f
302w-303s‡ Research (ar cr)

UNATTACHED COURSES

General Engineering (GE)

Fall Quarter

70 Slide Rule (1 cr; prereq ITM 11 or ¶)
—1, III T, Arch 10
—2, III Th, Arch 10
—3, V T, Arch 10
—4, V Th, Arch 10
101 Contracts, Specifications (3 cr; prereq 5th yr)
IV MWF, Arch 130
105 Engineering Library Techniques (1 cr)
VI T, E 206

Winter and Spring Quarters

70w,s See 70f: I T(s); III T(w,s); V T(w,s); VII Th(w)
101w See 101f
105w,s See 105f

Geophysics (GPhy)

Fall Quarter

90 Industrial Employment (2 cr; prereq △) Mooney
109 Seismology (3 cr; prereq Geol 125, Phys 9 or 14)
III MWF, MinMet 120, Mooney
127 Electrical Exploration (2 cr; prereq Phys 14, Geol 125, ITM 25A)
III TTh, MinMet 120, Mooney

131 **Topics: Theoretical Seismology** (ar cr; prereq ‡) Mooney
135 **Problems** (ar cr; prereq ‡) Mooney

Winter and Spring Quarters

-91w-92s See 90f
108w Gen Geophysics (3 cr; prereq Geol 2, Phys 9 or 14...Geol 125 rec) III MWF
110s Exploration Geophysics (3 cr; prereq Geol 2, Phys 9 or 14...Geol 125 rec) III MWF
125s Gravity, Magnetic Exploration (2 cr; prereq Phys 14, Geol 125, ITM 25A) III TTh
126w Seismic Exploration (2 cr; prereq Phys 14, Geol 125, ITM 25A) III TTh
-132w-133s See 131f
-136w-137s See 135f

COLLEGE OF VETERINARY MEDICINE

Veterinary Anatomy (VAna)

Fall Quarter

100 Orientation (1 cr; prereq ‡)
IV M, VetS 257, Weber
101 Anatomy of the Dog (7 cr; prereq ‡)
Lect I MWF, VetS 257, Kitchell
Lab II-III MWF, VI-VIII TTh, VetS 141
150 Prenatal Development of Domestic Animals (4 cr; prereq ‡)
Lect I TTh, VetS 257, Weber
Lab II-IV TTh, VetS 247
151 Microscopic Anatomy of Domestic Animals (3 cr; prereq ‡)
Lect VI WF, VetS 257, Weber
Lab VII-IX W, VetS 247
191 Special Studies (1-5 cr; prereq 151, ‡) Kitchell, Weber

Veterinary Bacteriology and Public Health (VBac)

Fall Quarter

102 Pathogenic Bacteria, Fungi (6 cr; prereq 101, ‡)
Lect II MWF, VII T, VetS 229, Loken, Lindorfer, Pomeroy
Lab III-IV MWF, VetS 325
125 Public Health (4 cr; prereq 103, VPaP 153, ‡)
Lect VII-VIII TTh, VetC 125, Anderson
Lab VIII-IX TTh, VetS 325
128 Probs: Bacteriology, Public Health (ar cr; prereq 103, ‡) Pomeroy, Anderson, Lindorfer, Loken
201 Adv Poultry Diseases (ar cr; prereq 131, ‡) Pomeroy
205 Adv Bacteriology (ar cr; prereq ‡) Pomeroy, Fenstermacher, Lindorfer
221 Adv Veterinary Public Health (ar cr; prereq 127, ‡) Anderson

Veterinary Medicine and Clinics (VMC)

Fall Quarter

102 Large Animal Medicine (5 cr; prereq ‡)
VI MTWThF, VetA 102, Hoyt, Sorensen
110 Clinics (5 cr; prereq 101, ‡)
II-IV MTWThF, I-III S, VetC 125
114 Clinics (5 cr; prereq 113, ‡)
II-IV MTWThF, I-III S, VetC 55, 125
117A Clinical Conference (1/3 cr, †117A-117B-117C; prereq ‡)
IX W, VetC 125, Campbell
118A Clinical Conference (1/3 cr, †118A-118B-118C; prereq ‡)
IX W, VetC 125, Campbell
122 Small Animal Medicine (5 cr; prereq ‡)
VI MTWThF, VetC 125, Mather
201 Adv Veterinary Medicine (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen
202 Adv Diagnosis, Therapeutics of Animal Diseases (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen
203 Seminar (ar cr; prereq ‡) Hoyt, Mather, Sorensen
204 Medical Conference (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen

Veterinary Pathology and Parasitology (VPaP)

Fall Quarter

151 Gen Pathology (5 cr; prereq VBac 101, ‡)
Lect VI MWF, VetS 229, Sautter, Nielsen, Perman
Lab VII-IX MW, VetS 225, 229
154 Clinical Pathology (2 cr; prereq 153, ‡)
VIII T, VII Th, VetS 229, Perman
157 Veterinary Necropsies (1-3 cr; prereq 153, ‡) Sautter

158 Surgical Pathology (1-3 cr; prereq 153, ‡) Sautter
201 Adv Veterinary, Poultry Pathology (ar cr; prereq ‡) Sautter, Fenstermacher
202 Seminar: Pathology (1 cr; prereq 153, ‡) Sautter
203 Neoplasms of Domestic Animals (ar cr; prereq ‡) Sautter
241 Probs: Parasitology (ar cr; prereq 102, ‡) Griffiths

Veterinary Physiology and Pharmacology (VPP)

Fall Quarter

105 Animal Physiology (5 cr; prereq VAna 153, PhCh 103, ‡)
I MTWThF, VetA 103, Good, Bergman
106 Animal Physiology Lab (2 cr; prereq ¶105)
II-IV TTh, TEH 103, Bergman, others
152 Veterinary Pharmacology (4 cr; prereq 151, ‡)
VIII M, VetC 125, VII-IX F, VetA 103, Stowe, Hammond

Veterinary Surgery and Radiology (VSR)

Fall Quarter

101 Prin Surgery (5 cr; prereq VMC 101, ‡)
I MTWThF, VetS 229, Usenik, Gourley
104 Lamenesses of Domestic Animals (1 cr; prereq 103, ‡)
VII W, VetC 125, Campbell
105 Special Surgery (1 cr; prereq 103, ‡)
VII-IX M, VetA 102, 103, Usenik, Clifford, Gourley
121 Radiology (3 cr; prereq VMC 113, ‡)
Lect I T, VII F, VetC 125, Spurrell, Wolf
Lab VIII-IX F, VetC 125, 70

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE (Air)

Fall Quarter

31 Air Science I (no cr)
Leadership Laboratory I M or V M or VI M
34 Air Science II (2 cr; prereq 33)
Leadership Laboratory I M or V M or VI M
—1, I WF, A 12
—2, III WF, A 12
—3, IV WF, A 12
131 Air Science III (3 cr)
Leadership Laboratory I M or V M or VI M
—1, I TWThF, A 11
—2, V TWThF, A 11
134 Air Science IV (3 cr)
Leadership Laboratory I M or V M or VI M
—1, II TWThF, A 11
—2, IV TWThF, A 11

Winter and Spring Quarters

-32w See 31f
-33s Air Science I (2 cr) Leadership Lab I or V or VI M, rec I TTh; III TTh; V TTh; VI TTh
-35w See 34f
-36s Air Science II (no cr; prereq 35) I or V or VI M
-132w-133s‡ See 131f
-135w-136s‡ See 134f

MILITARY SCIENCE AND TACTICS (Mil)

Fall Quarter

1 Military Science I (1 cr)
Leadership Laboratory III or VI T or Th
—1, II MW, A 116, Rutledge
—2, III MW, A 116, Rutledge
—3, VI MW, A 116, Rutledge
—4, I TTh, A 116, Rutledge
—5, II TTh, A 116, Rutledge
—6, V TTh, A 116, Rutledge
4 Military Science II (1 cr; prereq 3)
Leadership Laboratory III or VI T or Th
—1, II MW, A 201, Edwards
—2, III MW, A 201, Edwards
—3, V MW, A 201, Edwards
—4, II TTh, A 201, Edwards
—5, V TTh, A 201, Edwards
151 Military Science III (3 cr; prereq 6)
Leadership Laboratory III or VI T or Th
—1, I MTWTh, A 105, Elliott
—2, IV MTWTh, A 105, Elliott
—3, VI MTWTh, A 105, Elliott
154 Military Science IV (3 cr; prereq 153)
Leadership Laboratory III or VI T or Th
—1, II MTWTh, A 116A, Carlton
—2, V MTWTh, A 116A, Carlton

Winter and Spring Quarters

-2w See 1f: I MWF; II MWF; III MWF; V MWF; VI MWF
-3s See 1f: Leadership Lab VI-VII Th, rec II M; II T; III M; III T; VI M
-5w See 4f: II MWF; III MWF; V MWF; VI MWF
-6s See 4f: Leadership Lab VI-VII Th, rec II T; III T; V T; VI T
-152w See 151f: I MTWThF; IV MTWThF; VI MTWThF
-153s See 151f: Leadership Lab VI-VII Th, rec I MTW; IV MTW; VI MTW
-155w See 154f: II MTWThF; V MTWThF
-156s See 154f: Leadership Lab VI-VII Th, rec II MTW; V MTW

MORTUARY SCIENCE (Mort)

Fall Quarter

3 **Introd Restorative Art** (1 cr)
I Th, NH 100, Gates
4 **Restorative Art** (1 cr, †4-5-6; prereq soph)
—1, VIII-IX T, NH 100, Gates
—2, VIII-IX Th, NH 100, Gates
8 **Orientation in Funeral Service** (1 cr)
I T, NH 213, Slater
10 **Orientation in Funeral Service** (1 cr)
VIII M, NH 213, Slater
11 **Mortuary Mgt** (2 cr; prereq 10)
II TTh, JacH 304, Thorsell
12 **Embalming** (3 cr; prereq 10)
VIII MWF, JacH 304, Thorsell
13 **Mortuary Law** (3 cr)
I MWF, MurH 420, Grayson
14 **Mortuary Law** (3 cr)
II MWF, MurH 420, Carney
53 **Pathology** (3 cr, †53-54; prereq Biol 3 or Zool 3, Phsl 4)
II MWF, JacH 104, Gamble
56 **Embalming Theory, Practice** (3 cr, †56-57-58; prereq 12, Zool 3 or 15, Phsl 4)
III MWF, Arch 45, Slater
59 **Public Health, Minnesota Law, Regulations** (2 cr; prereq △)
IV TTh, JacH 104, Larson
60 **Funeral Mgt** (2 cr; prereq 11)
III TTh, P 210, Slater

Winter and Spring Quarters

3s See 3f
-5w-6s See 4f
8w,s See 8f
9w,s Orientation in Funeral Service (1 cr)
I Th
10s See 10f
11s See 11f
12s See 12f: II MWF
13s See 13f
14w See 14f: I MWF
51w-52s Anatomy (3 cr, †51-52; prereq Zool 3 or 15, Phsl 4) Lect V TTh, VI-VII TTh
-54w See 53f
55s Medical Science Survey (3 cr; prereq 52, 54) I MWF
-57w-58s See 56f: III MWF(w); VI MWF(s)
59w,s See 59f
-61w-62s‡ See 60f: I TTh(s); III TTh(w)
63w Business Methods (2 cr; prereq Econ 24) II TTh
64w Psychology of Funeral Service (2 cr; prereq GC 41 or Psy 1-2) VII MW
70w Chemistry for Embalmers (3 cr, †70-71; prereq InCh 2) Lect VI MW, lab VI-VII F

NAVAL SCIENCE (Nav)

Fall Quarter

11 **Naval Orientation** (3 cr)
Drill 7:30-8:20 am T
—1, Lect III MWF, A 205, McCabe
—2, Lect IV MWF, A 205
—1, Lab III T, A 205
—2, Lab IV T, A 205

21 **Naval Weapons** (no cr; prereq △, psych or ¶psych...Psy 1 rec)
Drill 7:30-8:20 am T
—1, Lab III T, A 202, Laing
—2, Lab IV T, A 202

51 **Naval Engineering** (3 cr)
Drill 7:30-8:20 am T
—1, Lect VI MWF, A 12A, Loberger
—2, Lect VII MWF, A 12A
—1, Lab I T, A 12A
—2, Lab II T, A 12A

54 **Evolution of the Art of War I** (3 cr)
Drill 7:30-8:20 am T
Lect VI MWF, A 205, Meyer
Lab VI Th, A 205

57 **Organization, Logistics: Naval Finance** (3 cr)
Drill 7:30-8:20 am T
Lect VI MWF, A 202, Donnelly
Lab VI Th, A 202

61 **Naval Operations** (3 cr)
Drill 7:30-8:20 am T
—1, Lect III MWF, A 12A, Simmering
—2, Lect V MWF, A 12A
—1, Lab III T, A 12A
—2, Lab V T, A 12A

64 **Amphibious Warfare I** (3 cr)
Drill 7:30-8:20 am T
Lect V MWF, A 205, Meyer
Lab III Th, A 205

67 **Ships Store Afloat; Clothing, Small Stores** (3 cr)
Drill 7:30-8:20 am T
Lect V MWF, A 202, Donnelly
Lab V Th, A 202

Winter and Spring Quarters

12w Sea Power (3 cr) Lect III or IV MWF, lab III or IV TTh
13s Sea Power (3 cr) Lect III or IV MWF, lab III or IV T, drill 7:30-8:20 T
22w-23s‡ Naval Weapons (3 cr) Lect III or IV MWF, lab III or IV T, drill III or IV Th(w); 7:30-8:20 T(s)
52w Naval Engineering: Introd to Navigation (3 cr) Lect VI or VII MWF, lab I or II T, drill IV or VI T
53s Celestial Navigation (3 cr) Lect I-II TTh; VII-VIII MW, drill 7:30-8:20 T
55w Evolution of the Art of War II (3 cr) Lect VI MWF, lab VI T, drill VI Th
56s Modern Basic Strategy, Tactics (3 cr) Lect VI MWF, lab VI T, drill 7:30-8:20 T
58w Naval Accounting: Basic Supply Afloat (3 cr) Lect VI MWF, lab VI T, drill VI Th
59s Advanced Supply Afloat (3 cr) Lect V MWF, lab V Th, drill 7:30-8:20 T
62w Naval Operations: Leadership (3 cr) Lect III or V MWF, lab III or V T, drill VII or VIII T
63s Leadership (3 cr) Lect III or V MWF, lab III or V T, drill 7:30-8:20 T
65w Amphibious Warfare II (3 cr) Lect V MWF, lab VII T, drill VII Th
66s Leadership (3 cr) Lect V MWF, lab V T, drill 7:30-8:20 T
68w Ships Store Afloat; Leadership (3 cr) Lect V MWF, lab V T, drill V Th

PHYSICAL EDUCATION FOR MEN (PEM)

Nonprofessional

Fall Quarter

All classes meet the first day in CH gymnasium

1A Sports Education (1 cr)

Adapted Activities
—1, III MWF, StadS, Osell
—2, IV MWF, StadS, Osell
—3, VIII MWF, StadS, Osell

Archery
—4, II MWF, FieldHse, McCarthy
—5, 9:00-9:50 MWF, Gy 100 (StP Campus), McDonnell
—6, 10:00-10:50 MWF, Gy 100 (StP Campus), McDonnell

Badminton
—7, III MWF, CH Gym, McLeod

Bowling, Bgn
—8, I MWF, CMU, Kulbitski
—9, II MWF, CMU, Kulbitski
—10, 10:00-10:50 TTh, 1 hr ar, StCen (StP Campus), McDonnell
—11, 11:00-11:50 TTh, 1 hr ar, StCen (StP Campus), McDonnell

Golf
—12, II MWF, StadS, Bolstad, Anderson
—13, III MWF, StadS, Bolstad, Anderson
—14, 11:00-11:50 MWF, Gy 100 (StP Campus), McDonnell

Handball
—15, 2:00-2:50 TTh, 1 hr ar, Gy 100 (StP Campus), Chopp

Handball-Paddleball
—16, IV MWF, StadN, McLeod

Swimming, Bgn
—17, II MWF, CH Pool, Boyce
—18, VII MWF, CH Pool, Thorpe
—19, II-III T, II Th, CH Pool, Boyce

Tennis
—20, VII MWF, CH Gym, McLeod

Touch Football
—21, VI MWF, FieldHse, Kulbitski

Volleyball
—22, IV MWF, CH Gym, Gostick

Weight Lifting
—23, II MWF, CH Weight Room, Gostick
—24, VII MWF, CH Weight Room, Novak

Freshman Cross Country
—25, CH, Kelly

Freshman Football
—26, CH, Johnson

2A Sports Education (1 cr)

Body Building
—1, VIII MWF, StadS, Osell

Ballroom Dancing
—2, III TTh, NGW
—3, VIII TTh, NGW

Square-Folk Dancing
—4, VII TTh, NGW
—5, 10:00-10:50 TTh, Gy 100 (StP Campus)

Gymnastics
—6, VI MWF, CH App Gym, Novak

Life Saving
—7, III MWF, CH Pool, Boyce

Swimming, Bgn-Interm
—8, 2:00-2:50 MWF, Gy Pool (StP Campus)
—9, 3:00-3:50 MWF, Gy Pool (StP Campus)

Swimming, Interm
—10, II T, II-III Th, CH Pool, Boyce
—11, VI MWF, CH Pool, Thorpe
—12, VI-VII T, VI Th, CH Pool, Thorpe
—13, VI T, VI-VII Th, CH Pool, Thorpe

Varsity Cross Country
—14, CH, Kelly

Varsity Football
—15, CH, Warmath

Winter and Spring Quarters

1Bw Sports Education (1 cr)
Adapted Activities III MWF; IV MWF; VIII MWF
Archery 9:00-9:50 or 10:00-10:50 MWF(StP); III MWF
Badminton, Bgn III MWF
Basketball II MWF; VII MWF

Bowling, Bgn 10:00-10:50 or 11:00-11:50 TTh, 1 hr ar (StP); I MWF; II MWF
Freshman Basketball Ar (cons coach)
Freshman Gymnastics Ar (cons coach)
Freshman Ice Hockey Ar (cons coach)
Freshman Swimming Ar (cons coach)
Freshman Track Ar (cons coach)
Freshman Wrestling Ar (cons coach)
Golf II TTh, I hr ar; III TTh, 1 hr ar; VI MWF; VII MWF
Handball 2:00-2:50 TTh, 1 hr ar (StP)
Handball-Paddleball IV MWF
Skating VI MWF
Swimming, Bgn II MWF; II-III T, II Th; VII MWF
Tennis VI MWF
Volleyball VI TTh, 1 hr ar
Weight Lifting VI MWF

1Cs Sports Education (1 cr)
Adapted Activities III MWF; IV MWF; VIII MWF
Archery 10:00-10:50 MWF (StP); II MWF
Bowling, Bgn 10:00-10:50 TTh, 1 hr ar (StP); I MWF; II MWF
Freshman Baseball Ar (cons coach)
Freshman Golf Ar (cons coach)
Freshman Tennis Ar (cons coach)
Freshman Track Ar (cons coach)
Golf 12:00-12:50 MWF (StP); 1:00-2:50 TTh (StP); II MWF; II TTh, 1 hr ar; III MWF; III TTh, 1 hr ar
Handball 1:00-1:50 MWF (StP)
Handball-Paddleball IV MWF
Softball III MWF; IV MWF
Swimming, Bgn II MWF; III T, II-III Th; VII MWF
Tennis, Bgn 9:00-9:50 MWF (StP); 8:00-8:50 TTh, 1 hr ar (StP); V MWF
Weight Lifting III T, III-IV Th; VI MWF

2Bw Sports Education (1 cr)
Badminton, Adv IV MWF
Body Building VIII MWF
Dancing, Ballroom IV TTh; VII TTh
Dancing, Folk, Square II TTh
Golf 11:00-11:50 MWF (StP)
Gymnastics VI MWF
Life Saving III MWF
Squash Racquets V MWF
Swimming, Bgn, Interm 2:00-2:50 or 3:00-3:50 MWF (StP)
Swimming, Interm II T, II-III Th; VI MWF; VI T, VI-VII Th; VI-VII T, VI Th
Trampoline V MWF
Varsity Basketball Ar (cons coach)
Varsity Gymnastics Ar (cons coach)
Varsity Ice Hockey Ar (cons coach)
Varsity Swimming Ar (cons coach)
Varsity Track Ar (cons coach)
Varsity Wrestling Ar (cons coach)

2Cs Sports Education (1 cr)
Body Building VIII MWF
Dancing, Ballroom I TTh; VII TTh
Dancing, Folk, Square VIII TTh
Life Saving III MWF
Squash Racquets V MWF
Swimming, Bgn, Interm VII or VIII MWF (StP)
Swimming, Interm II T, II-III Th; VI MWF; VI T, VI-VII Th; VI-VII T, VI Th
Tennis, Interm III MWF; IV MWF
Trampoline VII MWF
Varsity Baseball Ar (cons coach)
Varsity Golf Ar (cons coach)
Varsity Tennis Ar (cons coach)
Varsity Track Ar (cons coach)

BUILDING ABBREVIATIONS

A, Armory
AE, Aeronautical Engineering
AgBot(StP), Agricultural Botany
AgEng(StP), Agricultural Engineering
Agr(StP), Agronomy
AH, Appleby Hall
Arch, Architecture
Bo, Botany
BoG, Botany Greenhouse
Bu, Burton Hall
C, Chemistry
CH, Cooke Hall
ChE, Chemical Engineering
CMU, Coffman Memorial Union
CofH(StP), Coffey Hall
CW, Child Welfare
DCB(StP), Dairy Cattle Barn
DI(StP), Dairy Industries
E, Main Engineering
EdH, Eddy Hall
EE, Electrical Engineering
Ex, Experimental Engineering
FieldHse, Fieldhouse
FP(StP), Forest Products
FolH, Folwell Hall
ForH, Ford Hall
FraH, Fraser Hall
GH(StP), Green Hall
Gy(StP), Gymnasium
HH(StP), Haecker Hall
HL, Hydraulic Lab (Hennepin Island)
HolB, Holman Bldg (2035 Univ Ave)
Hosp, University Hospitals
Hr(StP), Horticulture
HS, Health Service
J, Jones Hall
JacH, Jackson Hall
JohH, Johnston Hall
Lib, Walter Library
LsPav(StP), Livestock Pavilion
LyonL, Lyon Laboratories
Mayo, Mayo Memorial
McNH(StP), McNeal Hall
ME, Mechanical Engineering
MeH(StP), Meredith Hall
MEx, Mines Experiment Station
MH, Millard Hall
MinMet, Mines and Metallurgy
MMA, Mayo Memorial Auditorium
MNH, Museum of Natural History
MSh(StP), Meat Shop
MurH, Murphy Hall
MusEd, Music Education
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
Owre, Owre Hall
P, Pillsbury Hall
PeikG, Peik Hall Gymnasium
PeikH, Peik Hall
PetH(StP), Peters Hall
Ph, Physics
PoH, Powell Hall
PP(StP), Plant Pathology
Psy, Psychology
Pt, Pattee Hall
SBH, State Board of Health
ScH, Scott Hall
ShH, Shevlin Hall
SnH(StP), Snyder Hall
So(StP), New Soils
Stad, Stadium
TEH(StP), Temporary, East of Haecker Hall
TNCE, Temporary, North Court of Engineering
TNCW, Temporary, North of Child Welfare
TNM, Temporary, North of Mines (Appleby Hall)
TSCE, Temporary, South Court of Engineering
TSF, Temporary, South of Folwell
TSH(StP), Temporary, South of Haecker Hall
VCHH, Variety Club Heart Hospital
VetA(StP), Veterinary Anatomy
VetC(StP), Veterinary Clinic
VetS(StP), Veterinary Science
VH, Vincent Hall
WeH, Wesbrook Hall
WmsA, Williams Arena
WuH, Wulling Hall
Z, Zoology

DIRECTORY OF DEPARTMENTAL OFFICES

Admissions and Records, Office of:
Minneapolis Campus 105Adm
St. Paul Campus 220CofH
Aeronautical Engineering 107AE
Agricultural Biochemistry 214SnH
Agricultural Economics 303HH
Agricultural Education 205Hr
Agricultural Engineering 200AgEng
Agricultural Journalism 107CofH
Agronomy and Plant Genetics 303Agr
Air Science 3A
American Studies 101TSF
Anatomy 201JacH
Anesthesiology ..... C596 Mayo
Animal Husbandry 122PetH
Anthropology 325ForH
Architecture ..... 110 Arch
Art 108J
Art Education 106J
Astronomy 358Ph
Bacteriology ..... 1060 Mayo
Biology 104Z
Biophysics 48Ph
Botany 8Bo
Business Administration 109VH
Cancer Biology 274LyonL
Chemical Engineering 151ChE
Chemistry 139C
Child Development and Welfare 103CW
Civil Engineering 123E
Classics 311FolH
Dairy Husbandry 202HH
Dairy Industries ..... 225 DI
Dental Assisting ..... 335 MH
Dental Hygiene ..... 337 MH
Dentistry ..... 136 Owre
Economics 221VH
Electrical Engineering 139EE
Engineering Graphics 125ME
English 219FolH
Entomology and Economic Zoology 300CofH
Food Technology 214SnH
Forestry 110GH
General College 106NH
General Education 204Bu
Geography 290aForH
Geology and Mineralogy 108P
Geophysics ..... 207 MinMet
German 210FolH
History 200ForH
Home Economics 200McNH
Home Economics Education 117McNH
Horticulture 111Hr
Industrial Education 103TNCW
Interdepartmental Courses, General Education 225JohH
Journalism 111MurH
Law 125FraH
Library 3Lib
Linguistics and Philology 311FolH
Mathematics (IT) 114E
Mathematics (SLA) 119FolH
Mechanical Engineering 125ME
Medical Technology ..... C205 Mayo
Medicine ..... C309 Mayo
Metallurgy ..... 403 MinMet
Military Science and Tactics 108A
Mines and Metallurgy ..... 112 MinMet
Mortuary Science 155NH
Music 107ScH
Music Education 214ScH
Naval Science 203A
Nursing ..... 125 Owre
Obstetrics and Gynecology ..... A616 Hosp
Ophthalmology ..... A684 Mayo
Orientation 202CofH
Otolaryngology ..... A605 Mayo
Pathology 110JacH
Pediatrics ..... 1403 Mayo
Pharmacology 105MH
Pharmacy 101WuH
Philosophy 100WeH
Physical Education for Men 111CH
Physical Education for Women 101NGW
Physical Medicine ..... 860 Mayo
Physics 148Ph
Physiological Chemistry 227MH
Physiology 424MH
Plant Pathology and Agricultural Botany 304PP
Political Science 395ForH
Poultry Husbandry 205PetH
Psychiatry and Neurology ..... B692 Mayo
Psychology 112Psy
Public Health ..... 1325 Mayo
Radiology ..... B238 Mayo
Rhetoric 230AgEng
Romance Languages 200FolH
Scandinavian 13FolH
Slavic and Oriental Languages 322FolH
Social Work 400ForH
Sociology 400ForH
Soils 125So
Speech 309FolH
Student Counseling Bureau 101EdH
Surgery ..... B518 Mayo
Veterinary Medicine 301VetS
Zoology 108Z

FINAL EXAMINATIONS

Hours and days—The time of your examination is based on the hours and days the class is regularly scheduled, and the college under which the course is listed in the *Class Schedule*. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine . . . or to courses numbered over 200 which have no regularly scheduled classrooms.

In determining your proper final examination time from this schedule:

- Go by the lecture hours rather than the laboratory or recitation hours.
- Follow the MWF sequence if your class meets four or more days a week.
- Use the first full class hour if your class meets for more than one continuous hour.
- Use the common examination hour if your course is listed on the following page.

Classes meeting I-II Hour Saturday only will be examined 8:00-10:00 S December 10.

Classes meeting III-IV Hour Saturday only will be examined 10:30-12:30 S December 10.

Courses Listed Under Business Administration, General College, and Institute of Technology

Class Hours					Class Hours				
I	MWF	8:00-10:00	F	Dec 9*	VI	MWF	1:30- 3:30	Th	Dec 15*
I	TThS	10:45-12:45	T	Dec 13	VI	TTh	4:00- 6:00	Th	Dec 15
II	MWF	10:15-12:15	M	Dec 12*	VII	MWF	1:30- 3:30	M	Dec 12*
II	TThS	10:30-12:30	W	Dec 14	VII	TTh	4:00- 6:00	M	Dec 12
III	MWF	3:45- 5:45	W	Dec 14*	VIII	MWF	7:00- 9:00 pm	F	Dec 9*
III	TThS	10:45-12:45	S	Dec 10	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	1:30- 3:30	F	Dec 9*	IX				
IV	TThS	1:30- 3:30	T	Dec 13	X				
V	MWF	1:30- 3:30	S	Dec 10*					
V	TTh	4:00- 6:00	S	Dec 10					

Courses Listed Under Science, Literature, and the Arts, Education, Medical Sciences‡, Dentistry‡, and Unattached Departments**

Class Hours					Class Hours				
I	MWF	10:15-12:15	F	Dec 9*	VI	MWF	1:30- 3:30	Th	Dec 15*
I	TThS	10:45-12:45	T	Dec 13	VI	TTh	4:00- 6:00	Th	Dec 15
II	MWF	8:00-10:00	M	Dec 12*	VII	MWF	1:30- 3:30	M	Dec 12*
II	TThS	10:30-12:30	W	Dec 14	VII	TTh	4:00- 6:00	M	Dec 12
III	MWF	1:30- 3:30	W	Dec 14*	VIII	MWF	7:00- 9:00 pm	F	Dec 9*
III	TThS	10:45-12:45	S	Dec 10	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	3:45- 5:45	F	Dec 9*	IX				
IV	TThS	1:30- 3:30	T	Dec 13	X				
V	MWF	1:30- 3:30	S	Dec 10*					
V	TTh	4:00- 6:00	S	Dec 10					

Courses Listed Under Agriculture, Forestry, and Home Economics

Class Hours					Class Hours				
I	MWF	8:30-10:30	F	Dec 9*	VI	MWF	1:30- 3:30	Th	Dec 15*
I	TThS	10:45-12:45	T	Dec 13	VI	TTh	4:00- 6:00	Th	Dec 15
II	MWF	8:30-10:30	M	Dec 12*	VII	MWF	1:30- 3:30	M	Dec 12*
II	TThS	10:30-12:30	W	Dec 14	VII	TTh	4:00- 6:00	M	Dec 12
III	MWF	1:30- 3:30	W	Dec 14*	VIII	MWF	7:00- 9:00 pm	F	Dec 9*
III	TThS	10:45-12:45	S	Dec 10	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	1:30- 3:30	F	Dec 9*	IX				
IV	TThS	1:30- 3:30	T	Dec 13	X				
V	MWF	1:30- 3:30	S	Dec 10*					
V	TTh	4:00- 6:00	S	Dec 10					

* Classes meeting four or more hours per week may give three-hour examinations provided the instructor notifies the Room Scheduling Office of his intention to do this. Three-hour examinations will be scheduled from 8:30-11:30 or 1:30-4:30 on the respective morning or afternoon the examination would otherwise be given (6:30-9:30 p.m. for VIII Hour classes).

‡ Courses offered primarily to students other than medical and dental students.

** Courses listed under Air Science, Military Science, Mortuary Science, Naval Science, and non-professional Physical Education for Men.

Common Examinations—All sections of the following courses are examined together at the time indicated.

BA 5—7:00-9:00 **pm** M ..... Dec 12
BA 24, 25, 26—7:00-9:00 **pm** W ..... Dec 14
Biol 1, 1A—10:45-12:45 Th ..... Dec 15
Comm 1, 2, 3—8:00-10:00 W ..... Dec 14
Comp X—8:00-10:00 W ..... Dec 14
Econ 1, 2—4:00-6:00 T ..... Dec 13
EG 14—10:45-12:45 T ..... Dec 13
EG 15—10:45-12:45 S ..... Dec 10
EG 16—10:30-12:30 W ..... Dec 14
Engl A, 1A—*
Engl 1B—8:00-10:00 W ..... Dec 14
Fren 1B, 1C, 3C, 4—7:30-10:30 S ..... Dec 10
GC 10A—8:15-10:15 S ..... Dec 10
GC 32A—10:45-12:45 Th ..... Dec 15
Ger 1C, 3C—8:15-10:15 S ..... Dec 10
ITM 11, 26A—7:30-10:30 S ..... Dec 10
ITM 12, 24A—7:30-10:30 T ..... Dec 13
ITM 13A, 25A—7:30-10:30 Th ..... Dec 15
Math X, T, 55—8:15-10:15 Th ..... Dec 15
Math H, 10, 40, 53, 54—7:30-10:30 T ..... Dec 13
ME 30—10:45-12:45 Th ..... Dec 15
MM 28—7:30-10:30 Th ..... Dec 15
MM 40—7:30-10:30 T ..... Dec 13
Psy 4—7:00-9:00 **pm** T ..... Dec 13
Span 1C, 3C—7:30-10:30 S ..... Dec 10

Rooms—Examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Instructors note: Requests for special final examination rooms are submitted to the Office of Room Assignments and Scheduling by your department office on Form A123. These rooms will be scheduled beginning November 14.

Conflicts and Three Examinations in One Day—Report conflicts with examinations in other courses and situations involving three examinations in one day to your college office.

Changes in Final Examination Hours—All requests for adjustment of final examination hours should be made by December 6 to permit publication and orderly consideration of hardships. Additional common examinations may be requested on Form A163, which is available in department offices. The same form is used to request exceptions to official examination hours. Please note Regulations Regarding Examinations below.

University Schedule Committee Regulations Regarding Examinations

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the chairman of the University Scheduling Committee. This prohibition precludes also moving a final examination from a scheduled time to the last or earlier meetings of the class, except laboratory final examinations which cannot be held in accordance with the regular final examination schedule.

2. Instructors requesting any variation from the official final examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one day because of the change in hours being requested.

3. No variations from the University final examination schedule will be considered official until published in the Official Daily Bulletin.

4. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.

Recommended: In order to give students an opportunity for thorough review prior to final examinations, instructors are requested not to schedule quizzes or term papers to be due during the last week of class.

GRADES

Academic Staff—Grades are due in the Office of Admissions and Records within 90 hours after the examination. Fall quarter grades are due beginning December 13 with last day examination grades due by noon, Monday, December 19. Messenger service is provided. Please call Extension 6658 when grades are ready. Do not put reports in campus mail.

Students—Your Fall quarter grade reports will be available Wednesday, December 28 as follows:

Agriculture, Forestry, Home Economics; Veterinary Medicine—in post office boxes, St. Paul Campus.

Business Administration; Education; General College; Graduate School; Institute of Technology; Medical School; Science, Literature, Arts; University College—at Admissions and Records Office.

Other Colleges—at the college offices except for Law grades which will not be reported until the end of the year.

On Tuesday, January 3, SLA grades will be in the Library basement study room and IT grades will be in the Mechanical Engineering lobby.

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* Follow regular final examination schedule using sectional rather than lecture hours.

GRADING SYSTEM

1. There shall be four permanent grades, A (highest), B, C, and D (lowest), which shall be acceptable for the completion of a single course.

2. There shall be a permanent grade of F (failure) given when a student does not complete successfully the work of a course.

3. There shall be a temporary grade of I (incomplete) which may be assigned when there is not sufficient information immediately available to permit the assignment of a permanent grade. This would be the case if the student has not done all the work of the course or if the instructor does not know why a student, officially registered for his course, has not appeared or has left. If the instructor is able to ascertain that the student has no adequate excuse or if the student attended beyond the sixth week and was failing, F is the appropriate grade.

   An I which is not turned into a permanent grade or into a W (official cancellation with approval of the student's college) by the end of the sixth week of the next regular quarter of attendance shall become an F. (This does not apply to students in the Graduate School or to students in a Master's degree program in undergraduate colleges; their I grades remain until changed by the instructors to some other grade.) Permission to complete the work must be obtained from the instructor. He may set a makeup deadline of less than 6 weeks.

   An extension of time may be permitted for removal of I grades upon recommendation of the instructor concerned and with approval of the Scholastic Committee of the college in which the student is registered. If the petition is presented after the end of the sixth week of the next quarter of residence, a restoration of the mark of I and the completion of the required work would be considered in the nature of a special examination for which the special examination fee would be required.

4. There shall be a symbol W to indicate official cancellation from a course without grade. This shall be assigned in all cases of official cancellation during the first 6 weeks of classes irrespective of the student's standing. Whether cancellation is permitted is within the authority of the student's college to determine. After 6 weeks, W shall be posted only if the student is not failing at the time of official cancellation. W is a registration symbol, not a grade, and shall be posted by the Recorder on the basis of the student's registration activity as approved by the student's college.

5. A student who cancels officially or otherwise leaves a class after the sixth week of classes and is failing at the time shall receive an F.

6. There shall be a symbol X which may be reported in continuation courses in which a student is permitted to continue but in which a grade cannot usually be determined until the sequence is completed. The instructor shall submit a grade for each X when the student has completed the entire sequence.

7. In courses numbered 200 and higher, the permanent grade S (satisfactory) may be used to indicate satisfactory work for graduate students. In calculating grade point averages, it counts as a B.

8. In the Doctor of Medicine program, the permanent grade P (pass) may be used to indicate satisfactory work for Doctor of Medicine candidates. The student's standing will be calculated using more detailed evaluations available in the college office.

9. There shall be a registration symbol V (visitor) to indicate registration as an auditor or visitor.

10. There shall be a symbol T (transferred) indicating credits transferred from another institution, or from one college to another within the University when a revaluation is required. It shall be posted as a preceding supplement to the original grade.

11. For purposes of determining scholarship averages, grade points shall be assigned as follows:

Each credit of A	4 grade points
Each credit of B	3 grade points
Each credit of C	2 grade points
Each credit of D	1 grade point
Each credit of F	0 grade points

   A student's scholastic average—or grade point average—shall be the sum of grade points divided by the sum of credits passed and failed. In general, all credits must enter into the grade point average. If a course is repeated, usually both grades should enter into the computation of the grade point average. However, the faculty of a school or college may determine which credits and grade points are to be included in the average.

12. Any college or school may set special scholastic standards or other standards as a condition for registration in particular courses of study, for placing students on probation, for admission to the college or school, for promotion, for honors, for continued residence in the college or school, or for degrees, etc.

13. The official grade point average shall be calculated in accordance with paragraph 11 above regardless of when grades were earned.

CALENDAR 1960-61

Fall Quarter

September

-23 Fall registration
Orientation program for new students
5 Holiday (Labor Day)
15 Fall quarter fees due for students registered through September 9
16-24 New Students' Week
23 Last day for registration and payment of fees for the undergradaute colleges
26 Fall quarter classes begin
29 Opening convocation, 11:30 a.m., IV hour classes excused
30 Last day for registration and payment of fees for the Graduate School, and for teachers in service

October

12 Holiday (Columbus Day)
15 Homecoming Day

November

3 Senate meeting, 3:30 p.m.
11 Holiday (Veterans Day)
24 Holiday (Thanksgiving Day)
25-26 Classes excused (except Medical and Veterinary)

December

8 Senate meeting, 3:30 p.m.
9-15 Final examination period
15 Commencement, 8:00 p.m.
17 Fall quarter closes

Winter Quarter

26 Holiday (Sunday, December 25, Christmas Day)
27 Winter quarter fees due for students in residence fall quarter
29-30 Registration for new students

January

2 Holiday (Sunday, January 1, New Year's Day)
3 Registration continues. Fees due for new students in all undergraduate colleges
Winter quarter classes begin
6 Last day for registration and payment of fees for the Graduate School, and for teachers in service

February

2 Senate meeting, 3:30 p.m.
20-26 University of Minnesota Week
22 Holiday (Washington's Birthday)
23 Charter Day Convocation, 11:30 a.m., IV hour classes excused

March

9 Senate meeting, 3:30 p.m.
10-16 Final examination period
16 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
16 Commencement, 8:30 p.m.
18 Winter quarter closes

Spring Quarter

23-24 Registration and payment of fees for new students in all undergraduate colleges
27 Spring quarter classes begin
30 Last day for registration and payment of fees for the Graduate School, and for teachers in service
31 Holiday (Good Friday)

April

27 Senate meeting, 3:30 p.m.

May

18 Cap and Gown Day Convocation; 11:30 a.m., IV hour classes excused
30 Holiday (Memorial Day)

June

1 Senate meeting, 3:30 p.m.
3-9 Final examination period
4 Baccalaureate service, 3:00 p.m.
10 Commencement, 8:00 p.m.
10 Spring quarter closes

COURSES TALLIED IN COLLEGE OFFICES

Aeronautical Engineering
All courses under 200—E 136
Agricultural Biochemistry
1A, 2—CofH 220
Agricultural Economics
1, 12, 25—CofH 220
Agricultural Engineering
All courses under 200—E 136
Agronomy and Plant Genetics
1, 131—CofH 220
Air Science
All courses—A 1
Analytical Chemistry
57—Mayo C205 for Med Tech, and JohH 210 for other students
All other courses under 200—E 136
Animal Husbandry
1, 36A—CofH 220
Anthropology
1A, 2A, 165—JohH 210
Architecture
All courses under 200—E 136
Art
23A, 60A—E 136
All other courses under 193 **except** 1, 2, 50, 56, 86, 100, 111, 116, 126, 140, 166—JohH 210
Art Education
17, 18, 19, 53, 84—Bu 206
Astronomy
11—E 136 for IT, and JohH 210 for other students
Bacteriology and Immunology
53—CofH 220 for AFHE, Mayo C205 for Med Tech, WuH 101 for Pharm, Owre 125 for Nurs, Mayo 1325 for PubH Nurs, Mayo 860 for PT, and JohH 210 for other students
Biology
1 (lect and lab), 1A (lect and lab)—CofH 220 for AFHE, WuH 101 for Pharm, NH 156 for Mort Sci, Owre 125 for Nurs, and JohH 210 for other students
Botany
50A, 52, 118, 127, 130A, 150—JohH 210
Business Administration
1, 5, 24, 25, 26—JohH 210
28—E 136
All other courses under 200 **except** 32, 34, 37, 43, 107A—VH 107
Chemical Engineering
All courses under 200—E 136
Child Development and Welfare
80—JohH 210
Civil Engineering
All courses under 200 (lect and lab for 18, 31, 51, 130, 141)—E 136
Communication
All courses—JohH 210
Curriculum and Instruction
60, 61, 62, 63, 64, 65, 66, 109, 110, 125—Bu 206
Dairy Husbandry
49—CofH 220
Economics
1T—E 136
1, 1H, 2—JohH 210
All other courses under 200 **except** 190—VH 107 for BA, and JohH 210 for other students
Education
55A, 75A—Bu 206
Educational Psychology
116A, 125, 133, 142, 150, 151, 216, 216A, 219A, 233, 253, 281, 282A—Bu 206
Electrical Engineering
All courses under 200 (lect and lab for 36)—E 136
Engineering Graphics
All courses—E 136
English (SLA)
A, C, 3B, 10H, 21, 23, 37, 55, 56, 72, 74—JohH 210
1A—E 136 for IT, and JohH 210 for other students
1B—E 136 for IT, Owre 106 for DH, NH 156 for Mort Sci and JohH 210 for other students
85—E 136
English Composition
All courses under 200—JohH 210
Entomology and Economic Zoology
1A, 51, 121, 125, 144—CofH 220
Family Life
All courses—JohH 210
Forestry
7, 10, 59, 75, 199—CofH 220
French
1B, 1C, 2C, 3C, 4, 50, 54—JohH 210
General College
7A, 7C, 10A, 10B, 26A—CofH 220 for AFHE, and NH 106 for other students
38A—Bu 206 for Educ, NH 106 for other students
All other courses—NH 106
General Engineering
All courses—E 136
Geography
1, 4, 41, 60, 70, 150 (sec 1)—JohH 210
150 (sec 2)—CofH 220
Geology and Mineralogy
A, 1—CofH 220 for AFHE, and JohH 210 for other students
B—JohH 210
5—E 136
Geophysics
All courses—E 136
German
1A, 1B, 1C, 3C, 4, 5, 56, 57, 61, 70, 73, 76, 91, 94—JohH 210
50—E 136 for IT, and JohH 210 for other students
History
1, 1H, 3, 3H, 4, 17, 20, 20H, 22, 22H, 53, 56, 59, 70—JohH 210
History and Philosophy of Education
180—Bu 206
Home Economics
1, 20, 31, 40, 76, 120—CofH 220 for AFHE, and JohH 210 for other students
All other courses under 187—CofH 220
Humanities
1—CofH 220 for AFHE, and JohH 210 for other students
1A, 2A—CofH 220
21—E 136 for IT, and JohH 210 for other students
All other courses—JohH 210

Hydromechanics
All courses under 200—E 136

Industrial Education
1—Bu 206
2, 6, 7, 12, 15, 21—TNCW 103

Industrial Engineering
All courses under 200—E 136

Inorganic Chemistry
4, 11—CofH 220 for AFHE, and JohH 210 for other students
24—WuH 101 for Pharm, E 136 for IT, and JohH 210 for other students
26—E 136 for IT, and JohH 210 for other students
All other courses under 200—E 136

Italian
1—JohH 210

Journalism
11—CofH 220 for AFHE, and JohH 210 for other students
12, 13, 18, 51, 54, 73, 79, 118, 140—JohH 210

Library
83—JohH 210

Mathematics (IT)
All courses under 200—E 136

Mathematics (SLA)
X, H, T, 10, 40—CofH 220 for AFHE, and JohH 210 for other students
10H, 40H, 53, 54, 55, 100A, 121—JohH 210

Mechanical Engineering
All courses under 200 (lect and lab for 22, 33)—E 136

Mechanics and Materials
All courses under 200—E 136

Mechanized Agriculture
All courses except 114—CofH 220

Metallurgy
All courses under 200—E 136

Metallurgical Engineering
All courses under 200—E 136

Military Science and Tactics
All courses—A 106

Mining Engineering
All courses under 200—E 136

Mortuary Science
All courses—NH 156

Music
1, 1T, 3T, 4T, 6T, 10, 11A, 11H, 12C, 34, 43—JohH 210

Music Education
4, 5, 6, 51, 52—Bu 206

Natural Science
1, 4—JohH 210

Naval Science
All courses—A 203

Organic Chemistry
42—CofH 220
61—WuH 101 for Pharm, and E 136 for other students
All other courses under 200—E 136

Orientation
1—CofH 220

Personal Orientation
All courses—JohH 210

Petroleum Engineering
All courses under 200—E 136

Philosophy
1—E 136 for IT, and JohH 210 for other students
2—JohH 210

Physical Chemistry
107—JohH 210
All other courses under 200—E 136

Physical Education for Men
1A (secs 1, 2, 3, 4, 7, 8, 9, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26)—JohH 210
1A (secs 5, 6, 10, 11, 14, 15)—CofH 220
2A (secs 1, 2, 3, 4, 6, 7, 10, 11, 12, 13, 14, 15)—JohH 210
2A (secs 5, 8, 9)—CofH 220
5B, 5C, 8, 43—Bu 206

Physical Education for Women
A (nonprofessional) secs 1, 11, 31, 43—CofH 220 for AFHE, and JohH 210 for other sections
20A, 20C, 25, 45, 70, 91—Bu 206

Physics
7, 11, 13, 14, 14H, 100, 120, 144—E 136

Plant Pathology and Botany
1, 120—CofH 220

Political Science
1—E 136 for IT, and JohH 210 for other students
5, 25—JohH 210

Poultry Husbandry
52, 154—CofH 220

Psychology
1—CofH 220 for AFHE, E 136 for IT, Owre 125 for Nurs, and JohH 210 for other students
4 (lect and lab), 4H (lect and lab), 125, 144, 156, 200, 221—JohH 210

Public Health
2—CofH 220 for AFHE, and JohH 210 for other students
52—CofH 220
111—JohH 210

Rhetoric
22, 32, 33, 47, 51, 52, 54, 56, 91, 151—CofH 220

Russian
1—JohH 210

Social Science
1—CofH 220 for AFHE, and JohH 210 for other students
2, 3—E 136 for IT, and JohH 210 for other students
51—JohH 210

Social Work
265, 268, 275—JohH 210

Sociology
1, 1H—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
3, 45—JohH 210

Soils
1, 126—CofH 220

Spanish
1A, 1C, 1H, 2C, 3C, 53—JohH 210

Speech and Theater Arts
All courses under 177 except 9, 39, 97, 152, 157, 164—JohH 210

Zoology
51, 54—Mayo C205 for Med Tech, and JohH 210 for other students
65, 112, 121, 125, 144, 170—JohH 210

COURSE FEES

All fees are per quarter unless otherwise indicated.

Students taking the following courses will pay course fees in addition to tuition as follows:

Civil Engineering (Summer)
$35.00 per term—23

Composition (SLA)
*$21.00—X Preparatory Composition

English (Duluth and Morris)
*$21.00—X Preparatory English

Itasca Biological Station (Summer)
$10.00—Laboratory fee
*$25.00—Research Table fee

Mathematics (IT and Morris)
*$21.00—8 Solid Geometry

Mathematics (SLA and Morris)
*$35.00—X Preparatory Mathematics

Modern Language Institute (Summer)
$40.00 per term—French (22, 58, 109); or German (22, 66, 107); or Spanish (22, 58, 109)

Music
$35.00 for 1 half-hour individual lesson per week; $70.00 for 2 half-hour lessons or 1 hour lesson per week—A, D (no cr) ¶¶
$35.00 (2 cr) for 1 half-hour individual lesson per week; $70.00 (4 cr) for 2 half-hour lessons or 1 hour lesson per week—11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 100 ¶¶
$50.00—for 2 half-hour individual lessons per week or 1 hour lesson per week—13B (Summer)
$25.00—60B, 61B, 62B (Summer)
$70.00—for 1 hour lesson per week—204 ¶¶
$10.00—Piano for Children, ages 6-16

Music Education
225E—Same as Music 11-27, 100 ¶¶

Physical Education (men)
Towel and locker fee for students using PE facilities for activity, $2.50 per quarter payable at department
Uniforms (optional for class of recreation activity) $2.00 per quarter payable at department

Physical Education (women)
$3.25 (maximum $6.50 per quarter—All nonprofessional courses except Horseback Riding, 20A, 20B, 20C, 21A, 21B, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 40D, 41A, 41B, 42A, 45, 54, 76, 87, 88

Public Health
$100.00—169, 190
$185.50—231, 232
*$200.00—230 (September field course)

Rhetoric (AFHE)
*$7.00 per credit for more than 6 credits in Rhet 1

SPECIAL FEES

Supplement to *General Information Bulletin.*

English for foreign students
$15.00 per qtr—required of foreign students needing special instruction in English.

Music Practice Room
$1.00 per qtr for one, $2.00 for two, 50 cents for each addtl hr per week—all instruments except organ
.20 per hr—small organ
.40 per hr—large organ

Record Service Fee
$1.00—Required of all new students. This fee provides three certified copies of student records. When more than three copies of records are requested, a charge of $1 will be made for each additional copy.

Speech and Hearing Clinic—Students
$5.00 per qtr—spec clinical treatment

Speech and Hearing Clinic—Nonstudents
Articulatory cases, per 10 weeks—$15.00 for one, $25.00 for two, $30.00 for three, $35.00 for four, $40.00 for five lessons per week.
Stuttering, per session—$100.00 for full time remediation

DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry cards are $10; Agricultural Biochemistry, Art, Pharmacy, and Physiological Chemistry cards are $5.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be refunded at the end of the course.

You must present your deposit card to be assigned a laboratory desk. Veterans (P.L. 346, 16, 894) will receive information from their instructor concerning deposit cards and laboratory assignments.

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* In lieu of tuition.

¶¶ Number of lessons are doubled per Summer Session term for courses listed in these sections.

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Political Science, 80
Portuguese, 84
Poultry Husbandry, 16
Practical Nursing, 47
Psychiatry and Neurology, 51
Psychology, 81
Public Health, 51

Radiology, 54
Rhetoric, 17
Romance Languages, 83
Russian, 86

Sanskrit, 61
Scandinavian, 85
Slavic, 86
Social Science, 73
Social Work, 86
Sociology, 87
Soils, 17
Spanish, 84
Speech and Theater Arts, 88
Statistics, 90
Surgery, 55

Veterinary Medicine, 113

Zoology, 90

REGISTRATION DATES

New students participating in the orientation program should register on the date they are scheduled to appear for this activity. Other students may register at any time during the period listed below for their college or course.

Education and Graduate students taking Saturday classes only may register also on Saturday, October 1 at 206 Burton Hall.

Agriculture, Forestry, Home Economics (220 Coffey)
Aug. 1-12, Sept. 12-23

Business Administration (107 Vincent)
Aug. 1-5, Sept. 22-23

Dental Hygiene (106 Owre)
Aug. 17-19, Sept. 21-23

Dentistry (149 Owre)
Aug. 1-Sept. 23

Duluth Campus
Sept. 16-23

Education (206 Burton)
Aug. 1-12, Sept. 19-23

General College (106 Nicholson)
Aug. 8-19, Aug. 29-Sept. 23

Graduate School (316 Johnston)
Aug. 1-Sept. 30

Law School (125 Fraser)[1]
First year students, Sept. 6-16
Other students, Sept. 6-23

Medical School (1360 Mayo)
Sept. 23

Medical Technology (C205 Mayo)
Aug. 1-19, Aug. 29-Sept. 23

Morris Campus
Sept. 19-23

Mortuary Science (156 Nicholson)
Aug. 15-19, Sept. 19-23

Nursing (125 Owre)
Aug. 8-19, Sept. 19-23

Occupational Therapy (860 Mayo)
Aug. 1-9, Sept. 12-23

Pharmacy (101 Wulling)
Aug. 1-12, Sept. 19-23

Physical Therapy (860 Mayo)
Aug. 1-9, Sept. 12-23

Public Health (1325 Mayo)
Sept. 19-23

Science, Literature, and the Arts
Lower Division, 216B Johnston
Aug. 1-19, Aug. 29-Sept. 23

Upper Division, 223 Johnston
Students with approved program folders
Aug. 1-19, Sept. 12-23
Students without program folders
Aug. 1-12, Sept. 12-23
Special Students, 216 or 225 Johnston
Aug. 1-19, Sept. 12-23

Technology, Institute of[2]
Sept. 19-23
Engineering and Architecture, 133 Main Engineering
Chemistry, 127 Chemistry
Mines and Metallurgy, 112 Mines
Physics, 148 Physics

University College (223 Johnston)
Aug. 1-Sept. 23

Veterinary Medicine (220 Coffey)
Sept. 22-23

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[1] Beginning first year Law students will register Sept. 6-16 and attend a Law School Orientation Program Sept. 19-23 designed to give an introduction to the study of law that will be essential for satisfactory progress in the study of law. Failure to attend this program will seriously handicap a student in the commencement of his law studies. Full information on the orientation program will be distributed to students when they register. Other Law students may register Sept. 6-23.

[2] Institute of Technology—Enrolling Schedule—

	8-9	9-10	10-11	11-12	1-2	2-3	3-4
Sept. 19	Gz-Ge	Ga-Er	Ep-De	Da-Cl	Ch-Bu	Br-Bi	Be-Bae
Sept. 20	Bac-A	Ny-Ne	Na-Mi	Me-Mar	Man-Lin	Lim-L	Ky-Ki
Sept. 21	Ke-Jo	Ji-Ho	Hi-Har	Han-H	Z-Wi	Wh-Vi	Ve-Th
Sept. 22	Te-St	Sr-Sh	Se-Sc	Sa-Ro	Ri-Pr	Po-Pat	Pas-O
Sept. 23	Completion of Tallying						

Students may report after the time scheduled for their names but not before. Preferably, they should report as soon as possible after their time is up.

Students who plan to request a special registration time should submit an application no later than September 9, 1960.

University of Minnesota

CLASS SCHEDULE

Winter Quarter

1961

Minneapolis and St. Paul Campuses

including

- Registration instructions, page 2
- Final examination schedule, page 80
- Courses tallied in college offices, page 84
- Course fees, page 83
- Calendar, page 86

Every Student Is Held Accountable for Information Contained Herein and Should Save This Bulletin for Future Reference.

Courses Are Listed Under the Departments Which Offer Them. Consult Index on Page 87.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office.

Follow the instructions given you by your college. Registration dates for each college are listed on the back cover.

Step 2—Get class reservation cards for courses tallied in the college offices.

Courses which are tallied in college offices are listed on page 84.

Step 3—New students (who have not already done so) go to the University Health Service and make an appointment for your physical examination. Required of all undergraduate students taking 6 credits or more and of all graduate students except "teachers in service" taking less than 6 credits.

Step 4—Turn in your registration permit, class reservation cards, and approved registration blank at your record window in the Office of Admissions and Records to obtain statement of fees. New students, in addition, must present physical examination appointment slip (if required) and turn in University Relations mailing slips, Dean of Students information card, and religious census card.

Step 5—Pay your fees to the bursar.

Every fee statement must be receipted, even when no payment is required, before you are considered officially registered.

Fees for students in residence fall quarter in undergraduate colleges are due December 27.

Fees for new students in undergraduate colleges are due January 3.

Fees for students in the Graduate School are due January 6.

Change of registration—Have your "cancel-add" blank approved by your college office, get necessary class reservation cards for courses you are adding as in step 2 above, and present to your college window in the Office of Admissions and Records. You will get a supplementary fee statement or fee refund statement as necessary.

Withdrawal from the University—Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. All-University property such as library books, military, athletic or band equipment, laboratory material, locker keys or locks, athletic tickets, etc., must be turned in before you leave. P.L. 346, 16, and 894 veterans must also notify 102 Administration Building.

Accounts Paid by Various Agencies

If you have authorization for the University to bill a donor for your tuition and fees you must have your fee statement approved at window 18 in the Office of Admissions and Records (or room 200 Coffey Hall, St. Paul Campus) and *receipted by the bursar*. Failure to have your fee statement receipted before the last date for payment will necessitate a "late fee."

Veterans and War Orphans

P.L. 550 veterans and P.L. 634 war orphans—You must register and pay fees like every other student. Your business with the Veterans Administration is separate, and you must attend to it on your own responsibility. The University assists you by certifying that your claims for payment are justified. You initiate this business at window 18 on the first floor of the Administration Building (or room 220 Coffey Hall, St. Paul Campus). Do the following:

Make application to the Veterans Administration for benefits on or before your first day of classes. You don't get paid unless you do apply. A Certificate of Education and Training comes to you from the Veterans Administration about a month after you apply. Turn this in as soon as you complete your registration at one of the above addresses.

If you are returning for another session, your previous training period under either law having been officially interrupted, you have to make out a re-entrance form to notify the Veterans Administration that you wish to return to training status. Do this at one of the above addresses.

Make a report of your attendance every month. During the first five days of each month, fill out the Certification of Attendance Form and turn it in at one of the above addresses. The Admissions and Records Office adds to this form a certification of the amount of work you are doing and sends it on to the Veterans Administration, which in turn sends you a check at your home address. If you want full benefits, take 14 credits per quarter as an undergraduate or 12 credits in the Graduate School.

P.L. 16, 346, and 894 veterans—Have your fee statement approved at window 18 in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), and then receipted by the bursar. Present the receipted statement and your course list to room 102 Administration Building to obtain an order for books and supplies.

Additional information and assistance with problems concerning any of the above laws may be obtained at room 102 Administration Building.

Graduate School Fees for Staff Members

All academic appointees giving 25 per cent or more of full time service and all 75 per cent time or more civil service appointees, when enrolled in the Graduate School, will pay tuition at the Graduate School resident rate, regardless of source of fund, resident status, or curriculum pursued. Similar staff members when enrolled in the final year of a Master's degree curriculum in an undergraduate college will pay tuition at the respective college resident rate. If you are a non-resident, entitled to resident fee privileges under these regulations, tell the fee statement clerk that you are a staff member when you turn in your approved registration blank at your college window in the Admissions and Records Office.

If You Are Graduating This Year

For the March Commencement, you must file a form called "Application for Degree" at the appropriate window in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), preferably with your winter quarter registration material. A graduation fee of $10 is due February 6 for winter quarter graduation.

If you expect to graduate anytime within the year (through August 1961), file your formal Application for Degree now. Shortly thereafter you will receive a balance sheet which shows whatever requirements for the degree you still must complete.

Foreign Students

Your first action upon arriving at the University should be to show your passport at the Foreign Student Adviser's Office, 302 Eddy Hall. There you will be given full information about federal, state, and local regulations, and about housing, finance, health and personal problems. Following this, you register in the same manner as all other students.

HOW TO USE THIS BULLETIN

Bold face titles—You must obtain a class reservation card to enroll in courses which appear with **bold face** titles. Instructions on where to get these class reservation cards precede the index at the back of this bulletin.

Prerequisites—Before you can enroll in some courses, you must have completed or be concurrently enrolled in certain other courses or possess some particular qualification or class standing. These requirements are known as prerequisites. If no prerequisites are listed, there are none, except insofar as the course number indicates a class standing requirement.

Class standing requirements, unless otherwise noted, are indicated by the course number:

1-49 for freshmen and sophomores

50-99 for juniors, seniors, and fifth-year students

100-199 for juniors, seniors, fifth-year students, and graduate students

200 and over for graduate students only

A minimum of prerequisite information is shown. For example, when courses which must be taken in sequence are prerequisites, only the last course of the sequence is listed. A comma always means "and"; while a semi-colon indicates that there are alternative prerequisites.

Example: prereq 2 or 5, Psy 1 (you must have had Psychology 1 plus either course 2 or 5)

Example: prereq C; or Comp 6 or Comm 3, 5 addtl cr; or 5 cr in 21-22-23 (you must have had either course C; or 5 credits in the same department plus either Composition 6 or Communication 3; or 5 credits from either course 21, course 22, or course 23)

When no departmental designation precedes the course number listed as a prerequisite, that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.

Work equivalent to a prerequisite course (having the same content) is ordinarily accepted in lieu of that prerequisite. You will also note that the instructor may, in some instances, waive prerequisites at his discretion. See your college bulletin for further information.

Symbols—The following symbols are used throughout this bulletin:

† To receive credit, all courses listed after the dagger must be completed.

‡ Students may enter any quarter.

§ No credit if credit received for equivalent course after the symbol.

¶ Means "concurrent registration in."

♯ Means "consent of instructor."

△ Means "consent of department or school offering the course."

Hours and days—Class hours are identified by Roman numerals, and continue for 50 minutes after the beginning time shown below:

Hour	I	II	III	IV	V	VI	VII	VIII
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00

A class listed I-III TTh meets the first through the third hours Tuesdays and Thursdays, the hyphen always indicating "through." Days of the week are abbreviated M, T, W, Th, F, and S.

Building name abbreviations—Refer to the index for page reference.

Choice of classes—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll. Many courses have a choice of laboratory or recitation periods, but only a single lecture period for all students taking the course. Occasionally there will be a choice of both lecture and laboratory or recitation periods. The choice of the laboratory or recitation section will determine the lecture section whenever the lecture sections have no identifying section number.

Examples:

—1, I TThS	Lect III MWF	Lect II T	—1, Lect II T
—2, II MWF	—1, Lab V-VI M	—1, Lab III-IV T	—2, Lect II Th
—3, IV TThS	—2, Lab V-VI W	—2, Lab III-IV Th	—1, Lab III-IV T
		Lect II Th	—2, Lab III-IV Th
		—3, Lab VI-VII T	—3, Lab VI-VII T
		—4, Lab VI-VII Th	—4, Lab VI-VII Th

Missing information—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

Changes—Changes made subsequent to publication of the *Class Schedule* are published in the Official Daily Bulletin, which appears in the *Minnesota Daily*. Room changes are posted on classroom doors.

Important Note to *STUDENTS*—

Accurate registration is your personal responsibility. You will receive credit in only those courses for which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel it on a regular cancellation form.

Colleges of the University reserve the right to cancel courses in which enrollment is not sufficient to warrant giving the course.

Do not register from the *Class Schedule* alone. Your college bulletin contains full course descriptions, college rules and requirements, and other information necessary for sound program planning.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

Courses offered on the St. Paul Campus by Minneapolis Campus departments:

Hum 1A, 2A, 24	Soc 1A, 14A
Math H, T, 10	Spch 251
Mus 44S	PEM 1B, 2B
PubH 52	PEW B

For additional information, see the course listing under the appropriate department.

AGRICULTURAL BIOCHEMISTRY (AgBi)

2 Quantitative Methods (5 cr; prereq 8 cr inorg chem)
VI-IX MWF, SnH 116, Anderson

3 Introduction (3 cr; prereq OrCh 42 or 62)
I TThS, SnH 113, Glass

103 Adv Dairy Chemistry (5 cr; prereq 10)
Lect IV MWF, SnH 113, Jenness
Lab VI-VIII TTh, SnH 102, Jenness

116 Adv Animal Nutrition (3 cr; prereq 6... 120 rec)
III TThS, SnH 113, Schultze

118 Lab Probs: Biochemistry (3-5 cr; prereq ‡)

120 Proteins (3 cr; prereq 119 or ‡)
III MWF, SnH 113, Briggs

121 Carbohydrates (3 cr; prereq 119 or ‡)
II MWF, SnH 113, Smith

130 Proteins Lab (2 cr; prereq 2, ¶120)
VI-VIII TTh, SnH 202, Jenness

131 Carbohydrates Lab (2 cr; prereq 2, ¶121)
VI-VIII MW, SnH 202, Smith

203 Research Probs (2-5 cr; prereq ‡)

205 Topics: Literature (1-3 cr; prereq ‡)

208 Seminar: Cereal Chemistry (1 cr; prereq 108 or ‡) Geddes, Glass

213 Seminar: Dairy Chemistry (1 cr; prereq 103, ‡) Jenness

216 Seminar: Nutrition, Enzymes (1 cr; prereq 116, 123, ‡) Schultze, Liener, Kirkwood

219 Seminar: Colloids (1 cr; prereq 119, ‡) Briggs

220 Seminar: Proteins (1 cr; prereq 120, ‡) Briggs, Jenness

221 Seminar: Carbohydrates (1 cr; prereq 121, ‡) Smith

222 Seminar: Lipides (1 cr; prereq 122, ‡) Lundberg

224 Seminar (1 cr)
IX F, SnH 113, Geddes

AGRICULTURAL ECONOMICS (AgEc)

1 Introduction (3 cr)
—1, II MWF, DI 15, Hess
—2, IV MWF, DI 15, Hess

2 Principles of Economics I (3 cr; prereq 1)
—1, Lect II TTh, DI 15, Hess
—2, Lect IV TTh, DI 15, Hess
—1, Rec I Th, HH 9, Johnson
—2, Rec III Th, HH 9, Johnson
—3, Rec V Th, HH 9, Johnson
—4, Rec I F, HH 9, Johnson
—5, Rec II F, HH 9, Johnson
—6, Rec IV F, HH 9, Johnson
—7, Rec V F, HH 9, Johnson

25 Accounting (4 cr; prereq soph, regis AFHE)
VII MWF, VIII-IX W, HH 210, R Dahl

40 Marketing Organization (3 cr; prereq soph, 2)
II MWF, AgEng 108, D Dahl

80 Farm Accounting (3 cr; prereq soph with ‡)
I MWF, AgEng 109, Nodland

101 Statistical Methods for Social Sciences (4 cr; prereq Biom 100)
Lect III MWF, HH 210, Learn
Lab I-II T, HH 2, Learn

131 Market Prices (3 cr; prereq 30)
3:30-4:45 TTh, HH 100, Cochrane

141 Dairy Marketing (3 cr; prereq 40)
II MWF, HH 210, Koller

143 Livestock, Poultry Marketing (3 cr; prereq 40)
IV MWF, HH 210, Engelman

180 Farm Accounting (3 cr, §80; prereq ‡)

183 Farm Planning (3 cr; prereq ‡)
10:00-11:15 TTh, HH 210, Engene

221 Farm Mgt Research Methods (3 cr)
1:30-2:45 TTh, DI 118, Day

241 Seminar: Marketing (3 cr) Engelman

270 Seminar: Land Tenure (3 cr) Solberg, Bade

AGRICULTURAL ENGINEERING

Mechanized Agriculture (MeAg)

2 **Technical Drawing Probs** (1 cr, §3; prereq 1 yr HS mech draw)
III-IV T, AgEng 303, Christopherson

3 **Technical Drawing** (3 cr, §2)
III-IV MWF, AgEng 303, Christopherson

4 **Mechanical Training** (4 cr)
—1, Lect V-VI M, AgEng 108, Olson
—2, Lect V-VI W, AgEng 108, Olson
—3, Lect V-VI F, AgEng 108, Olson
Lab III-V TTh, AgEng 20, Olson

7 **Farm Building Construction** (3 cr)
Lect VI TTh, AgEng 41, Pomroy
—1, Lab VII-IX T, AgEng 48, Pomroy
—2, Lab VII-IX Th, AgEng 48, Pomroy

23 **General Physics** (5 cr; prereq Math H)
Lect II MTWF, AgEng 101, Machmeier
—1, Lab I-II Th, AgEng 102, Machmeier
—2, Lab III-IV Th, AgEng 102, Machmeier

24 **Agricultural Physics I** (4 cr; prereq Math T, 10)
Lect I MWF, AgEng 101, Culmer
—1, Lab VI-VII W, AgEng 102, Machmeier
—2, Lab VI-VII Th, AgEng 102, Machmeier
—3, Lab VIII-IX Th, AgEng 102, Machmeier

25 **Agricultural Physics II** (4 cr; prereq 24)
Lect III MWF, AgEng 101, Culmer
—1, Lab I-II T, AgEng 102, Culmer
—2, Lab III-IV T, AgEng 102, Culmer
—3, Lab VI-VII T, AgEng 102, Culmer
—4, Lab VIII-IX T, AgEng 102, Culmer

39 **Rural Sanitation, Water Supply** (3 cr; prereq 23, Math H)
IV MWF, AgEng 305, Allred

45 **Engines, Tractors** (3 cr; prereq 23)
Lect VI MW, AgEng 109, Solstad
—1, Dem VI F, AgEng 37, Solstad
—2, Dem VII F, AgEng 37, Solstad

45A **Engines, Tractors Lab** (1 cr; prereq 45 or ¶)
—1, VIII-X F, AgEng 37, Solstad
—2, VIII-X M, AgEng 37, Solstad

55 Electricity (2 cr; prereq 23, Math H)
III TTh, AgEng 101, Flikke

107 Drainage, Irrigation (3 cr; prereq Math H, Soil 1 or 3 or 19)
II MWF, AgEng 305, Allred

114 Probs: Farm Buildings (2-4 cr; prereq 3, 7, 14) Otis, Christopherson

AGRONOMY AND PLANT GENETICS (Agro)

1 **Introduction** (4 cr)
Lect IV MWF, Agr 202, Smith
—1, Lab III-IV T, Agr 106, Smith
—2, Lab VI-VII T, Agr 106, Smith
—3, Lab III-IV Th, Agr 106, Smith

21 **Grain, Oil Seed Crops** (4 cr; prereq 1)
Lect VI MWF, Agr 202, Robinson
—1, Lab VII MF, Agr 104, Robinson
—2, Lab VII-VIII W, Agr 104, Robinson

30 Genetics (3 cr; prereq soph, Biol 3)
I MWF, MeNH 227, Lambert

77 Literature (1 cr; prereq sr, 9 cr)
IX W, Agr 408

121 **Grain, Oilseed Crops** (4 cr; prereq 1)
Lect VI MWF, Agr 202, Robinson
—1, Lab VII MF, Agr 104, Robinson
—2, Lab VII-VIII W, Agr 104, Robinson

132 Farm Crops Plant Breeding (4 cr; prereq 30)
VI-VII TTh, Agr 202, Rinke

201 Research: Farm Crops (ar cr; prereq 121, 123) Behrens, Robinson, Schmid, Smith

202 Seminar: Farm Crops (1 cr; prereq 9 cr farm crops)
IX W, Agr 408

240 Adv Genetics (3 cr; prereq 131)
II MWF, Agr 408, Snyder

241 Research: Plant Genetics (ar cr) Myers, Burnham, Rinke, Ausemus, Thomas, Lambert

246 Seminar: Genetics (1 cr)
VIII-IX F, Agr 408

248 Applied Statistics (3 cr; prereq Biom 101 or PubH 110)
V MWF, Agr 408, Thomas

251 Probs: Application of Statistics (ar cr; prereq 136) Thomas

261 Quantitative Inheritance (3 cr; prereq 131, 248)
III-IV T, IV Th, Agr 408, Sentz

ANIMAL HUSBANDRY (AnHu)

1 **Introduction** (4 cr)
II MTWThF, LsPav 100, Meiske, Kolari

8 Breeds of Livestock (4 cr; prereq soph, 1)
II-IV TTh, West LsPav, Harvey

30 Meat Selection, Utilization (3 cr; prereq soph)
VI-VII MW, MSh 102, Aunan

37 Livestock Feeding II (3 cr; prereq 36)
III MWF, PetH 110, Meade

37A **Livestock Feeding II Lab** (1 cr; prereq 37 or ¶)
—1, VIII-IX T, LsPav 203, Meade
—2, VIII-IX Th, LsPav 203, Meade

61 Current Topics (1 cr; prereq sr)
IX F, PetH 108, Meiske

62 Animal Breeding (3 cr, §162; prereq Agro 30)
IV MWF, PetH 110, Rempel

64 Sheep Production (3 cr, §164; prereq 37, 37A, 62 or ‡)
VI-VII TTh, LsPav 203, Jordan

162 Animal Breeding (3 cr, §62; prereq Agro 30)
IV MWF, PetH 116, Rempel

164 Sheep Production (3 cr, §64; prereq 37, 37A, 62 or ‡)
VI-VII TTh, LsPav 203, Jordan

206 Adv Livestock Feeding I (3 cr; prereq 37, AgBi 6)
VI MWF, PetH 108, Meade

209 Seminar: Animal Husbandry (1 cr)
IX M, PetH 108, Comstock

211 Experimental Methods (3 cr; prereq Agro 248)
IV MWF, PetH 108, Comstock

213 Research: Animal Husbandry (3-9 cr)

DAIRY HUSBANDRY (DyHu)

1 Dairying (3 cr, §DInd 1)
III MWF, DI 15, Morris, Williams

19 Dairy Cattle Management (1 cr; prereq §11)
VI-VIII Th, HH 9, Williams, Cole

122 Dairy Production II (4 cr; prereq 49, Agro 30)
VI-VII TTh, HH 210, Young

203 Research: Dairy Production (ar cr)

218 Nutrition, Feeding of Dairy Cattle (3 cr; prereq ‡)
II TThS, HH 9, Donker

DAIRY INDUSTRIES (DInd)

1 Dairying (3 cr, §DyHu 1)
III MWF, DI 15, Morris, Williams

3 Dairy Products Judging (1 cr; prereq Soph)
IX-X Th, DI 118, Thomas

50 Dairy Bacteriology (3 or 5 cr, §150; prereq soph, Bact 53, ‡ to take lect only)
Lect VI MWF, DI 255, Olson
Lab VII-VIII MWF, DI 218, Olson

100 Seminar: Literature (2 cr; prereq sr, 3 courses)
V TTh, DI 122, Jezeski

102 Dry Milk Products (3 cr; prereq 101)
I TTh, DI 255, VI-VIII Th, DI 151, 150, Coulter

104 Ice Cream, Frozen Dairy Foods (3 cr; prereq 2, 50, AgBi 10)
IV TS, DI 255, VI-VIII T, DI 155, 150, Thomas

150 Dairy Bacteriology (3 cr, §50; prereq grad or ‡, Bact 53)
Lect VI MWF, DI 255, Olson
Lab VII-VIII MWF, DI 218, Olson

205 Seminar (1 cr)

210 Research: Dairy Products (2-5 cr)

212 Research: Dairy Bacteriology (2-5 cr)

ENTOMOLOGY AND ECONOMIC ZOOLOGY (Ent)

52 **Entomology** (5 cr; prereq ‡ for soph, Biol 3
Lect VII MWF, Z 313 (Mpls Campus) Price
—1, Lab V-VI MWF, Z 402 (Mpls Campus) Price
—2, Lab VIII-IX MWF, Z 402 (Mpls Campus) Price

56 **Forest Entomology** (4 cr; prereq Biol 3)
Lect VIII WF, AgEng 109, Hodson
—1, Lab VI-VII MWF, CofH 302, Hodson
—2, Lab IX-X MWF, CofH 302, Hodson

63 **Mammalogy** (4 cr; prereq Zool 22)
Lect II MWF, LsPav 203, Beer
—1, Lab I-II ThS, LsPav 203, Beer
—2, Lab IV-V ThS, LsPav 203, Beer

64 Fishery, Wildlife Populations (3 cr; prereq Biol 3, Bot 50 or For 5)
III MWF, AgEng 109, Marshall, Smith

65 Fishery, Wildlife Mgt (3 cr; prereq 64)
III ThS, LsPav 203, Marshall, Smith

118 Animal Ecology (3 cr; prereq 15 cr ent or zool, 3 cr animal or plant ecology, ‡)
VI T, VI-VII Th, CofH 307, Hodson

126 **Adv Entomology** (4 cr, §Zool 126; prereq 125, ‡...org chem rec)
Lect I MWF, Z 402 (Mpls Campus) Brooks
Lab II-V M, Z 402 (Mpls Campus) Brooks

141 Insects in Relation to Plant Diseases (3 cr, §PlPa 141; prereq 5 cr, 5 cr pl path or ‡)
I-II TThS, CofH 302, Peterson, Wilcoxson

145 **Parasitic Protozoa** (3 cr; prereq 15 cr zool incl Biol 3, ‡)
Lect VI TTh, Z 211 (Mpls Campus)
Lab VII-VIII TTh, Z 208 (Mpls Campus)

152 **General Entomology** (3 cr; prereq grad or ‡, Biol 3)
Lect VII MWF, Z 313 (Mpls Campus) Price
—1, Lab V-VI MWF, Z 402 (Mpls Campus) Price
—2, Lab VIII-IX MWF, Z 402 (Mpls Campus) Price

156 Adv Forest Entomology (3 cr; prereq 9 cr, ‡) Hodson

175 Economic Entomology (4 cr; prereq 15 cr incl 50 or ‡)
IV MWF, CofH 307, Cutkomp

197 Introd Research (ar cr; prereq sr, △)

200 Seminar (1 cr)

259 **Experimental Ecology Lab** (2 cr; prereq 118 or ¶) Hodson

273 Wildlife Mgt: Fur Bearers (3 cr; prereq 63, 65, Zool 116, Bot 50 or ‡) Beer

FORESTRY (For)

1A Conservation of Natural Resources (3 cr)
III MWF, GH 120, Kaufert, Miles

51 Logging (2 cr)
II TTh, GH 203, Hallgren

76 **Wood Structure, Identification** (2 cr, §old 54; prereq 75)
—1, VI-VII TTh, GH 211, Rees
—2, VI-VII MW

80 Timber Testing Lab (2 cr, §old 115; prereq 79)
I-II TTh, FP 204, Rees

85 Glued Wood Products (3 cr, §old 57; prereq 76 or ♯)
Lect IV TTh, FP 204
Lab VIII-IX Th, GH 203

87 Building Materials Merchandising (3 cr, §old 58; prereq 123, 18 cr BA)
Lect II-III T, FP 204, Butler
Lab II-III Th

101 Adv Dendrology (3 cr; prereq 4) Rees

104 Watershed, Range Mgt (4 cr; prereq 5 or ♯)
IV MTWF, GH 203, Duncan, Meyer

111 **Application of Statistical Methods** (3 cr; prereq 8 or ♯)
—1, VI-VIII WF, GH 206, R Brown
—2, VI-VIII TTh, GH 206

124 **Forest Mgt** (3 cr; prereq 123)
Lect II MW, GH 203, Irving
—1, Rec II F, GH 202
—2, Rec III Th, GH 202
—3, Rec IV Th, GH 202

136 Forest Economics (3 cr; prereq sr, 123, ♯)
VIII-IX T, VII Th, GH 201, Skok

140 Adv Forest Mgt (3 cr; prereq sr, 124)
I-II TTh, GH 201, Irving

145 Adv Silviculture (3 cr; prereq sr, 128) Hansen

146 Adv Forest Aerial Photogrammetry (3 cr; prereq sr, 59 or ♯) Meyer

154 Adv Watershed Mgt (3 cr; prereq 104 or ♯)
II TTh, VI-VII T, GH 202, Duncan

175 Wood Pulp, Paper (3 cr, §old 113; prereq 76, org chem)
IX MWF, FP 204, Hossfeld

187 Adv Building Materials Merchandising (3 cr; prereq 87, BA 107)

199 **Seminar** (1 cr)
—1, VIII-IX T, FP 204, Winsness, Kaufert
—2, VIII-IX W, GH 202

200 Research Probs: Silviculture (ar cr) Hansen, Duncan, B Brown, Bakuzis

203 Research Probs: Forest Mgt (ar cr) Duncan, Meyer, Irving, B Brown, Shiue, Winsness

205 Research Probs: Forest Economics (ar cr) Skok

207 Research Probs: Forest Products Engineering (ar cr) Hossfeld, Rees, Kaufert

213 Research Probs: Forest Utilization (ar cr) Hossfeld, Rees, Kaufert

218 Research Probs: Forest Measurements, Photogrammetry (ar cr) R Brown, Meyer, Shiue

220 Probs: Forest-Tree Genetics (ar cr) Pauley

221 Probs: Forest Influences (ar cr) Duncan

222 Probs: Forest Policy (ar cr) Irving, Skok, Winsness

224 Seminar (1 cr; prereq 223)
VIII-IX Th, GH 202

226 Statistical Methods (1 cr; prereq 6 cr stat or ♯) Shiue

HOME ECONOMICS (HE)

1 **Choice, Care of Clothing** (3 cr, §GC 3C; not open to men, sr)
IV MWF, McNH 350, Baumgartner

3 **Clothing Construction A** (3 cr; prereq 3rd qtr fr, 1)
—1, III-IV MWF, McNH 327, Andrews
—2, VI-VIII TTh, McNH 327, Andrews

4 **Clothing Construction B** (3 cr; prereq soph, 3)
II-IV TTh, McNH 328, Gorham

17 **Personal, Family Living** (3 cr, not open to sr)
—1, III MWF, McNH 227, Gallagher
—2, IV MWF, McNH 227, Gallagher

20 **Related Art** (3 cr)
—1, II MWF, McNH 350, Myren
—2, III MWF, McNH 350, Myren

21 **Color, Design** (3 cr; prereq 20)
—1, III-IV MWF, McNH 342, Abell
—2, VII-VIII MWF, McNH 359, Forsyth
—3, II-IV TTh, McNH 359, Forsyth

22 **Bgn Costume Design** (3 cr; prereq 1, 20... 21 rec)
VI-VIII TTh, McNH 342, Esteros

24 **Probs: Home Planning, Furnishing** (5 cr, §GC 3D, FL 15; prereq soph, 20...21, 49 rec)
—1, V-VI MWF, McNH 360, Forsyth
—2, VII-VIII MWF, McNH 360, Myren

25 **Design Applied to Crafts** (3 cr; prereq 20... 21 rec)
II-IV TTh, McNH 433, Abell

31 **Nutrition** (3 cr, §30 or GC 3B or PNurs 14, not open to HE sr)
—1, II MWF, McNH 125, North
—2, 11:00-12:15 TTh, McNH 125, North

35 **Nutrition II** (4 cr; prereq soph, 33)
Lect II MWF, McNH 44, Morse
Lab VI-VIII T, McNH 254, Morse

40 **Food Preparation** (5 cr; prereq 3rd qtr fr, 2 qtrs chem)
—1, Lect III TTh, McNH 48, Hanson
Lab III-IV MWF, McNH 157, Hanson
—2, Lect VII TTh, McNH 48, Hanson
Lab VI-VII MWF, McNH 157, Hanson

41 **Food Mgt, Marketing** (5 cr; prereq soph, 31, 40)
—1, Lect III T, McNH 125, III Th, McNH 150, Trammell
Lab III-IV M, III-V F, McNH 150, 152-156
Conf IV T, McNH 48

—2, Lect IV TTh, McNH 150, Lund
Lab III-IV M, III-V W, McNH 150, 152, 156
Conf V T, McNH 150

49 Household Equipment (3 cr; prereq soph, MeAg 35 or ‡)
—1, Lect I-II M, McNH 124, 128, Ehrenkranz
Lab I-II W, McNH 124, 128
—2, Lect II-III T, McNH 124, 128, Ehrenkranz
Lab II-III Th, McNH 124, 128

50 Textiles (4 cr; prereq 3rd qtr soph, 1, InCh 5 or GC 7C)
—1, III-IV MWF, McNH 303, Gorham
—2, VI-VII MWF, McNH 303, Andrews

53 Adv Clothing (3 cr; prereq 4, 50 or ¶)
VI-VII MWF, McNH 328, Gorham

63 Quantity Food Purchasing, Production (5 cr; prereq 41, 3rd qtr soph)
Lect V MW, McNH 201, Hitchcock
Lab I-IV TTh, Cafeteria

66 Administrative Food Service Experience (5 cr; prereq 65) Hitchcock

70 Adv Food Preparation (3 cr; prereq 40, AgBi 1A)
VI TTh, McNH 48, VII-VIII TTh, McNH 56, Trammell

85 Home Mgt (3 cr; prereq 40...41 rec)
VII MWF, McNH 201, Jeary

86 Home Mgt Lab (4 cr; prereq 85 or ¶...41 rec)
—1, I MTWThFS, Home Mgt House, Sands, Steensland
—2, I MTWThFS, Home Mgt House, Sands, Steensland

89 Probs: Household Equipment (2-4 cr; prereq 49 with B, MeAg 35, ‡)
Lect 1:00-2:15 T, McNH 124, 128, Ehrenkranz
Lab VI-VIII Th, McNH 124, 128

107 Textile Analysis (3 cr; prereq 50, AgBi 1A, AgBi 2 or OrCh 42)
VI-VIII MWF, McNH 304, Davison

115 Economic, Social Aspects of Clothing (3 cr; prereq 50, AgEc 2)
IX-X T, McNH 201, Baumgartner

120 Art History (3 cr)
VIII MWF, McNH 350, Esteros

121 Textile Design (3 cr; prereq 23, 50 or ‡)
VI-VII MWF, McNH 433, Abell

123 History of Home Furnishings (2 cr; 120 rec)
II TTh, McNH 360, Ludwig

126 Special Problems in Crafts (1-3 cr; prereq 25 or ‡)
II-IV TTh, McNH 433, Abell

127 Purchasing Home Furnishings (3 cr; prereq 24, 50)
VI-VIII TTh, McNH 360, Ludwig

141 Current Literature in Foods (3 cr; prereq sr, 40)
9:00-10:15 TTh, McNH 44, Lund

170 Nutrition Principles (3 cr; prereq 31, 40, AgBi 1A, Phsl 4)
III MWF, McNH 44, Doyle

171 Maternal, Child Nutrition (3 cr; prereq 170, HEEd 90)
III MW, McNH 48, III F, Ph 236a, IV-V one day ar **(Mpls Campus)** Doyle

174 Topics: Nutrition (1 cr; prereq 170)
—1, V W, McNH 44, North
—2, V F, McNH 44, North

175 Nutrition (4 cr; prereq sr, 33, AgBi 2)
Lect II MWF, McNH 48, Morse
Lab VI-VIII T, McNH 254, Morse

178 Clinical Probs: Nutrition (2 cr; prereq 35 or ¶, 170)
Lect IV T, McNH 44, Gormican
—1, Lab VI-VIII T, U Hosp **(Mpls Campus)** Gormican
—2, Lab VI-VIII Th, U Hosp **(Mpls Campus)** Gormican

179 Readings: Nutrition (2 cr; prereq 170) Morse

185 Family Relationships (3 cr; prereq 17, HEEd 90 or ‡)
II-III T, II Th, McNH 227, Gallagher

186 Probs: Income Mgt (3 cr; prereq 76, 85 or ‡)
3:30-5:30 W, McNH 125, Jeary, others

187 Readings: Family Relationships (1-3 cr; prereq ‡) Gallagher

189A Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

189B Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

189C Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

220 Readings: Related Art (1-3 cr; prereq ‡) Esteros

221 Probs: Textile Design (1-3 cr; prereq 121 or ‡)
VI-VII MWF, McNH 433, Esteros

227 Probs: Home Planning, Furnishing (1-3 cr; prereq 180 or ‡...122B rec) Ludwig

247 Probs: Food (3 cr; prereq 142, AgBi 1, ‡) Noble

272 Human Metabolic Studies in Health, Disease (4 cr; prereq 173, ‡) Code

273 Adv Diet Therapy (4 cr; prereq 173 or ‡) Victor

279 Seminar: Nutrition (1 cr; prereq ‡)

295 Probs: Home Economics (1-5 cr; prereq ‡) Davison, Ehrenkranz, Esteros, Ford, Noble

296 Probs: Home Economics (1-5 cr; prereq 295) Davison, Ehrenkranz, Esteros, Ford, Noble

HORTICULTURE (Hort)

6 Fruit Growing (3 cr; prereq Biol 3 or 3 cr bot)
III MWF, Hr 102, Andersen

36 Plant Propagation (3 cr; prereq soph, Biol 3 or 6 cr bot)
Lect III TTh, Hr 8, Widmer
Lab VI-VIII T

53 Foliage Plants (2 cr; prereq 16)
Lect VI Th, Hr 8, Widmer
Lab VII-VIII Th

62 Probs: Landscape Design, Composition (2-4 cr; prereq sr, 61 or ‡) Phillips

104 Frozen Food Processing, Storage (3 cr, §FTec 104; prereq AgBi 5 or 6 or 10, Bact 53 or ‡)
IV MWF, Hr 102

105 Frozen Food Probs (2-4 cr, §FTec 105; prereq 104 or ‡)

110 Crop Breeding (3 cr; prereq Agro 30)
III TThS, Hr 302, Wilcox

121 Small Fruit Culture (3 cr; prereq 6, hort maj or min or ‡)
II MWF, Hr 102, Andersen

138 Vegetable Crops I (3 cr; prereq 32, Bot 51)
VII MWF, Hr 302, Nylund

191 Problems (2-4 cr; prereq ‡)

241 Organization of Research (2 cr) Snyder

242 Seminar (1 cr; prereq 9 cr)
IX W, Hr 301, Snyder, others

244 Adv Topics (2 cr; prereq 243) Snyder, others

247 Report: Special Topics (1-9 cr)

249 Research: Crop Breeding (ar cr) Currence, Hutchins, Wilcox

PLANT PATHOLOGY AND BOTANY (PlPa)

51 **Forest Pathology** (4 cr, §1, old 10; prereq 6 cr bot or Biol 3)
Lect V WF, PP 103, French
—1, Lab VI-VII MWF, PP 105, French
—2, Lab VIII-IX MWF, PP 105, French

101 Nematodes in Relation to Plant Diseases (3 cr; prereq 1, 51 or 120, 6 cr zool or Biol 3 or ‡)
II MWF, PP 103, Taylor

102 Biology of Seeds (3 cr; prereq 15 cr pl sci or ‡)
VI-VII MWF, AgBot 107, Kommedahl

106 Mycology (3 cr; prereq 1 or 51 or 56)
VI-VIII TTh, PP 105, C Christensen, Anderson

108 Physiology of Economic Plants Lab (2 cr; prereq Bot 140 with lab, quant anal)
Lect VIII-IX M, AgBot 107, Linck
Lab VIII W, AgBot 203, 3 hrs ar, Linck

111 Diseases of Field Crops (4 cr; prereq 1 or 51 or 120)
III-IV TThS, PP 103, 105, J Christensen, Fezer

114 Adv Forest Pathology (3 cr; prereq 1 or 51 or 120)
VI-VIII T, VII-VIII Th, PP 106, French

120 **Plant Pathology for Adv Students** (3 cr, §1 or 51; prereq 14 cr pl sci or ‡)
Lect V WF, PP 103, French
—1, Lab VI-VII MWF, PP 105, French
—2, Lab VIII-IX MWF, PP 105, French

141 Insects in Relation to Plant Diseases (3 cr, §Ent 141; prereq 5 cr, 5 cr ent or ‡)
I-II TThS, CofH 302, Wilcoxson, Peterson

143 Methods (3 cr; prereq 1 or 51)
III-IV TThS, PP 106, Durbin

162 Temperature Relations of Crop Plants (3 cr; prereq 15 cr pl sci or ‡) Landon

203 Research (ar cr) J Christensen, others

207 Probs: Mycology (ar cr; prereq 105, 106, 107) J Christensen, others

211 History (2 cr)
IX-X M, PP 401, J Christensen

213 Seminar (1 cr)
IX-X T, PP 103, J Christensen, others

214 **Radioisotope Techniques Applied to Biology** (3 cr; prereq nuclear phys)
VI-VIII TTh, AgBot 107, Linck, Caldwell

218 Principles of Plant Pathology (3 cr; prereq 1 or 51, 156, Bact 53, 6 addtl cr)
III-IV MWF, PP 401, Eide

251 Seminar: Agricultural Botany (1 cr)
IX Th, AgBot 107, J Christensen, others

254 Research Probs: Applied Plant Physiology (ar cr) Landon, Rowell

260 Research Probs: Agricultural Botany (ar cr) J Christensen, others

POULTRY HUSBANDRY (PoHu)

1 Poultry Production (3 cr)
II MWF, PetH 110, Snetsinger

53 Poultry Feeding (2 cr; prereq 1)
VI TTh, PetH 205, Johnson

55 Problems (1-3 cr; prereq 6 cr, ‡)

59 Commercial Turkey Production (3 cr; prereq 1)
I MWF, PetH 108, Kinney, others

102 Poultry Breeding (4 cr; prereq 1, Agro 30)
I MWF, PetH 205, Shoffner

214 Research: Poultry Husbandry (ar cr; prereq ‡)

215 Research: Poultry Nutrition (ar cr; prereq 9 cr agr biochem) Waibel, Johnson

216 Research: Poultry Breeding (ar cr; prereq 9 cr genetics) Shoffner

217 Seminar (1 cr; prereq ‡) Shoffner

218 Research: Poultry Products (ar cr; prereq ‡) Swanson

RHETORIC (Rhet)

1-2-3 Communications I, II, III (3 cr per qtr)
Three days assigned from I MTWThF. All entering freshmen and students transferring with fewer than nine credits of freshman English meet in Agricultural Engineering 303 the first period MTW for the first week for diagnostic tests and sectioning. Students already tested during freshman week and students who have taken Rhetoric 1 or 2 will find section assignments posted on 2nd floor AgEng Bldg January 3rd.

22 **Public Speaking** (3 cr; prereq rhet comm req)
—1, II MWF, AgEng 307, Thiss
—2, II MWF, EgEng 306, Langtry
—3, III MWF, AgEng 307, Nichols
—4, III MWF, AgEng 306, Seeden
—5, IV MWF, AgEng 307, Langtry
—6, V MWF, AgEng 307, Seeden
—7, VI MWF, AgEng 307, Gill
—8, VII MWF, AgEng 307, Richardson
—9, III TThS, AgEng 307, Cashman

32 Novel, Short Story (3 cr; prereq rhet comm req)
V MWF, AgEng 105, Nadon

33 American Life in American Literature (3 cr; prereq rhet comm req)
II MWF, AgEng 317, Horberg

47 **Efficient Reading** (3 cr, SLA students see SLA bul)
VI MWF, AgEng 315, Brown

51 **Exposition** (3 cr; prereq rhet comm req)
—1, IV MWF, AgEng 306, Mixon
—2, V MWF, AgEng 317, Horberg
—3, VI MWF, AgEng 306, Mixon
—4, VII MWF, AgEng 306, Wright
—5, II TThS, AgEng 315, Brown

52 **Technical Writing** (3 cr; prereq 51)
III MWF, AgEng 317, Thurston

54 **Adv Public Speaking** (3 cr; prereq 22)
II MWF, AgEng 105, Seeden

56 **Discussion Methods** (3 cr, §old 12; prereq rhet comm req)
IV MWF, AgEng 109, Cashman

60 Contemporary Life, Literature (3 cr; prereq rhet comm req)
IV MWF, AgEng 315, Wright

91 **American Speech for Foreign Students** (no cr)
IX MWF, AgEng 317, Gill

151 **Report, Thesis Writing** (3 cr; prereq 51 or ‡)
IX M, IX-X W, AgEng 306, Thurston

251 Seminar: Listening Comprehension (2 cr, §Spch 251; prereq undergrad spch maj, ‡)
VIII-IX W, AgEng 221, Nichols

SOILS (Soil)

1 **Soils, Soil Mgt** (4 cr)
Lect III MWF, So 115, Burson
—1, Lab VI-VIII W, So 115
—2, Lab VI-VIII Th, So 115
—3, Lab VI-VIII F, So 115

20 **Interpretation of Soil Information** (3 cr; prereq 1 or 3 or 19)
Lect IV TTh, So 115, Grava
—1, Lab VI-VIII M, So 126
—2, Lab VI-VIII T, So 126

24 Soil-Forming Minerals, Rocks (3 cr; prereq 1 or 3 or 19, InCh 5)
Lect V TTh, So 115, Farnham
Lab VI-VIII Th, So 132

52 Topics (1 cr; prereq 1 or 3 or 19)
VIII-IX F, So 215

53 Topics (1 cr; prereq 52)
VIII-IX F, So 215

124 Soil-Forming Minerals, Rocks (3 cr, §24; prereq 1 or 3 or 19, InCh 5)
Lect V TTh, So 115, Farnham
Lab VI-VIII Th, So 132

128 Soil Chemistry (3 cr; prereq 3 or 19 or 119)
8:00-9:30 TTh, So 115, MacGregor

129 **Chemical Analysis of Soils** (3 cr; prereq AgBi 2)
Lect VI MWF, So 215, MacGregor
Lab VII-VIII MWF, So 120

130 Problems (2-4 cr; prereq 1 or 3 or 19 or 119)

132 Soil Fertility (3 cr; prereq 3 or 19 or 119)
IV MWF, So 115, Caldwell

203 Seminar (1 cr)
IX T, So 215

UNATTACHED COURSES

Agricultural Journalism (AgJo)

53 Publicity (3 cr; prereq rhet comm req)
I TTh, AgBot 107, 1 hr ar, Swanson, Wolf, McKay

Biometrics (Biom)

101 Statistical Analysis II (4 cr; prereq 100)
Lect IV MWF, DI 118, Gates, lab ar

Food Technology (FTec)

52 Food Analysis (2 cr; prereq AgBi 2, 3)
Geddes, Glass

102 Food Technology (3 cr; prereq AgBi 5, 6 or ‡, Bact 53, phys)
III MWF, DI 255, Jezeski, Liener

Orientation (Orie)

1 **College Orientation Lectures** (1 cr)
—1, I T, CofH 307, DeBoer
—2, I W, AgBot 107

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

5 Statistics (4 cr, §151 or Soc 45; prereq Math 10)
—1, I MTWF, Arch 135
—2, II MTWF, Owre 12
—3, IV MTWF, MinMet 116
—4, VI MTWF, MinMet 116

24 Accounting (3 cr, §55A; prereq 3rd qtr fr)
—1, V MWF, VH 2
—2, V MWF, VH 6
—3, VI MWF, ForH 115
—4, VI MWF, ForH 185
—5, VII MWF, VH 6

25 Accounting (3 cr, §55B; prereq 24)
—1, I MWF, ForH 185
—2, III MWF, ForH 85
—3, III MWF, ForH 15
—4, IV MWF, AH 350
—5, V MWF, VH 306
—6, VI MWF, ForH 85
—7, VII MWF, VH 301

26 Accounting (3 cr, §55B; prereq 25)
—1, VI MWF, Arch 135
—2, VII MWF, VH 2

32 Typewriting (1 cr)
I MTWThF, VH 209, Stanley

33 Interm Typewriting (1 cr; prereq 30 words a min, 32 or 1 yr HS type)
VI MWF, VH 209, 2 hrs ar, Stanley

36 Office Procedures (3 cr; prereq soph)
IV MWF, VH 209, Donaldson

38 Shorthand (3 cr, †37-38-39; prereq 37 or 1 yr HS shorthand)
III MWF, VH 209, 2 hrs ar, Stanley

50 Production Mgt (3 cr, §150; prereq Econ 2)
III MWF, MNH Aud, Wickesberg

51 Business Statistics (3 cr, §161; prereq soph with ‡, 5)
—1, 9:00-10:30 TTh, VH 207, Hastings
—2, III MWF, VH 207, Neter
—3, 10:30-12:00 TTh, VH 1, Hastings

52 Modern Industrial Relations: Labor Marketing (3 cr, §152; prereq Econ 2)
Lect II TTh, C 100, Lazar
—1, III T, VH 306
—2, III T, VH 307
—3, III Th, VH 306
—4, IV T, VH 307
—5, IV Th, VH 307
—6, V T, VH 113
—7, V Th, VH 113

53 Risk Mgt, Insurance (3 cr, §153; prereq Econ 2)
—1, II MWF, ForH 185, Fleischer
—2, III MWF, ME 110, Fleischer
—3, IV MWF, Arch 45, Fleischer
—4, 10:30-12:00 TTh, VH 113, Hansen

54 Transportation I: Principles (3 cr, §154; prereq Econ 2)
—1, I MWF, VH 4
—2, II MWF, VH 1, Nightingale
—3, III MWF, VH 4, Harper

55A Accounting (4 cr, §24-25)
VI MTWF, VH 301, Nelson

55B Accounting (4 cr, §25-26; prereq 55A)
IV MTWF, VH 306, Heller

55C Managerial Costs (3 cr, §115A or 115B or 265A; prereq 26)
VI MWF, VH 207, Bentley

55D Analysis of Financial Statements (3 cr, §105C; prereq 26)
I MWF, VH 6, Lund

56 Corporation Finance (3 cr, §156; prereq 26)
—1, II MWF, VH 207, Gustafson
—2, III MWF, ME 18, Gustafson
—3, 10:30-12:00 TTh, VH 207, Norgaard

57 Marketing (3 cr, §157; prereq Econ 2)
—1, I MWF, VH 207, Harper
—2, II MWF, VH 6, Hansen
—3, II MWF, C 325, Werner

58 Business Law: Contracts (3 cr, §158; prereq Econ 2)
Lect III T, ForH 155, Wright
—1, I TTh, VH 4, Wright
—2, II TTh, VH 4, Wright

60 Business Policy, Mgt Control (3 cr, §160; prereq 3rd qtr sr)
—1, II MWF, VH 301, Gaumnitz
—2, III MWF, VH 211, Gaumnitz

62 Human Relations in Industry (3 cr, §old 102)
IV MWF, C 115, Lazar

72 Modern Industrial Relations: Manpower Mgt (3 cr, §172; prereq 52 or 152)
VI MWF, VH 4, Rhode

75A Accounting Lab I (1 cr; prereq 26)
VI-VII T, VH 306

75B Accounting Lab II (1 cr; prereq 115A)
—1, VI-VII Th, VH 306
—2, VII-VIII W, VH 306

76 Financial Mgt (3 cr, §276; prereq 56)
8:30-10:00 TTh, VH 1

77 Advertising (3 cr, §207; prereq 57...Psy 156 rec)
II MWF, Ph 236A, Lewis

78 Business Law: Agency, Partnership, Corporations (3 cr, §178; prereq 58)
Lect III Th, Ph 150, Wright
—1, I TTh, VH 6, Neville
—2, I TTh, VH 306, Eastlund
—3, II TTh, VH 6, Neville
—4, II TTh, VH 306, Eastlund
—5, III T, IV Th, VH 4, Neville
—6, IV TTh, VH 2, Eastlund

79B Admin Secretarial Studies (3 cr; prereq 79A)
II MWF, VH 209, 2 hrs ar, Stanley

80 Administrative Practices (3 cr; prereq sr)
—1, III MWF, VH 113, Glaskowsky
—2, IV MWF, VH 113, Glaskowsky

83 Group Insurance (3 cr, §213; prereq 53)
I MWF, VH 205, Cummings

87 Credits, Collections (3 cr; prereq 57)
2:00-3:30 MF, VH 1, Hancock

89B Tabulating Equipment Applied to Business Lab (2 cr; prereq 5, 26)
Lect V Th, VH 211, Hammond
—1, Rec III-IV T, VH 211, Hammond
—2, Rec V-VI T, VH 211, Hammond

93 Property, Liability Insurance I (3 cr, §223; prereq 53)
IV MWF, VH 6, Ulseth

97 Market Analysis, Research I (3 cr, §217; prereq 51, 57)
II MWF, VH 113, Hancock

99 Office Mgt: Administrative Services (3 cr; prereq Econ 2)
VI MWF, VH 211, Donaldson

105A Interm Accounting I (3 cr; prereq 26)
IV MWF, VH 2, Lund

105B Interm Accounting II (3 cr; prereq 105A)
—1, IV MWF, VH 307, Nelson
—2, VI MWF, VH 306, Lund

106 Securities Market (3 cr, §old 186; prereq 56 or 156)
VI MWF, VH 6, Stevenson

107 Retail Mgt I (3 cr, §227; prereq 57)
III MWF, VH 301, Werner

107C Retail Mgt II (3 cr, §227C; prereq sr, 107)
III MWF, VH 205, Hancock

110 Systems, Procedures Analysis; Work Measurement (3 cr; prereq 50)
8:30-10:00 TTh, VH 307, Gibson

113 Actuarial Science Principles: Personal Insurance (3 cr, §Math 21; prereq 53 or 153 or ‡)
II MWF, VH 210, Hill

115A Cost Accounting (3 cr, §55C; prereq 26)
I MWF, VH 113, Bentley

115B Cost Accounting (3 cr, §55C; prereq 115A)
—1, II MWF, VH 307, Nelson
—2, III MWF, VH 307, Meyers

117 Sales Mgt I (3 cr, §237; prereq 57)
IV MWF, VH 1, Lewis (for undergrads)

129 Records Admin (3 cr; prereq sr, 36, 99 or ‡)
2:30-4:00 TTh, VH 211, Donaldson

135 Income Tax Accounting (4 cr; prereq 55D or 105A or ‡)
III MTWF, VH 2, Berryman

151 Statistics (3 cr, §5 or Soc 45; prereq grad or ‡, Math 10)
II MWF, VH 205, Willis

155B Managerial Accounting (3 cr, §25-26 or 55B; prereq grad, 155A)
I MWF, VH 306, Meyers

156 Corporation Finance (3 cr, §56; prereq grad or ‡, 155A)
10:30-12:00 TTh, VH 6, Stevenson

158 Business Law: Contracts (3 cr, §58; prereq grad or ‡)
Lect III T, ForH 155, Wright
Rec II TTh, VH 4, Wright

170 Top Mgt Organization, Control (3 cr; prereq sr)
I MWF, VH 1, Glaskowsky (for undergrads)

174 Transportation II: Traffic Mgt (3 cr; prereq 54 or 154)
I MWF, VH 2, Nightingale

175B Data Processing (3 cr; prereq 115B)
II MWF, VH 306, Meyers

178 Business Law: Agency, Partnership, Corporations (3 cr, §78; prereq grad or ‡, 158)
Lect III Th, Ph 150, Wright
Rec IV TTh, VH 2, Eastlund

181 Quality Control, Industrial Statistics (3 cr; prereq 51 or 161)
IV MWF, VH 205, Neter

182B Interm Manpower Mgt (3 cr; prereq 72 or 172)
III MWF, VH 6, Heneman

184A Highway Transportation (3 cr; prereq 54 or 154)
VI MWF, VH 307, Harper

194B Adv Traffic Mgt II (3 cr; prereq sr, 174 or ‡)
IV MWF, VH 210, Nightingale

195A Internship: Public Accounting (ar cr; prereq 125, ‡) Berryman

196 Corporation Financial Topics (3 cr, §old 196A; prereq 76 or 276)
1:30-3:00 TTh, VH 210, Stevenson

197 Purchasing (3 cr; prereq 57)
II MWF, VH 4, Holloway

207 Advertising (3 cr, §77; prereq 57...Psy 156 rec)
II MWF, Ph 236a, Lewis

213 Group Insurance (3 cr, §83; prereq 153)
I MWF, VH 205, Cummings

217 Market Analysis, Research (3 cr, §97; prereq 51 or 151, 57 or 157)
IV MWF, EE 137, Holloway

223 Property, Liability Insurance I (3 cr, §93; prereq 153)
IV MWF, VH 6, Ulseth

227C Retail Mgt II (3 cr, §107C; prereq 107)
III MWF, VH 205, Hancock

237 Sales Mgt (3 cr, §117; prereq 57)
2:30-4:00 MF, VH 307, Lewis

242 Mgt Development (3 cr; prereq 72 or 172)
IV MWF, VH 211, Mahoney

256 Govt, Business Enterprise I (3 cr)
10:30-12:00 TTh, VH 210, Seltzer

258 Quantitative Approaches to Admin Probs I (3 cr; prereq 151, 155B, Econ 65 or 165)
1:00-2:30 MF, VH 205, Willis

260 Policy Formulation, Admin (3 cr; prereq 2nd yr grad)
2:30-4:00 MF, VH 113, Gaumnitz

265A Managerial Cost Accounting (3 cr, §55C or 115A or 115B; prereq 26)
VI MWF, VH 207, Bentley

265B Corporate Statements (3 cr, §55D or 105C; prereq 26)
I MWF, VH 6, Lund

272 Topics: Industrial Relations (3 cr; prereq 262)
2:30-4:00 MW, VH 210, Turnbull

305B Seminar: Accounting Theory-Income Determination, Statement Presentation (3 cr)
4:00-5:15 MW, VH 210, Nelson

ECONOMICS (Econ)

B Scope, Methods, Application (3 cr)
IV MWF, Arch 35, Smith

1 Principles (3 cr, §C or 1T or 50A; prereq 3rd qtr fr)
—1, I MWF, Arch 145
—2, II MWF, MH 213
—3, II MWF, AH 150
—4, III MWF, EE 237
—5, IV MWF, Arch 145
—6, V MWF, VH 1
—7, VI MWF, Arch 145
—8, VII MWF, VH 4

1H Honors Course: Principles (3 cr, §C or 1T or 50A; prereq 3rd qtr fr, GPA of 3.0)
I MWF, VH 210

1T Principles (3 cr, §1 or C or 50A; prereq 3rd qtr fr, regis 1T)
—1, I MWF, VH 301
—2, IV MWF, ChE 50
—3, VI MWF, Arch 60

2 Principles (3 cr, §C or 2T or 50B; prereq 1)
—1, I MWF, MinMet 116
—2, II MWF, ForH 85
—3, III MWF, FraH 101, Boddy
—4, IV MWF, MurH 308
—5, V MWF, VH 207
—6, VI MWF, AE 309

2H Honors Course: Principles (3 cr, §C or 2T or 50B; prereq 1, GPA of 3.0)
III MWF, VH 210

2T Principles (3 cr, §2 or C or 50B; prereq 1T)
—1, I MWF, FraH B1
—2, IV MWF, FraH B25
—3, V MWF, VH 113
—4, VI MWF, Arch 45

50A Probs: American Economy (3 cr, §1 or 1T)
III MWF, FraH B25, Smith

65 Interm Economic Analysis: The Firm (3 cr, §165; prereq 2)
—1, 8:30-10:00 TTh, VH 2, Sjaastad
—2, II MWF, VH 2, Maynes
—3, III MWF, VH 306, Maynes
—4, 10:30-12:00 TTh, Arch 45, Sjaastad

66 Interm Economic Analysis: Income, Employment (3 cr, §166; prereq 2 or ‡)
—1, 8:30-10:00 TTh, VH 113, Coen
—2, II MWF, Bu 123, Sjaastad
—3, III MWF, MinMet 116, Kareken
—4, 11:00-12:30 TTh, E 227, Weiss

67 Money, Banking (3 cr; prereq 2)
—1, IV MWF, VH 207, Gregory
—2, VI MWF, Z 313, Gregory
—3, VII MWF, VH 207, Borak

68 Public Finance (3 cr, §168 or 178A; prereq 2)
—1, IV MWF, VH 4, Borak
—2, VI MWF, VH 2, Borak

69 Govt Regulation of Business (3 cr, §169; prereq 65 or 165 for maj, law or pol sci or ‡ for others)
—1, 9:00-10:30 TTh, VH 301, Simler
—2, III MWF, VH 1, Schmookler
—3, IV MWF, VH 301, Schmookler

75 Interm Economic Analysis: Household, Policy (3 cr, §175; prereq 65)
10:30-12:00 TTh, VH 301, M Richter

101B Decision Theory (3 cr; prereq BA 5, 101A or ‡...Math 40 rec)
2:00-3:30 TTh, VH 6, Sobel

103 Economic Development (3 cr; prereq 65, 66 or ‡)
II MWF, Owre 113, Krueger

104 International Economics (3 cr; prereq 2)
1:30-3:00 TTh, VH 207, Coen

114 Balance of Payments Theory (3 cr; prereq 66, 67)
10:30-12:00 TTh, E 205, Coen

121B Theory of Statistics I (3 cr; prereq 121A, ¶Math 53 or ‡)
III MWF, Z 313, D Richter

133 Development of American Industry (3 cr; prereq 65 or 165)
2:00-3:30 MW, MinMet 104, Schmookler

152 Labor Movements (3 cr; prereq BA 52 or 152)
I MWF, VH 211, Gregory (for grads)

160 Comparative Economic Systems (3 cr; prereq 2)
VI MWF, VH 113, Maynes

162 Union Govt, Policies (3 cr; prereq BA 52 or 152)
2:00-3:30 TTh, VH 2, Seltzer (for undergrads)

165 Economic Analysis: The Firm (3 cr, §65; prereq 2, grad or ‡)
1:30-3:00 TTh, VH 205, M Richter

172 Public Policy: Labor Relations (3 cr; prereq BA 52 or 152)
VI-VII F, ForH 170, Simler (for grads)

176A Theory of Employment, Natl Income, Price Level I (3 cr; prereq 66 or 166)
VIII-IX Th, VH 113, Brownlee

178B Public Finance (3 cr; prereq 178A or grade of B in 68 or ‡)
9:30-11:00 TTh, VH 205, W Heller

181B Topics: Statistics (3 cr; prereq 121C or ¶121C or ‡)

182 Economic Security (3 cr; prereq BA 52 or 152)
IV MWF, EE 237, Turnbull (for undergrads)

184 Probs of the Far East (3 cr; prereq 2)
II MWF, VH 211, Bronfenbrenner

185A **Price Theory** (3 cr; prereq 65 or 165)
VIII MWF, VH 207, Bronfenbrenner
190 Readings (ar cr; prereq cons adv, instr)
195B **Analytical Methods in Business Decision Making: B** (3 cr; prereq 195 or ♯)
VI-VII T, VH 307, Henderson
215B Welfare Economics B (3 cr; prereq 215A)
VIII-IX M, VH 306, Brownlee
245B Mathematical Economics B (3 cr; prereq 245A)
III-IV Th, VH 211, Hurwicz
280B History of Economic Thought: After 1870 (3 cr)
VI MWF, VH 210, Krueger
281B Adv Topics: Statistics (3 cr)
301 Seminar: Statistical Inference, Econometrics (3 cr)
VIII-IX F, VH 210, Hurwicz
368A Seminar: Public Finance (3 cr)
VIII-IX T, VH 210, W Heller
391B Seminar: Workshop in Econometrics (ar cr, †391A-391B-391C; prereq 391A)
VIII-IX F, VH 210, Hurwicz
392B Workshop: Labor Economics (ar cr; prereq 392A)
VIII-IX F, VH 205, Gregory, Simler, Turnbull
393B Seminar: Workshop in Economic Development (ar cr, †393A-393B-393C; prereq 393A)
VIII-IX Th, VH 210, Bronfenbrenner, Krueger, Schmookler
398B Seminar: Workshop in Public Finance, Fiscal Policy (ar cr, †398A-398B-398C; prereq 398A)
VIII-IX W, VH 205, Brownlee, W Heller, M Richter, Kareken
399A Workshop: Industrial Organization (ar cr; prereq 165, 169, ♯)
VIII-IX T, VH 205, Weiss

SCHOOL OF DENTISTRY

Dental Assisting (DA)

4 Bacteriology (1 cr; prereq 3)
8:00-9:00 T, MH 213, Thorson
5 Pathology, Pharmacology, Anesthetics (1 cr; prereq 3)
9:00-10:00 T, Owre 113, Thorson
6 Prosthetics Lab (2 cr; prereq 3)
2:00-5:00 M, MH 356, Tuchner
7 Clinic II (4 cr; prereq 3)
2:00-5:00 TWTh, 9:00-12:00 Th, Owre 310, Tuchner
9 Dental Radiography (½ cr; prereq 7)
III M, Owre 111, Petersen

Dental Hygiene (DH)

8 Dental Anatomy (2 cr; prereq 7)
Lect VI W, MH 356, Hall
Lab VII-IX W, MH 356, Hall
21 Dental Prophylaxis (2 cr)
Lect II W, MH 356, Jackson, lab ar
41 Dental Health Education (2 cr; prereq 40)
Lect I T, MH 356, Schendel, lab ar
46 Dental Assisting (2 cr; prereq 45)
Lect VI M, MH 356, lab ar
54 Dental Prophylaxis (2 cr; prereq 53)
—1, Lab II-IV T, Clinic, Jackson, Schendel
—2, Lab VII-IX M, Clinic, Jackson
—3, Lab VII-IX T, Clinic, Schendel
—4, Lab VII-IX W, Clinic, Jackson
—5, Lab VII-IX F, Clinic, Jackson
—6, Lab II-IV M, Clinic, Jackson
58 Prosthetic Dentistry, Dental Lab (2 cr; prereq 57)
Lect I Th, MH 356, Hall
Lab II-IX Th, MH 356, Hall
60 Oral Histology, Pathology (2 cr; prereq 56)
VI TTh, MH 356, Gorlin

Dentistry (Dent)

51 Dental Anatomy (3 cr; prereq 50)
Lect I M, Owre 12, Hall
Lab II-IV MF, Owre 1
55 Development of Occlusion (2 cr; prereq regis Dent)
I WF, Owre 12, Meyer
61 Dental Prosthetics (4 cr; prereq 60)
Lect VI M, Owre 12, Hall
Lab VII-IX MF, II-IV W, Owre 1, Hall
76 Crown and Bridge Technic (4 cr; prereq 75)
Lect VI T, Owre 111, Serr
Lab VII-IX TTh, I-III T, Owre 1, Serr
85 Operative Dentistry (4 cr; prereq regis Dent)
Lect VI W, Owre 111, Wakely
Lab I-III ThS, VII-IX W, Owre 1, Wakely
111 Dental Prosthetics (1 cr; prereq 110)
VI M, Owre 111, Morstad
111C Dental Prosthetics Clinic (2 cr; prereq 110C) Morstad
116C Dental Prosthetics Clinic (2 cr; prereq 115C) Morstad
121C Crown and Bridge Clinic (2 cr; prereq 120C) Yock

126C Crown and Bridge Clinic (2 cr; prereq 125C) Yock
135 Oral Medicine (1 cr; prereq 132C)
1:00-2:00 W, Owre 113, Bartholdi
141C Operative Clinic (3 cr; prereq 140C) Jensen
146C Clinical Operative Dentistry (3 cr; prereq 145C) Jensen
148 Seminar: Restorative Dentistry (1 cr)
1:00-2:00 Th, Owre 113
149 Mass Casualty, First Aid (2 cr)
1:00-2:00 MF, Owre 113, Jensen
156 Oral Surgery (2 cr; prereq 155)
8:00-9:00 TF, Owre 113, Clark
161 Oral Pathology, Histology (1 cr; prereq 160)
1:00-2:00 W, Mayo 125, Gorlin
171 Pedodontics (1 cr; prereq 170) Wittich
176C Pedodontics Clinic (3 cr; prereq 172C) Wittich
181 Periodontics (1 cr)
I T, Owre 111, Schaffer
181C Periodontics Clinic (1 cr; prereq ¶181) Schaffer
186C Periodontics Clinic (1 cr; prereq 185C) Schaffer
198 Dental Jurisprudence (1 cr)
8:00-9:00 W, Owre 113, Brand
200 Adv Orthodontic Technics (ar cr)
201 Treatment Procedures in Orthodontics (ar cr) Steadman
202 Case Analysis (ar cr) Steadman
203 Treatment Planning (ar cr) Steadman
204 Adv Clinical Orthodontics (ar cr) Steadman
205 Osteology, Myology of the Head (ar cr) Steadman
206 Growth of the Head (ar cr) Steadman
207 Comparative Odontology (ar cr) Steadman
208 Seminar: Orthodontics (ar cr) Steadman
209 Probs, Research: Orthodontics (ar cr) Steadman
220 Adv Dental Anatomy (ar cr) Hall
230 Adv Oral Diagnosis (ar cr) Bartholdi
231 Adv Clinical Oral Diagnosis (ar cr) Bartholdi
232 Research: Oral Medicine (ar cr) Jensen, Wittich, Yock
240 Adv Technical Restorative Dentistry (ar cr) Jensen, Wittich, Yock
243 Adv Clinical Restorative Dentistry (ar cr)
247 Research Probs: Restorative Dentistry (ar cr) Jensen, Wittich, Yock
250 Adv Oral Surgery (ar cr) Clark
251 Seminar: Oral Surgery (1 cr) Clark
252 Research: Oral Surgery (ar cr) Clark
253 Probs: Oral Surgery (ar cr) Clark
261 Adv Dental Radiographic Technique (ar cr) Petersen
262 Research: Oral Pathology (ar cr) Gorlin
263 Seminar: Dental Research (1 cr) Gorlin
264 Clinical Oral Pathology Conference (1 cr) Gorlin, Clark, Bartholdi
280 Adv Periodontics Clinic (ar cr) Schaffer
281 Adv Periodontics Lectures (3 cr) Schaffer
282 Research: Periodontics (ar cr) Schaffer
283 Seminar: Periodontics (1 cr) Schaffer
284 Supporting Structures of the Teeth (3 cr) Schaffer

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AgEd)

56 Rural Education Through Extension Methods (3 cr; prereq soph)
III MWF, Hr 301, Swanson
81 Teaching in Secondary School (4 cr; prereq Psy 2)
Lect IV MWF, Hr 301, Kitts
Lab VII-VIII Th, Hr 302, Kitts
82 Teaching in Secondary School (4 cr; prereq 81, Ed 55B or ¶)
Lect III MWF, Hr 302, Kitts
Lab VII-VIII T, Hr 301, Kitts
91 Supervised Teaching Experience (6 cr; prereq sr, 82, ♯) Kitts
103 Young Farmer, Adult Education (4 cr; prereq 81)
Lect II MWF, Hr 301, Peterson, Marvin
Lab VII-VIII Th, Hr 301, Peterson, Marvin
104 Planning Programs (3 cr; prereq 3rd qtr sr or ♯)
11:00-12:15 TTh, Hr 301, Peterson
156 Rural Education Through Extension Methods (3 cr, §56; prereq grad or ♯)
IV MWF, Hr 301, Swanson
221 Field Probs (3 cr) Peterson, Kitts, Swanson
232 Research (ar cr; prereq 15 cr educ) Peterson, Kitts, Swanson
286 Current Issues (ar cr; prereq ♯) Peterson, Kitts, Swanson

ART EDUCATION (ArEd)

14 Introduction (2 cr)
VII MW, J 109, Gayne

17 **Pictorial Expression for Elem Education** (3 cr)
—1, I-II MWF, TSF 259, Cherry
—2, III-IV MWF, TSF 259, Wold
—3, VI-VII MWF, TSF 259, Wold
—4, VIII-IX MWF, TSF 259, Wold

18 **Design Activities for Elem Education** (3 cr)
—1, III-IV MWF, TSF 256, Cherry
—2, VI-VII MWF, TSF 256, Cherry
—3, VIII-IX MWF, TSF 256, Hegg

19 **Functional Arts, Crafts in Elem Education** (3 cr)
I-II MWF, TSF 256, Wold

53 **Introduction to Weaving** (3 cr)
VI-VII MWF, TSF 203, Smits

57 Principles, Experiences (5 cr; prereq 14)
III-IV MTWThF, J 109, Hastie, Hegg

81 Puppetry in Education (3 cr)
I-IV S, TSF 256, Cherry

84 **Teaching in Elem School** (3 cr; prereq 6 cr from 17, 18, 19)
Lect VII TTh, P 210, Gayne
—1, Lab VI TTh, J 109, Hegg
—2, Lab VIII TTh, J 109, Gayne

87 Student Teaching, Supervision (3 cr, †86-87-88; prereq sr, 56, 57, Ed 55A, 55B, ¶87A) Hastie, Hegg

87A Teaching, Supervision (2 cr, †86A-87A-88A; prereq sr, 56, 57, Ed 55A, 55B, ¶87)
IX-X T, J 109, Hastie

153 Curriculum Building (3 cr; prereq 152)
I-II S, J 109, Hastie

184 Improving Art Programs in Elem School (3 cr; prereq tchg exper or ♯)
III-IV S, J 109, Gayne

295 Problems (ar cr; prereq cons maj adv) Gayne, Hastie

CHILD DEVELOPMENT AND WELFARE (CD)

80 **Child Psychology** (3 cr; prereq Psy 2)
—1, II MWF, CW 218, Hartup
—2, IV MWF, CW 218, Wright
—3, VI MWF, CW 218, Templin

81 **Adolescent Psychology** (3 cr, §old 132; prereq Psy 2)
—1, V MWF, CW 218, Hurst
—2, III MWF, Bu 120, Briggs

140 Behavior Probs (3 cr; prereq sr, 12 cr educ psy or psy or soc or HE)
I MWF, CW 218, Grams

142 Psychology of Handicapped Children (3 cr; prereq sr, 12 cr psy)
4:00-5:30 MW, CW 222, Templin

170 Parent Education (3 cr; prereq sr, 12 cr CD or educ psy or psy or soc or HE or Pub-H)
4:00-5:30 TTh, CW 222, Grams

181 Social Development of Children (3 cr; prereq 80)
III MWF, CW 218, Hartup

184 Sensory, Motor Development (3 cr; prereq 80)
IV MWF, CW 206, Anderson

190 Topics (ar cr, §old 95; prereq 18 cr with B avg incl 80, Psy 70 or BA 5 or Soc 45)

211 Adv Child Psychology (3 cr; prereq 210)
II-III T, CW 206, Stevenson

221 Seminar: Current Research (ar cr)

224 Seminar: Developmental Theory (1 cr; prereq 223)
VIII-IX M, CW 140, Anderson

231 Seminar: Recent Literature (1 cr)
VIII-IX T, CW 206, Palermo

233 Design of Research (2 cr; prereq 12 cr educ psy or psy incl stat)

238 Seminar: Human Development (2 cr; prereq 237)
VIII-IX M, CW 218, Hurst

248 Clinical Child Psychology (3 cr; prereq ♯)
IX-X MF, CW 206, Wirt

250 Practicum: Clinical Child Psychology (ar cr; prereq ♯)
V-VII MW, CW 117, Hafner

271 Readings, Research: Child Development (ar cr; prereq MA plan B students or ♯)

283 Experimental Child Psychology (2 cr; prereq 282)
3:00-5:00 M, CW 134, Wright

288 Guidance of Children in Preschool 2 cr; prereq 287)
VIII-IX M, CW 35, Moore

291 Mental Testing of Infants, Preschool Children (3 cr; prereq ♯) Ruebush

292 Practicum: Psychological Appraisal of Children (ar cr; prereq ♯)

GENERAL EDUCATION

Curriculum and Instruction (EdCI)

45 Business, Distributive Education (2 cr)
IV MW, Bu 103, Price, Meyer

58 Core Curriculum Foundations (1 cr; prereq ♯)
3:00-4:20 M, Bu 103, Bossing

59 Methods, Observation in Nursery School (2 cr; prereq 55 or ¶)
VIII TTh, CW 218, Kilmer

60 **Teaching Reading in Elem School** (3 cr; prereq Ed 75A)
—1, II MWF, Bu 120, Bond
—2, VI MWF, Bu 120, Kerfoot

61 **Teaching Social Studies in Elem School** (3 cr; prereq Ed 75B)
—1, III MWF, Bu 211, Lambert
—2, VI MWF, Bu 123, Lea

62 **Teaching Mathematics in Elem School** (3 cr; prereq Ed 75A)
—1, III MWF, Pt 202, Stochl
—2, VI MWF, Pt 202, Stochl
—3, IX-X T, IX Th, Pt 202, Jackson

63 Children's Literature (2 cr)
—1, VII TTh, Bu 120, Odland
—2, IX-X W, Bu 120, Odland

64 Teaching English in Elem School (3 cr; prereq Ed 75A)
—1, VI MWF, Bu 211, Dykstra
—2, VII MWF, Pt 202, Chase
—3, VI T, VI-VII Th, Pt 202, Archer

65 Teaching Science in Elem School (3 cr; prereq Ed 75A, 10 cr nat sci)
—1, VII-VIII M, VII W, Bu 211, Goossen
—2, VII-VIII T, VII Th, Bu 211, Goossen

66 Treatment of Learning Difficulties (3 cr; prereq 60, 62, ¶student tchg)
—1, IX-X W, JohH 114, Wesenberg
—2, IX-X W, JohH 113, Dykstra

102 Teaching, Supervision of Social Studies in Elem School (3 cr; prereq Ed 75B)
IX-X T, JohH 115, Lambert

104 Adult Education (3 cr)
VIII-IX Th, JohH 113, Nolte

105 Audio-Visual Materials in Education (3 cr; prereq sr)
IX-X M, NH 211, Pearson

109 Audio-Visual Materials, Equipment Lab (3 cr; prereq 105 or ¶ or ♯)
Lect IX-X T, WeH 206, Pearson
—1, VI-VII W, WeH 206, Pearson
—2, IX-X Th, WeH 206, Pearson

110 Practicum: Laboratory School Teaching, K-6 (ar cr; prereq tchg exper, cons adv)

117 Braille II (3 cr; prereq 116)
IX-X MW, P 218, Kenmore

118 Education of Blind Children in the Elem Grades (3 cr; prereq 115, 116, ♯)
IX-X T, Psy 109, Kenmore

119 Elem School Curriculum (3 cr; prereq Ed 75B)
III-IV S, Bu 123, Goossen

121 Literature for Elem School (3 cr)
I-II S, Bu 120, Odland

135 Group Procedures in Guidance (3 cr; prereq EPsy 133 or ♯, 9 cr educ)
I-II S, Bu 123, Tennyson

139 Coordination Techniques (3 cr)
4:00-6:20 W, Bu 103, Meyer

143 Teaching, Supervision of Reading in Elem School (3 cr; prereq 9 cr educ)
IX-X T, Bu 120, 1 hr ar, Bond

145 Reading Difficulties (3 cr; prereq 143 or 144)
III-IV S, Bu 120, 1 hr ar, Bond

151 Diagnosis, Treatment of Learning Difficulties (3 cr)
I-II S, Pt 202, Balow

153 Supervision, Teaching of English in Elem Schools (3 cr; prereq Ed 75B)
IX-X W, Bu 123, Chase

161 Curriculum Construction in Business Education (3 cr; prereq 113)
III-IV S, Bu 103, Price

162 Nursery School, Instructional Practices Lab (3 cr; prereq tchg exper or ♯)
IX-X W, CW 218, Headley

168 Current Developments in Social Studies (3 cr; prereq grad or ♯)
I-II S, JohH 105, McCune

170B Curriculum, Course of Study Construction (3 cr; prereq 113 or 119 or ♯)
IX-X T, Bu 103, Bossing

171 Curriculum Lab Practice (0-3 cr; prereq 170A or 170B, ♯) Bossing, Goossen

174 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 164; prereq Spch 163) Starr

175 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 165; prereq 174) Starr

176 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 166; prereq 175) Starr

178 Structure, Function of the Eye: Educational Implications (3 cr; prereq ♯)
III-IV S, JohH 113, Kenmore

191 Adv Teaching, Supervision of Secondary Mathematics (3 cr)
IX-X Th, PeikH 315, Johnson

193B High School Mathematics: Content, Teaching Techniques (4 cr; prereq 193A)
V TTh, VI MTWThF, FolH 9, Johnson

199E Internship (ar cr) Davies, others

201 Probs: Teaching Social Studies (3 cr; prereq 155 or 168, 204 or ♯) Morse, McCune, West

205 Probs: Audio-Visual Education (ar cr; prereq ♯) Pearson

215 Probs: School Health Education Program (ar cr; prereq ♯) Grout

217 Seminar: School Health Education Program (ar cr; prereq ♯)
III-IV W, IV Th, Mayo 1210, Grout

222 Seminar: Current Probs in Techniques of High School Instruction (ar cr; prereq Ed 55B, sr methods)
IX-X W, PeikH 275, Bossing, Keller, Winter, Popper

225 Probs: Secondary School Supervision (ar cr; prereq ♯) Keller, Lane, Popper

226 Seminar: Elem School Probs (2 cr)
IX-X Th, PeikH 165

227 Probs: Rural Education (ar cr; prereq Ed Ad 117) Archer

228 Probs: Higher Education, Teacher Education (ar cr; prereq ♯) Eckert

238 Probs: Distributive Education (ar cr; prereq ♯) Meyer

239 Probs: Business Education (ar cr; prereq ♯) Price

251 Curriculum Trends in American Colleges (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II T, I Th, Bu 123, Eckert

252 Effective College Teaching (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II S, Bu 103, Eckert

253A Seminar: Materials, Methods in Marriage Education (4 cr; prereq ‡)
VI-VII MW, Psy 109, Hill

254 Directed Experience in College Instruction (ar cr; prereq ‡) Eckert, Hill

257 Research: Language Instruction in Elem Schools (3 cr; prereq 153)
IX-X W, Bu 211, 1 hr ar, Archer

261 Probs: Improvement of Instruction (ar cr; prereq ‡) Archer, Goossen, Curtin, Stochl

263 Research: Mathematics Instruction in Elem School (3 cr)
III-IV S, Pt 202, Stochl

271 Probs: Curriculum Construction (3-6 cr; prereq ‡)

273 Probs: Reading (ar cr; prereq 143 or 144 or ‡) Bond, Chase, Odland, Reynolds, Balow

280 Supervision of Counseling (3 cr; prereq ‡) Dugan, Tennyson, Soldahl, Blocher

284 Probs: Student Teaching (3-9 cr; prereq ‡) Davies

285 Professional Education of Teachers (3 cr; prereq 15 cr educ incl 184, 250 or HEd 182 or EPsy 250 or ‡)
III-IV S, PeikH 75, 77, Davies

287 Adv Teaching of Science (3 cr)
I-II S, PeikH 365, Winter

294 Adv Curriculum, Methods in Secondary School English (2 cr; prereq EdT 75C)
I-II S, PeikH 245, Kegler

296 Probs: Teaching English (ar cr) Kegler

Education (Ed)

55A Introd Secondary School Teaching (5 cr; prereq Psy 2)
Lect I TThS, NH 45, Neale
—1, II TTh, Pt 202
—2, II TTh, FolH 9
—3, III TTh, Pt 202
—4, III TTh, Psy 115
—5, V TTh, Bu 123

55B Introd Secondary School Teaching (5 cr; prereq 55A or ‡)
Lect I MWF, NH 45, Neale
—1, I TTh, Pt 202
—2, I TTh, Psy 115
—3, II TTh, CW 218
—4, II TTh, FolH 102
—5, II TTh, FolH 104
—6, III TTh, CW 222
—7, III TTh, CW 218
—8, V TTh, Bu 211

75A Introd Elem School Teaching (5 cr, §old 71B; prereq Psy 2)
Lect IV MWF, FraH 20, Dykstra
—1, I-II TTh, FolH 3, Balzer
—2, III-IV TTh, FraH B25, Dykstra

75B Introd Elem School Teaching (5 cr, §old 71A; prereq 75A)
Lect VII MWF, NH 45, Curtin
—1, II-III MW, TSF 109, Kerfoot
—2, I-II TTh, Bu 120, Kerfoot
—3, I-II TTh, JohH 205, Johnson
—4, III-IV TTh, Bu 211, Balzer
—5, III-IV TTh, JohH 205, Ekman
—6, VI-VII TTh, Psy 115
—7, VI-VII TTh, CW 222, Balzer

81 Education for Public Health Nurses (3 cr, not open to educ degree cand; prereq PubH 62, 100, 133)
VI-VII T, VI Th, Bu 103, Grout

Educational Administration (EdAd)

117 Schools in Rural Areas (3 cr)
III-IV S, JohH 105, 1 hr ar, Archer

202 Foundations (3 cr)
IX-X TTh, WeH 302, Lane

218 Recent Literature in Secondary Education (ar cr)
IX-X W, PeikH 275, Bossing, Keller, Winter, Popper

227 Teacher, Employee Admin (3 cr; prereq 225)
I-II S, Bu 211, 1 hr ar, Lane

228 Probs: Educational Admin (1-3 cr; prereq 225) Domian, Hooker, Lane

230 Public Relations for Schools (3 cr; prereq 225)
IX-X TTh, JohH 105, Popper

235 Seminar: Educational Admin (no cr)
IX-X M, JohH 105, Bossing, Domian, Hooker, Keller, Lane, Popper

236 Field Study (0-10 cr; prereq ‡) Domian, Hooker, Lane

253 Admin in Higher Education (3 cr)
3:00-5:00 M, NH 122, 1 hr ar, Morse

264 Admin of Instructional Activities in Secondary School (3 cr)
III-IV S, Bu 211, 1 hr ar, Keller

270A Probs: Elem Educ (ar cr; prereq ‡) Archer, Bond, Curtin, Goossen

270B Probs: Secondary Educ (ar cr; prereq ‡) Bossing, Domian, Hooker, Keller, Lane, Popper

Educational Psychology (EPsy)

110 Measurement in the Classroom (3 cr)
VIII MWF, JohH 115, Corcoran

116 Statistical Methods (3 cr; prereq ¶116A or ‡)
III MWF, Bu 123, Collier

116A Statistical Methods Lab (2 cr; prereq ¶116)
VI-VII TTh, Bu 251, MacEachern

117 Measurement (3 cr; prereq 116 or 216 or Psy 70)
VII MWF, NH 216, Lathrop

133 Procedures in Student Personnel Work (3 cr; prereq 9 cr educ)
3:45-5:15 W, Psy 115, Blocher

134 School Counseling Procedures (3 cr; prereq 110 or 117, 133, ‡)
3:45-5:15 TTh, Bu 123, Blocher

142 **Individual Mental Testing** (3 cr; prereq sr, 110 or 117 or ¶117 with ‡)
III-IV S, JohH 114, Reynolds, Hodges

150 **Clinical Practice in Remedial Teaching** (3 cr; prereq EdCI 145 or 151, ‡) Balow

151 **Clinical Practice in Educational Diagnosis** (3 cr; prereq 142, EdCI 145, ‡)
1:00-4:00 MTWThF, Pt 108, Balow, Capobianco, Hodges

159 Personality Development, Mental Hygiene (3 cr; prereq sr)
I MWF, Bu 211, Torrance

182 Education of Exceptional Children (3 cr; prereq Ed 55B or 75B)
VII MWF, CW 222, Force

183 Education of Gifted Children (3 cr; prereq Ed 55B or 75B)
IX-X T, CW 218, Reynolds

188 Use of Residual Hearing in Education of Auditorially Handicapped Children (3 cr; prereq Spch 152 or exper in teaching deaf or ‡)
III-IV S, JohH 126, Watson

190 Educational Problems of Cerebral Palsy (3 cr; prereq 182 or ‡)
IX-X W, Pt 202, Force

191 Education of the Mentally Retarded in Secondary Schools (3 cr; prereq 182 or ‡)
IX-X W, CW 206, Capobianco

200 Seminar: Institute in Guidance (3 cr; prereq ‡) (guidance inst students)
VI-VII MWF, Bu 125, Dugan, Wright, Winfrey

217 Statistical Methods (3 cr; prereq 216)
II MWF, Z 313, Collier

217A **Statistical Methods Lab** (2 cr; prereq 216A)
—1, I-II TTh, Bu 251, MacEachern
—2, III-IV TTh, Bu 251, MacEachern

221 Adv Theory of Measurement (2 cr; prereq 220)
III TTh, Bu 123, Hoyt

225 Diagnosis as a Phase of Counseling (3 cr; prereq 140 or ¶, 133 or 250 or Psy 130)
IV MWF, Bu 123, Wrenn

233 **Probs: Guidance, Personnel Work** (1-9 cr)
—1, 3:30-5:00 M, Bu 123, Blocher, Tennyson
—2, Ar, Wrenn, Dugan, Edson, Hagenah, Snoke, Tennyson

240 Probs: Measurement (3 cr) Hoyt

243 Probs: Statistics for Students in Education, Psychology (3 cr) Collier

251 College Student Personnel Work (1-3 cr; prereq 250 or 1 course higher educ)
VI-VII W, Bu 103, Wrenn, Snoke

253 **Research Probs** (ar cr; prereq ‡)
—1, 3:30-5:00 M, Pt 202, Tennyson, Blocher
—2, Ar, Hoyt
—3, I T, Pt 104, Hodges
—4, Ar

260 Seminar (no cr)

280 Practicum in Group Leadership (3 cr; prereq ‡) Flanders

281 **Practice in Personnel Work** (3 cr; prereq 226 or ‡)
—1, VI-VII Th and ar, EdH 204, Hagenah
—2, Ar, Wrenn, Snoke

282A **Field Practice in Guidance** (3 cr; prereq ‡)
—1, I-IV T, Bu 129, Soldahl, Blocher
—2, I-VIII Th, Bu 125, Dugan, Wright, Winfrey (guidance inst students)

282B Supervised Practicum in Counseling (3 cr; prereq ‡)
I-IV S, Bu 129, Soldahl, Blocher

287 Practicum: School Psychological Services (1-3 cr; prereq ‡) Hodges

288 Practicum: Special Education (3-9 cr; prereq ‡) Kenmore, Capobianco

289 Survey of Special Education Probs (3 cr; prereq 182, ‡)
IX-X Th, Pt 104, Capobianco

292 Recent Literature (3 cr; prereq ‡) Hoyt

293 Psychology of Learning (3 cr; prereq 12 cr educ psy, psy)
III MWF, Psy 115, Palermo

History and Philosophy of Education (HEd)

101 Historical Foundations of Modern Education (3 cr)
IX-X T, Bu 211, Bagley

131 Comparative Education (3 cr)
IX-X M, Bu 120, Beck

180 **The School, Society** (3 cr; prereq sr)
—1, VII-VIII T, VII Th, JohH 205, Beck
—2, III MWF, WeH 202, Bagley
—3, IV MWF, CW 222, Bagley
—4, VIII M, VIII-IX W, FraH 20, Corwin
—5, I MWF, CW 222, Corwin
—6, VI T, VI-VII Th, CW 218, Corwin

241 Problems (ar cr; prereq ‡) Beck, Bagley

242 Seminar: Educational Philosophy (3 cr; prereq ‡)
12:30-2:00 F, Psy 109, Beck

HOME ECONOMICS EDUCATION (HEEd)

91 Observation, Materials, Teaching (5 cr; prereq HE 4, 21, 41, Ed 55B, ¶93)
VIII MWF, IX W, McNH 103, Kafka

92 Teaching Probs (2 cr; prereq sr, 91, 93, ¶94, ¶192, ¶194A)
II MWF, I F, McNH 103, Wantoch

93 Supervised Teaching (3 cr; prereq HE 4, 21, 41, Ed 55B)
IX MF, Kafka, Wantoch
94 Supervised Teaching (6 cr; prereq 93) Brown, Holmblade, Kafka
95 Field Experience for Home Agents (6 cr; prereq 91, 93, △, cons dir agric ext) Ford
190 Readings (1-3 cr; prereq ♯) Ford
192 Evaluation in Home Economics (2-3 cr; prereq sr, 91, 93, Ed 55B)
III-IV TTh, McNH 102, Brown
193B Curriculum: College Level (3 cr; prereq ♯)
IX-X Th, McNH 102, 1 hr ar, Holmblade
194A Adult Education (3 cr; prereq 91, 93)
III-IV MWF, McNH 103, Ford
293 Problems (1-9 cr; prereq ♯...294 rec) Esteros, Ford, Holmblade, Brown

INDUSTRIAL EDUCATION (Ind)

1 **Handicrafts** (3 cr)
I-III TTh, TNCW 218, Kelle
3 **Wood Processing II** (3 cr)
I-II MWF, TNCW 1, Randleman
4 Wood Processing III (3 cr; prereq △)
5 Wood Processing IV (3 cr; prereq 4, △)
8 **Design I** (3 cr; prereq 7 or ♯)
II-IV TTh, TNCW 201, Kavanaugh
12 **Craftwork** (3 cr)
III-IV MWF, TNCW 218, Flug
15 **Graphic Arts I** (3 cr)
II-IV TTh, TNCW 14, Flug (OT students only)
20 **Electricity, Electronics** (3 cr)
VI-VII MWF, TNCW 15, Kavanaugh
23 Applied Electronics I (3 cr; prereq △)
24 Applied Electronics II (3 cr; prereq △)
25 Metal Processing I (3 cr; prereq △)
26 Metal Processing II (3 cr; prereq △)
27 Metal Processing III (3 cr; prereq △)
28 Metal Processing IV (3 cr; prereq △)
29 Metal Processing V (3 cr; prereq △)
30 Small Gas Engines (3 cr; prereq △)
50 **Industrial Practices, Processes** (3 cr; prereq 35)
VI-VIII T, TNCW 116, Widdowson
55 **Teaching Industrial Arts** (5 cr; prereq Ed 55A)
VI-VIII TTh, TNCW 113, Flug
60A Student Teaching (3 cr, †60A-60B-60C; prereq 6, 55 or 6, 100, △) Randleman
60B Student Teaching (3 cr, †60A-60B-60C; prereq 60A) Randleman
60C Student Teaching (3 cr, †60A-60B-60C; prereq 60B) Randleman
90 Independent Study (3 cr; prereq up div or ♯)
VIII W, TNCW 116, Nelson
91 Independent Study (3 cr; prereq 90)
VIII W, TNCW 116, Nelson
92 Independent Study (3 cr; prereq 91)
VIII W, TNCW 116, Nelson
101 Tests in Industrial Subjects (3 cr; prereq Ed 55B)
IX-X Th, TNCW 113, Kavanaugh
105 Administration (3 cr; prereq 35)
IX-X T, TNCW 113, Nelson
107 Coordination (3 cr; prereq 35 or 125 or ♯)
IX-X M, TNCW 113, Widdowson
200 Research Probs (3, 6 or 9 cr)
III-IV M, TNCW 103, Micheels, Nelson, Kavanaugh
205 Seminar (no cr)
V W, TNCW 116, Micheels
250 Literature (3 cr; prereq ♯)
IX-X W, TNCW 116, Micheels

METHODS AND STUDENT TEACHING (EdT)

50 Junior Practicum in Special Education (3 or 6 cr; prereq ♯) Capobianco, Force, Kenmore
51A Teaching: Nursing (4 cr; prereq Ed 55N)
I MWF, ForH 175, Dunning, Weise
51B Teaching: Nursing (6 cr; prereq 51A)
I TTh, VIII-IX T, Arch 140, Dunning, Weise
52 Student Teaching (ar cr) Davies, others
53A Teaching Handicapped Children (6 cr; prereq ♯)
IX M and ar, Chase, Sorensen, others
53B Teaching Handicapped Children (6 cr; prereq ♯)
IX M and ar, Chase, Sorensen, others
54A Student Teaching: Elem School (6 cr)
IX M and ar, Chase, others
54B Student Teaching: Elem School (6 cr; prereq 54A)
IX M and ar, Chase, others
60 Student Teaching: Library Science (3 cr; prereq sr, Lib 53, 62, 70, 74, 171, 172 or ♯) Zimmerman
67 Student Teaching: Mathematics (3 or 6 cr, †9 cr; prereq sr, ¶67B, Math 60 or ¶)
IX-X M and ar (off-campus), D Johnson, Goralski, others
67B Teaching Secondary School Mathematics (1 cr, †67A-67B-67C; prereq 67A)
IX-X W, PeikH 315, D Johnson
68 Student Teaching: Science (3 or 6 cr, †9 cr; prereq sr, ¶68B)
IX-X M and ar (off-campus), Boeck, Goralski, others
68B Teaching Secondary School Science (1 cr, †68A-68B-68C; prereq 68A)
IX-X W, PeikH 365, Boeck
69 Student Teaching: Social Studies (1 or 3 or 6 cr; prereq jr, ¶Ed 55A...or sr, ¶69B)
VIII M (1 cr), PeikH 165, IX-X M (off-campus), West, Goralski, others
69B Teaching Social Studies in Secondary School (1 cr, †69A-69B-69C; prereq 69A)
IX-X W, PeikH 175, West

69M Teaching Social Studies in Secondary School (3 cr; prereq minor only)
I MWF, PeikH 155, Zito

70 Student Teaching: Modern Languages (3 or 6 cr, †9 cr; prereq sr, ¶70B)
IX-X M and ar (off-campus), Birkmaier, Goralski, others

70B Teaching Modern Languages (1 cr, †70A-70B-70C; prereq 70A)
IX-X Th, PeikH 225, Birkmaier

71 Student Teaching: Latin (3-9 cr, †9 cr; prereq sr, ¶71B)
IX-X M and ar, Goralski, Birkmaier, others

71B Teaching Latin (1 cr, †71A-71B-71C; prereq 71A)
IX-X Th, PeikH 225, Birkmaier

72 Student Teaching: Distributive Education (3-9 cr, †9 cr; prereq Ed 55B, ♯) Meyer

73 Student Teaching: Business Subjects (3-9 cr, †9 cr; prereq Ed 55B, ♯) Price

74 Teaching Journalism (3 cr; prereq Jour 41 or 51)
VII MWF, MurH 420, Kildow

75 Student Teaching: Language Arts (3 or 6 cr, †9 cr; prereq sr, ¶75B)
IX-X M and ar (off-campus), Kegler, Goralski, others

75B Teaching Language Arts in Secondary Schools (1 cr, †75A-75B-75C; prereq 75A)
IX-X W, Arch 40, Kegler

77 Student Teaching: Nursery School (4 cr)
4:30-6:00 Th and ar, CW 12, Robinson

78 Student Teaching: Kindergarten (6 cr)
4:30-6:00 Th and ar, CW 218, Sorensen, others

79 Student Teaching: Primary Grades (6 cr)
4:30-6:00 Th and ar, CW 218, Sorensen, others

81 Teaching Shorthand (2 cr; prereq Ed 55B or ¶)
VIII-IX M, FolH 103, Price

84A Practice, Field Work in Recreation Leadership (2 cr; prereq jr, recr maj)
I T, 6 hrs ar, CH 206, Giles

84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
I T, 6 hrs ar, CH 206, Giles

84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
I T, 6 hrs ar, CH 206, Giles

85A Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq sr, recr maj or min)
V W, CH 206, 6 hrs ar maj, 3 hrs ar min, Giles

85B Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85A)
V W, CH 206, 6 hrs ar maj, 3 hrs ar min, Giles

85C Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85B)
V W, CH 206, 6 hrs ar maj, 3 hrs ar min, Giles

90B Teaching Distributive Education Subjects (2 cr, †90A-90B-90C; prereq 90A)
V TTh, Bu 103, Meyer

93 Student Teaching: Core Curriculum (12 cr; prereq 93B or ¶)
IX-X M and ar, Goralski, others

93B Methods of Teaching for Core Majors (2 cr; prereq 93A)
IX-X Th, Bu 103, Bossing

MUSIC EDUCATION (MuEd)

4 **Applied Instrumental Technique** (2 cr; prereq mus educ maj)
VI MTWTh, MusEd 200, Loeffler

5 **Applied Instrumental Technique** (2 cr; prereq 4)
IV MWThF, ScH 4, Prescott

6 **Applied Instrumental Technique** (2 cr; prereq 5)
VII MTWTh, NMA 4, Prescott

50B **Teaching in Interm Grades** (2 cr; prereq ♯)
II TTh, NMA 4, 1 hr ar, Berryman

51 **Teaching Music** (2 cr; prereq Mus 1)
—1, I MWF, NMA 5, Berryman
—2, IV MWF, ScH 104, Alpuerto
—3, VIII MWF, ScH 4, Alpuerto (for Elem Ed IIIA maj)

52 **Teaching Music** (2 cr; prereq 51 or ♯)
—1, III MWF, ScH 4, Abelson
—2, VI MWF, ScH 104, Alpuerto

59 Choral Literature, Conducting (2 cr sr, 1 cr others)
V MTTh, NMA 4, ScH 104, Caswell

60 Supervision, Teaching (3 cr; prereq sr, 50B, 53, Ed 55B, ♯)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

61 Supervision, Teaching (3 cr; prereq 60)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

62 Supervision, Teaching (3 cr; prereq 61)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

64 Band Organization (3 cr; prereq 6, ♯)
VI MWF, NMA 5, Prescott

65 Instrumentation (3 cr; prereq sr, Mus 6T)
III MWF, ScH 104, Ivory

105 Adv Topics: Instrumental Music (3 cr; prereq sr, ♯)
IV MWF, ScH 3, Ivory

124 Selection, Conducting of Choral Materials (3 cr; prereq sr)
V MWF, ScH 104, Caswell

224 Research Probs (3-9 cr; prereq elem stat)
VIII W, ScH 214, Caswell, Ivory

PHYSICAL EDUCATION

Undergraduate Courses for Men (PEM)

4A Football Fundamentals (1 cr)
—1, VI-VII TTh, CH 215, Nash, Warmath
—2, VIII MWF, CH 215, Nash, Warmath

5B Gymnastics (1 cr)
III-IV TTh, App Gym, Ostrander, Novak

6B Intramural Sports (1 cr)
IV-V TTh, CH 215, Kulbitski, Novak

6C Aquatics (1 cr)
IV MWF, CH Pool, Heusner

7B Boxing, Wrestling (1 cr)
II-III TTh, StadN, Johnson

9A Fundamental Rhythms (1 cr)
V T, IV-V Th, NGW, Piper

23 Recreation Leadership (3 cr)
V-VI T, CH 206, 1 hr ar, Starr

49 Social Aspects of Leisure (3 cr)
V MWF, CH 206

52 Leadership in Social Activities (3 cr)
VI-VII TTh, StadS, Ostrander

55 Methods, Materials (4 cr; prereq 5A, 5B, 5C, 6A, 6B, 6C, 7A, 7B, 7C, Ed 55A or ¶)
III MWF, and ar, CH 214, Lewis

60B Athletic Training Lab (1 cr; prereq 60A)
Stein

64A Leadership in Nature Recreation (2 cr; prereq 15 cr nat sci)
III-IV T, CH 206, Chapman

65 Adapted Physical Education (3 cr; prereq 51, Anat 57)
II MWF, CH 206, Osell

69 Track Coaching (2 cr; prereq 4C)
VI MWF, CH 215, Kelly

73 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

74 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

75 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

76 Directed Teaching-Block Plan (9 cr, not open to students who have taken 73, 74, 75; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

78 Scout Leadership (2 cr)
VII MW, CH 206, Osell

81 Hockey Coaching (2 cr; prereq 6B or ‡)
VII MWF, CH 215, Mariucci

Undergraduate Courses for Women (PEW)

B Nonprofessional Physical Education

Aquatics (activity rating 1)

Swimming, Bgn
—1, VI MWF, NGW 51 (1½ cr)

Swimming, Adv Bgn
—2, VII TTh, NGW 51 (1 cr)

Swimming, Interm Adv
—3, VII MWF, NGW 58 (1½ cr)

ARC Sr Life Saving
—4, VI MWF, NGW 58 (1½ cr)

Water Safety Instructors Course
—5, IV MWF, NGW 58 (1½ cr)

Individual Activities

Posture, Individual Exercise (activity rating 1, 2, 3)
—6, IV TTh, Gy 100 (StP Campus) (1 cr)
—7, I MWF, NGW 153a (1½ cr)
—8, II MWF, NGW 153a (1½ cr)
—9, V MWF, NGW 153a, 3 (1½ cr)
—10, I TTh, NGW 153a (1 cr)
—11, IV TTh, NGW 153a (1 cr)
—12, VI TTh, NGW 153a (1 cr)
—13, VII TTh, NGW 153a, 3 (1 cr)
—14, II TTh, NGW 153a (1 cr)

Individual Sports

Archery, Bgn (activity rating 1, 2, 3)
—15, VI MWF, NGW 60 (1½ cr)
—16, VII TTh, NGW 60 (1 cr)

Badminton, Bgn (activity rating 1, 2)
—17, III MWF, NGW 60 (1½ cr)
—18, IV MWF, NGW 60 (1½ cr)
—19, V MWF, NGW 60 (1½ cr)
—20, III TTh, NGW 60 (1 cr)
—21, III TTh, Gy 100 (StP Campus) (1 cr)

Badminton, Interm
—22, IV TTh, NGW 60, 3 (1 cr)

Bowling, Bgn (activity rating 1, 2, 3)
—23, II TTh, StCen (StP Campus) (1 cr)
—24, III MWF, NGW 201, CMU (1½ cr)
—25, IV MWF, NGW 201, CMU (1½ cr)
—26, II TTh, NGW 201, CMU (1 cr)
—27, III TTh, NGW 201, CMU (1 cr)

Fencing, Bgn (activity rating 1, 2)
—28, V TTh, NGW 60 (1 cr)

Riflemarksmanship (activity rating 1, 2, 3)
—29, I TTh, NGW 201, Armory (1 cr)
—30, II TTh, NGW 201, Armory (1 cr)

Skating, Bgn (activity rating 1, 2)
—31, II MWF, NGW 3, WmsA (1½ cr)
—32, III MWF, NGW 201, WmsA (1½ cr)

Skating, Figure (activity rating 1, 2)
—33, II MWF, NGW 201, WmsA (1½ cr)
—34, III MWF, NGW 201, WmsA (1½ cr)

Social Games, Mixers (activity rating 1, 2, 3)
—35, VII TTh, NGW 153, 3 (1 cr)

Tennis, Bgn (activity rating 1, 2)
—36, V TTh, NGW 151, 201 (1 cr)

Tumbling, Trampoline (activity rating 1, 2)
—37, V MWF, NGW 153, 201 (1½ cr)

Rhythms

Ballroom Dance, Bgn (activity rating 1, 2, 3)
—38, IV TTh, NGW 151, 3 (1 cr)
—39, VII TTh, NGW 151, 201 (1 cr)

Folk, Square Dance (activity rating 1, 2)
—40, II TTh, NGW 151 (1 cr)

Modern Dance, Bgn (activity rating 1, 2)
—41, IV MWF, NGW 3, 151 (1½ cr)

Modern Dance, Adv Bgn (activity rating 1, 2)
—42, VI MWF, NGW 3, 151 (1½ cr)

Team Sports (activity rating 1, 2)
Basketball
—43, I MWF, NGW 3, 151 (1½ cr)
—44, III TTh, NGW 151, 201 (1 cr)
—45, V TTh, Gy 100 (StP Campus) (1 cr)
Volleyball
—46, I TTh, NGW 151 (1 cr)
—47, VI TTh, NGW 151 (1 cr)

Professional Courses

21A Adv Basketball (½ cr)
VIII TTh, NGW 153, 153a

21B Rhythmic Fundamentals, Elem Folk Dance (1 cr)
V TTh, IV Th, NGW 153, 153a

21E Winter Sports (½ cr)
III TTh, WmsA

25 **ARC First Aid: Standard, Adv** (2 cr)
—1, IV MWF, NGW 201, 153
—2, VII MWF, NGW 201, 153a

40D Interm Modern Dance (1 cr)
II MWF, NGW 151

41A Adv Aquatics (1 cr)
II MWF, NGW 58

41B Officiating Basketball (½ cr; prereq 21A)
IV MW, NGW 153, 153a

45 **Physical Education Activities for the Elem School** (2 cr; prereq elem educ maj only)
—1, III MWF, NGW 153, 153a
—2, VIII MWF, NGW 153, 153a

48 Teaching Individual, Dual Sports (3 cr; prereq ‡)
II MWThF, NGW 60, 153, 201, 1 hr ar

70 **Teaching Health, Physical Education in the Elem School** (3 cr; prereq 3rd qtr soph, elem educ maj, 45)
—1, III TTh, IV T, NGW 153, 201
—2, VI MWF, NGW 153, 201

83 Methods, Materials of School Health Education (3 cr; prereq PubH 59)
III MWF, NGW 201

85 Teaching of Posture, Self-Testing Activities (3 cr)
VII MTWThF, NGW 3, 153, 153a

88 Adv Probs: Dance Composition (2 cr; prereq ‡)
III MW and ar, NGW 151

90B Student Teaching (3 cr; prereq 90A)
I T, II Th and ar, NGW 3

90C Student Teaching (3 cr; prereq 90B)
III Th and ar, NGW 4

90E Student Teaching (2-3 cr; prereq 4th qtr student teachers)

91 **Prin Play** (3 cr; prereq NKP maj)
III MWF, NGW 4, 151

93 Student Teaching for Minors (2 cr; prereq Ed 55B, phys educ min)
III TTh and ar, NGW 3

94 Student Teaching: School Health Education (2 cr; prereq sr, 83, ‡)
III Th and ar, NGW 202

Advanced Courses for Men and Women (PE)

101 Principles (3 cr; prereq PEM 55)
V MWF, CH 215, Heusner (for undergrads)

102 Program in Elementary, Secondary School (3 cr; prereq sr)
III MWF, NGW 3, Jaeger

107 Camp Admin (3 cr; prereq PEM 46, ‡)
IX-X W, CH 206, Osell, Ostrander, Thorpe

110 Recreation Surveys (3 cr; prereq PEM 58)
VI MWF, CH 214, Fitzgerald

113 Physical Education in Elem School (3 cr; prereq elem sch exper or ‡)
4:00-5:30 TTh, NGW 3, Baker

115 Adv Kinesiology (3 cr; prereq undergrad kinesiology or ‡)
4:00-5:30 MW, NGW 3, Wells

117B Adv Instruction in School Health for Secondary Schools (3 cr, §117A; prereq PEW 83 or ‡) Slocum
III-IV S, NGW 3, 1 hr ar

118E Probs: Teacher Education in Health, Physical Education, Recreation (ar cr; prereq ‡) Baker, Jaeger, Slocum, Wells

135 Tests, Measurements (3 cr; prereq sr, EPsy 60)
I MWF, CH 214, 1 hr ar, Stish

143 Programming in Hospital Recreation (3 cr; prereq 141)
III MWF, CH 206, Chapman

221 Seminar: Physical Education (no cr) Baker, Jaeger, Slocum, Wells

224 Research Probs: School Health Education, Physical Education, Recreation (ar cr; prereq 236, 135 or EPsy 116 or ‡) Baker, Chapman, Donnelly, Fitzgerald, Heusner, Jaeger, Slocum, Stish, Wells

233 Admin of Physical Education Program in Secondary Schools (3 cr; prereq 63)
I-II T, II Th, CH 206, Stish

241 Admin of Public Recreation (3 cr)
IV MWF, CH 206, Fitzgerald

261B Seminar: Contemporary Probs (ar cr; prereq cons adv)
III-IV Th, CH 206, Chapman

GENERAL COLLEGE (GC)

1A Individual Adjustment (4 cr)
II-III TTh, FolH 6, King

1B Vocational Planning (5 cr; prereq ♯ or cons couns)
V MTWThF, NH 111, Long

2A Psychology in Modern Society (5 cr)
—1, II MTWThF, FraH 102, Burris
—2, VII MTWThF, FraH 101, Burris

2B Fields of Applied Psychology (5 cr; prereq 2A)
IV MTWThF, NH 213, Borow

2C Psychology of Human Development (3 cr)
IV MWF, Arch 25, W Anderson

3A Home Life: Marriage, Family Living (5 cr)
—1, II MTWThF, Bu 211, W Anderson
—2, VI MTWThF, WeH 202, W Anderson
—3, VII MTWThF, WeH 202, Sudia

3B Food Selection, Purchase (3 cr)
V MWF, P 110, Gormican

4 Leisure Today (3 cr)
III MWF, CH 215, Giles

5A Functions, Problems of Philosophy (3 cr)
IV MWF, Bu 211, Kurak

5B Functions, Problems of Logic (3 cr)
—1, II MWF, ME 110, Petersen
—2, V MWF, NH 213, Petersen
—3, VIII MWF, NH 209, Benson

5C Probs of Ethics (3 cr)
I MWF, WeH 202, Petersen

7A Physical Science: Elements of Physics (5 cr, §6A)
—1, III MTWThF, Ph 170, Rassweiler
—2, VI MTWThF, Ph 133, Policoff

7C Physical Science: Elements of Chemistry (5 cr, §6B)
—1, IV MTWThF, Ph 170, Schwabacher
—2, VI MTWThF, Ph 170, Stoppel

7D Physical Science: Elements of Geology (5 cr, §6C)
III MTWThF, P 2, M Harris

8A Applied Mathematics (5 cr)
—1, II MTWThF, NH 207, 1 hr ar, Baldwin
—2, III MTWThF, NH 207, 1 hr ar, Policoff
—3, IV MTWThF, NH 207, 1 hr ar, Stoppel
—4, VI MTWThF, NH 207, 1 hr ar, Mandeville
—5, VII MTWThF, NH 207, 1 hr ar, Baldwin
—6, VIII MTWThF, NH 207, 1 hr ar, Schluck

8B Applied Mathematics (5 cr; prereq 8A)
—1, I MTWThF, Arch 30, Schwabacher
—2, III MTWThF, Arch 30, McCutcheon
—3, V MTWThF, Arch 30, M Harris

9A Statistics (5 cr)
—1, I MTWThF, NH 207, McCutcheon
—2, VII MTWThF, Arch 30, Giese

10A Human Biology: Fundamental Similarities in Living World (3 cr)
—1, I MWF, NH 211, Jefferson, lab ar
—2, III MWF, NH 211, Jefferson, lab ar

10B Human Biology: Living Machinery in Man (3 cr; prereq 10A)
—1, II MWF, NH 211, Dearden
—2, V MWF, NH 211, Dearden

10C Human Biology: Healthful Living (3 cr)
VI MWF, NH 211, Dearden

16A Bookkeeping, Accounting Lab (3 cr)
—1, II-III WF, FolH 113, Donnelly
—2, II-III TTh, FraH B1, Donnelly

16B Bookkeeping, Accounting Lab (3 cr; prereq 16A or ♯)
IV-V TTh, FraH B1, Donnelly

17B Probs of Finance, Credit (3 cr)
I MWF, P 2, Gustafson

18B Retailing, Selling (5 cr; prereq ♯)
—1, II M, II-III TTh, Bu 103, Wallace
—2, II M, II-III WF, Bu 103, Wallace

19A Probs of Business Transactions (5 cr)
—1, II MTWThF, Arch 30, Stolte
—2, IV MTWThF, Arch 30, Rassweiler
—3, VI MTWThF, Arch 30, Larson
—4, VII MTWThF, Arch 45, Larson

19B Probs of Investment Transactions (5 cr; prereq 19A or ♯)
V MTWThF, NH 207, Giese

20A Practical Law (5 cr)
—1, V MTWThF, FraH B25, Newcomb
—2, VIII MTWThF, FraH B25, Newcomb

21 Gen Arts (3 cr)
—1, III MWF, NH 111, Caswell
—2, VII MWF, NH 111, Gates

22B Art Today (3 cr)
IV MWF, NH 111, Safer

23A Art Lab (3 cr)
—1, I-II MW, NH 102, 1 hr ar, MacInnes
—2, VI-VII MW, NH 102, 1 hr ar, Safer
—3, III-IV WF, NH 102, 1 hr ar, Gates
—4, VI-VII TTh, NH 102, 1 hr ar, MacInnes

23B Commercial Art (3 cr)
II-III TTh, NH 102, Safer

24B Music Today: Background of Contemporary Music (3 cr)
—1, I-II TTh, NH 111, Seecamp
—2, III-IV TTh, NH 111, Caswell
—3, VI-VII TTh, NH 111, Caswell

25A Chorus: Techniques, Performance (2 cr)
II MWF, NH 111, Caswell

26A Photography (3 cr)
Lect III T, J 2, Agar
—1, I-II TTh, J 2, Agar
—2, IV-V TTh, J 2, Agar

28A French Language, Civilization (5 cr)
Lect II TTh, P 210, Finnberg
—1, II MWF, C 215, Finnberg
—2, VI MWF, P 218, Finnberg

29A—World Literature I (5 cr)
III MTWThF, NH 213, Rice

29B World Literature II (5 cr)
VI MTWThF, Arch 55, Burrows

29C American Literature (3 cr)
VIII MWF, NH 216, Draxten

29D Contemporary Books, Periodicals (5 cr, §old 29D, old 29E)
II MTWThF, ME 18, Kivits

29G Literature of the Theater: Film, Drama (3 cr)
III T, III-IV Th, P 210, Sheldon

29H Individual Reading in Literature (3 cr; prereq credit in 29, ♯)
II TTh, JohH 306, Rathburn

30A Reading, Vocabulary Development (5 cr)
—1, I MTWThF, NH 216, Stockdale
—2, VI MTWThF, NH 216, Kurak

31A Writing Lab: Personal Writing (3 cr)
—1, I MW, I-II F, WeH 302, Trachtenberg
—2, II-III WF, NH 122, Elsenpeter
—3, III-IV M, IV WF, NH 122, Finnberg
—4, III-IV M, IV WF, NH 209, Burrows
—5, IV MW, III-IV F, WeH 302, Beck
—6, IV-V M, V WF, NH 216, Kivits
—7, V-VI M, V WF, NH 122, Sheldon
—8, V MW, V-VI F, WeH 302, Keeler
—9, V-VI TTh, NH 107, Rathburn

31B Writing Lab: Organizing Ideas (3 cr; prereq 31A)
—1, I-II M, I WF, NH 209, Keeler (for DA students only)
—2, I-II M, I WF, NH 122, Sheldon (for DA students only)
—3, I-II TTh, NH 122, Burrows
—4, II-III MW, WeH 302, Trachtenberg
—5, II-III WF, NH 209, Draxten
—6, III-IV TTh, P 218, Beck
—7, III-IV WF, NH 216, Rathburn
—8, V-VI M, V WF, NH 209, Draxten
—9, V-VI TTh, NH 209, Rice
—10, VI-VII MW, WeH 302, Trachtenberg
—11, VI-VII WF, NH 122, Rice
—12, VII-VIII TTh, NH 216, Elsenpeter

31C Writing Lab: Communicating in Society (3 cr; prereq 31B)
III-IV TTh, WeH 302, Bergstrom

31D Writing Lab: Business Writing (3 cr; prereq 31A...31B rec)
—1, I-II TTh, NH 209, Kurak
—2, II-III TTh, NH 216, Reisman
—3, III-IV TTh, NH 122, Keeler
—4, V-VI TTh, NH 122, Stockdale

31E Writing Lab: Individual Writing (3 cr; prereq 31A, ♯)
III-IV TTh, NH 209, Kivits

32A Oral Communication: Basic Prin (3 cr)
—1, I MWF, JohH 306, Blue
—2, II MWF, JohH 306, Amram
—3, III MWF, NH 107, Hagen
—4, IV MWF, P 218, Manfull
—5, V MWF, NH 107, Amram
—6, VI MWF, NH 107, Benson

32B Oral Communication: Applications of Speech (3 cr; prereq 32A)
—1, II MWF, Psy 109, Blue
—2, VI MWF, JohH 306, Hagen
—3, VII MWF, NH 107, Blue

32C Oral Communication: Speech Organization (3 cr; prereq 32A)
—1, III-IV TTh, NH 107, Amram
—2, IV MWF, Psy 109, Benson

33A Oral Communication: Radio, Television Today (3 cr)
I MWF, NH 107, Manfull

33B Oral Communication: Creative Speech Activities (3 cr; prereq 32A, ♯)
I-II TTh, NH 107, Hagen

38A Geography (5 cr)
—1, II MTWThF, NH 213, Steinhauser
—2, VI MTWThF, NH 213, Steinhauser

39 Anthropology (3 cr)
V MWF, Arch 25, Tefft

40 Problems of Contemporary Society (5 cr)
I MTWThF, FraH 102, McCune

41A Man in Society: His Personal Role (5 cr)
—1, III MTWThF, P 110, McGarry
—2, V MTWThF, JohH 113, McGarry

41B Man in Society: His Organizational Role (5 cr; prereq 41A)
—1, II MTWThF, CW 222, F Harris
—2, VII MTWThF, Arch 135, Traphagen

43A Background of Modern World (5 cr)
VI MTWThF, P 2, Jones

43B Historical Biography (3 cr)
I MWF, NH 213, Moen

43C The Far East (5 cr)
III MTWThF, FraH 102, Matsumoto

44B Current History (2 cr)
—1, V TTh, NH 211, Matsumoto
—2, VII TTh, NH 213, Matsumoto

45A Growth of American Democracy (5 cr)
V MTWThF, FraH 102, Traphagen

45B Impact of Science, Technology on American History (5 cr)
IV MTWThF, NH 211, McCune

46B Probs of State Govt (3 cr)
IV MWF, P 210, F Harris

46D Probs of Intl Relations (5 cr)
VIII MTWThF, WeH 302, Jones

LAW SCHOOL (Law)

Second Semester

101 Contracts (3 cr)
—1, II MW, FraH B1, Kinyon
—2, II MW, FraH B25, Daheim
—3, III MW, FraH B1, Kinyon

102 Criminal Law (6 cr)
—1, VII MTWTh, FraH B1, Kamisar
—2, VII MTWF, FraH B25, Pirsig
—3, VIII MTWTh, FraH B1, Kamisar

105 Legal Accounting (3 cr)
I MT, FraH 101, Schroeder

106 Legal Research I (1½ cr)
VI Th, FraH 101, Fitzgerald, Greene

107 Property I (6 cr)
IV MTWF, FraH 101, Cound

108 Torts (3 cr)
II ThF, FraH 101, McCoid

110 Constitutional Law (3 cr)
I WF, FraH 101, Lockhart

122 Legal Research II (1½ cr)

123 Private Corporations (3 cr)
I TTh, FraH 20, Daheim

126 Sales (4½ cr)
II MTTh, FraH 20, McClure

127 Trusts, Estates (6 cr)
III MTWF, FraH 20, Hogg

128 Taxation I (6 cr)
VI MTWTh, FraH 20, Waterbury

129 Evidence (3 cr)
II WF, FraH 20, Hetland

140 Admin Law (6 cr)
II MTThF, FraH 120, Davis

141 Seminar: Admin Law (3 cr)
VIII-IX F, FraH 237, Davis

142 Conflicts (4½ cr)
I MWF, FraH 120, Cound

144 Seminar: Criminal Law (3 cr)
VI-VII Th, FraH 237, Pirsig

155 Labor Law Practice (1½ cr)
VII TTh, FraH 223, McCoid

158 Legislation (3 cr)
IV WF, FraH 120, McClure

161 Modern Social Legislation (4½ cr)
VI MTW, FraH 120, McCoid

162 Mortgages (3 cr)
II W, III F, FraH 120, Bade

163 Practice (6 cr)
III MTWTh, FraH 120, Hetland

171 Seminar: Federal Jurisdiction (3 cr)
VI F, VII W, FraH 120, Levy

172 Probs (1½ cr)

177 Seminar: Probs of Intl Business (3 cr)
VIII-IX Th, FraH 237, Hogg

178 Adv Law Review (1½ cr)

179 Directed Research (1 cr)

183 Seminar: Trade Regulation (3 cr)
VIII-IX M, FraH 237, Levy

185 Jurisprudence (4½ cr)
VII-VIII F, FraH 120, Loevinger

186 Family Law (3 cr)
I TTh, FraH 120, Levy

188 Adv Law Review (1½ cr)

189 Taxation Seminar (3 cr)
VIII-IX T, FraH 223, Waterbury

190 Seminar: Comparative Law (3 cr)
VIII-IX T, FraH 237, Greene

191 Seminar: Land Use Planning (3 cr)
VIII-IX M, FraH 223, Bade, Solberg

192 Jurisprudence A (3 cr)
VII-VIII F, FraH 120, Loevinger

COLLEGE OF MEDICAL SCIENCES

ANATOMY (Anat)

101 Gross Human Anatomy (7 cr, †100-101; prereq 100)
Lect VI MWThF, MMA 100, Hartmann, Morgan, Lazarow
Lab VII-IX MWF, VII Th

107 Human Embryology (4 cr; prereq ‡)
Lect I TF, IV Th, Owre 15, Heggestad
—1, Lab I-II M, II-III F
—2, Lab II-III T, I-II Th

141 Skeletal Tissue Biology (2 cr; prereq 140) Felts

154 Adv Anatomy (ar cr; prereq ‡) Carpenter, Felts, Hartmann, Heggestad, Lazarow, Morgan, Smithberg, Sundberg, Wells

166 Hematology (4 cr; prereq 165, ‡)
Lect VII TTh, JacH 104, Sundberg
Lab VIII-IX TTh, JacH 213

202 Research (ar cr; prereq ‡) Carpenter, Felts, Hartmann, Lazarow, Morgan, Sundberg, Wells

206 Seminar: Anatomy (1 cr; prereq ‡) Lazarow, others

ANESTHESIOLOGY (Anes)

165 Clinical Anesthesia (2 cr; prereq regis Med) VanBergen, others

265 Gen Anesthesia (12 cr)
IX M, MMA 100

266 Regional Anesthesia (4 cr)
X M, MMA 100
267 Preoperative, Postoperative Evaluation (2 cr)
X W, MMA 100
268 Seminar (2 cr)
IX W, MMA 100
269 Research (ar cr)

BACTERIOLOGY (Bact)

1 Elem Bacteriology (4 cr, offered by Ext Div, open to DH, PT students without addtl fee winter qtr with △)
Lect I MWF, Z 313
Lab II M, II-III F, Mayo A205, Cooney
53 **Gen Bacteriology** (5 cr; prereq soph with C avg in prereq courses, 10 cr chem, 4 cr biol sci or ♯)
Lect VII-VIII MWF, Owre 15
Lab VIII-IX MWF, Mayo A205, Schmidt
106 Infectious Disease (5 cr; prereq 105)
Lect I-II TTh, VI T, MMA 125
Lab II-IV TTh, Mayo A-205, Syverton, Scherer, others
110 Microbial Genetics (3 cr; prereq 53 or ♯)
III TThS, Owre 12, Bradley
116 Immunology (4 cr; prereq 53) Skarnes
Lect VI MTh, MMA 125, VI T, MMA 100
Lab VII-VIII TTh, Mayo A205
122 Physiology of Bacteria Lab (3 cr; prereq 121 or ♯)
Lect IX T, MMA 125
Lab VI-VIII TTh, Mayo A205, Lichstein
152 Problems (ar cr; prereq grad, ♯)
153 Gen Bacteriology (3 cr, §53; prereq grad, 10 cr chem, 4 cr biol sci or ♯) Schmidt
201 Research (ar cr)
202 Diagnostic Microbiology (ar cr; prereq bact maj, ♯) Syverton, Bridges
203 Seminar (1 cr)
V W, Mayo 1050, McLaren
204 Adv Bacteriology (ar cr; prereq 122 or ¶, ♯) Lichstein
205 Adv Bacteriology (ar cr; prereq 204) Lichstein

LABORATORY MEDICINE

Laboratory Medicine (LMed)

102 Clinical Lab Medicine (3 cr; prereq regis Med, PhCh 100, Path 101 or ¶)
Lect VI M, VIII Th, Hosp EustisAmph, Evans, Benson, Conn, others
—1, Lab III-IV F
—2, Lab I-II F
181 Probs: Fluid, Electrolyte Metabolism B (ar cr; prereq regis Med) Evans, others
184 Probs: Clinical Lab Medicine (ar cr; prereq regis Med) Evans, others
235 Adv Clinical Lab Medicine (ar cr; prereq Anat 166) Evans, Benson
236 Research: Clinical Lab Probs (ar cr) Evans, Benson

Medical Technology (MedT)

11 Orientation (1 cr; prereq 10)
VIII W, Owre 12, Hovde
31 Case Presentations (1 cr; prereq 30)
V Th, Hosp EustisAmph, Hovde
51 Clinical Diagnosis by Lab Methods (1 cr)
II W, Hosp EustisAmph, Hammer
70A Lab Methods in Clinical Chemistry A (10 cr) Peterson
70B Lab Methods in Clinical Chemistry B (5 cr) Freier
73 Electrocardiography, Basal Metabolism Testing (2 cr) Halsted
75 Clinical Hematology (5 cr) Gonyea
80 Clinical Microbiology (9 cr) Delaney
82 Blood Bank Techniques (4 cr) Ruspino
85 Histologic Techniques (4 cr) McMasters
98 Adv Lab Techniques (4 cr) Gonyea
110 Adv Clinical Lab Techniques (5 cr) Rausch
111 Adv Clinical Lab Techniques (5 cr) Rausch
130 Elements of Admin (3 cr)
VI WThF, Mayo C295, Hovde
141 Educational Admin (3 cr)
VII MWF, Mayo C295, Hovde, Rausch
150 Topics: Bacteriology (ar cr)
III W, Mayo C295, Bridges
151 Topics: Chemistry (ar cr)
I T, Mayo C295, Freier
152 Topics: Hematology (ar cr)
III M, Mayo C295, Gonyea, Sundberg
153 Topics: Immunology (ar cr)
VIII F, Mayo C295, Yunis, Ruspino

MEDICINE (Med)

101 Clinical Medicine (2 cr; prereq Med, Anat 100, Phsl 106-107)
1:30-2:30 MW, Hosp ToddAmph
104 Clinical Lecture: Internal Medicine (2 cr per qtr, †3 qtrs; prereq 101, 102)
4:30-5:30 W, Hosp EustisAmph
111 Junior Clinical Clerkship (8 cr; prereq regis Med)
9:00-12:00, 1:00-3:00 MTWThFS
123 Clinical Lecture: Dermatology, Syphilology (1 cr, †2 qtrs; continuation of 123f)
IX M, Bo B6
124 Senior Clerkship: Dermatology (2 cr; prereq regis Med)
1:30-3:30 WF, Hosp EustisAmph
201 Clinical Medicine (ar cr)
202 Diseases of Cardiovascular Apparatus (ar cr)
203 Research: Medicine (ar cr)
205 Diseases of Chest (ar cr)

206 Clinical Conference (1 cr)
9:00-9:50 F, Hosp ToddAmph
207 Clinical Pathological Conference (1 cr)
11:00-11:50 W, Hosp ToddAmph
208 Clinical Radiological Conference (1 cr)
9:00-9:50 M, Hosp ToddAmph
210 Seminar: Infectious Disease (1 cr)
211 Electrocardiographic Conference (1 cr)
212 Pigment Metabolism (1 cr)
213 Seminar: Psychosomatic Medicine (1 cr, §NPsy 244)
225 Clinical Dermatology (ar cr)
226 Dermatology (ar cr)
227 Histopathology of Skin (ar cr)
228 Research: Dermatology, Syphilology (ar cr)

NURSING

Nursing (Nurs)

18 Clinical Nursing (6 cr; prereq 17)
Lect VI MW, III-IV F, PoH Amph, Baas, Brown, Magnuson
—1, Lab II-IV M
—2, Lab II-IV T
—3, Lab II-IV W
—4, Lab II-IV Th
—5, Lab VI-VIII T
56 Operating Room Nursing (6 cr) Ellison
58 Orthopedic Nursing (2 cr)
1:00-4:30 MTWTh, PoH 2309, Kume
59 Gynecologic Nursing (4 cr)
1:00-4:30 MTWTh, PoH 2309, Grainger
60 Maternal, Child Nursing (12 cr)
10:30-11:30 TTh, PoH 1326, 1:30-3:30 T, MH 116, Whitney
61 Maternal, Child Nursing (12 cr; prereq 60)
2:00-5:00 MWTh, 1:00-4:30 T, Owre 113, Cook, Geis
66 Neuropsychiatric Nursing (4 cr)
1:30-3:30 TTh, PoH 2317, Lediger, Clipper
67 Care of Neuropsychiatric Patients (8 cr)
1:30-2:30 W, PoH 2317, Lediger, Clipper
79 Tuberculosis Nursing (3 cr) Einerson
87 Field Experience in Public Health Nursing (10 cr) Pennebaker
88 Rural Nursing (5 cr) Titt
95 Orientation to Nurs Mgt (5 cr; prereq regis Nurs)
II-III TTh, MH 111, VI T, VI-VII Th, PoH 1326, Titt
96 Out-Patient Nursing (5 cr) Knutson
151B Medical Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, MH 214, Coe
Lab I-III TTh, MH 214
152B Obstetric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, PoH 1326, Whitney
Lab I-II TTh, PoH 1326
153B Operating Room Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, Owre 112, Ellison
Lab I-III TTh, Owre 112
155B Psychiatric Nursing (6 cr; prereq Psy 144 or NPsy 171A or ¶ or ‡)
Lect III MWF, MH 123, Lediger
Lab I-III TTh, PoH 2309
157B Surgical Nursing (6 cr)
Lect III MWF, Owre 113, Town
Lab I-III TTh, MH 116
158 Tuberculosis Nursing (15 cr) Einerson
165 Work Simplification in Nursing (4 cr)
VI-VII TTh, MH 214, Grainger

Nursing Administration (NuAd)

160 Ward Admin (3 cr; prereq 170)
I MWF, MH 123, Grainger
170 Nursing Service Admin (3 cr, not open to students in MNA prog)
V MWF, MH 123, Harris
173 Fundamentals of Educ in Nursing (3 cr; prereq NuAd maj, 170 or ‡)
V MWF, MH 116, Harrington
175 Nursing Admin (5 cr; prereq 170)
VI-VII MW, VI F, MH 123, Walseth
176 Nursing Admin (5 cr; prereq 177)
III-IV TTh, VII F, MH 123, Walseth
192 Nursing Service Admin (6 cr; prereq 191)
I-II MWF, MH 214, Harris

Nursing Education (NuEd)

162 Personnel Work in Nursing (3 cr)
II MWF, MH 116, Holm
175 Educational Admin in Nursing (3 cr; prereq sr or ‡)
IV MWF, JacH 304, Fritz
197E Adv Teaching (3 cr; prereq regis MEd prog or ‡)
VII-IX Th, MH 123, Dunning

Practical Nursing (PNurs)

2 Elements of Nursing Care (8 cr)
Lect I-II M, VII MF, PoH Amph
—1, VI-VII W, MH 116, VI F, PoH 2309, lab ar, Taylor, Hanson
—2, VI-VII W, VI F, PoH 1326, lab ar, Taylor, Hanson
10 Care of Mothers, Infants (3 cr)
VI-VII TTh, PoH Amph, lab ar, Moncure

OBSTETRICS AND GYNECOLOGY (Obst)

120 Obstetrics (3 cr per yr; prereq regis Med)
IX T, Bo B6
135 Clinical Clerkship (6 cr; prereq regis Med)

201 Adv Obstetrics, Gynecology I (ar cr)
202 Adv Obstetrics, Gynecology I (ar cr; prereq 201)
203 Adv Obstetrics, Gynecology I (ar cr; prereq 202)
204 Adv Obstetrics, Gynecology I (ar cr; prereq 203)
205 Adv Obstetrics, Gynecology II (ar cr; prereq 204)
206 Adv Obstetrics, Gynecology II (ar cr; prereq 205)
207 Adv Obstetrics, Gynecology II (ar cr; prereq 206)
208 Adv Obstetrics, Gynecology II (ar cr; prereq 207)
209 Adv Obstetrics, Gynecology III (ar cr; prereq 208)
210 Adv Obstetrics, Gynecology III (ar cr; prereq 209)
211 Adv Obstetrics, Gynecology III (ar cr; prereq 210)
212 Adv Obstetrics, Gynocology III (ar cr; prereq 211)

OPHTHALMOLOGY (Opth)

100 Ophthalmology (2 cr, †3 qtrs; continuation of 100f)
IX alt Th, Bo B6
201 Clinical Ophthalmology (6 cr)
9:00-5:00 MTWThF, Hosp OPD
204 Surgery of Eye (3 cr)
7:00-9:00 Th, Hosp OR
205 Pathology of Eye (2 cr)
3:30-5:00 Th
220 Basic, Applied Ophthalmology (2 cr)
8:30-12:00 S, Hosp OPD

OTOLARYNGOLOGY (Otol)

101 Otology (2 cr; prereq regis Med)
IX alt Th, Bo B6, Boies
230 Clinical Otology (3 cr)
9:00-12:00 MWF, ENT Clinic, Boies
231 Clinical Rhinology, Laryngology (3 cr)
9:00-12:00 MWF, ENT Clinic, Boies
232 Surgery of Ear, Nose, Throat (3 cr)
9:00-12:00 MTWThF, ENT Clinic, Boies
237 Endoscopy (2 cr) Boies
238 Pathology of Ear, Nose, Throat (1 cr) Boies
241 Seminar (1 cr) Boies
248 Research (ar cr) Boies

PATHOLOGY (Path)

102 Special Pathology (8 cr; prereq 101)
Lect VII MTWThF, MMA 125, Dawson, others
Dem I, III MWFS, JacH 104
—1, Lab I-II MF, III-IV WS, JacH 106, 107, 108
—2, Lab III-IV MF, I-II WS, JacH 106, 107, 108
104 Autopsies (ar cr; prereq 102) Dawson
110 Seminar (1 cr; prereq 102)
V-VI M, JacH 104, Dawson
111 Conference on Autopsies (1 cr; prereq 102)
V-VI T, JacH 104, Dawson, others
113 Surgical Pathology (ar cr; prereq 102) Hebbel
122 Basic Science of Cancer (4 cr; prereq PhCh 100)
VIII-IX MTWF, JacH 104, Wattenberg
201 Research (ar cr) Dawson

PEDIATRICS (Ped)

120 Clinical Lecture: Pediatrics (2 cr; prereq regis Med)
4:30-5:30 W, Hosp EustisAmph, Anderson, others
135 Senior Clinical Clerkship (16 cr; prereq regis Med) Anderson, others
181 Externship (16 cr; prereq regis Med) Anderson, others
182 Externship: Pediatric Service (16 cr; prereq regis Med) Anderson, others
183 Clinical Program: Cardiology (16 cr; prereq regis Med) Anderson, others
184 Clinical Training: Neurology (16 cr; prereq regis Med) Anderson, others
185 Clinical Training: Endocrinology, Metabolism (16 cr; prereq regis Med) Anderson, others
186A Hematology (16 cr; prereq regis Med) Anderson, others
186B Infectious Disease (16 cr; prereq regis Med) Anderson, others
186C Immunology, Inflammatory Diseases (16 cr; prereq regis Med) Anderson, others
186D Renal Diseases (16 cr; prereq regis Med) Anderson, others
186E Metabolic, Endocrinologic Research (16 cr; prereq regis Med) Anderson, others
200 Seminar (1½ cr)
3:45 T, Anderson, others
202 Clinic (ar cr; prereq ‡) Anderson, others
204 Residency (ar cr; prereq ‡) Anderson, others
206 Pediatric Special Interest (ar cr) Anderson, others
208 Research (ar cr; prereq ‡) Anderson, others

PHARMACOLOGY (Phcl)

56 Pharmacology of Official Medicinal Agents (3 cr; prereq 55)
10:30-11:50 T, 1:30-2:50 Th, AH 9, White
101 Introduction (3 cr; prereq Phsl 106-107)
VI ThF, VIII T, Owre 15, Bieter, Wright, Cranston, Holte (for Med students)

105 Gen, Experimental Pharmacology (6 cr; prereq 101)
Lect I MWF, MMA 100, 1:00-2:00 T, Owre 15, Bieter, Wright, Cranston, Holte
—1, Lab II-IV MW, MH 129 (for Dent students)
—2, Lab VI-VIII MW, MH 101 (for Pharm students)

109 Problems (ar cr; prereq ‡) Bieter, Wright, Cranston

112 Forensic Toxicology (6 cr; prereq 110 or ‡) Wright

124 Special Systems (2 cr; prereq ‡) Wright, Cranston

203 Research (ar cr; prereq 101, 102 or ‡) Bieter, Wright, Cranston

PHYSICAL MEDICINE AND REHABILITATION (PMed)

2B Orientation to Physical Therapy, Rehabilitation (1 cr; prereq regis OT)
VII W, Mayo 825, Moen

4 Orientation to Occupational Therapy (1 cr; prereq regis PT)
III F, Mayo 825, Esch

58 Bandaging, Aseptic, Isolation Techniques (2 cr; prereq regis PT)
VII-VIII TTh, Mayo 825, Moen

60B Electrotherapy (3 cr; prereq 60A)
Lect III T, Owre 111, Allison

64 Senior Clinic (1 cr; prereq 63)
II W, Hosp ToddAmph, Kottke

68 Applied Anatomy (3 cr; prereq regis PT)
III MWF, Mayo 810

70 Massage (3 cr; prereq regis PT)
Lect III Th, Owre 111, Allison
Lab V-VI TTh, Mayo 825, Allison

72 Theory of Occupational Therapy (3 cr; prereq 71)
VIII MW, VII-VIII F, Hosp D138, Esch

75 Techniques of Occupational Therapy (3 cr; prereq 74)
V-VII TTh, Hosp D138, Eliason, Lepley

80C Therapeutic Exercises (4 cr; prereq 80B)
Lect II TTh, Mayo 810, Mundale
Lab III-IV TTh, Mayo 825, Mundale

83 Muscle Function, Tests, Measurements (5 cr; prereq regis OT or PT)
Lect III MW, Mayo 825, Pohtilla
—1, Lab V-VI MWF, Mayo 825, Lepley, Esch (for OT students)
—2, Lab I-II MWF, Mayo 825, Pohtilla, Allison (for PT students)

88 Clinical Practice (3 cr; prereq 87)
V-VIII MWF, Moen

91 Conference (1 cr; prereq regis PT) Moen

92 Preliminary Hospital Practice in Occupational Therapy (3 cr; prereq regis OT)
I-II MWF, Eliason

95 Clinical Affiliation (18 cr; prereq 94)

96 Clinical Affiliation (18 cr; prereq 95)

98 Probs: Physical Therapy (3 cr; prereq 97)
V-VIII MWF, Skowlund

200 Service (ar cr)

205 Readings (1 cr)
I M, Mayo 860, Kottke

206 Conference (1 cr) Kottke

210 Research (ar cr) Kubicek

220 Seminar (ar cr)
IV M, Hosp EustisAmph, Kubicek

PHYSIOLOGICAL CHEMISTRY (PhCh)

101 Physiological Chemistry (7 cr; prereq 100)
Lect IV MTWFS, Owre 15
—1, Lab I-III MW, MH 201
—2, Lab I-III ThS, MH 201
—3, Lab VI-VIII WF, MH 201

102 Physiological Chemistry for Veterinary Medicine Students (6 cr; prereq org chem)
Lect IV MT, Owre 111, VI-VII Th, VetS 257
Lab VI-VIII M, I-III T, MH 201

105 Physiological Chemistry for Dental Students (6 cr; prereq 104)
Lect VI TWThF, VII W, Owre 12, Singer
Lab VII-IX TTh, MH 201

153 Problems (ar cr; prereq 101, ‡)

200 Seminar: Physiological Chemistry (1 cr)
V T, MH 213

205 Research (ar cr)

211 Nucleic Acid, Protein Metabolism (3 cr; prereq 101)
VIII MWF, MH 213, Barnum

212 Quantitative Histochemistry Lab (ar cr; prereq 101, ‡) Glick

214 Kinetics, Mechanisms of Enzymic Reactions (3 cr, §PCh 214; prereq PCh 103, ‡) Lumry

236 Seminar: Radio-Isotope (1 cr, §Rad 236)
V W

PHYSIOLOGY (Phsl)

51 Human Physiology for Nursing, Physical Therapy Students (6 cr; prereq 1 yr chem, zool)
Lect I MWThF, Owre 111
—1, Lab II-IV T, MH 307
—2, Lab II-IV W, MH 307
Conf II F, Owre 111

60 Human Physiology for Med Tech, Pharm Students (6 cr; prereq physiol chem, human or mammalian anat)
Lect I MWThF, JacH 304
Lab II-IV Th, MH 307
Conf II F, JacH 304

101 Human Physiology for Dental Students (10 cr; prereq physiol chem, human or mammalian anat)
Lect IV MTWThFS, Owre 12
—1, Lab I-III M, VI-VIII F, MH 307
—2, Lab I-III F, VI-VIII M, MH 307
Conf VI Th, MH 213
113 Probs: Physiology (ar cr; prereq 106-107)
202 Readings (ar cr)
203 Research (ar cr)
211 Topics: Heart, Circulation (ar cr; prereq 106-107, ♯)
212 Topics: Respiration (ar cr; prereq 106-107, ♯)

PSYCHIATRY AND NEUROLOGY (NPsy)

103 Junor Clinical Clerkship (8 cr; prereq regis Med)
120 Basic Behavioral Science (1 cr, †3 qtrs; prereq regis Med)
121 Behavior Pathology, Psychiatric Methods (1 cr, †2 qtrs for Med; prereq regis Med or grad clin psy)
145 Readings: Psychiatry (ar cr; prereq regis Med)
145X Readings: Neurology (ar cr; prereq regis Med) Baker
146 Common Behavior Disorders in Children (ar cr; prereq regis Med)
181 Externship: Neurology (ar cr; prereq regis Med, ♯)
182 Probs: Basic, Clinical Neurology (ar cr; prereq regis Med, ♯)
191 Externship: Adult Psychiatry (ar cr; prereq regis Med, ♯)
192 Externship: Child Psychiatry (ar cr; prereq regis Med, ♯)
193 Probs: Psychiatry (ar cr; prereq regis Med, ♯)
201 Clinical Seminar for Psychologists (1 cr; prereq ♯) Schofield
202 Case Conference (1 cr; prereq ♯)
203 Psychometric Clerkship (ar cr; prereq ♯)
204 Seminar: Interm (1 cr; prereq ♯) Hathaway
205 Seminar: Adv (1 cr; prereq ♯) Hathaway
208 Clinical Neurology (ar cr)
209 Research (ar cr)
210 Adv Neuropathology (2 cr, §150 or Path 115) Nelson
212 Survey of Neuropathology (1 cr, §151 or Path 119)
220 Adv Clinical Neurology (1 cr)
221 Neurochemistry (1 cr) M Cohen
222 Seizure Mechanisms (1 cr) Morrell
226 Neurological-Neurosurgical Conference (1 cr, §Rad 163 or Surg 318)
238 Neurological Clinical Pathological Conference (1 cr)
241 Neuroradiology (1 cr, §Rad 163)
251 Clinical In-Patient Psychiatry (ar cr; prereq MD degree)
252 Clinical Out-Patient Psychiatry (ar cr; prereq MD degree) Anderson
253 Clinical Child Psychiatry (ar cr; prereq MD degree) Jensen, Lawton
254 Adv Clinical In-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
255 Adv Clinical Out-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
256 Adv Clinical Child Psychiatry (ar cr; prereq 251, 252, 253, MD degree) Jensen, Lawton
257 Special Assignments (1 cr; prereq 251, 252, 253, MD degree)
258 Research (ar cr; prereq MD degree or ♯)
262 Clinical Observation, Evaluation (1 cr; prereq MD degree or ♯) Jepson
266 Therapeutic Dynamics in Hospital Psychiatry (1 cr; prereq MD degree or ♯) Koutsky
269 Psychotherapy (3 cr; prereq MD degree or ♯) Meehl
271 Readings: Psychoanalysis I (1 cr; prereq MD degree or ♯) Hambidge
273 Survey of Psychosomatic Medicine (1 cr; prereq MD degree or ♯) Magraw
275 Collaborative Theory (1 cr; prereq MD degree or ♯) Gross, Hambidge
276 Current Research (1 cr; prereq MD degree or ♯)
279 Development of Psychiatric Thought (1 cr, §old 261; prereq MD degree or ♯) Sukov
281 Readings: Psychoanalysis II (1 cr; prereq MD degree or ♯) Hambidge
283 Seminar: Special Topics (1 cr; prereq MD degree or ♯) Schiele
284 Readings: Child Psychiatry (1 cr) Jensen
285 Seminar: Current Literature in Child Psychiatry (1 cr) Jensen
286 Diagnostic, Therapeutic Methods in Child Psychiatry (1 cr) Jensen
291 Seminar: Current Literature (1 cr; prereq MD degree or ♯) Simon
292 Special Supervision in Psychotherapy (1 cr; prereq MD degree or ♯)
293 Probs in Teaching Psychiatry (ar cr; prereq MD degree or ♯)
294 Seminar: Adv Critical Examination of Systems, Theories (1 cr; prereq MD degree or ♯) Hathaway
295 Group Therapy (1 cr, §old 274; prereq MD degree or ♯)

PUBLIC HEALTH (PubH)

2 **Personal, Public Health** (2 cr, §3 or 50)
VI MW, Bo B6, Reiter
3 Personal Health (2 cr, §2 or 50)
VI TTh, MNH Aud, Thomson

5 Individual, Public Health (3 cr, §2 or 3 or 3A or 3B or 4 or 50 or 51)
I MWF, Bo B6, Thomson

51 Community Hygiene (3 cr, §4 or 5 or 50 or 100; prereq 3 or 3A)
IV MWF, MMA 100, Cowan

52 **Home Nursing, Family Care** (1 cr; prereq HE students, 50 or ‡)
—1, VIII-IX T, MeH 01 **(StP Campus)** Simons
—2, VIII-IX Th, MeH 01 **(StP Campus)** Simons

53 Introduction (5 cr; prereq regis nurs or nurses, 3 or 50, bact)
IV MTWThF, MMA 125, Anderson, Thomson

58 Maternal, Child Health (3 cr; prereq nurses, 53, 133 or ¶)
I-II T, I Th, Mayo 1205, Stocking

62 Public Health Nursing I (3 cr; prereq nurses, 58, 95, 133, Soc 50, ¶65 or Nurs 87)
—1, II-III, VI-VII Th, Mayo 1203, Stocking
—2, II-III, VI-VII Th, Mayo 1260, Fredlund
—3, II-III, VI-VII F, Mayo 1245, Blanchard
—4, II-III, VI-VII F, Mayo 1260, Pennebaker
—5, II-III, VI-VII F, Mayo 1203, Cline

63 Public Health Nursing II (2 cr; prereq nurses, 62, 65 or ‡)
I WF, Mayo 1250, Murphy, Anderson

64 Long-term Patient Care (6 cr; prereq nurses, 58, 95, 133, Soc 50) Anderson

65 Field Practice: Public Health Nursing (ar cr; prereq 58, 95, 133, Soc 50, ¶62, C avg) Murphy, others

69 The Nurse in School (3 cr; prereq nurses, 62, 95, 133 or ‡)
VI-VIII W, Mayo 1205, Stocking

77 Dental Public Health (2 cr; prereq sr, ¶76) 8:00-9:00 MTh, Owre 113, Jordan

92 Physiological Hygiene (4 cr, †91-92; prereq 91)
Lect IV MWF, Owre 113, Taylor
Lab VII T, MMA 100, Taylor

100B Elements of Public Health II (1 cr; prereq 100A)
IV-V T, MMA 100, Anderson, others

101 Admin, Field Work (2 cr; prereq sr Med) Thomson

103 Bacteriology (ar cr; prereq grad, Bact 102, 116, ‡)
I-II MWF, SBH Lab, Bauer

104 Epidemiology I (3 cr; prereq 100A, 111 or 140)
II-III TTh, MH 213, Schuman

106 Administration (3 cr; prereq 100A)
I MWF, MMA 125, Anderson, Hamilton

108 Biostatistics, Statistical Decision (2 cr)
VI-VII TTh, Mayo 1250, Bearman

112A Public Health Engineering-Plan Examinations: Water Supplies (1 cr, §114; prereq engr degree, 102, ‡)
IV F, Mayo 1114, Bosch

113A Public Health Engineering-Field Investigations: Water Supplies (2 cr, §114; prereq engr degree, 102, ‡)
IV MW, Mayo 1205, Bosch

115 Food Sanitation (3 cr; prereq 100A, ‡)
VI-VIII F, Mayo 1115, Olson

118 Sanitary Biology (3 cr; prereq 117)
VI-IX MW, Mayo 1138, Olson

120 Biostatistics II (3 cr; prereq 110 with grade C, ¶121)
III MWF, Owre 12, Brown

121 **Biostatistics Lab II** (2 cr; prereq ¶120)
Lect III TTh, Arch 40, Keenan, Knatterud
—1, II MWF, Arch 15
—2, IV MWF, Arch 15
—3, VI MWF, Arch 15
—4, VI-VIII T, Arch 15

123 Topics (ar cr; prereq ‡)

133 Mental Health (3 cr; prereq ‡)
—1, I MWF, Z 211, Williams
—2, VI-VIII F, Mayo 1210, Cline

135 Conservation of Hearing (1 cr; prereq 62 or 62A)
II F, MH 128, Boies

137 Dental Health (1 cr; prereq 62 or 62A)
II M, MH 128, Jordan

152 Industrial Hygiene Engineering (3 cr; prereq ‡)
II MW, II-III F, Mayo 1205, Michaelsen

155 Air Pollution Probs (3 cr; prereq ‡)
III MW, I-II S, Mayo 1205, Paulus

163 Organization, Mgt of Hospitals (6 cr; prereq 162)
II-III MTWF, VI-VII F, I-II S, Mayo 1250, Stephan, Hamilton

166 Hospital Clerkship (5 cr)
VI-IX MW, I-IV Th, Mayo 1250, Stephan

169 Administrative Residency (ar cr) Stephan

170 Seminar: Public Health Nursing (2 cr, §170A; prereq health officers or ‡)
VI TTh, Mayo 1210, Murphy, Fritz

170A Public Health Nursing (1 cr, §170; prereq ‡)
IV Th, Murphy, Fritz

174A Seminar: Admin, Supervision, Consultation (2 cr; prereq PubH nurs, 171, 175 or ‡)
VI-VII W, Mayo 1220, Murphy, Blanchard

176 Adv Practice in Public Health Nursing (3 cr; prereq 175)
Lect VI-VII Th, Mayo 1220, Williams
—1, VI-VII M, Mayo 1245, Fritz
—2, VI-VII M, Mayo 1203, Von Bergen
—3, VI-VII T, Mayo 1245, Cline
—4, VI-VII T, Mayo 1203, Von Bergen

178 Seminar: Mental Health (ar cr; prereq ‡) Williams

182 Principles, Methods in Public Health Education (3 cr; prereq 181)
VI-VII MW, Mayo 1210, Grout

190 Field Work: Health Education (ar cr; prereq 183, 227) Grout

192 Physiology of Exercise (ar cr; prereq Phsl 107, ‡) Taylor
195 Aspects of Cardiovascular Disease (3 cr; prereq ‡)
VII-VIII MW, StadG 27, Keys
200 Research (ar cr)
201 Topics: Biometry (ar cr; prereq 130, ‡) Bearman, others
202 Seminar: Physiological Hygiene (1 cr)
205 Research Design in Biometry (3 cr; prereq 203)
II MF, Mayo 1220, II W, Mayo 1210, McHugh
206 Theory of Research Design in Biometry (2 cr; prereq 204, ¶205)
II TTh, Mayo 1220, McHugh
210 Seminar: Public Health (ar cr)
VIII-IX Th, MMA 125
211 Seminar: Biometry (ar cr)
212 Seminar: Public Health Engineering, Sanitation (ar cr; prereq ‡)
VI-VII Th, Mayo 1108, Bosch
213 Seminar: Epidemiology (ar cr)
VI-VIII F, Mayo 1158, Schuman
214 School Health Programs (2 cr; prereq 107 or ‡)
218 Biomedical Measurement Probs, Assays (3 cr; prereq 216)
I MWF, Mayo 1220, Johnson
219 Theory of Biomedical Measurement Problems, Assays (2 cr; prereq ¶218)
I TTh, MH 128, Johnson
220 Readings: Probs of Physiological Hygiene (ar cr; prereq ‡) Keys, others
227 Probs: Public Health Education (ar cr; prereq ‡) Grout
251 Foundations of Biometry (2 cr; prereq 250)
290 Research: Physiological Hygiene, Related Areas (ar cr)

RADIOLOGY (Rad)

102 X-Ray Conference (1 cr; prereq ‡)
5:00-6:00 T, Hosp, EustisAmph
104 Radiological Physics I (2 cr; prereq 1st yr res)
4:00-5:00 T, Mayo C239
111 Medical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 M, Hosp ToddAmph
124 Pediatric-Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 T, Hosp ToddAmph
135 Surgical Roentgenologic Conference for Graduate Students (1 cr)
9:00-9:50 S, Hosp ToddAmph
163 Neurosurgical-Roentgenologic Conference for Graduate Students (1 cr)
1:00-2:30 F, Hosp ToddAmph
180 Externship (4 cr; prereq regis Med)
181 Externship: Diagnostic Radiology (4 cr; prereq regis Med)
182 Externship: Radiation Therapy (4 cr; prereq regis Med)
183 Probs: Radiation Biology, Radioactive Isotope Methods (12 cr; prereq regis Med)
184 Probs: Diagnostic Radiology (12 cr; prereq regis Med)
200 Research: Roentgenology (ar cr)
201 Neuroradiology (2 cr)
7:00-9:00 pm M, Hosp ToddAmph
202 Cardiovascular Roentgenologic Conference (1 cr)
2:30-4:00 M, Hosp ToddAmph
204 Tumor Clinic Conference (ar cr)
11:00-12:00 Th, Hosp ToddAmph
205 Research: Radiation Therapy, Nuclear Medicine, Radiobiology (ar cr; prereq ‡)
206 Roentgenoscopy (3 cr)
207 Roentgen, Radium Therapy (ar cr)
209 Roentgen Diagnosis (3 cr)
210 Roentgen Technique (2 cr)
217 Roentgenologic Conference on Chest Diseases (1 cr)
4:00-5:00 F, Hosp ToddAmph
218 Seminar: Radiobiology (1 cr; prereq ‡)
220 Urologic-Roentgenologic Conference (1 cr)
5:00-6:00 M, Hosp EustisAmph
236 Seminar: Radioactive Isotope (1 cr, §PhCh 236)
12:30-1:20 W, Mayo C239
237 Radiological Physics II (2 cr; prereq 104)
4:00-5:00 F, Mayo C239
238 Roentgen-Surgical Pathology Conference (1 cr)
4:00-6:00 Th, Hosp ToddAmph
240 Radiation Therapy Conference (1 cr)
4:00-5:00 M, Mayo C-239

SURGERY (Surg)

122 Principles of Diagnosis, Treatment, Prognosis of Fractures, Dislocations (1 cr; prereq regis Med)
IX F, Hosp EustisAmph, Wangensteen, others
127 Surgical Diseases of Nervous System (1 cr; prereq regis Med)
IX F, Hosp EustisAmph, French, others
134 Clinical Lecture: Frontiers (1 cr; prereq regis Med)
IX F, Hosp EustisAmph, Wangensteen, others
135 Junior Clinical Clerkship (16 cr; prereq regis Med) Wangensteen, others
140 Clinical Lecture: Orthopedic (1½ cr; prereq regis Med)
IX F, Hosp EustisAmph, Moe, others
173 Clinical Lecture: Urology (1½ cr; prereq regis Med)
IX F, Hosp EustisAmph, Creevy, others
180 Externship in Urology (ar cr)
181 Externship: General Surgery (ar cr; prereq Med students other than Minn)

182 Probs: Clinical Investigation and/or Experimental Surgery (ar cr)
183 Extramural Surgical Program (ar cr)
185 Externship: Orthopedic Surgery, Fractures (ar cr)
186 Research Probs (ar cr)
188 Neurosurgical Externship (ar cr)
189 Neurosurgical Externship (ar cr)
190 Neurosurgical Investigation (ar cr)
200 Out-Patient Clinic in Surgery (1 cr) Wangensteen, others
202 Applied Surgical Anatomy on Cadaver (1 cr) Wangensteen, others
203 Proctoscopy, Sigmoidoscopy (1 cr)
I-IV MF, Mayo SurgClinic, Wangensteen, others
204 Tumor Clinic (1 cr)
I-IV Th, Mayo SurgClinic, Wangensteen, others
205 Surgical Diagnosis (1 cr) Wangensteen, others
208 Surgical Service (1 cr) Wangensteen, others
211 Operative Surgery (1 cr) Wangensteen, others
214 Surgical Ward Conference (1 cr) Wangensteen, others
215 Roentgenological-Surgical Conference (1 cr)
I-IV S, Hosp ToddAmph, Wangensteen, others
216 Research: Surgery (1 cr) Wangensteen, others
217 Seminar: Surgery (1 cr) Wangensteen, others
218 Medical, Surgical Pathological Conference (1 cr)
IV W, Hosp ToddAmph, Wangensteen, others
219 Surgical Literature Conference (1 cr)
I T, Mayo SurgLib, Wangensteen, others
220 Peripheral Vascular Surgery (1 cr)
II-IV T, Mayo SurgClinic, Wangensteen, others
221 Seminar: Surgery-Physiology (1 cr)
VIII T, MMA 125, Wangensteen, others
250 Urological Surgery (4 cr) Creevy, others
251 Cystoscopy, Urological Diagnosis (4 cr) Creevy, others
252 Urological Conference (4 cr) Creevy, others
253 Research: Urology (4 cr) Creevy, others
254 Urological Seminar (3 cr) Creevy, others
255 Urological Radiological Conference (3 cr) Creevy, others
256 Urological Pathological Conference (3 cr) Creevy, others
305 Neurosurgical Diagnosis (3 cr) French, others
311 Operative Neurosurgery (4 cr) French, others
316 Neurosurgical Research (3 cr) French, others
318 Neurosurgical Conference (1 cr)
VI-VIII F, Hosp ToddAmph, French, others
405 Orthopedic Diagnosis (ar cr) Moe, others
408 Orthopedic Service (ar cr) Moe, others
411 Orthopedic Operative Surgery (ar cr) Moe, others
416 Orthopedic Research (ar cr) Moe, others

UNATTACHED COURSES

Biophysics (BPhy)

138 Seminar: Gen Physiology, Biophysics (ar cr)
170 Radiation (3 cr; prereq ♯)
204 Research: Biophysics, Physiology of Radiation (ar cr)
221 Research: Biophysics (ar cr)
222 Research: Biophysics (ar cr)
223 Research: Biophysics (ar cr)

Cancer Biology (CBio)

140 Seminar (1 cr)
12:30-1:30 Th, LyonL 271, Halberg
141 Problems (ar cr) Bittner
207 Research (ar cr) Bittner

Comprehensive Clinic (CoCl)

150 Clerkship: Comprehensive Care of Ambulatory Patients (ar cr; prereq regis Med)

COLLEGE OF PHARMACY

Pharmaceutical Chemistry (PhmC)

1 Inorganic Pharmaceutical Products (4 cr; prereq InCh 11)
Lect I MW, AH 150, Soine
Rec I F, AH 150, Soine
—1, Lab VI-VIII MT, AH 325, Soine
—2, Lab VI-VIII WTh, AH 325, Soine
54 Quantitative Pharmaceutical Chemistry (5 cr; prereq Soph, 2, InCh 11)
Lect IV MWF, AH 150, DiGangi
Rec VII MF, AH 150, DiGangi
Lab VII-IX MF, AH 316, DiGangi
162 Organic Medicinal Agents (3 cr; prereq 161)
III MWF, AH 9, Gisvold

165 Analytical Methods (3 cr; prereq 164)
Lect I T, AH 101, DiGangi
Lab II-IV T, I-III Th, DiGangi
166 Special Probs (ar cr)
201 Seminar (1 cr) Gisvold
208 Carbohydrates, Glycosides (3-5 cr; prereq OrCh 63 or #) Gisvold
214 Research (ar cr)

Pharmaceutical Technology (PhmT)

1B Orientation (1 cr)
IV T, AH 150, Hager, Netz
55 Pharmaceutical Preparations (4 cr; prereq 54)
Lect II MW, AH 9, Rippie
Lab VI-VIII TW, AH 125, Rippie
59 Prescription Compounding (6 cr; prereq 58)
Lect II MWF, IV Th, AH 350, Hadley
Lab VI-VIII ThF, AH 104, Hadley, Miller
Rec VI Th, AH 350, VI F, AH 9, Hadley
69 Hospital Pharmacy (3 cr; prereq 68)
Lect I T, Mayo A355, Perreault
Lab I-III Th, II-IV T, Mayo D189, Perreault
167 Pharmaceutical Manufacturing (3 cr; prereq 166)
Lect I T, AH 350, Miller
Lab II-IV T, I-III Th, AH 28, Miller
173 Special Probs (ar cr; prereq 56, PhmC 163)
201 Seminar (1 cr) Rippie
203 Adv Analytical Methods (3-5 cr; prereq 202) Rippie
216 Pharmaceutical Development (5 cr; prereq 215) Miller
222 Heterogeneous Systems in Pharmacy (3-5 cr; prereq 221) Hadley, Rippie

Pharmacognosy (Phcg)

2 Vegetable Drug Histology (3 cr; prereq 1)
Lect III T, VI Th, AH 150, Jonas
Lab VII-IX Th, AH 225, Jonas
59 Biological Products (3 cr; prereq sr, Bact 53)
III MWF, AH 225, Fischer
173 Special Probs (ar cr)

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AmSt)

91 Proseminar (3 cr; prereq 90)
VIII-IX Th, FolH 103, Weber
201 Introduction (3 cr; prereq 200)
VIII-IX T, FolH 103, Kwiat, Noble
212 Seminar (3 cr; prereq 211)
VIII-IX W, FolH 103, Foster
241 Materials for Study of American Civilization (2 cr; prereq adv degree cand or #)
VIII-IX M, TSF 109, Turpie

ANTHROPOLOGY (Anth)

1A **Introduction: Prehistoric Man, Culture** (5 cr)
Lect IV MWThF, MNH Aud, Murrill
—1, I T, ForH 120
—2, II T, ForH 120
—3, III T, ForH 120
—4, III T, ForH 130
—5, IV T, ForH 285
—6, IV T, ForH 150
—7, IV T, ForH 130
—8, IV T, ForH 155
2A **Introduction: Cultural Anthropology** (5 cr)
Lect II MTWF, MNH Aud, Spencer
—1, I Th, ForH 120
—2, II Th, ForH 120
—3, II Th, ForH 130
—4, II Th, ForH 285
—5, II Th, ForH 185
—6, III Th, ForH 120
—7, III Th, ForH 130
—8, IV Th, ForH 130
118 Pre-Columbian Civilizations of Middle America (3 cr; prereq 1A or 100 or △)
9:30-11:00 TTh, ForH 115, Johnson
121 Peoples, Cultures of the South Seas (3 cr; prereq 1A, 2A or 100)
VI MWF, ForH 130, Johnson
127 Islamic Culture Sphere (3 cr; prereq 1A, 2A or 100 or △)
I MWF, ForH 130, Gerlach
132 Archaeology of Mississippi Drainage (3 cr; prereq 90 or △)
1:30-3:00 TTh, ForH 180, Johnson
151 Applied Anthropology (3 cr; prereq 150 or △)
III MWF, ForH 150, Merrill
160 Law-ways of Primitive Man (3 cr; prereq 2A or 100...or none for law or other soc sci maj)
IV MWF, ForH 185, Gibbs
164 Social Anthropology (3 cr; prereq 2A or 100)
II MWF, ForH 130, Gibbs

165 **Culture, Personality** (3 cr; prereq sr, 2A or 100 or △...or none for PubH nurs, psy, soc, SW maj)
II MWF, ForH 55, Spencer

171 **Physical Anthropology** (4 cr)
Lect III TTh, ForH S40, Murrill
Lab 1:30-3:00 TTh, ForH S40, Murrill

191 Research (ar cr; prereq 190)

205 Seminar: Anthropology (3 cr; prereq 204)
VIII-IX W, ForH 70

ART (Art)

1 Principles (5 cr, §50)
Lect III MWF, NH 45, lab ar, Eitner

2 **Ancient, Medieval Art** (3 cr; prereq 1)
III MWF, Arch 130, Simon

3 **Renaissance, Modern Art** (3 cr; prereq 1)
III MWF, J 207b, Torbert

10 **Photography** (3 cr)
I-II MWF, J 2, Liebling

11 **Photography** (3 cr; prereq 10 or prac exper, △)
III-IV MWF, J 2, Liebling

20 **Drawing** (2 cr)
I-II TTh, J 200a, 200b, Quirt

24 **Drawing, Design I** (3 cr; prereq 23)
—1, I-II MWF, J 104, Downs
—2, III-IV MWF, J 104, Downs
—3, V-VI MWF, J 104, Mitra
—4, VII-VIII MWF, J 104, Crowell
—5, III-IV TThS, J 200a, 200b, Quirt
—6, VII-IX TTh, J 104, Mitra

24A **Drawing, Painting for Architects I** (2 cr; prereq 23A)
—1, II-IV TTh, J 11, Crowell
—2, II-IV TTh, J 10, Kutzik
—3, II-IV TTh, J 4, Perez
—4, VI-VIII TTh, J 10

32 **Printmaking** (3 cr)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers

33 **Printmaking** (3 cr; prereq 32)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers

41 **Sculpture I** (3 cr; prereq 40)
—1, I-II MWF, HolB 154, Morton
—2, III-IV MWF, HolB 154, Morton
—3, I-II TThS, HolB 154, Rood
—4, III-IV TThS, HolB 154, Rood

45 **Ceramic Processes** (3 cr)
—1, I-II MWF, HolB 134, MacKenzie
—2, III-IV MWF, HolB 134, MacKenzie

50 Visual Arts (3 cr, §1)
III MWF, NH 45, Eitner

51 **Pictorial Design** (2 cr; prereq 25)
III-IV MW, J 4, Corbett

52 **Drawing II** (3 cr; prereq 25, △)
I-II MWF, J 10, Perez

53 **Drawing II** (3 cr; prereq 52)
I-II MWF, J 10, Perez

54 **Life Drawing** (3 cr; prereq 52, △)
III-IV MWF, J 10, Munoz

55 **Life Drawing** (3 cr; prereq 54)
III-IV MWF, J 10, Munoz

57 Renaissance, Baroque Art: 1500-1650 (3 cr; prereq 1 or 50 or △)
II MWF, J 207b, Waldfogel

61A **Drawing, Painting for Architects II** (2 cr; prereq 60A)
—1, VI-VIII T, II-IV S, J 4, Michener
—2, VI-VIII T, II-IV S, J 11, Munoz
—3, 6:00-9:00 pm TTh, J 4, Munoz

67 **Modern Art: Realism, Impressionism** (3 cr; prereq 1 or 50 or △)
IV MWF, Arch 130, Waldfogel

70 **Oil Painting** (3 cr; prereq 54)
—1, VI-VIII MW, J 200a, 200b, Corbett
—2, VI-VIII Th, J 200a, 200b, Quirt

71 **Oil Painting** (3 cr; prereq 70)
—1, VI-VIII MW, J 200a, 200b, Corbett
—2, VI-VIII TTh, J 200a, 200b, Quirt

72 **Oil Painting** (3 cr; prereq 71)
—1, VI-VIII MW, J 200a, 200b, Corbett
—2, VI-VIII TTh, J 200a, 200b, Quirt

80 **Sculpture II** (3 cr; prereq 42)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

80A **Direct Metal Sculpture, Constructions** (3 cr; prereq 42 or △)
VI-VII MWF, HolB 154, Morton

81 **Sculpture II** (3 cr; prereq 80)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

81A **Metal Sculpture in Relief, Repousse** (3 cr; prereq 80A)
VI-VII MWF, HolB 154, Morton

82 **Sculpture II** (3 cr; prereq 81)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

82A **Bronze Casting, Wax Modeling** (3 cr; prereq 81A)
VI-VII MWF, HolB 154, Morton

84 **Photography II** (3 cr; prereq 83)
VI-VII MWF, J 2, Liebling

87 **Art of the Film** (3 cr; prereq 86)
VII-VIII MW, VII F, J 207a, Amberg

90 **Printmaking** (3 cr; prereq 32 or △)
VI-VIII TTh, J 203, Myers

91 **Printmaking** (3 cr; prereq 90)
VI-VIII TTh, J 203, Myers

92 **Printmaking** (3 cr; prereq 91)
VI-VIII TTh, J 203, Myers

94 **Ceramic Design** (3 cr; prereq 45 or △)
VI-VII MWF, HolB 134, MacKenzie

95 **Ceramic Design** (3 cr; prereq 94)
VI-VII MWF, HolB 134, MacKenzie

97 **Seminar for Superior Students** (3 cr; prereq 96) Waldfogel

101 **Hellenistic Through Early Christian** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
II MWF, J 207a, Tselos

112 **Art of Japan** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
I MWF, J 207a, Copeland
117 **Renaissance, Baroque Painting** (3 cr; prereq 116)
VI MWF, J 207a, Thomas
124 **Film Workshop** (3 cr; prereq 123)
VI-VII MWF, J 4, Downs
127 **18th Century Art** (3 cr; prereq 126)
IV MWF, J 207b, Thomas
137 Art in the United States (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
V MWF, J 207b, Torbert
141 **Scandinavian Painting** (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
I MWF, J 207b, Nelson
150 **Probs: Painting** (ar cr; prereq 72, △)
—1, VI-VIII MW, J 200a, 200b, Corbett
—2, VI-VIII TTh, J 200a, 200b, Quirt
151 **Probs: Painting** (ar cr; prereq 150)
—1, VI-VIII MW, J 200a, 200b, Corbett
—2, VI-VIII TTh, J 200a, 200b, Quirt
152 **Probs: Painting** (ar cr; prereq 151)
—1, VI-VIII MW, J 200a, 200b, Corbett
—2, VI-VIII TTh, J 200a, 200b, Quirt
157 **European, American Painting: 1775-1900** (3 cr; prereq 156)
V MWF, J 207a, Eitner
167 **Origins of Modern Sculpture** (3 cr; prereq 166)
III MWF, J 207a, Arnason
177 20th Century European, American Painting (3 cr; prereq sr, 1 or 50, 9 cr art hist...or 9 cr hist or lit with △)
IV MWF, J 207b, Tselos
180 **Probs: Sculpture** (ar cr; prereq 82, 82A or △)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood
181 **Probs: Sculpture** (ar cr; prereq 180)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood
182 **Probs: Sculpture** (ar cr; prereq 181)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood
190 **Probs: Printmaking** (ar cr; prereq 92 or △)
VI-VIII TTh, J 203, Myers
191 **Probs: Printmaking** (ar cr; prereq 190)
VI-VIII TTh, J 203, Myers
192 **Probs: Printmaking** (ar cr; prereq 191)
VI-VIII TTh, J 203, Myers
193 Adv Probs: Design (ar cr; prereq 9 up div cr in design, cons maj adv)
194 Adv Probs: Design (ar cr; prereq 193)
195 Adv Probs: Design (ar cr; prereq 194)
196 Readings: Art History, Criticism (3 cr; prereq sr, △)
197 Readings: Art History, Criticism (3 cr; prereq sr, △)
198 Readings: Art History, Criticism (3 cr; prereq sr, △)
200 Adv Probs: Studio Work (ar cr; prereq ♯)
201 Adv Probs: Studio Work (ar cr; prereq 200)
202 Adv Probs: Studio Work (ar cr; prereq 201)
216 Seminar: European, American Painting, Sculpture (3 cr; prereq ♯)
III MWF, J 207a, Arnason
217 Seminar: European, American Painting, Sculpture (3 cr; prereq 216)
III MWF, J 207a, Arnason
218 Seminar: European, American Painting, Sculpture (3 cr; prereq 217)
III MWF, J 207a, Arnason
236 Seminar: Probs in Art History, Criticism (ar cr; prereq ♯) Tselos
237 Seminar: Probs in Art History, Criticism (ar cr; prereq 236) Tselos
238 Seminar: Probs in Art History, Criticism (ar cr; prereq 237) Tselos
250 Thesis Seminar (no cr; prereq cons adv)
251 Thesis Seminar (no cr; prereq 250)
252 Thesis Seminar (no cr; prereq 251)

ASTRONOMY (Ast)

20 **Celestial Navigation** (5 cr)
III MTWF, Ph 358, lab ar, Luyten
51 Gen Astronomy (3 cr, §11; prereq Math T)
IV MWF, Ph 166, Danby
52 Astrophysics (4 cr; prereq Math 53, Phys 59 or Phys 9, ♯)
II MTWF, Ph 358, Danby
105 Celestial Mechanics (3 cr; prereq 104)
V MWF, AE 211, Danby

BOTANY (Bot)

12 **Plants Useful to Man** (4 cr)
—1, III MWF, HS 45, Lawrence
—2, V MWF, HS 45, Lawrence
53 **Plant Anatomy** (5 cr, §121; prereq 3 or 5 or Biol 3 or NSci 9)
Lect III MWF, Z 211, Abbe
—1, Lab I-II MWF, Bo 209
—2, Lab IV-V MWF, Bo 209
—3, Lab VI-VII MWF, Bo 209
106 Angiosperm Families (5 cr; prereq 52 or ♯)
VI-VIII MWF, Bo 401, Morley
119 **Experimental Cytology** (5 cr; prereq 118 or Zool 161) Dahl
121 **Plant Anatomy** (5 cr, §53; prereq 10 cr bot or zool)
Lect III MWF, Z 211, Abbe
—1, Lab I-II MWF, Bo 209
—2, Lab IV-V MWF, Bo 209
—3, Lab VI-VII MWF, Bo 209
133 Phytogeography (3 or 5 cr; prereq 50 or 130 or ♯)
VII-VIII MWF, Bo 214, Martin
177 Photosynthesis (3 cr; prereq sr, 51 or 140, 20 cr chem or biochem, PCh 101, 102, 103 or ♯)
8:30-9:45 TTh, Bo 110, Brown

198 Problems (1-5 cr; prereq 20 cr nat sci, ‡)
202 Research Probs: Morphology of Vascular Plants (ar cr) Abbe
206 Research Probs: Taxonomy (ar cr) Ownbey, Morley
222 Research Probs: Ecology (ar cr) Lawrence, Martin
226 Research Probs: Plant Physiology (ar cr) Brown
230 Research Probs: Cytology (ar cr) Dahl
234 Probs: Phycology (ar cr) Norris
241 Seminar: Morphology (1 cr) Abbe
244 Seminar: Taxonomy (1 cr) Morley, Ownbey
250 Seminar: Ecology (1 cr) Lawrence, Martin
253 Seminar: Plant Physiology (1 cr) Brown
256 Seminar: Cytology (1 cr) Dahl
259 Seminar: Cryptogamic Plants (1 cr) Norris

CLASSICS

Classics (Clas)

24 Technical Terms of Science, Medicine, Humanities (3 cr, §124; prereq soph)
VI MWF, FolH 308, McDonald
43 Ancient Mythology in Relation to Literature, Art (2 cr; prereq soph)
V MW, FolH 303, Forbes
82 Aristophanes, Roman Drama in Translation (3 cr, §182; prereq 9 cr lit or △)
IV MWF, FolH 303, Furley
106 Study of Language (3 cr; prereq 56 or △)
VII MWF, FolH 305, D Swanson
124 Technical Terminology (3 cr, §24)
VI MWF, FolH 308, McDonald
182 Aristophanes, Roman Drama in Translation (3 cr, §82; prereq grad, 9 cr lit or △)
IV MWF, FolH 303, Furley
190 Proseminar: Classical Archaeology (3 cr; prereq 122, 123 or ‡)
VII MWF, FolH 303, McDonald
192 Classical Literary Traditions (3 cr; prereq 9 cr lit)
VII MWF, FolH 304, DeWitt

Greek (Grk)

2 Bgn Greek (5 cr, †1-2; prereq 1)
Lect II MWThF, FolH 303, R Swanson
—1, Lab II T, FolH 205½
—2, Lab III T, FolH 205½
52 Greek Tragic Drama (3 cr, §152; prereq 3)
VI MWF, FolH 303, Furley
152 Greek Tragic Drama (3 cr, §52; prereq 3)
VI MWF, FolH 303, Furley
172 Advanced Reading (3 cr; prereq 171)
III-IV TTh, FolH 305½, Allen
202 Seminar: Greek Literary Bibliography, Criticism (3 cr; prereq 201)
VIII T, Lib 317, D Swanson

Latin (Lat)

2 Bgn Latin (5 cr, †1-2; prereq 1)
Lect I MTWF, FolH 303, Forbes
—1, Lab I Th, FolH 205½, Weber
—2, Lab II Th, FolH 205½, Weber
52 Survey of Literature (3 cr, §152; prereq 51)
VI MWF, FolH 304, Forbes
152 Survey of Literature (3 cr, §52; prereq 151)
VI MWF, FolH 304, Forbes
172 Adv Reading (3 cr; prereq 53 or △)
II-III S, FolH 304, McDonald
222 Seminar: Lyric Poetry (3 cr; prereq 221)
415 Th, Lib 317, R Swanson

Sanskrit (Skt)

129 Readings (3 cr; prereq 128)
VIII MWF, FolH 304, D Swanson

ENGLISH

English (Engl)

A Literature, Composition (5 cr, §1A or 1B or Comm 1; prereq classif 1 or 1A or 2)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MTWF, ForH 150
—2, Rec V MWThF, ForH 50, Griscom

B Literature, Composition (5 cr, §2A or 2B or Comm 2; prereq A)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MTWF, TSF 109, Bredeson
—2, Rec I MTWF, C 115, McGinnis
—3, Rec I MTWF, C 111, Albrecht
—4, Rec I MTWF, MurH 302, David Smith
—5, Rec I MTWF, Ph 143, Burton Weber
—6, Rec II MWThF, TNM 115, Joseph
—7, Rec II MWThF, Arch 20, Kirchner
—8, Rec II MWThF, ForH 170, Denzell Smith
—9, Rec III MWThF, JohH 306, Shea
—10, Rec III MWThF, JohH 307, Mooney
—11, Rec III MWThF, C 111, Mays
—12, Rec III MWThF, C 115, Joseph
—13, Rec IV MTWF, TSF 109, McClure
—14, Rec IV MTWF, FolH 110, Klein
—15, Rec V MTWF, Arch 135, Johnson
—16, Rec V MTWF, Psy 115, McGinnis
—17, Rec V MTWF, Arch 20, Peterson
—18, Rec V MTWF, CW 222, M Shaw
—19, Rec V MTWF, JohH 105, David Smith
—20, Rec V MTWF, ForH 30, George
—21, Rec VI MTWF, TSF 109, George
—22, Rec VI MTWF, FolH 114, Mays
—23, Rec VI MTWF, FolH 201, Hansen
—24, Rec VI MTWF, AH 350, Fort
—25, Rec I MTWF, Arch 20, Kirchner
—26, Rec V MTWF, ChE 40, Klein

1A Freshman English (4 cr, §A or 1B or Comm 1; prereq classif card 1 or 1A or 2)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec V MWF, FolH 9, Ryley
—2, Rec V MWF, ChE 150

1B Freshman English (4 cr, §A or 1A or Comm 1; prereq classif card 1 or 1A or 2 or 3)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MWF, MinMet 120, Rudisill
—2, Rec I MWF, MinMet 124, Potter
—3, Rec I MWF, ME 302, Daniel
—4, Rec I MWF, Ex 22, Black
—5, Rec III MWF, ChE 54, Daniel
—6, Rec III MWF, EE 137, Guidera
—7, Rec III MWF, Arch 20, Black
—8, Rec V MWF, FolH 207, Guidera
—9, Rec V MWF, Bu 103, Nelson
—10, Rec V MWF, Bu 123, Cross
—11, Rec V MWF, Bu 211
—12, Rec VI MWF, FolH 213, Nelson
—13, Rec VI MWF, FolH 306
—14, Rec VI MWF, C 215
—15, Rec VII MWF, FolH 209½
—16, Rec VII MWF, FolH 213
—17, Rec I MWF, ChE 40
—18, Rec V MWF, ChE 54

2A Freshman English (4 cr, §B or 2B or Comm 2; prereq 1A)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MWF, MurH 308, Breslin
—2, Rec II MWF, TNCW 113, Mooney
—3, Rec II MWF, FolH 208, Duus
—4, Rec III MWF, CW 206, Jones
—5, Rec III MWF, MH 213, Korges
—6, Rec III MWF, Arch 45, Duus
—7, Rec IV MWF, Pt 202, Gurian
—8, Rec IV MWF, TNM 115, Anderson
—9, Rec V MWF, MurH 302, Wise
—10, Rec V MWF, MurH 308, Hoople
—11, Rec V MWF, MurH 311, Hansen
—12, Rec VI MWF, AE 317, Johnson
—13, Rec VII MWF, FolH 2, Hoople
—14, Rec IV MWF, ForH 40, Lohmann
—15, Rec V MWF, ForH 40, Kvernes

2B Freshman English (4 cr, §B or 2A or Comm 2; prereq 1B)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MWF, MurH 311, Denzell Smith
—2, Rec I MWF, Pt 202, Barker
—3, Rec I MWF, Psy 115, Wilson
—4, Rec I MWF, AE 309, Weingart
—5, Rec I MWF, AE 317, Mann
—6, Rec I MWF, AE 319, Reid
—7, Rec I MWF, AE 321, Steller
—8, Rec II MWF, ChE 54, Burton Weber
—9, Rec II MWF, CW 206, Breslin
—10, Rec II MWF, ForH 40, Foy
—11, Rec II MWF, ForH 175, Migdal
—12, Rec II MWF, Pt 202, Steller
—13, Rec II MWF, C 115, Fort
—14, Rec III MWF, FolH 4, Warner
—15, Rec III MWF, Arch 60, Buchwald
—16, Rec III MWF, Arch 55, Erisman
—17, Rec III MWF, AH 150, Reid
—18, Rec III MWF, ForH 40, Mann
—19, Rec III MWF, ForH 175, Wilson
—20, Rec III MWF, JohH 105, Cribb
—21, Rec III MWF, Arch 145, Bullock
—22, Rec IV MWF, TNCW 113, Flint
—23, Rec IV MWF, AE 317, Tutton
—24, Rec IV MWF, AE 319, Bullock
—25, Rec IV MWF, AE 321, Warner
—26, Rec IV MWF, AE 327, R Shaw
—27, Rec IV MWF, ChE 54, Buchwald
—28, Rec IV MWF, ChE 150, M Shaw
—29, Rec V MWF, Pt 202, Cribb
—30, Rec V MWF, Ph 143, Lohmann
—31, Rec V MWF, Ph 145, Schmitt
—32, Rec V MWF, Ph 236a, Flint
—33, Rec V MWF, P 218, Migdal
—34, Rec V MWF, AE 317, Jensen
—35, Rec V MWF, TNM 107, Gibson
—36, Rec V MWF, TNM 115, Erisman
—37, Rec V MWF, TNCW 113, R Shaw
—38, Rec VI MWF, TNM 115, Weingart
—39, Rec VI MWF, TNCW 113, Gibbs
—40, Rec VI MWF, AE 211, Tutton
—41, Rec VI MWF, AE 9, Sorenson
—42, Rec VII MWF, FolH 3, Keller
—43, Rec VII MWF, FolH 5, Gibbs
—44, Rec VIII MWF, FolH 2, Keller
—45, Rec I MWF, ForH 40, Anderson
—46, Rec IV MWF, Arch 20, Peterson
—47, Rec V MWF, TSF 109, Bredeson
—48, Rec V MWF, Arch 45, Korges
—49, Rec VI MWF, ForH 40, Wise

11H Honors Course: Literature, Composition B (5 cr; prereq 10H)
Lect II T, III T, NMA Aud, VIII M, C 100
Rec III MWThF, FolH 207, McClure

21 Introd Literature (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
II MTWThF, FolH 207, Youngblood

22 Introd Literature (5 cr, §19 or 20; prereq C or 3A or 3B or Comm 3 or exemption)
—1, III MTWThF, Arch 5, Moore
—2, IV MTWThF, FolH 204, R Foster
—3, VI MTWThF, FolH 204, Buckley

38 Modern Literature (3 cr; prereq soph, C or 3A or 3B or Comm 3)
—1, III MWF, FolH 308, R Foster
—2, VII MWF, FolH 204, Myers

53 English Novel (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 12H...or 21 or 22 or 23...or exemption, 5 cr lit)
II MWF, FolH 114, Frank

55 **Shakespeare: Early Plays** (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 12H...or 21 or 22 or 23...or exemption, 5 cr lit)
—1, I MWF, FolH 107, Steinmann
—2, II MWF, FolH 107, Madsen
—3, IV MWF, Ph 145, Jones
—4, VII MWF, FolH 107, Jackson

56 **Shakespeare: Later Plays** (3 cr; prereq 55 or △)
—1, II MWF, FolH 205, Hurrell
—2, III MWF, FolH 107, Buckley
—3, IV MWF, FolH 107, Blum
—4, VI MWF, FolH 205, Hurrell
—5, VII MWF, FolH 207, Youngblood

67 Literature of the Bible (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 12H...or 21 or 22 or 23...or exemption, 5 cr lit)
VI MWF, FolH 107, Jackson

72 **American Literature** (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 12H ...or 21 or 22 or 23...or exemption, 5 cr lit)
II MWF, FolH 9, Kwiat

73 **American Literature** (3 cr; prereq 72 or ‡)
—1, II MWF, FolH 308, Turpie
—2, VII MWF, FolH 308, C Foster

75 Chaucer (4 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 12H...or 21 or 22 or 23...or exemption, 5 cr lit)
IV MWThF, FolH 207, Cody

85 **Adv Technical Communication for Engineers** (3 cr; prereq C or 3A or 3B)
—1, II MWF, E 215, Guthrie
—2, II MWF, E 4, Haga
—3, IV MWF, E 215
—4, IV MWF, E 4, Haga
—5, VI MWF, E 215
—6, VI MWF, E 4
—7, VIII MWF, E 215

86 **Adv Technical Communication for Engineers** (3 cr; prereq 85)
—1, I MWF, E 215, Haga
—2, I MWF, E 4, Simson
—3, III MWF, E 215, Foulke
—4, III MWF, E 4, Guthrie
—5, V MWF, E 215, Simson
—6, V MWF, E 4, Guthrie
—7, VII MWF, E 215, Foulke
—8, VII MWF, E 4

102 Readings: Old English Prose, Verse (3 cr; prereq 100)
VII MWF, FolH 108, Allen

105 Hawthorne, Melville (3 cr; prereq 5 cr above C)
II MWF, FolH 4, Brom Weber

110 Romantic Poets of Early 19th Century (3 cr; prereq 5 cr above C)
VI TTh, VII T, FolH 107, Jackson

121 Interpretation of Poetry (3 cr; prereq 120)
1:30-2:45 TTh, FolH 206, Tate

127 Drama: 18th, 19th Century (3 cr; prereq 5 cr above C)
IV MWF, FolH 206, Moore

138 19th Century Literature (3 cr; prereq 5 cr above C)
III MWF, FolH 206, Stange

140 Adv Chaucer (3 cr; prereq 75 or 175)
VI MWF, FolH 302, Clark

142 20th Century Literature (3 cr; prereq 5 cr above C)
VII MWF, FolH 206, O'Connor

154 American Novel (3 cr; prereq 5 cr above C)
II TThS, FolH 206, Bowron

157 American Poetry (3 cr; prereq 5 cr above C)
1:30-2:45 TTh, FolH 303, Levenson

165 Modern English (3 cr; prereq 5 cr above C)
VI MWF, FolH 206, Allen

170 Shakespeare's Later Contemporaries (3 cr; prereq 56)
8:30-9:45 TTh, FolH 107, Brown

172 18th Century Novel (3 cr, §52; prereq 5 cr above C)
VI-VII T, FolH 305, Montgomery

180 Influence of Poe (3 cr; prereq 5 cr above C)
10:30-12:00 TTh, FolH 108, Tate

185 Form, Idea in Dramatic Literature (3 cr; prereq 5 cr above C...56 rec)
VII MWF, FolH 205, Hurrell

188 18th Century Literature (3 cr; prereq 5 cr above C)
II MWF, FolH 206, Davis

195 Elizabethan Literature: Prose, Poetry, Drama (3 cr; prereq 5 cr above C)
2:00-3:15 TTh, FolH 205, Brown

198 17th Century Literature (3 cr; prereq 5 cr above C)
IV MWF, FolH 205, Madsen

204 History of English Language (3 cr, §166)
VI TTh, VII Th, FolH 304, Allen

211 17th Century Literature (3 cr; prereq 210)
VIII-IX M, FolH 108, Madsen

226 Elizabethan Drama (3 cr; prereq 225)
VIII-IX M, FolH 203, Brown

235 Medieval English Culture (3 cr; prereq 234)
VIII-IX Th, FolH 302, Clark

246 English Literary Criticism (3 cr)
VIII-IX F, FolH 108, O'Connor

251 Modern Literature (3 cr; prereq 250)
VIII-IX M, FolH 208, O'Connor

266 American Renaissance II: Hawthorne, Dickinson, Thoreau (3 cr; prereq 265)
VIII-IX Th, FolH 203, C Foster

268 Aesthetics (3 cr; prereq Engl or phil grad students or ‡)
VIII-IX Th, FolH 108, Steinmann, Donagan

275 Early 18th Century Literature (3 cr; prereq 274)
VIII-IX W, FolH 302, Davis

279 American Realism (3 cr)
VIII-IX F, FolH 208, Bowron

288 Victorian Literature (3 cr; prereq 287)
VIII-IX W, FolH 208, Stange
298 Independent Reading (3 cr; prereq 297)

English Composition (Comp)

X **Preparatory Composition** (0 cr)
—1, I MWF, Bu 103
—2, I MWF, Bu 123
—3, IV MWF, FolH 109
—4, IV MWF, FolH 11
—5, V MWF, FolH 6
—6, I MWF, MurH 420
—7, V MWF, MurH 420
27 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3)
—1, I MWF, FolH 12, Schneider
—2, II MWF, FolH 103, Schneider
—3, IV MWF, FolH 103, Hart
—4, V MWF, FolH 205, Fraser
—5, V T, V-VI Th, FolH 103, Ryley
—6, VII MWF, FolH 103, Fraser
28 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3...27 rec)
—1, I MWF, FolH 103, Cody
—2, III MWF, FolH 205, Cody
—3, IV MWF, FolH 113, Myers
—4, V T, V-VI Th, FolH 207, Hart
—5, VI MWF, FolH 207, Myers
102 **Writing of Fiction, Poetry** (3 cr; prereq 101)
VIII-IX M, FolH 302, Blum
201 Seminar: Writing (3 cr; prereq 200)
VIII-IX T, FolH 302, Tate

FAMILY LIFE (FL)

1 **Preparation for Marriage** (3 cr, §1A)
—1, II MWF, JohH 106, Torbett
—2, II T, II-III Th, JohH 106, Torbett
—3, III MWF, JohH 106, Pitzer
—4, IV MWF, JohH 106, Pitzer
—5, V MWF, JohH 106, Sudia
—6, I MWF, JohH 106, Mandel
1A **Preparation for Marriage** (3 cr, §1; prereq up div or married students)
V MWF, JohH 306, Hansen
15 **The Home, Its Furnishing** (3 cr but cr added to SLA grad req)
II MWF, JohH 205, Ludwig
25 **Child Development, Adjustment** (3 cr, §CD 40 or 80, not open to NKP or psy maj)
III MWF, JohH 205, Peterson

GEOGRAPHY (Geog)

1 **Natural Resources** (5 cr)
Lect II MWThF, Owre 15, Barrett
—1, I T, ForH 60
—2, I Th, ForH 60
—3, III M, ForH 60
—4, III T, ForH 60
—5, III W, ForH 60
—6, III Th, ForH 60
—7, III F, ForH 60
—8, IV F, ForH 60
—9, V M, ForH 60
—10, V W, ForH 60
—11, V F, ForH 60
—12, VI F, ForH 60
4 **Human Geography** (5 cr)
Lect III MWF, Owre 15, Webb
—1, I MW, ForH 70
—2, I TTh, ForH 70
—3, II TTh, ForH 70
—4, II WF, ForH 70
—5, III TTh, ForH 70
—6, IV MW, ForH 70
—7, IV TTh, ForH 70
—8, V MW, ForH 70
—9, V TTh, ForH 70
—10, VI MW, ForH 70
—11, VI TTh, ForH 70
—12, VII MW, ForH 70
41 **Primary Production** (5 cr)
Lect VI MWThF, ForH 55, Lukermann
—1, I W, ForH 60
—2, II T, ForH 60
—3, II Th, ForH 60
—4, IV T, ForH 60
—5, IV Th, ForH 60
—6, VI T, ForH 60
70 **Cartography** (3 cr; prereq 5 cr or ♯)
VI-VII TTh, ForH 80, Porter
101 Western Europe (3 cr; prereq 10 cr or ♯)
VI MWF, ForH 285, Webb
107 Soviet Union (3 cr; prereq 10 cr or ♯)
V MWF, ForH 55, Borchert
110 South America (3 cr; prereq 10 cr or ♯)
III MWF, ForH 285, Mather
113 Eastern United States (3 cr; prereq 10 cr or ♯)
I MWF, ForH 285, Mather
117 Middle East (3 cr; prereq 10 cr or ♯)
VII MWF, ForH 285, Lukermann
121 Southeast Asia (3 cr; prereq 10 cr or ♯)
II MWF, ForH 285, Broek
134 Adv Climatology (3 cr; prereq 133 or ♯)
IV MWF, ForH 160, Barrett
138 **Statistical Cartography** (3 cr; prereq 70 or ♯)
I-II TTh, ForH 80, Porter
143 Political Geography (3 cr; prereq 4 or ♯)
IV MWF, ForH 285, Broek
190 Readings (1-3 cr; prereq sr)
251 Seminar: Settlement Geography (ar cr; prereq ♯)
VIII-IX Th, ForH 175, Webb
252 Seminar: Agricultural Geography (ar cr; prereq ♯)
VIII-IX M, ForH 175, Mather
255 Seminar: Cultural Geography (ar cr; prereq ♯)
VIII-IX T, ForH 175, Broek
301 Research Probs (ar cr)

GEOLOGY AND MINERALOGY (Geol)

A Gen Geol Lab (2 cr; prereq 1 or 8 or 51 or ¶)
—1, I-II MW, P 22
—2, III-IV MW, P 22
—3, V-VI TTh, P 22
—4, III-IV TTh, P 22
—5, I-II TTh, P 22
—6, V-VI MW, P 22
—7, VII-VIII MW, P 22
—8, VII-VIII TTh, P 22
—9, III-IV MW, P 22
—10, I-II MW, P 22

B Gen Geol Lab (2 cr; prereq A, 2 or ¶2)
—1, VI-VII TTh, P 20
—2, III-IV TTh, P 20
—3, I-II TTh, P 20
—4, VI-VII MW, P 20

1 Gen Geology (3 cr, §5)
—1, IV MWF, P 2, Thiel
—2, II MWF, P 110, Walton
—3, VII MWF, P 2, Dickinson

2 Gen Geology (3 cr, §6; prereq 1 or 8 or 51)
—1, VI MWF, P 110, Swain
—2, IV MWF, P 110, Sloan

6 Geology for Engineers (3 cr, §2; prereq 5)
I MWF, P 210, Schwartz

24 Mineralogy (4 cr; prereq 23)
Lect I MWF, P 110, Zoltai
—1, Lab VI-VII TTh, P 100
—2, Lab VII-VIII MW, P 100

102 Methods of Study of Sediments (3 cr; prereq 101, 106)
Lect VI T, P 210, Thiel
—1, Lab VII-VIII T, P 208
—2, Lab VI-VII Th, P 208

104 Micropaleontology (2 cr; prereq 103)
VIII TTh, P 10, Swain

108 Stratigraphic Paleontology (3 cr; prereq 107)
VIII-IX F, P 105, Sloan

110 Economic Geology (3 cr; prereq sr, 125)
III MWF, P 210, Schwartz

119B Geomorphology of Western United States (3 cr; prereq 118 or 125)
II TTh, P 125, 1 hr ar, Wright

126 Adv Structural Geology (3 cr; prereq 125)
V MW, P 210, Walton

131 Petrology (4 cr; prereq 106)
Lect II MW, P 210, Phinney
—1, Lab VI-VII WF, P 200
—2, Lab ar

147 Soil Mineralogy (3 cr; prereq 146) Zoltai

151 Stratigraphy I (3 cr; prereq 25, 107)
I MWF, P 218, Swain

155 Vertebrate Paleontology (3 cr; prereq 107 or Zool 22 or ‡) Sloan

166 Mineralography (3 cr; prereq sr, 111, 131)
VI-VII MWF, P 207, Schwartz

170 Geologic Probs (1-3 cr)

177 Adv Geomorphology (3 cr; prereq 118) Wright

182 Isotopic, Nuclear Processes (3 cr; prereq 25, phys chem or ‡)
II-III MWF, P 218

248 Seminar: Geomorphology, Pleistocene Geology (ar cr; prereq 118, 120)

261 Theoretical Mineralogy (3 cr; prereq 121, 161 or ‡)
II TTh, P 110

272 Adv Igneous Petrology (3 cr; prereq 131, 271)

GERMAN (Ger)

1C Bgn German (5 cr, §1A or 1B or HS Ger)
—1, III MTWThF, FolH 204
—2, III MTWThF, FolH 209½
—3, VI MTWThF, FolH 209
—4, VI MTWThF, FolH 209½

2A Bgn German: Conversational (5 cr, §2B or 2C; prereq 1A)
Lect I MWF, FolH 209½
Lab I TTh

2B Bgn German: Language, Culture (5 cr, §2A or 2C; prereq 1B)
Lect II MWF, FolH 209½
Lab II TTh

2C Bgn German (5 cr, §2A or 2B; prereq 1C or 1 yr HS Ger)
—1, Lect I MWF, FolH 209
Lab I TTh
—2, Lect II MWF, FolH 209
Lab II TTh
—3, Lect III MWF, FolH 209
Lab III TTh
—4, Lect IV MWF, FolH 209
Lab IV TTh
—5, V MTWThF, FolH 209
—6, V MTWThF, FolH 209½

3C Bgn German (5 cr, §3A or 3B; prereq 2C or 2 yrs HS Ger)
VII MTWThF, FolH 209

4 Interm German (3 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
—1, IV MWF, FolH 209½
—2, V MWF, FolH 4

5 Interm German (2 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
—1, IV TTh, FolH 209½
—2, V TTh, FolH 4

51 Reading German: Bgn for Juniors, Seniors (3 cr, §2A or 2B or 2C; prereq 50)
—1, I MWF, FolH 205
—2, II MWF, FolH 204
—3, II MWF, FolH 3
—4, VII MWF, FolH 11

56 Reading, Analysis of Literary Texts (3 cr; prereq 4 or 4 yrs HS Ger)
—1, IV MWF, FolH 304
—2, IV MWF, FolH 114

57 Composition (2 cr; prereq 4, 5)
VI MF, FolH 10

58 **Composition** (2 cr; prereq 4, 5)
—1, VI MF, FolH 208
—2, VI MF, FolH 108

62 **Conversation** (2 cr; prereq 4, 5)
—1, VI TTh, FolH 208
—2, VI TTh, FolH 108
—3, VI TTh, FolH 302

65 **Adv Conversation, Essay Writing** (2 cr; prereq 59, 63)
VII TTh, FolH 208

71 **Lyric Poetry from Goethe to Rilke** (2-3 cr; prereq 56...or 4, △)
IV TTh, FolH 208

74 **Drama from Lessing to the Present** (3 cr; prereq 56...or 4, △)
IV MWF, FolH 208

77 **Prose of the 19th, 20th Century** (2-3 cr; prereq 56...or 4, △)
III TTh, FolH 208

92 **Civilization, Culture** (3 cr; prereq 3 cr above 69)
VII MWF, FolH 208

95 **Survey of Literature** (3 cr; prereq 3 cr above 69)
III MWF, FolH 208

104 Syntax, Composition (1 cr; prereq sr, 66)

111 Middle High German (3 cr; prereq 110)
VIII-IX M, FolH 305½, C Wood

149 Directed Readings (2-3 cr)

158 Old Norse: Language, Literature (3 cr, §old Scan 196, †157-158-159; prereq 157)
IX-X F, FolH 305½

161 Klopstock, Wieland, Lessing, Herder (3 cr; prereq sr, 14 cr above 69)
VIII-IX Th, FolH 208, Ramras

171 Romanticism (3 cr; prereq sr, 14 cr above 69)
VIII-IX W, FolH 108, Menze

179A Drama from Naturalism to Present: 1880-1910 (3 cr; prereq sr, 14 cr above 69)
VI-VII F, JohH 126, Weiss

187 Lyric Poetry (3 cr; prereq sr, 14 cr above 69)
VIII-IX T, FolH 208, F Wood

HISTORY (Hist)

1 **Civilization of the Modern World** (3 cr)
Lect II MW, FraH 101, Wright
—1, II Th, ForH 30
—2, II F, ForH 30
—3, I T, ForH 130
—4, I Th, ForH 160
—5, I F, ForH 60
—6, II F, ForH 60
—7, VI Th, ForH 30

1H **Honors Course: Civilization of the Modern World** (3 cr; prereq △)
Lect II MW, FraH 101, Wright
Honors Rec IV W, ForH 244, Wright

2 **Civilization of the Modern World** (3 cr)
Lect II TTh, NH 45, Wolf
—1, I M, ForH 50
—2, I T, ForH 50
—3, I W, ForH 50
—4, I Th, ForH 50
—5, I F, ForH 50
—6, II M, ForH 50
—7, II F, ForH 50
—8, III T, ForH 50
—9, III Th, ForH 50
—10, IV T, ForH 50
—11, VI M, ForH 30
—12, VI W, ForH 160
—13, VI F, ForH 50
—14, VII T, ForH 40
—15, II W, ForH 50
—16, III W, ForH 50
—17, VI T, ForH 150
—18, I T, ForH 170
Lect III TTh, NH 45, Payne
—19, I Th, ForH 30
—20, I T, ForH 30
—21, I F, ForH 70
—22, II M, ForH 30
—23, II Th, ForH 50
—24, III M, ForH 50
—25, IV Th, ForH 30
—26, VII Th, ForH 50
—27, III W, ForH 70
—28, IV Th, ForH 150
Lect VI TTh, NH 45, Taylor
—29, I M, ForH 85
—30, I W, ForH 85
—31, I Th, ForH 150
—32, II W, ForH 30
—33, III T, ForH 30
—34, III Th, ForH 30
—35, IV F, ForH 70
—36, III T, ForH 40

2H **Honors Course: Civilization of the Modern World** (3 cr; prereq △)
—1, Lect II TTh, NH 45, Wolf
Honors Rec VI W, ForH 50, Wolf
—2, Lect III TTh, NH 45, Payne
Honors Rec VI W, ForH 60, Payne
—3, Lect VI TTh, NH 45, Taylor
Honors Rec I F, ForH 467, Taylor

5 **English History** (3 cr)
Lect IV MW, FraH 102, Willson
—1, I M, ForH 60
—2, IV T, ForH 30
—3, IV T, ForH 40
—4, VI W, ForH 170
—5, VI F, ForH 30

12 **Medieval, Renaissance History** (3 cr; prereq art or mus maj or △)
IV MWF, ForH 115, Thompson

15 Ancient Civilization (3 cr, §15A)
VII TWTh, NH 211, Jones

15A Ancient Civilization with Readings (5 cr, §15)
VII TWTh, NH 211, VII MF, ForH 115, Jones

18 Asia (3 cr, §60)
VI MWF, ForH 120, Stein, Taylor

20 **American History** (3 cr; prereq soph)
Lect II MW, NH 45, Murphy
—1, VI T, ForH 40
—2, I Th, ForH 130
—3, I M, ForH 160
—4, II T, ForH 130
—5, II Th, ForH 160
—6, III T, ForH 15
—7, IV T, ForH 115

20H **Honors Course: American History** (3 cr; prereq soph, △)
Lect II MW, NH 45, Murphy
Honors Rec II F, ForH 180, Murphy

21 **American History** (3 cr; prereq soph)
Lect I MW, Owre 15, Rutman
—1, II M, ForH 70
—2, I T, ForH 115
—3, VI T, ForH 30
—4, III W, ForH 244
—5, III Th, ForH 160
—6, I Th, ForH 85
—7, II Th, ForH 85
—8, II T, ForH 50
Lect II TTh, Ph 150, Berkhofer
—9, I M, ForH 170
—10, VI M, ForH 50
—11, III T, ForH 150
—12, IV T, E 4
—13, III W, ForH 30
—14, IV W, Z 211
—15, VII W, ForH 50
—16, III Th, ForH 15
—17, VI Th, ForH 150
—18, I Th, ForH 115
—19, II M, ForH 180
Lect VIII MW, ForH 155, Chambers
—20, V M, ForH 160
—21, II T, ForH 30
—22, IV W, ForH 60
—23, VII W, ForH 30

21H **Honors Course: American History** (3 cr; prereq soph, △)
—1, Lect I MW, Owre 15, Rutman
Honors Rec IV W, ForH 30, Rutman
—2, Lect II TTh, Ph 150, Berkhofer
Honors Rec I T, ForH 244, Berkhofer
—3, Lect VIII MW, ForH 155, Chambers
Honors Rec VIII T, ForH 75, Chambers

51 Ancient Civilization (3 cr, §15)
VII TWTh, NH 211, Jones

54 **Civilization of the Modern World** (3 cr, §2)
Lect II TTh, ForH 55, Altholz
—1, II M, ForH 60
—2, III M, ForH 70
—3, II F, ForH 244
—4, VI W, ForH 30

57 England (3 cr, §5)
Lect IV MW, FraH 102, Willson
Rec IV F, ForH 30

60 Asia (3 cr, §18)
VI MWF, ForH 120, Stein, Taylor

71 **English Constitutional History** (3 cr; prereq prelegal soph, C avg or jr)
I MWF, ForH 115, Thompson

80 United States in 20th Century (3 cr)
VI MWF, MNH Aud, Chambers

87 American Colonies (3 cr)
II MWF, Arch 55, Rutman

91 The American West (3 cr)
III MWF, ForH 130, Berkhofer

94 American Diplomatic History (3 cr)
I MWF, ForH 155, Beatty

98 **Minnesota, the Northwest** (3 cr)
III MWF, ForH 155, Jordan

101 The Ancient Near East (3 cr)
VIII MWF, ForH 115, Jones

104A Renaissance, Reformation (3 cr)
1:30-3:00 TTh, ForH 120, Giesey

107 Early Modern Europe (3 cr)
1:30-3:00 TTh, ForH 15, Wolf

107A Europe in the 19th Century (3 cr)
1:30-3:00 TTh, ForH 115, Altholz

110 Europe in the 20th Century (3 cr)
II MWF, Bo B6, Payne

125B 20th Century Russia (3 cr; prereq 108A or 109 or 127 or ♯)
VI MWF, ME 18, Stavrou

125C Modern Near East (3 cr; prereq 1, 2, 3 or ♯)
IV MWF, MurH 302, Stavrou

126 Russia (3 cr)
IV MWF, ForH 55, Anderson

126A Eastern Europe, Middle East in 19th, 20th Centuries (3 cr; prereq 1-2-3)
III MWF, ForH 160, Anderson

129 Modern England: Tudor, Stuart Periods (3 cr)
II MWF, ForH 150, Willson

135 World War II (3 cr)
I MWF, MNH Aud, Deutsch

138 Early Natl Period in United States History (3 cr)
I MWF, ForH 120, Jordan

138A American History: 1850-1900 (3 cr)
II MWF, ForH 120, Loehr

147 American Economic, Social History (3 cr)
III MWF, ForH 115, Loehr

147A The South (3 cr)
10:30-12:00 TTh, ForH 55, Noble

150 Social, Intellectual History of the United States (3 cr)
VI MWF, ForH 180, Noble

150A American Constitutional History (3 cr)
IV MWF, ForH 50, Murphy

155B South Asia, Especially India (3 cr)
1:30-3:00 TTh, ForH 170, Stein

158 Latin-American History (3 cr)
III MWF, ForH 185, Beatty

161A Readings: 18th Century Europe (3 cr, †160A-161A-162A; prereq 160A)
VIII-IX M, ForH 256, Wright

165 History of China: Prehistoric to Present (3 cr; prereq 164)
10:30-12:00 TTh, ForH 170, Taylor

168 Readings: Works of Great Historians (2 cr; prereq sr)
3:30-5:30 T, ForH 244, Giesey

171 Readings: Ancient History (3 cr, †170-171-172; prereq 170) Jones

174 Readings: Medieval, Renaissance History (3 cr, †173-174-175; prereq 173)
VI-VII M, ForH 75, Giesey

174A Readings: Medieval English History (3 cr, †173A-174A-175A; prereq 173A)
1:30-3:00 Th, ForH 244, Thompson

177 Readings: 17th Century France (3 cr, †176-177-178; prereq 176)
2:30-4:30 W, ForH 256, Wolf

177A Readings: Russian History (3 cr, †176A-177A-178A; prereq 176A)
VII-VIII F, ForH 256, Anderson

177B Readings: India (3 cr, †176B-177B-178B; prereq 176B)
VIII-IX F, ForH 244, Stein

177C Readings: Recent European History (3 cr, †176C-177C-178C; prereq 176C)
1:00-2:40 M, ForH 244, Deutsch

183 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq 182)
VI-VII F, ForH 175, Willson

186 Readings: American Political, Constitutional History (3 cr, †185-186-187; prereq 185)
VIII-IX W, ForH 244, Murphy

186B Readings: American Diplomatic History (3 cr, †185B-186B-187B; prereq 185B)
VI-VII M, ForH 175, Beatty

186C Readings: 20th Century American History (3 cr, †185C-186C-187C; prereq 185C)
1:00-2:50 T, ForH 75, Chambers

186E Readings: American History of the 17th, 18th Century (3 cr, †185E-186E-187E; prereq 185E) Rutman

189 Readings: American Economic History (3 cr, †188-189-190; prereq 188)
VI-VII M, ForH 346, Loehr

189B Intellectual History of United States in 19th, 20th Centuries (3 cr; prereq 188B)
VI-VII Th, FolH 12, Noble

201 Historical Bibliography, Criticism (2 cr, †200-201-202; prereq 200)
VI-VII W, ForH 244, Jordan

211 Ancient History (3 cr, †210-211-212; prereq 210)
8:00-10:00 pm Th, ForH 244, Jones

221 Medieval English History (3 cr, †220-221-222; prereq 220) Thompson

224 English History, Tudor-Stuart Period (3 cr, †223-224-225; prereq 223) Willson

254 Russian History (3 cr, †253-254-255; prereq 253)
VII-VIII F, ForH 256, Anderson

261 Latin American History (3 cr, †260-261-262; prereq 260) Beatty

264 History of India (3 cr, †263-264-265; prereq 263) Stein

274 Nineteenth Century American History (3 cr, †273-274-275; prereq 273) Jordan

284 American Economic History (3 cr, †283-284-285; prereq 283) Loehr

287 American Political, Constitutional History (3 cr, †286-287-288; prereq 286)
VIII-IX W, ForH 244, Murphy

294 American Diplomatic History (3 cr, †293-294-295; prereq 293) Beatty

297 Intellectual History of United States in 19th, 20th Centuries (3 cr; prereq 296)
VI-VII Th, FolH 12, Noble

INTERDISCIPLINARY STUDIES IN GENERAL EDUCATION

Communication (Comm)

1 Communication (4 cr, §Engl A or 1A or 1B; prereq classif 1 or 1A or 2 or 3)
—1, I MTWF, TNM 115, Giltner
—2, III MTWF, TNM 115, White
—3, IV MTWF, TNM 9, Hausdorff
—4, V MTWF, TNM 106, Morrison
—5, VI MTWF, TNM 107, Greis

2 Communication (4 cr, §Engl B or 2A or 2B; prereq 1)
—1, I MTWF, TNM 114, Scanlon
—2, I MTWF, TNM 106, White
—3, I MTWF, TNM 107, Connolly
—4, I MTWF, TNM 9, Regnier
—5, II MTWF, TNM 114, Brook
—6, II MTWF, TNM 106, Jensen
—7, II MTWF, TNM 107, Morrison
—8, III MTWF, TNM 114, Willcoxon
—9, III MTWF, TNM 106, Cox
—10, III MTWF, TNM 107, Scanlon
—11, III MTWF, TNM 9, Regnier
—12, IV MTWF, TNM 114, O'Hara
—13, IV MTWF, TNM 106, Cox
—14, IV MTWF, TNM 107, Giltner
—15, V MTWF, TNM 114, Hausdorff
—16, V MTWF, TNM 9, Bryan
—17, VI MTWF, TNM 114, Bryan

3 Communication (4 cr, §Engl C or 3A or 3B; prereq 2)
—1, II MTWF, TNM 9, O'Hara
—2, VI MTWF, TNM 106, Willcoxon

Humanities (Hum)

1 Modern World I (5 cr)
—1, I MTWThF, JohH 115, Ramsland
—2, II MTWThF, JohH 114, Fredricks
—3, IV MTWThF, ForH 15, Altholz
—4, V MTWThF, JohH 114, J Wright
—5, VI MTWThF, JohH 205, Amberg
—6, VII MTWThF, JohH 114, Brown

1A Age of Enlightenment (3 cr)
III MWF, AgEng 108 (StP Campus), Price

2 Modern World II (5 cr; prereq 1)
—1, I MTWThF, JohH 114, Blum
—2, III MTWThF, FolH 114, Wood
—3, IV MTWThF, JohH 113, Frank
—4, V MTWThF, JohH 115, Ramsland
—5, VI MTWThF, JohH 113, J Wright

2H Honors Course: Modern World II (5 cr; prereq 1, △)
III MTWThF, Psy 109, Ames

2A Romanticism, Industrial Revolution (3 cr; prereq 1A)
—1, I MWF, DI 15 (StP Campus), Drake
—2, III MWF, HH 100 (StP Campus), Drake
—3, 1:35-2:50 TTh, DI 15 (StP Campus), Drake

3 Modern World III (5 cr; prereq 2)
IV MTWThF, JohH 122, Siegelman

4 Modern World IV (5 cr; prereq 1 or 2 or 3)
II MTWThF, JohH 122, Vogelbaum

12 Roman, Medieval Heritage (5 cr)
II MTWThF, JohH 105, DeWitt

22 American Life II (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
—1, II MWF, FolH 6, Rockland
—2, III MWF, FolH 6, Weber
—3, IV MWF, FolH 6, Turpie
—4, VI MWF, FolH 6, Berkhofer

24 American Humanities (3 cr; prereq 1A)
II MWF, AgEng 109 (StP Campus), Carr

52 Modern World (5 cr, §2)
—1, III MTWThF, FolH 9, Kwiat
—2, VII MTWThF, JohH 113, W Wright

52H Honors Course: Modern World (5 cr, §2; prereq △)
VI MTWThF, JohH 307, Ludwig

54 Modern World (5 cr, §4)
—1, III-IV TTh, JohH 114, 1 hr ar, Berryman
—2, VII MTWThF, JohH 115, Ludwig

62 European Heritage (5 cr, §12)
—1, II MTWThF, JohH 115, Ames
—2, III-IV TTh, JohH 115, 1 hr ar, Vogelbaum

72 Humanities in the United States (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
VII MWF, FolH 6, Levenson

132 Proseminar (3 cr; prereq 131)
—1, VII-VIII T, JohH 105, Berryman
—2, VII-VIII T, JohH 106, Ross

Natural Science (NSci)

2 Orientation (5 cr, †1-2; prereq 1)
III MTWThF, Ph 166, Graubard

5 Physical World (3 cr, †4-5; prereq 4)
VII MWF, Ph 150, Winter, lab ar

172 Development of Sciences (3 cr; prereq 1 yr of HS biol, 1 yr of HS phys sci or ‡)
IV MWF, Ph 236a, Graubard

Social Science (SSci)

1 Introduction (3 cr)
—1, III MWF, JohH 114, Kliger
—2, IV MWF, JohH 115, Kliger
—3, VI MWF, JohH 122, Blum

2 Introduction (3 cr; prereq 1)
—1, I MWF, JohH 113, Engelbourg
—2, II MWF, ForH 15, Uppal
—3, 9:00-10:20 TTh, JohH 113, Kanun
—4, III MWF, JohH 113, Engelbourg
—5, III MWF, JohH 115, Krueger
—6, IV MWF, JohH 114, Blum
—7, V MWF, JohH 122, Merrill
—8, VI MWF, JohH 115, Cooperman
—9, VII MWF, JohH 205, Blum

3 Introduction (3 cr; prereq 2)
—1, IV MWF, JohH 205, Engelbourg
—2, VI MWF, JohH 114, Kliger

52 Introduction (4 cr, §2)
IV MWF, JohH 105, 1 hr ar, Cooperman

JOURNALISM (Jour)

11 Reporting for Nonmajors (3 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3 or Rhet 3)
VI MWF, MurH 212, Ward

12 Bgn News Photography (3 cr; prereq soph)
VI-VIII TTh, MurH 20, Schuneman

13 Journalistic Writing for Majors (4 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3, type 35 words/min or BA 32 or 33)
Lect IV T, MurH 608
—1, I-III TTh, MurH 212, Lindsay
—2, VI-VIII TTh, MurH 210, Sim

14 Newspaper Reporting for Majors (3 cr; prereq 13 with grade C or ‡, ¶Comp 27 or 28, type 35 words/min or ¶BA 33)
—1, I-II MWF, MurH 212, Hage
—2, VI-VIII TTh, MurH 212, Charnley

18 Prin Advertising (3 cr; prereq 13, C avg, ¶Comp 27 or 28)
—1, II MWF, MurH 420, Mindak
—2, VI MWF, MurH 308, Watters

41 Publications Editing (3 cr; prereq soph, 11 or 13)
Lect IV M, MurH 420, Sim
—1, Lab I-II TTh, MurH 206, Gardner
—2, Lab VIII-IX TTh, MurH 207, Gardner
—3, Lab IV-V WF, MurH 207, Schuneman
—4, Lab I-II TTh, MurH 207, Rao

53 Picture Editing (3 cr; prereq 41, 51 or ‡)
Lect I T, MurH 210, Schuneman
Lab II-III TTh, MurH 210, Schuneman

55 Newspaper Make-up, Typography (3 cr; prereq maj, 51, ¶56 or ‡)
Lect II MTWTh, MurH 308, Wilson, Sim
—1, III-IV MW, MurH 206, 315, Gompertz, Wilson

—2, VI-VII WF, MurH 206, 315, Emery, Wilson
—3, III-IV TTh, MurH 206, 315, Rao, Berscheid
—4, VIII-IX TTh, MurH 206, 315, Gompertz, Berscheid

56 **Newspaper Editing** (3 cr; prereq 55 or ¶)
Lect II MTWTh, MurH 308, Wilson, Sim
—1, III-IV MW, MurH 206, 315, Gompertz, Wilson
—2, VI-VII WF, MurH 206, 315, Emery, Wilson
—3, III-IV TTh, MurH 206, 315, Rao, Berscheid
—4, VIII-IX TTh, MurH 206, 315, Gompertz, Berscheid

59 **Adv Advertising Typography, Layout** (3 cr; prereq 54)
VI-VII TTh, MurH 315, 320, Wilson

73 **Magazine Writing** (3 cr; prereq 15 or 41, ‡)
VI MWF, MurH 311, Hage

74 **Magazine Editing** (3 cr; prereq 55, 73, ‡)
VII-VIII M, MurH 212, 1 hr ar, Charnley

79 **Advertising Copy Writing** (3 cr; prereq 41 or 51, 54, 65)
VII MWF, MurH 308, Watters

85 **Television News, Public Affairs** (3 cr; prereq 84)
VI MWF, MurH 302, Lindsay

101 Reporting Public Affairs (3 cr; prereq sr, 51)
III MWF, MurH 311, Hage

110 History of Journalism (3 cr; prereq 109)
II MWF, MurH 311, Emery

118 Adv Projects (1-3 cr; prereq sr, jour maj, B avg, ‡)

121 Mass Media in a Dynamic Society (3 cr; prereq jour maj, 15 or 18...or others, ‡)
IV MWF, MurH 311, Gerald

125 Communication Systems of Free World (3 cr; prereq 15 cr soc sci...up div course intl rel or compar govt rec)
VII MWF, MurH 302, Nixon

131 Public Opinion, Propaganda (3 cr; prereq 130)
III MWF, MurH 308, Carter

141 **Interpretation of Contemporary Affairs** (3 cr; prereq 140)
—1, VI TTh, VII T, MurH 302, Gerald
—2, VI TTh, VII T, MurH 311, Nixon

149 Public Relations Theory (3 cr; prereq sr, 78, 113 or 130...or 15 cr soc sci, ‡)
9:30-11:00 TTh, MurH 420, Emery

161 **Advertising: Newspapers, Other Print Media** (3 cr; prereq 18, 54, 79 or ‡...or 41, 54, ‡)
9:30-11:00 TTh, MurH 311, Watters

162 **Advertising: Radio, Television Media** (3 cr; prereq 18, 79 or ‡)
III MWF, MurH 302, Mindak

164 **Current Advertising Developments, Probs** (3 cr; prereq 54, 79, 163 or ‡)
VII MWF, MurH 311, Mindak

213 Seminar: Mass Communication Theory (3 cr; prereq 113, ‡) Nixon

215 Seminar: Communications Analysis (3 cr; prereq 113 or 115, 200, stat or ‡) Jones

221 Communication Agencies as Social Institutions (3 cr; prereq ‡) Gerald

225 Seminar: Intl News Communication, Comparative Foreign Journalism (3 cr; prereq 224) Nixon

230 Seminar: Public Opinion, Propaganda (3 cr; prereq 131, cons adv) Carter

278 Govt, Mass Comunications (3 cr; prereq 277) Gerald

291 Probs: Mass Communications (3 cr; prereq ‡)

LIBRARY (Lib)

53 School Library Mgt (3 cr; prereq school librarians on cert prog)
4:30-5:45 MW, Lib 4A

55 Administration (3 cr)
4:30-5:45 TTh, Lib 4A

62 Reference I (3 cr)
III MWF, Lib 4A

154 The Public Library (3 cr; prereq 55)
1:30-3:00 MW, JohH 126

155 College, University Library (3 cr; prereq 55)
VI MWF, Lib 4A

156 Special Libraries (3 cr; prereq 55)
1:00-3:00 T, Lib 4A

157 School Library Probs (3 cr; prereq 55)
VI MWF, Lib 4B

161 Literature of the Humanities (3 cr; prereq 62)
9:00-10:30 TTh, Lib 4A

168 Research Methods (3 cr; prereq ‡)
II MWF, Lib 4A

172 Reading Guidance for Adolescents (3 cr; prereq 70)
IV MWF, Lib 4A

173 Reading Guidance for Adults (3 cr; prereq 70)
II MWF, Lib 4B

181 Adv Subject Cataloguing (3 cr; prereq 83)
III MWF, Lib 4B

MATHEMATICS (Math)

X **Preparatory Mathematics** (no cr; prereq △)
—1, I MTWThF, FolH 5
—2, V MTWThF, FolH 5
—3, VI MTWThF, FolH 113

H Higher Algebra (3 or 5 cr; prereq 1 yr elem alg)
—1, I MTWThF, FolH 113
—2, V MTWThF, FolH 308
—3, VI MTWThF, FolH 2
—4, IV MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

T Trigonometry (3 cr; prereq plane geom, H or HS higher alg)
—1, I MWF, FolH 2
—2, I TThS, FolH 2
—3, III MWF, FolH 2
—4, VI MWF, FolH 102
—5, III MWF, AgEng 103 **(StP Campus)** (for AFHE students)

5 Foundations of Arithmetic (3 cr; prereq 1 yr elem alg, 1 yr HS geom)
VI MWF, Arch 5

10 College Algebra (5 cr; prereq plane geom or △, H or HS higher alg)
—1, I MTWThF, Arch 5
—2, II MTWThF, Arch 5
—3, V MTWThF, FolH 105
—4, VII MTWThF, FolH 109
—5, II MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

10H Honors Course: College Algebra (5 cr; prereq geom or △, H or HS higher alg △)
I MTWThF, FolH 4

20 Investment (5 cr; prereq 10)
IV MTWThF, FolH 104

21 Life Insurance (3 cr, §BA 113; prereq 20 or 40 or BA 53 or 153 or ♯)
II MWF, VH 210

40 Mathematical Analysis I (5 cr; prereq 10, T or ¶ or HS trig)
—1, II MTWThF, FolH 109
—2, III MTWThF, FolH 109
—3, V MTWThF, Arch 5
—4, VI MTWThF, FolH 109

40H Honors Course: Mathematical Analysis I (5 cr; prereq 10, T or ¶ or HS trig △)
II MTWThF, FolH 108

40A Mathematical Analysis I (5 cr; prereq pre-acctg students, 10)
III MTWThF, FolH 105

53 Mathematical Analysis II (5 cr; prereq 40)
—1, I MTWThF, FolH 101
—2, IV MTWThF, Arch 5

54 Mathematical Analysis III (5 cr; prereq 53)
—1, III MTWThF, FolH 101
—2, VII MTWThF, FolH 105

55 Interm Calculus (3 cr; prereq 54)
—1, I MWF, FolH 105
—2, VI MWF, FolH 105

59 Elem Differential Equations (2 cr; prereq 53)
I TTh, FolH 105

62 Theory of Equations (3 cr; prereq 53 or ¶)
VI MWF, FolH 101

100B Foundations of Arithmetic, Algebra, Geometry (3 cr; prereq 54, ♯)
—1, IV MWF, FolH 102, Engeler
—2, VIII MWF, FolH 102

102B Probability, Statistics (3 cr; prereq 102A)
II MWF, FolH 102, Hart

107 Adv Calculus (3 cr; prereq 55)
V MWF, FolH 101

108 Adv Calculus (3 cr; prereq 107)
II MWF, FolH 101, Gil de Lamadrid

115B Differential Geometry (3 cr; prereq 115A)
V MWF, FolH 102, Guggenheimer

122 Theory of Statistics (3 cr; prereq 121)
IV MWF, FolH 101, Pruitt

125A Critical Reasoning in Mathematical Analysis (3 cr; prereq 54)
III MWF, FolH 104, Engeler

131A Adv Algebraic Theory (3 cr; prereq 54)
VII MWF, FolH 101, Harper

158 Methods of Applied Mathematics (3 cr; prereq 157)
II TThS, FolH 101, Turner

171 Modern Algebra (3 cr; prereq 170)
VI MWF, FolH 110, Kalisch

178B Introd to Probability (3 cr; prereq 178A)
11:30-12:45 TTh, FolH 102, Jamison

207 Theory of Functions of Real, Complex Variables (3 cr; prereq 206)
II MWF, FolH 105, Storvick

210B Foundations of Algebra (3 cr; prereq 210A)
IV TTh, FolH 101, 1 hr ar, Jonsson

211B Adv Methods of Applied Mathematics (3 cr; prereq 211A)
1:30-3:00 TTh, FolH 101, Kalisch

212B Point Set Topology (3 cr; prereq 212A)
III TTh, FolH 102, 1 hr ar, Slye

245A Lebesgue Integrals (3 cr; prereq 206 or ♯)
VII MWF, FolH 104, Knight

246 Integration in Function Space (3 cr; prereq 245A or 245B, ♯)
II TTh, FolH 4, 1 hr ar, Cameron

272 Ordinary Differential Equations (3 cr; prereq 271)
III MWF, FolH 102, Loud

284B Stochastic Processes (3 cr; prereq 284A)
1:30-3:00 TTh, FolH 102, Orey

MUSIC (Mus)

A Piano (no cr)
Ar, ScH 107, Weiser, Freed, Hunter

D Voice (no cr)
Ar, ScH 107, Knowles, Oja, Rice

1 Fundamentals (2 cr; prereq non-mus maj)
—1, I MW, MusEd 103, I TTh, NMA 4, Oja
—2, II MW, MusEd 103, II TTh, ScH 104, Oja
—3, V MW, ScH 4, V TTh, MusEd 103, Glemming
—4, VIII-IX TTh, ScH 4, Oja

1T Theory (3 cr)
V MTWThF, ScH 3, Loeffler

2T Theory (3 cr; prereq 1T)
—1, I MTWThF, ScH 3, Barry
—2, III MTWThF, ScH 3, Barry
—3, VI MTWThF, ScH 3, Glemming
—4, VII MTWThF, ScH 3, Barry

4T Theory (4 cr; prereq 3T)
V MTWThF, ScH 103, Bencriscutto

5T Theory (4 cr; prereq 4T)
—1, II MTWThF, ScH 103, Malcolm
—2, III MTWThF, ScH 103, Malcolm
—3, VI MTWThF, ScH 103, Malcolm

7B Ear Training (2 cr; prereq 7A)
I TWThF, ScH 103, Malcolm

11 Piano (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Weiser, Freed, Hunter

11B Piano: Class Lessons (2 cr; prereq 11A)
Mu Hr IV T, ScH 108, Duckworth
—1, III MWF, MusEd 103, Duckworth
—2, V MWF, MusEd 103, Duckworth
—3, VI MWF, MusEd 103, Duckworth

11H Honors Course: Piano Class Lessons (2 cr; prereq maj only, ♯)
III TTh, MusEd 103, Duckworth

12 Voice (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Knowles, Oja, Rice

12C Voice: Class Lessons (2 cr)
Mu Hr IV T, ScH 108
—1, V MWF, MusEd 104, Knowles
—2, VI MWF, MusEd 104, Knowles
—3, VII MWF, MusEd 104, Knowles
—4, IV MWF, MusEd 4, Abelson

13 Violin (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Loeffler, Carol

14 Viola (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Loeffler

15 Cello (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Jamieson

16 Double Bass (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch

17 Flute (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Opava

18 Oboe (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Angelucci

19 Clarinet or Saxophone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch, Williams

20 Bassoon (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Santucci

21 Trumpet (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Chenette

22 French Horn (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Speyer

23 Trombone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Weinman

24 Tuba (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Walton

25 Percussion (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Dahlgren

26 Harp (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Miller

27 Organ (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, organ lab 1V Th, ScH 103, lesson ar, ScH 107, Fleischer

32 Music Literature (2 cr)
II TTh, ScH 108, 1 hr ar, Ivory

35 History of Music (2 cr; prereq 34)
I MTWThF, ScH 4, Houle

39 Women's Glee Club (1 cr; prereq ♯)
VI MWF, NMA 4, Barry

41 Orchestra (1 cr; prereq ♯)
7:00 pm W, NMA Stage, sectionals ar, Oberg

43 Chorus (1 cr, †3 qtrs; prereq ♯)
—1, IV MWF, NMA 4, 5, 7:30 pm T, NH 45, Zinman
—2, VIII MWF, NH 45, 7:30 pm T, NH 45, Zinman

44S St Paul Campus Chorus (1 cr; prereq ♯)
4:30-6:00 TTh, CofH 225, **(StP Campus)** Abelson

47 Concert Band (1 cr; prereq ♯)
—1, VIII MTTh, NMA 4, 5, Bencriscutto
—2, VIII MWF, NMA 4, 5, Bencriscutto
—3, VIII-IX TThF, NMA 4, 5, Bencriscutto

49 Men's Glee Club (1 cr; prereq ♯)
V MWF, NMA 5, Abelson

50 Introduction (5 cr)
VI MTWThF, ScH 4, Houle

61 Instrumental Ensemble (2 cr)
VII MTWThF, ScH 103, Oberg

67 Chamber Singers (2 cr; prereq ♯)
VII MWF, NMA 5, Zinman

71 Normal Piano (2 cr; prereq 70)
II TTh, MusEd 103, IV ar, MusEd 2, Duckworth

91 Adv Instrumental Ensemble (2 cr; prereq sr, 62)
VII MTWThF, ScH 103, Oberg

98 Counterpoint (2 cr; prereq 97)
III TTh, ScH 4, Fetler

100 Adv Applied Music (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

105 American Music (2 cr; prereq 104)
III TTh, ScH 104, Riedel

109 Lasso, Palestrina (3 cr; prereq 6 cr mus hist or Renaissance and Baroque art or pol hist to 1700 or gen hist of western phil or ♯)
VIII-IX F, ScH 103, Riedel

119 Piano Literature (2 cr; prereq 12 cr in 11 or ♯)
VI TTh, ScH 104, Weiser

122 Adv Harmony (2 cr; prereq 121)
II TTh, ScH 3, Argento

125 History of Opera (3 cr; prereq 124)
VII MWF, ScH 104, Argento

128 Composition (2 cr; prereq 127)
II MW, ScH 2, 1 hr ar, Fetler

131A Music of Romantic Period (3 cr; prereq 130A)
VII MWF, ScH 4, Riedel

135 History of Church Music (2 cr; prereq 134)
VIII-IX T, ScH 103, Riedel

142 Orchestration (2 cr; prereq 141)
I TTh, ScH 104, Argento

148 Opera Workshop (2 cr)
6:30-8:00 pm M, MusEd 104, Knowles

151 Musicology (3 cr; prereq 110 or ♯)
I MWF, ScH 2, Riedel

165 Baroque Era (2 cr; prereq 164)
VII TTh, ScH 4, Houle

175 Training in Adv Musicianship (3 cr; prereq 6T)
IV MWF, ScH 103, Fetler

198 Adv Counterpoint (2 cr; prereq 197)
II TTh, ScH 2, Fetler

204 Applied Music (3 cr, †3 qtrs; prereq entr exam)

212 Problems (3-9 cr; prereq 110)
VIII W, ScH 2, Riedel, others

227 Seminar: Composition, Orchestration (3 cr)
VI MW, ScH 2, 1 hr ar, Fetler

228 Seminar: Composition, Orchestration (3 cr; prereq 227)
VI MW, ScH 2, 1 hr ar, Fetler

229 Seminar: Composition, Orchestration (3 cr; prereq 228)
VI MW, ScH 2, 1 hr ar, Fetler

PHILOSOPHY (Phil)

1 Probs of Philosophy (5 cr, §1A; prereq 3rd qtr fr)
Lect II MWF, WeH 202, Potter
—1, Rec II TTh, WeH 202
—2, Rec III TTh, WeH 202
Lect IV MWF, WeH 202, Maxwell
—3, Rec III TTh, Lib 4A
—4, Rec IV TTh, WeH 202

2 Logic (5 cr, §2A)
Lect II MWF, Arch 25, Garver
—1, Rec I TTh, Arch 145
—2, Rec II TTh, Arch 135
—3, Rec III TTh, MurH 308
Lect III MWF, Arch 25, Terrell
—4, Rec II TTh, FraH B25
—5, Rec III TTh, Arch 135
—6, Rec IV TTh, Arch 135

3 Ethics (5 cr; prereq 3rd qtr fr)
Lect III MWF, JohH 122, Mason
—1, Rec II TTh, WeH 306
—2, Rec III TTh, JohH 122
Lect IV MWF, Arch 60, Garver
—3, Rec III TTh, Arch 60
—4, Rec IV TTh, Arch 60

10 Science, Religion (2 cr; prereq soph)
III TTh, Arch 55, Garver

51 History of Western Philosophy (5 cr)
II MTWThF, Mayo 100, Allen, Veatch

113 Plato (3 cr; prereq 112)
VI MWF, JohH 106, Allen

118 Readings: Medieval Philosophy (3 cr; prereq 50, 51 or ♯)
VII MWF, JohH 306, Allen, Veatch

121 Descartes (2 cr; prereq 50 or 51 or 52 or ♯)
VII WF, Arch 60, Raab

131 Hume (3 cr; prereq 52 or ♯)
IV MWF, JohH 306, Terrell

137 Kierkegaard, Scandinavian Philosophy (3 cr; prereq 50 or 51 or 52 or ♯)
VI MWF, ForH 15, Mason

155 Interm Symbolic Logic (3 cr; prereq 154)
III MWF, AH 350, Brodbeck

158 Theory of Knowledge (4 cr; prereq 2 or ♯)
II MWF, JohH 113, II T, AH 9, Feigl

164 Logic of Social Sciences I (3 cr; prereq 15 cr educ or hist or phil or psy or soc sci or ♯)
IV MWF, JohH 307, Brodbeck

171 Philosophies of India (3 cr; prereq 5 cr or ♯)
VII MWF, P 218, Potter

181 Psychology of Religion (3 cr; prereq 6 cr)
VII MWF, ForH 15, Mason

191 Seminar (3 cr; prereq sr, 9 cr or ♯)

218 Seminar: Social, Political Philosophy (3 cr; prereq ♯) Ross

221 Seminar: Philosophical Analysis (3 cr; prereq 154, 157 or 158) Donagan, Garver

231 Adv History of Philosophy (3 cr)
VII MWF, JohH 306, Allen, Veatch

260 Seminar: Metaphysics (3 cr; prereq 157 or ♯) Brodbeck

268 Seminar: Studies in Aesthetics (3 cr; prereq ♯) Donagan, Steinmann

POLITICAL SCIENCE (Pol)

A State in Modern World (3 cr, †A-B)
II MWF, MMA 125, Baird

B State in Modern World (3 cr, †A-B; prereq A)
III MWF, Bo B6, Lippincott

1 American Govt, Politics (3 cr, †1-2, §5)
II MWF, ChE 240, Backstrom

2 American Govt, Politics (3 cr, †1-2, §5; prereq 1)
IV MWF, NH 45, Christensen
5 American Govt, Politics (5 cr, §1-2)
VI MTWThF, FraH 102, Hathaway
26 American Foreign Policy (3 cr)
VI MWF, CHE 240, Holt
52 Field Work: Govt, Politics (3 cr, †51-52; prereq 51)
III-IV T, ForH 160, Backstrom
61 Legal Systems (3 cr; prereq jr or ♯)
1:30-3:00 TTh, ForH 160, McLaughlin
85 Probs of World Politics (3 cr)
VI MWF, ForH 155, Mills
93 Honors Work (ar cr; prereq 18 cr, cons maj adv)
95 Major Paper (no cr; prereq pol sci maj)
102 American Constitution II (3 cr; prereq 101)
10:30-12:00 TTh, Arch 25, Chase
108 Legislative Organization, Procedure (3 cr; prereq 2 or 5 or ♯)
IV MWF, ForH 150, Short
117 Local Government (3 cr; prereq 116)
IV MWF, ForH 170, Backstrom
121 Municipal Admin (3 cr; prereq 2 or 5 or ♯)
8:30-10:00 TTh, ForH 15
126 Govt, Economic Order I (3 cr; prereq 2 or 5)
10:30-12:00 TTh, ForH 185, Warp
132 Public Admin (3 cr; prereq 131 or ♯)
II MWF, ForH 160, Short
142 European Govt, Politics (3 cr, †141-142; prereq 141)
III MWF, ForH 120, Holt
146 Social Legislation, Social Institutions in Scandinavian Countries (3 cr; prereq 2 or 5 or Soc 1)
VI MWF, FolH 12, Clement
150 Govt, Politics of British Empire: Development of Dominion Status (3 cr)
III MWF, ForH 180, Mills
154 Chinese Govt, Politics (3 cr)
IV MWF, ForH 85, Turner
156 Govt, Intl Relations in Latin America (3 cr; prereq 155)
II MWF, ForH 115, Christensen
158 Comparative Govt Systems: Principles, Probs (3 cr; prereq 6 cr up div compar govt or ♯)
1:30-3:00 TTh, ForH 346, Holt
161 Probs of Democracy (3 cr; prereq B or 9 cr soc sci or ♯)
IV MWF, ForH 120, Sibley
165 Development of Political Thought: Middle Ages (3 cr; prereq B or 9 cr soc sci or ♯)
I MWF, ForH 15, Sibley
168 Political Behavior (3 cr; prereq 167)
1:30-3:00 TTh, ForH 185, Hoffmann
181 Intl Law: Pacific Relations (3 cr, †180-181; prereq 180)
8:30-10:00 TTh, ForH 180, McLaughlin
185 Intl Relations, Organization II (3 cr)
I MWF, ForH 180, Levi, Rogers
203 Seminar: Constitutional Law (3 cr; prereq 202)
VI-VII T, ForH 175, Chase
205 Seminar: Administrative Law (3 cr; prereq 18 cr or ♯)
VI-VII W, ForH 175, Chase
211 Seminar: Public Admin (3 cr, †210-211-212; prereq 210)
3:30-5:00 TTh, Lib 13
214 Seminar: Political Parties (3 cr; prereq 12 cr or ♯)
1:30-3:30 Th, ForH 75, Christensen
217 Seminar: Comparative European Govt (3 cr; prereq 216)
VIII-IX W, ForH 75, Turner
226 Readings: Classics of Politics (3 cr; prereq 225)
VIII-IX T, ForH 346, Lippincott
228 Seminar: Political Theory (3 cr; prereq 12 cr or ♯)
VI-VII M, MH 214, Sibley
239 Seminar: History, System of Intl Law (3 cr; prereq 238)
VI-VII F, ForH 75, McLaughlin
243 Topics: Colonization (3 cr; prereq 242)
3:00-5:00 W, ForH 346, Mills
246 Seminar: East Asian Govt, Intl Relations (3 cr; prereq 245)
VI-VII M, ForH 467, Turner

PSYCHOLOGY

Personal Orientation (PO)

1 **How to Study** (2 cr but cr added to SLA grad req)
—1, I MWF, JohH 307, Wark
—2, II MWF, JohH 307, Wark
—3, V MWF, JohH 307, Carlson
—4, VII MWF, JohH 307, Carlson
11 **Choosing a Vocation** (2 cr but cr added to SLA grad req)
I MWF, CW 206, Hewer

Psychology (Psy)

1 **Gen Psychology** (3 cr, †1-2; prereq soph or 3rd qtr fr with B avg)
VII MWF, ScH 108, Heron
2 **Gen Psychology** (3 cr, †1-2; prereq 1)
—1, III MWF, ScH 108, Wright
—2, V MWF, ScH 108, LaBerge
—3, V MWF, NH 45, Sperling
—4, VI MWF, ScH 108, Jenkins
4 **Lab Psychology** (2 cr, †4-5; prereq 2 or ¶1-2)
Lect I T, Bo B6, Russell, others
—1, Lab II-III T, Psy 211, Russell, others
—2, Lab V-VI T, Psy 211
—3, Lab VII-VIII T, Psy 211
—4, Lab I-II Th, Psy 211

—5, Lab III-IV F, Psy 211
—6, Lab IX-X F, Psy 211

5 **Lab Psychology** (2 cr, †4-5; prereq 4)
—1, Lect V T, Bo B6, Russell, others
—2, Lect VII T, Bo B6
—1, Lab VII-VIII M, Psy 211
—2, Lab IX-X T, Psy 211
—3, Lab I-II W, Psy 211
—4, Lab III-IV W, Psy 211
—5, Lab V-VI W, Psy 211
—6, Lab VII-VIII W, Psy 211
—7, Lab IX-X W, Psy 211
—8, Lab III-IV Th, Psy 211
—9, Lab V-VI Th, Psy 211
—10, Lab VII-VIII Th, Psy 211
—11, Lab IX-X Th, Psy 211
—12, Lab I-II F, Psy 211
—13, Lab V-VI F, Psy 211

5H **Honors Course: Lab Psychology** (2 cr, †4H-5H; prereq 4, △)
—1, Lect V T, Bo B6, Russell, others
—2, Lect VII T, Bo B6
Lab V-VI M, Psy 211, Russell, others

70 Psychological Measurement (3 cr; prereq 5)
VI MWF, FraH B25, Sperling

102 Experimental Psychology (3 cr, †101-102; prereq 101)
VII MWF, Psy 115, LaBerge

118 Verbal Behavior (3 cr; prereq 2, course above 50)
12:30-1:45 TTh, C 225, MacCorquodale

126 Individual Differences (3 cr; prereq 125)
II MWF, P 2, Jenkins

129 Learning (3 cr; prereq 128)
IV MWF, Bu 120, Heron

130 **Vocational, Occupational Psychology** (3 cr; prereq 5 or 5 cr in stat)
Lect III TTh, Bu 120, Lofquist
—1, Lab III-IV M, Psy 211
—2, Lab VII-VIII F, Psy 211

133 Motivation (3 cr, †132-133; prereq 132)
VI MWF, Psy 115, Russell

136 Occupational Counseling (2 cr; prereq sr, 9 cr or ‡)
VIII-IX M, Psy 115, Lofquist

140 Social Psychology (3 cr; prereq 5, 9 cr soc sci)
10:50-12:10 TTh, Arch 50, Kelley

144 Abnormal Psychology (3 cr, †144-145; prereq 9 cr or 6 cr, Zool 3 or 12 cr soc sci)
10:50-12:05 TTh, Bo B6, Lindzey

145 Abnormal Psychology (3 cr, †144-145; prereq 144)
9:30-10:45 TTh, NH 211, Rosen

156 Psychology of Advertising (3 cr; prereq 2, prin of econ)
VII MWF, Arch 25, Longstaff

160 Personnel Work (3 cr; prereq 5 or 3 cr in stat, prin of econ or ‡)
VI MWF, Arch 25, Longstaff

167 Measurement of Opinions, Attitudes (3 cr; prereq sr, 70)
VII MWF, Bu 123, Dunnette

172 Clinical Psychology I: Assessment (3 cr; prereq 171)
VI MWF, CW 222, Schofield

190 Project (ar cr; prereq sr, ‡)

201 **Systematic Psychology** (3 cr; prereq 200)
VIII-IX Th, Psy 115, Lindzey, Schachter

208 Group Dynamics (2 cr; prereq 207) Schachter

211 Research Probs (ar cr)

219 Psychology of Personality (3 cr; prereq abnor psy, undergrad psy maj or ‡)
IV MWF, Psy 115, Rosen

222 **Seminar: Personality Research** (3 cr; prereq ‡) Wirt

225 **Seminar: Adv Clinical Child Psychology** (1 cr; prereq CD 248, ‡) Hafner

228 Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 227)
IX-X alt F, Psy 109, Lofquist

231 Field Work: Psychometric, Applied Psychology (ar cr; prereq written cons)

236 Clinical Practice in Counseling (1-3 cr; prereq cons adv, ‡) Berdie, Snoxell

241 Seminar: Student Personnel Work (1 cr; prereq ‡), Williamson

244 Research Probs: Experimental Psychodynamics (3 cr; prereq 243) Russell

251 Adv Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 250)
IX-X alt F, Psy 109, Lofquist

261 Seminar: Industrial Psychology (3 cr; prereq 260) Dunnette

266 Seminar: Adv Clinical Psychology (1 cr; prereq 265) Hathaway

270 Adv Psychological Measurement (3 cr)
VI MWF, FraH B25, Sperling

272 Clinical Psychology II: Treatment (3 cr, †271-272-273; prereq 271)
4:00-5:50 Th, Mayo C-608, Williams

276 Seminar: Student Personnel Work (1 cr; prereq 275) Volsky

285 Seminar: Psychology of Language (3 cr; prereq 284) Jenkins

291 Projective Techniques (3 cr; prereq 290)
VIII-IX T, Psy 115, Rosen

296 Seminar: Individual Differences, Applied Psychology (1 cr; prereq written ‡)
VIII-IX alt W, Psy 109, Dunnette

299 Tabulating Equipment Lab (1 cr; prereq PubH 111) Swanson

ROMANCE LANGUAGES

French (Fren)

1C **Bgn French: Standard** (5 cr, §1A or 1B or HS Fren)
—1, I MTWThF, FolH 201
—2, II MTWThF, Arch 145
—3, III MTWThF, FolH 201
—4, IV MTWThF, FolH 3
—5, V MTWThF, FolH 202

2B Bgn French: Language, Culture (5 cr, §2A or 2C; prereq 1B)
—1, I MTWThF, FolH 204, Burks, Schaefer
—2, I MWF, FolH 204, Burks, I TTh, FolH 205, Schubert
—3, II MTWThF, FolH 226, Lampert
—4, III MTWThF, FolH 226, Falk, Schaefer
—5, III MWF, FolH 226, Falk, III TTh, FolH 8, Schubert
—6, IV MTWThF, FolH 105, Bieter
—7, V MTWThF, FolH 11, Christianson

2C Bgn French: Standard (5 cr, §2A or 2B; prereq 1C)
—1, I MTWThF, FolH 226, Kalb
—2, II MTWThF, FolH 2, Brackney
—3, II MTWThF, JohH 126, Bieter
—4, IV MTWThF, FolH 305, Blodgett
—5, V MTWThF, FolH 226, Gale
—6, V MTWThF, FolH 8, Bjerkness

3C Bgn French: Standard (5 cr, §3A or 3B; prereq 2C)
—1, V MTWThF, FolH 107, Green
—2, V MTWThF, ForH 170, Blodgett

4 Interm French (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Fren)
—1, IV MTWThF, FolH 226, Burks, Poisson
—2, IV MWF, FolH 226, Burks, IV TTh, FolH 205, Lynch

20 Literary Texts (3 cr; prereq 4)
III MWF, FolH 103, Burks

51 Reading French: Bgn Course for Juniors, Seniors (3 cr; prereq 50)
V MWF, FolH 201, Poisson

54 Conversation, Pronunciation (3 cr; prereq 4)
—1, II MTThF, FolH 305, Saada
—2, III MTThF, FolH 302, Saada
—3, IV MTThF, FolH 4, Sullivan
—4, V MTThF, FolH 304, Sullivan

61 Civilization, Culture (4 cr; prereq 60)
II MTWThF, FolH 202, Malaquais

66 Survey of Literature (3 cr; prereq 4)
VI MWF, FolH 4, Brackney

71 17th Century Literature (2 cr, §65; prereq 20)
IV TTh, FolH 302, Burks

81 18th Century Literature (2 cr, §66; prereq 20)
III TTh, FolH 103, Vartanian

91 19th Century Literature (2 cr, §67; prereq 20)
IV MF, FolH 10, Falk

104 Syntax, Composition (2 cr; prereq 103)
III TTh, FolH 205, Sullivan

131 19th Century Poetry; Parnassian Poetry, Baudelaire (2 cr; prereq sr with ‡)
VII MF, FolH 202, Malaquais

140 18th Century Novel (3 cr; prereq sr with ‡)
VI MWF, FolH 203, Vartanian

157 20th Century Novel: Gide (2 cr; prereq sr with ‡)
VII-VIII W, FolH 202, Malaquais

172 History of Language (3 cr; prereq 171)
IV T, IV-V Th, FolH 303, Brackney

208 Old Provencal (2 cr; prereq 207) Brackney

260 Readings (ar cr; prereq 259)

Italian (Ital)

2 Bgn Italian (5 cr; prereq 1)
I MTWThF, FolH 302, Paolini

Portuguese (Port)

2 Bgn Portuguese (3 cr; prereq 1)
VI TTh, FolH 4, VI F, FolH 409, Floripe

Spanish (Span)

1C Bgn Spanish: Standard (5 cr, §1A or 1B)
—1, I MTWThF, FolH 206, Dudley
—2, II MTWThF, FolH 5, Barta
—3, III MTWThF, FolH 11, Paolini
—4, V MTWThF, JohH 205, Franklin

2A Bgn Spanish: Conversational (5 cr, §2B or 2C; prereq 1A)
Dem II MTWThF, FolH 201, Cuneo
—1, Lab I MTWThF, FolH 108, Shamblin
—2, Lab I MTWThF, FolH 203, Garofalo

2C Bgn Spanish: Standard (5 cr, §2A or 2B; prereq 1C)
—1, I MTWThF, FolH 202, Barta
—2, I MTWThF, FolH 213, Franklin
—3, II MTWThF, FolH 213, Jones
—4, V MTWThF, FolH 213, Dudley
—5, III MTWThF, FolH 203, Pattison
—6, IV MTWThF, FolH 203, Estelle

3C Bgn Spanish: Standard (5 cr, §3A or 3B; prereq 2C)
—1, III MTWThF, FolH 213, Reyes
—2, III MTWThF, FolH 10

20 Interm Grammar, Composition (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
III MTWThF, FolH 305, Narvaez

21 Spanish, Spanish-American Literature, Culture (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
II MTWThF, FolH 10, Rundorff

54 Composition, Conversation (3 cr; prereq 53)
—1, IV MWThF, FolH 2, Narvaez
—2, IV MWThF, FolH 8, Shamblin
—3, IV MTThF, FolH 202

61 Adv Composition, Conversation (3 cr; prereq 60)
I MWF, FolH 10, Narvaez

66 Spanish Literature: The Renaissance (3 cr, §68, 69; prereq soph, 21)
VII MWF, FolH 203, Pattison

68 Spanish Literature: Middle Ages through 18th Century (5 cr, §65, 66, 67; prereq soph, 21)
VI MTWThF, FolH 202, Rundorff

71 Latin-American Civilization, Culture (3 cr; prereq 20 or 21 or ♯)
III MWF, FolH 202, Cuneo
75 Literature of Spanish America (3 cr; prereq 74)
II MWF, FolH 203, Floripe
81 Spanish American Novel, Social Probs (2 cr; prereq jr or ♯, 6 qtrs)
IV TTh, FolH 206, Cuneo
104 Syntax, Composition (1 cr; prereq 103)
V T, FolH 203, Narvaez
111 19th Century Literature (3 cr; prereq 110)
IV MWF, FolH 201, Pattison
147 Spanish-American Novel, Short Story (3 cr; prereq 65, 66, 67 or 68, 69 or 76)
VII MWF, FolH 201, Floripe
251 Seminar (2 cr; prereq 250) Pattison

SCANDINAVIAN (Scan)

2 Bgn Norwegian (5 cr; prereq 1)
II MTWThF, FolH 11
5 Adv Norwegian (3 cr; prereq 4)
III TTh and ar, FolH 12
8 Bgn Swedish (5 cr; prereq 7)
II MTWThF, FolH 12
11 Adv Swedish (3 cr; prereq 10)
III MWF, FolH 12
161 Late 19th Century Novel (3 cr; prereq 6 or 12 or 8 cr lit)
V MWF, FolH 12
172 Strindberg, Drama in Revolt, Transition (3 cr; prereq 6 or 12 or 8 cr lit)
IV MWF, FolH 12
192 Readings (3 cr; prereq 6 or 12)

SLAVIC AND ORIENTAL LANGUAGES

Arabic (Arab)

2 Spoken Arabic (5 cr; prereq 1)
I MTWThF, VII MTWThF, FolH 305½, Saada
51 Dialect Analysis (3 cr; prereq 3 or ♯)
I MWF, VII MTWThF, FolH 305½, Saada
62 Arabic Grammar, Reading (3 cr; prereq 61)
V MTWThF, FolH 305½ Rundorff

Chinese (Chin)

2 Bgn Chinese (5 cr; prereq 1)
VI MTWThF, FolH 305½, Mather
52 Interm Chinese (3 cr; prereq 51)
IV M, Lib 329, Wang
57 Composition (2 cr; prereq 56)
IV Th, Lib 329, Wang
102 Adv Chinese (3 cr; prereq 101)
I MWF, FolH 322, Wang
111 Literature in Translation (3 cr; prereq 110)
VII MWF, FolH 302, Mather
152 Readings (1-3 cr, §old 162; prereq 151) Mather
192H Honors Course (1-3 cr; prereq 191) Mather

Japanese (Jap)

2 Bgn Japanese (5 cr; prereq 1)
III MTWThF, FolH 304, Copeland
52 Interm Japanese (3 cr; prereq 51)
II MWF, FolH 304, Copeland
102 Adv Japanese (3 cr; prereq 101)
II TTh, FolH 302, Copeland
111 Literature in Translation (3 cr; prereq 110)
IV MWF, FolH 302, Copeland
152 Readings (1-3 cr, §old 162; prereq 151)
IV MWF, FolH 305½, Copeland
192H Honors Course (1-3 cr; prereq 191)

Oriental (Ortl)

76 Asian Civilization: China (3 cr; prereq soph with ♯)
I MWF, JohH 105, Mather

Russian (Russ)

2 **Bgn Russian** (5 cr; prereq 1)
—1, I MTWThF, FolH 8, Alexeev
—2, II MTWThF, Psy 115, Donchenko
—3, III MTWThF, FolH 303, Nice
—4, VI MTWThF, FolH 8, Niemi
—5, VII MTWThF, FolH 114, Donchenko
5 Interm Russian (3 cr, §old 52; prereq 4)
II MWF, FolH 8, Nice
57 Conversation (3 cr; prereq 56)
I MWF, FolH 305, Alexeev
62 Composition (2 cr; prereq 61)
I TTh, FolH 305, Alexeev
72 Readings in Literature (3 cr; prereq 71)
III MWF, FolH 108, Niemi
76 Civilization, Culture (3 cr; prereq 75)
VI MWF, FolH 305, Nice
111 Literature in Translation (3 cr, §old 102; prereq 110)
V MWF, FolH 305, Niemi
152 Readings (1-3 cr, §old 162) Niemi

SOCIAL WORK (SW)

202 Topics (ar cr)
207 Readings (ar cr)
211 Field Instruction I (ar cr; prereq 210, ¶265 or ¶275) Yesner, others
216 Field Instruction II (ar cr; prereq 215)
221 Seminar for Clinical Field Instructors (ar cr; prereq superv students in field work)
I-II W, ForH 467, Boehm, Pernell
226 Social Policy, Programs II (2 cr; prereq 225)
IV-V T, ForH 120, Newhouse

228 Social Policy, Programs IV (2 cr; prereq 227)
IV-V Th, ForH 120, Newhouse

249 Concepts of Human Growth, Behavior in Practice II (3 cr; prereq 248, ¶211 or ‡)
VIII-IX T, VIII Th, ForH 115, Saloshin, others

252 Concepts of Human Growth, Behavior in Practice V (2 cr; prereq ¶216, 250)
4:00-6:00 Th, ForH 150, Wiener

263 Admin in Social Group Work (2 cr; prereq 260, 278)
IV-V T, ForH 467, Pernell

266 **Social Casework II** (2 cr; prereq ¶211, 265)
—1, I TTh, ForH 175, Whitmore
—2, III TTh, ForH 175, Whitmore

269 **Social Casework V** (2 cr; prereq ¶216, 267)
—1, II-III T, ForH 75, Scott
—2, II-III T, ForH 447, Boehm

274 Seminar: Community Organization (ar cr; prereq 271)
II-III S, ForH 467, Francel

276 Social Group Work II (2 cr; prereq ¶211, 275)
IV-V Th, ForH 467, Pernell

279 Social Group Work V (2 cr; prereq 278 or ‡)
I-II Th, ForH 75, Guzie

281A Use of Program in Groups I (2 cr; prereq 275)
III TTh, ForH 346, Guzie

285 Special Studies (ar cr)
VI-VII T, ForH 50, Francel

SOCIOLOGY (Soc)

1 **Introduction: Man in Modern Society** (3 cr)
—1, I MWF, ScH 108, Sirjamaki
—2, V MWF, Bo B6, Korenbaum

1A Man in Modern Society (3 cr; prereq regis AFHE)
II MWF, McNH 227 **(StP Campus)**, Taylor

2 **American Community** (3 cr; prereq 1 or 1A or 3)
—1, II MWF, Ph 150, Martindale
—2, VII MWF, ForH 55, Korenbaum

2H **Honors Course: American Community** (3 cr; prereq 1 or 1A or 3, △)
V MWF, ForH 115, Forster

3 **Social Probs** (3 cr)
II MWF, ScH 108, Johnson

14 Rural Sociology (3 cr)
VI MWF, ForH 150, Taylor

14A Rural Sociology for Agriculture Students (3 cr)
V MWF, Hr 102 **(StP Campus)**, Klietsch

45 **Social Statistics** (5 cr, §BA 5)
Lect VII MWF, ForH 85, Francis
—1, Lab III-IV TTh, ForH 85, Francis, others
—2, Lab VI-VII TTh, ForH 85, Francis, others

50 Theory, Practice of Social Work (5 cr; prereq 3)
IV MTWThF, ForH 180, Cohn

53 **Criminology** (3 cr; prereq 1 or 1A or ‡)
II MWF, ForH 155, Vold

98 Tutorial, Honors Work (3 cr; prereq cons maj adv in soc)

112 World Population Probs (3 cr; prereq 1 or ‡)
12:30-1:45 TTh, ForH 155, Francis

119 Modern Agencies for Control of Juvenile Delinquency (3 cr; prereq 53, 118)
10:30-11:45 TTh, ForH 244, Ellingston

120 Social Psychology (3 cr; prereq 1 or ‡)
III MWF, Arch 35, Gross

122 Conflict (3 cr; prereq 1 or ‡)
IV MWF, ForH 130, Vold

123 Minority Group Relations (3 cr; prereq 1 or ‡)
III MWF, ForH 55, Forster

126 Family Development (4 cr; prereq 1, CD 80 or ‡)
VI-VII TTh, ForH 130, Hill

141 The Family (3 cr; prereq 1 or ‡)
IV MWF, ForH 155, Johnson

142 Religion as a Social Institution (3 cr; prereq 1 or ‡)
VII MWF, ForH 185, Johnson

162 Rural Social Institutions (3 cr; prereq 1 or ‡)
VI MWF, C 225, Taves

171 Social Life, Cultural Change (3 cr; prereq 1 or ‡)
IV MWF, Z 313, Martindale

180 Methods of Social Research (3 cr; prereq 45)
II TTh, VII T, ForH 150, Monachesi (for SW students only)

182 Statistical Methods (3 cr; prereq 45)
V MWF, ForH 130, Francis

201 Seminar: Research Probs in Crime, Social Conflict (2 cr)
VI-VII Th, ForH 467, Vold

204 Seminar: Research Probs in Juvenile Delinquency (2 cr) Monachesi

227 Seminar: Contemporary Research on Marriage, Family I (3 cr; prereq ‡)
II-III TTh, ForH 467, Hill

239 Seminar: Principles (3 cr, †238-239; prereq 238)
VI-VII M, Arch 140, Sirjamaki

245 Seminar: Research in Urban Sociology (2 cr)
VIII-IX M, ForH 467, Sirjamaki

247 Seminar: Research in Large Scale Organization (2 cr)
VIII-IX W, ForH 170, Gross

252 Probs: Comparative Sociology (2 cr; prereq 251)
VIII-IX Th, ForH 244, Forster

271 Seminar: Social Theory (2 cr)
VI-VII W, ForH 75, Martindale

285 Seminar: Statistical Theory in Relation to Social Theory, Practice (2 cr)
VI-VII F, ForH 467, Monachesi
298 Seminar (ar cr)

SPEECH AND THEATER ARTS (Spch)

5 **Fundamentals** (5 cr, §old 1-2; prereq soph or fr with △)
—1, I MTWThF, FolH 306, Smith, Fletcher, others
—2, II MTWThF, Arch 45
—3, III MTWThF, FolH 409
—4, IV MTWThF, FolH 307
—5, V MTWThF, FolH 306
—6, VI MTWThF, FolH 307
—7, VII MTWThF, FolH 307
6 **Fundamentals** (3 cr, §old 3; prereq 5)
—1, I MWF, WeH 306, Smith, Fletcher, others
—2, II MWF, Arch 140
—3, IV MWF, AE 211
9 Freshman Discussion, Debate (1 cr; prereq fr with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro
31 **Theater Arts** (4 cr)
II MWF, ShH 115, Ballet
32 **Bgn Acting: Creative Approach** (3 cr; prereq soph, 31)
—1, II MWF, ScH 19, Backlin
—2, III MWF, ScH 19, Romley
—3, VI MWF, ScH 19, Adey
33 **Bgn Acting: Technique** (3 cr; prereq 32)
II MWF, NH 304, Moulton
34 **Stagecraft: Construction, Painting** (3 cr; prereq soph, 31)
III-IV MF, III W, ShH 110, Adey
51 **Adv Public Speaking** (3 cr; prereq 5)
—1, II MWF, FolH 306, Scott
—2, IV MWF, FolH 306, Jensen
56 **Speech Writing, Platform Speaking** (3 cr; prereq 5 or ‡)
II MWF, FolH 409, Smith
65 **Radio, Television Speech** (3 cr; prereq 5)
II MWF, MurH 302, Bormann
66 **Radio, Television Drama** (3 cr; prereq 32, 65)
III-IV T, IV Th, MurH 302, Snook
67 **Phonetics** (3 cr; prereq 5)
II MWF, FolH 307, Fletcher
69 **Radio, Television Production** (3 cr; prereq 65)
II T, II-III Th, MurH 302, Bormann
75 **Play Production in Secondary School** (3 cr; prereq 5, 32, 74)
III MWF, NH 304, Lenhoff
78 **Adv Acting** (3 cr; prereq 32)
IV MWF, NH 304, Graham
81 **Interpretative Reading** (3 cr; prereq 5)
—1, II MWF, WeH 306, Thompson
—2, III-IV T, III Th, WeH 306, Fredricks
—3, VI MWF, WeH 306, Thompson
82 **Interpretative Reading** (3 cr; prereq 81)
IV MWF, WeH 306, Fredricks
83 **Interpretative Reading** (3 cr; prereq 81)
III MWF, WeH 306, Thompson
91 **Scene Design** (3 cr; prereq 5, 31, 34)
III TThS, IV TS, ShH 110, Josal
97 Intercollegiate Oratory, Debate (1-3 cr; prereq soph with C avg)
V T, V-VI Th, FolH 409, Scott, Shapiro
102 **Argumentation, Persuasion** (3 cr; prereq 5, Psy 2, 10 cr soc sci)
—1, III MWF, FolH 306, Scott
—2, VI-VII T, VI Th, FolH 306, Howell
106 **Discussion** (3 cr; prereq 5)
VII MWF, FolH 306, Howell
112 **Stage Direction** (3 cr; prereq sr, 5, 90 or 91 or 92, △)
III MWF, ShH 115, Whiting
131 **Creative Dramatics** (3 cr; prereq 5, 31 or elem educ maj or ‡...32 rec)
VII MWF, ShH 115, Graham
136 **Production of Television Drama** (3 cr; prereq 65, 66, 78, 111, 112, ‡) Ballet
141 **Anatomy, Physiology of Voice Mechanism** (3 cr; prereq 67 or ‡, Psy 5)
IV MWF, FolH 409, Fletcher
153 Audiometry, Hearing Aids (3 cr; prereq 152 or ‡)
III MWF, Mayo A675, Lassman
157 Clinical Practice in Audiology (3 cr; prereq 153, 155 or ‡) Lassman
162 **Speech Pathology** (3 cr, †162-163; prereq 61, 67, 161)
VI M, VI-VII T, FolH 409
165 Clinical Methods, Practice in Speech Pathology (3 cr, §EdCI 175; prereq 164) Henrikson, Starr
169 Speech, Language in Human Behavior (3 cr)
VI MWF, Shapiro
172 **History of Theater** (3 cr; prereq sr, 5, 31)
VI T, VI-VII Th, NH 304, Graham
182 Readings (ar cr; prereq 5, 6 addtl cr, ‡)
191 Technical Stage Probs (3 cr; prereq 111, 112, 113) Josal
201 Seminar (1 cr; prereq ‡) Smith
208 Seminar: Persuasion (3 cr; prereq 101, 102, 103, Psy 140) Howell
212 Seminar: Dramatic Theory (3 cr; prereq 171, 172, 173, 9 cr dram lit) Ballet
215 Seminar: Stage Direction (3 cr; prereq 214) Whiting
222 Seminar: Oral Interpretation of Literature (3 cr; prereq 105) Thompson
242 Seminar: Radio, Television Research (2 cr; prereq ‡) Ziebarth
251 Seminar: Listening Comprehension (2 cr; prereq undergrad maj spch, ‡)
VIII-IX W, AgEng 221 (**StP Campus**) Nichols
262 Seminar: Speech Pathology (3 cr; prereq 122, 163 or ‡) Henrikson

268 Seminar: Experimental Phonetics (2 cr; prereq 67, 142) Fletcher
272 Seminar: Hearing (3 cr; prereq 271) Lassman, Watson
276 Seminar: Rhetoric (3 cr; prereq 109 or ‡)
282 Seminar: Organic Disorders (2 cr; prereq 261, 262, 263, ‡) Henrikson
292 Research (ar cr)

STATISTICS (Stat)

181B Topics: Theory of Sample Surveys (3 cr, §Econ 181B; prereq Econ 121C or ¶ or ‡)
2:00-3:30 TTh, VH 113, Neter
221B Statistical Theory II (3 cr; prereq 221A, ¶Math 131A or ITM 142 or ‡)
8:30-10:00 TTh, JohH 307, Olkin
231B Linear Models (3 cr; prereq ¶221B)
10:30-12:00 MW, JohH 126, Sobel
301 Seminar, Workshop (1-3 cr; prereq ‡)
11:30-1:30 F, JohH 126, Olkin

ZOOLOGY (Zool)

52 **Entomology** (5 cr, §Ent 52; prereq 3 or Biol 3)
Lect VII MWF, Z 313, Price
—1, Lab V-VI MWF, Z 402
—2, Lab VIII-IX MWF, Z 402
56 **Comparative Anatomy** (5 cr; prereq soph, 3 or Biol 3)
Lect III TThS, Z 313, Eddy
—1, Lab VI-VIII TTh, Z S3
—2, Lab III-IV MWF, Z S3
—3, Lab VI-VIII MW, Z S3
57 **Ornithology** (3 cr, †57-58; prereq 3 or Biol 3)
Lect VII TTh, MNH 307, Warner
Lab VIII-IX TTh, MNH 307
59 **Gen, Comparative Embryology** (5 cr; prereq 3 or Biol 3)
Lect I TTh, Z 313, Spratt
Lab VI-VIII TTh, Z 201
Conf II or III S, Z 313, 323
81 **Invertebrate Zoology** (3 cr; prereq 3 or Biol 3)
Lect II TTh, Z 211, Stephens
Lab I-III W, Z 202
Conf I F, Z 202
101 Zoological Techniques (ar cr; prereq grad)
113 Topics: Adv Gen Physiology (3 cr; prereq 15 cr incl 3 or Biol 3, ‡)
Lect II TTh, Z 323, lab ar, Brokaw
118 Animal Ecology (3 cr, §Ent 118; prereq 15 cr incl 3 or Biol 3, ‡)
VI T, VI-VII Th, CofH 307, **(StP Campus)** Hodson
126 **Adv Entomology** (4 cr, §Ent 126; prereq 125)
Lect I MWF, Z 402, Brooks
Lab II-V M, Z 402
138 Seminar: Biophysics (2 cr; prereq grad)
3:00-5:00 T, Z 323, Schmitt
145 **Parasitic Protozoa** (3 cr, §Ent 145; prereq 15 cr incl 3 or Biol 3, ‡)
Lect VI TTh, Z 211, Wallace
Lab VII-VIII TTh, Z 208
156 Biophysics (3 cr; prereq 28 cr betw phys, biol, ‡...phys chem, physiol rec) Schmitt, Benolken
160 **Cytology** (3 cr; prereq 15 cr incl 3 or Biol 3, ‡)
Lect II MF, Z 211, Miller
Lab III-IV MF, Z 204
171 Genetics of Speciation (3 cr; prereq 15 cr incl 83 or ‡)
VI MWF, Z 211, Merrell
198 Problems (ar cr; prereq 197)
202 Research: Entomology (ar cr; prereq 201) Cook
212 Research: Ecology (ar cr; prereq 211) Eddy, Underhill, Hodson
218 Research: Physiology (ar cr; prereq 217) Brokaw, Richards, Stephens
222 Research: Biophysics (ar cr; prereq 221) Schmitt
230 Research: Histology (ar cr; prereq 229) Olson
234 Research: Embryology (ar cr; prereq 233) Spratt
238 Research: Cytology (ar cr; prereq 237) Miller
243 **Insect Physiology** (4 cr, §Ent 243; prereq 242)
Lect VI WF, CofH 8 **(StP Campus)** Richards
Lab VII-IX WF, CofH 8
245 Research: Protozoology (ar cr; prereq 244) Kerr
252 Research: Genetics (ar cr; prereq 251) Reed, Merrell
259 **Experimental Ecology Lab** (2 cr; prereq 118 or ¶) Hodson
262 Research: Parasitology (ar cr; prereq 261) Wallace
292 Seminar (no cr; prereq 291)
297 Seminar: Research Fields (ar cr; prereq 296)

UNATTACHED COURSES

Biology (Biol)

2 **Gen Biol** (2 cr, †1A-2A-3A, §Bot 1 or 4 or Zool 1, §old Zool 14 or NSci 7)
—1, Lect II TTh, Bo B6
—2, Lect III TTh, MNH Aud
—3, Lect IV TTh, NH 45
—4, Lect VI TTh, ScH 108
—5, Lect IV WF, Bo B6
—1, Lab I-II MF, Z 101
—2, Lab III-IV MF, Z 101
—3, Lab V-VI MF, Z 101
—4, Lab VII-VIII MF, Z 101
—5, Lab I-II TTh, Z 101
—6, Lab III-IV TTh, Z 101

—7, Lab V-VI TTh, Z 101
—8, Lab VII-VIII TTh, Z 101

2A Gen Biol (2 cr, †1A-2A-3A, §Bot 2 or 5 or Zool 2, §old Zool 15 or NSci 8; prereq 1A)
—1, Lect II TTh, Bo B6
—2, Lect III TTh, MNH Aud
—3, Lect IV TTh, NH 45
—4, Lect VI TTh, ScH 108
—5, Lect IV WF, Bo B6
—1, Dem I W, Z 101
—2, Dem II W, Z 101
—3, Dem III W, Z 101
—4, Dem IV W, Z 101
—5, Dem V W, Z 101
—6, Dem VI W, Z 101
—7, Dem VII W, Z 101
—8, Dem VIII W, Z 101

Linguistics and Comparative Philology (Ling)

152H Honors Course (1-3 cr; prereq 151H) (for maj only)

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING

Aeronautical Engineering (Aero)

5 Aero-Space Survey, Laboratory (1 cr; prereq 4)
VIII M, AE 209

20 Flying: Theory, Practice (2 cr)
V Th, ME 214

21 Flying: Theory, Practice (2 cr; prereq 20)
VI Th, ME 214

22 Flying: Theory, Practice (2 cr; prereq 21)
VI Th, ME 214

46 Link Instrument Flying (no cr; prereq ♯)

100A Theoretical Aerodynamics I (3 cr; prereq ITM 26A, Hydr 101)
III MWF, AE 209

106A Applied Aerodynamics I (3 cr; prereq 102A)
III MWF, AE 215

110 Compressible Viscous Flow (3 cr; prereq 102A)
II MWF, AE 209

116A Structural System Analysis II (3 cr; prereq 115A)
IV MWF, AE 309

131A Aero-Space System Design (4 cr; prereq 130A)
—1, VI-VIII MW, AE 305
—2, VI-VIII T, III-V Th, AE 305

159 Aerodynamic Retardation (3 cr; prereq 102 or 107 or ♯)
3:30-5:00 MW, AE 227

184 Interm Gas Dynamics (3 cr; prereq 102A)
IV MWF, AE 9

194 Probs: Aero-Space Engineering (2-6 cr; prereq 193)

202 Aerodynamics of Compressible Fluid (3 cr; prereq 201 or ♯)
I T, I-II Th, AE 211

206 Boundary Layer Theory (3 cr; prereq 205)

220 Astronautics (3 cr; prereq 201, ITM 152, 153 or ♯)
II-III T, III Th, AE 211

251 Magneto-Fluid Dynamics (3 cr; prereq 203 or Phys 104 or ITM 234 or ♯)
8:00-9:30 MW, AE 327

273 Research (3-6 cr; prereq 272)

Mechanics and Materials (MM)

27 Rigid-Body Mechanics I (3 cr; prereq ITM 25A, Phys 14)
VII MWF, AE 215

28 Rigid-Body Mechanics II (3 cr; prereq 27, ITM 26A)
—1, II MWF, AE 215
—2, IV MWF, AE 215

29 Rigid-Body Mechanics III (3 cr, §Phys 100; prereq 28)
—1, I MWF, AE 215
—2, III MWF, AE 327
—3, III MWF, AE 321
—4, III MWF, AE 319
—5, III MWF, AE 317
—6, III MWF, AE 309
—7, III MWF, AE 211
—8, VI MWF, AE 209

40 Deformable-Body Mechanics I (3 cr; prereq 27)
VI MWF, AE 215

41 Deformable-Body Mechanics II (3 cr; prereq 40)
—1, II MWF, AE 327
—2, II MWF, AE 321
—3, II MWF, AE 319
—4, II MWF, AE 317
—5, II MWF, AE 309
—6, II MWF, AE 211
—7, IV MWF, AE 209

92 **Statics** (4 cr; prereq arch or combined engr-bus students, ITM 24A or 91)
I MTWTh, AE 209

142 **Experimental Mechanics** (2 cr; prereq 40)
—1, Lect V TTh, AE 327
Lab VI-VII M, Ex 130
—2, Lect V TTh, AE 327
Lab VIII-IX M, Ex 130
—3, Lect V TTh, AE 321
Lab I-II T, Ex 130
—4, Lect V TTh, AE 321
Lab VI-VII T, Ex 130
—5, Lect V TTh, AE 319
Lab VIII-IX T, Ex 130
—6, Lect V TTh, AE 319
Lab VI-VII Th, Ex 130
—7, Lect V TTh, AE 309
Lab VI-VII F, Ex 130

150 **Rheology, Strength of Solids** (3 cr; prereq 41, Met 56)
9:30-11:00 TTh, AE 209

165 **Problems** (3 cr; prereq ‡)

181 **Deformable-Body Mechanics III** (3 cr; prereq 41 or 180)
V MWF, AE 15

196 **Probs: Adv Rigid-Body Dynamics** (3 cr; prereq 193 or ITM 162 or EE 150 or Phys 102)
VII MWF, AE 19

211 Theory of Vibrations I (3 cr; prereq 193, ITM 148 or 150A)
VI MWF, AE 327

295 Theory of Elasticity with Applications (3 cr; prereq 180, ¶ITM 173, 174)
V MWF, AE 227

298 Seminar (0-3 cr)
VII-IX Th, AE 215

AGRICULTURAL ENGINEERING (AgEn)

9 **Laboratory: Materials** (1 cr)
VIII-IX T, AgEng 101, Flikke, Larson

62 **Farm Structures** (3 cr; prereq MM 41 or ¶)
Lect VI WF, AgEng 303, Otis, Pomroy
Lab VII-IX F, AgEng 303, Otis, Pomroy

142 **Erosion Control** (3 cr; prereq 82, Hydr 103, Soil 19)
I MWF, AgEng 305, Larson

147 **Design, Mgt of Farm Machinery** (3 cr; prereq 72)
Lect VI TTh, AgEng 105, Strait
Lab VII-IX Th, AgEng 305, Strait

167 **Adv Farm Structures** (3 cr; prereq ME 160, CE 37)
Lect VI TTh, AgEng 303, Otis
Lab VII-IX Th, AgEng 303, Otis

170 **Agricultural Tractors** (3 cr; prereq ME 121, 150)
Lect II TTh, AgEng 105, Strait
Lab VII-IX T, AgEng 37, Strait

171 **Design of Agricultural Machinery** (3 cr; prereq 147, ME 121)
Lect VII M, AgEng 105, Strait
Lab VIII-X M, VII-IX W, AgEng 305, Strait

179 **Agricultural Process Engineering** (3 cr; prereq ME 160)
Lect IV TTh, AgEng 108, Hustrulid
Lab VII-IX F, AgEng 6, Hustrulid

180 **Agricultural Hydrology, Flood Control** (3 cr; prereq 142 or ¶)
VI MWF, AgEng 105, Larson

192F **Probs: Farmstead Equipment, Operations** (2-6 cr; prereq ‡)

192P **Probs: Power, Machinery** (2-6 cr; prereq ‡)

192S **Probs: Soil Moisture** (2-6 cr; prereq ‡)

200 Seminar (1 cr; prereq ‡)

212 Adv Probs, Research (2-6 cr; prereq 191 or 192 or 193)

ARCHITECTURE (Arch)

52 **History** (4 cr; prereq 51)
II MTWF, Arch 130

72 **Building Technology** (4 cr; prereq 71)
III-IV TTh, Arch 130

75 **Building Technology** (4 cr; prereq 74)
III-IV TTh, Arch 145

82 **Architectural Design I** (6 cr, †81-82-83; prereq 81)
VI W, VI-IX MThF, VII-IX W, Arch 210, VI W, Arch 130

91 **Architectural Design II** (6 cr, †91-92-93; prereq 83)
VI-IX MWThF, Arch 220, VI M, Arch 130

92 **Architectural Design II** (6 cr, †91-92-93; prereq 91)
VI-IX MWThF, Arch 220, VI M, Arch 130

93 **Architectural Design II** (6 cr, †91-92-93; prereq 92)
VI-IX MWThF, Arch 220, VI M, Arch 130

102 **Tutorial Work in History** (2 cr; prereq 101)

105 **Planning** (3 cr; prereq 104)

111 **Architectural Design III** (8 cr, †111-112-113; prereq 93, MM 93)
VI-IX MTWThF, Arch 230, 4 hrs ar, VI Th, Arch 130

112 **Architectural Design III** (8 cr, †111-112-113; prereq 111)
VI-IX MTWThF, Arch 230, 4 hrs ar, VI Th, Arch 130

113 **Architectural Design III** (8 cr, †111-112-113; prereq 112)
VI-IX MTWThF, Arch 230, 4 hrs ar, VI Th, Arch 130

121 **Architectural Design IV** (9 cr, †121-122; prereq 113, CE 41)
VI-IX MTWThF, Arch 240, 7 hrs ar, VI F, Arch 130

122 **Architectural Design IV** (9 cr, †121-122; prereq 121)
VI-IX MTWThF, Arch 240, 7 hrs ar, VI F, Arch 130
123 **Thesis** (12 cr; prereq 122)
36 hrs ar, Arch 240
126 **Professional Relations** (3 cr; prereq 4th yr)
III-IV MF, Arch 135
201 Research: History (ar cr; prereq 53)
232 Planning (ar cr; prereq 231)
252 Architectural Design VI (ar cr; prereq 251)

CHEMICAL ENGINEERING (ChEn)

102 **Principles** (5 cr; prereq 101)
Lect II TThS, ChE 240, Ranz
—1, Rec I MWF, ChE 158, Ranz
—2, Rec II MWF, ChE 154, Scriven
—3, Rec II MWF, ChE 158, Wilder
—4, Rec III MWF, ChE 154, Isbin
112 **Laboratory** (2 cr; prereq 102)
Conf II T, E 205, Fredrickson
—1, Lab VI-IX M, ChE 3 fl, Fredrickson
—2, Lab VI-IX W, ChE 3 fl, Wilder
—3, Lab VI-IX Th, ChE 3 fl, Schmitz
—4, Lab VI-IX F, ChE 3 fl, Madden
117 **Process Evaluation, Design** (3 cr; prereq 116)
VII-VIII T, VIII-IX Th, ChE 50, Preckshot
119 **Thermodynamics** (3 cr; prereq PCh 101)
Lect I TTh, ChE 240, Dahler
—1, Rec II MW, ChE 150, Madden
—2, Rec VII WF, ChE 50, Dahler
—3, Rec VII W, II F, ChE 150, Schmitz
—4, Rec VIII MW, ChE 50, Wilder
122 **Biochemical Engineering** (3 cr; prereq 103, Bact 53 or ‡)
I TThS, ChE 150, Tsuchiya
131 **Chemical Reactor Analysis** (3 cr; prereq 120, PCh 109)
I MWF, ChE 240, I T, ChE 40, Aris
153 **Problems** (ar cr)
154 **Problems** (ar cr)
162 **Nuclear Reactor Design** (3 cr; prereq 161)
I MWF, ChE 150, Isbin
172 **Process Control** (3 cr; prereq 171)
Lect IV TTh, ChE 50, Ceaglske
—1, Lab VI-IX W, ChE 257, Ceaglske
—2, Lab VI-IX F, ChE 257, Ceaglske
202 Seminar (1 cr)
VI T, ChE 240, Dahler
209 Physical Rate Processes, Transfer Operations (3 cr; prereq 208)
III TThS, ChE 54, Ranz
212 Molecular Theory of Transport Processes (3 cr; prereq 211) Dahler, Prager
215 Adv Mathematics for Chemical Engineers, Chemists (3 cr; prereq 214)
VIII-IX TTh, ChE 162, Amundson
220 Adv Thermodynamics (3 cr; prereq 219)
V MWF, MinMet 104, Preckshot
226 Fluid Mechanics, Related Topics (3 cr; prereq 225)
I-II TTh, ChE 158, Aris
264 Survey (1 cr; prereq ‡)
302 Research (ar cr; prereq 301)
303 Research (ar cr; prereq 302)

CHEMISTRY

Analytical Chemistry (AnCh)

97 **Senior Thesis** (ar cr; prereq 4th yr)
101 **Theory of Volumetric Analysis** (3 cr; prereq 100)
VI MWF, C 325, Meehan
105 **Polarizing Microscope** (3 cr; prereq PCh 101 or 101H)
Lect VI F, C 315, Sandell, lab ar
107 **Technical Analysis** (2 or 3 cr; prereq 106) Sandell
112 **Physico-Chemical Methods of Analysis Lab** (2 cr; prereq 111)
—1, VI-IX MW, Bruckenstein
—2, VI-IX TTh
132 **Electrochemical Methods of Analysis** (2 cr; prereq PCh 103 or 103H)
II TTh, C 215, Bruckenstein
134 **Electrochemical Methods of Analysis Lab** (1-2 cr; prereq 132 or ¶) Bruckenstein
140 **Water Analysis** (2 cr; prereq 102 or 102A) Sandell
142 **Seminar: Modern Probs** (1 cr; prereq 141)
IV T, C 325
202 Topics (ar cr; prereq 102 or 102A)
236 Seminar: Research (ar cr)
VIII-IX Th, C 315
262 Survey (1 cr)
302 Research: Quantitative Analysis (ar cr)

Inorganic Chemisty (InCh)

4 **Gen Inorganic Chemistry** (5 cr, †4-5; prereq HS alg)
Lect III MWThF, C 100, Hugus
—1, Lab VI-IX M
—2, Lab VI-IX T
Lect V MWThF, C 100, Reynolds
—3, Lab VI-IX W
—4, Lab VI-IX Th
—5, Lab VI-IX F
5 **Gen Inorganic Chemistry** (5 cr, †4-5; prereq 4)
—1, Lect VI MWThF, C 100, Conroy
Lab VI-IX T
—2, Lect VII MTWF, C 100, Brasted
Lab VI-IX Th
—3, Lect VII TWF, C 325, Bent
Quiz VII Th, C 100
Lab VI-IX M
—4, Lect VIII TWThF, C 100, Bent
Lab VI-IX M

15 **Inorganic Chemistry** (4 cr, †14-15; prereq 14)
—1, Lect I MTWThF, C 100, Tobias
Lab VII-IX Th
—2, Lect I MTWThF, C 100, Tobias
Lab VII-IX F
—3, Lect IV MTWThF, ChE 240, Johnson
Lab VII-IX T
—4, Lect IV MTWThF, ChE 240, Johnson
Lab VII-IX W

25 **Chemical Principles** (5 cr, †24-25; prereq 24)
Lect II MWF, C 100, O'Connor
Lab I-III TTh

25H **Honors Course: Chemical Principles** (5 cr, †24-25; prereq 24)
Lect II MWF, C 225, Bent
Lab I-III TTh

97 **Senior Thesis** (ar cr; prereq 4th yr)

104 **The More Representative Elements** (3 cr; prereq 103 or ♯)
III MWF, C 225, Brasted

135 **Seminar: Modern Probs** (1 cr; prereq PCh 103 or 103H)
IV Th, C 325

204 Adv Inorganic Chemistry (4 cr; prereq 203 or ♯)
III MWF, C 215, Conroy

212 Topics (ar cr; prereq △)

260 General Survey (1 cr)

302 Research (ar cr)

Organic Chemistry (OrCh)

61 **Organic Chemistry** (4 cr, †61-62; prereq 12 cr chem)
Lect IV MTWF, C 100, Koelsch
Lab conf IV Th, C 100
—1, Lab VI-IX M, C 390
—2, Lab VI-IX T, C 390
—3, Lab VI-IX W, C 390
—4, Lab VI-IX Th, C 390
—5, Lab I-IV Th, C 390

62 **Organic Chemistry** (4 cr, †61-62; prereq 61)
Lect I MTWF, ForH 55, Kreevoy
Lab conf V Th, ForH 55
—1, Lab VI-IX T, C 390
—2, Lab VI-IX W, C 390
—3, Lab I-IV Th, C 390
Lect III MWThF, ChE 240, Dodson
Lab conf IV Th, FraH 102
—4, Lab VI-IX M, C 390
—5, Lab II-V T, C 390
—6, Lab VI-IX T, C 390
—7, Lab VI-IX Th, C 390

97 **Senior Thesis** (ar cr; prereq 4th yr)

101 **Interm Organic Chemistry** (3 cr; prereq 63, 64)
III MWF, C 315, Lauer

139 **Adv Laboratory** (2-5 cr; prereq 64)
IX T, C 315, Noland

144 **Heterocyclic Compounds** (3 cr; prereq 63, 64)
III TThS, C 215, Leete

202 Seminar (1 cr; prereq 201)
7:30-8:30 pm W, C 325

221 Survey (4 cr; prereq 220 or ♯)
I MWF, II Th, C 315, Koelsch

224 Survey (4 cr; prereq 220 or ♯)
II MWF, I Th, C 315, Fenton

239 Research (4 cr; prereq 102, 238 or ♯) Noland

261 General Survey (1 cr)

302 Research (ar cr; prereq 102, △)

Physical Chemistry (PCh)

97 **Senior Thesis** (ar cr; prereq 4th yr)

102 **Physical Chemistry** (4 cr; prereq 101)
IV MWFS, C 225, Livingston

102H **Physical Chemistry** (4 cr; prereq 101H)
IV MWFS, C 215, Prager

105 **Laboratory** (1-2 cr; prereq 102 or 102H or ¶)
Lect V M, C 325, Lipsky
—1, Lab VII-VIII M, VI-VIII W, C 190
—2, Lab VI-VIII T, VII-VIII Th, C 190
—3, Lab III-IV T, II-IV Th, C 190

108 **Physical Chemistry for Premedical Students** (3 cr, †107-108; prereq 107)
Lect IV MWF, C 325, Lumry
—1, Lab II-IV T, C 190
—2, Lab II-IV Th, C 190
—3, Lab VI-VIII F, C 190

111 **Thermodynamics, Statistical Mechanics** (4 cr; prereq 110)
IV MWF, C 315, Wertz

115 **History of Chemistry** (3 cr)
VIII TTh, C 225, Reyerson, Wolf

119 **Molecular Structure** (3 cr; prereq 103 or 103H)
I MWF, C 225, Moscowitz

129 **Adsorption, Catalysis** (3 cr; prereq 128)
II MWF, C 111, Reyerson

133 **Colloid Chemistry Lab** (1-2 cr; prereq 128 or ¶) Reyerson

205 Atomistics (4 cr; prereq 204)
III TThS, C 315, Mead

214 Kinetics, Mechanism of Enzymic Reactions (3 cr, §PhCh 214; prereq 103 or 103H, ♯) Lumry

222 Seminar: Radiation Chemistry (ar cr) Reyerson

251 Seminar: Physical Chemistry (1 cr)
7:30 pm W, C 225, Overend

260 Seminar: Chemical Kinetics (ar cr) Livingston

263 General Survey (1 cr)

266 Seminar: Magnetochemistry (ar cr) Wertz

269 Seminar: Statistical Mechanics (ar cr) Prager

272 Seminar: Biological Systems (ar cr) Lumry

275 Seminar: Quantum Mechanics (ar cr) Mead

291 Topics (ar cr)

302 Research (ar cr)

CIVIL ENGINEERING

Civil Engineering (CE)

2 Laboratory (1 cr; prereq 1)
—1, VII-IX T, E 315
—2, VII-IX W, E 315

19 Surveying (3 cr; prereq 18)
—1, Lect I TTh, E 215
—2, Lect IV TTh, E 215
—3, Lect VII TTh, E 215
—1, Lab VI-IX T, E 316A
—2, Lab VI-IX W, E 316A
—3, Lab VI-IX Th, E 316A
—4, Lab VI-IX F, E 316A
—5, Lab I-IV T, E 316A
—6, Lab I-IV Th, E 316A

32 Structural Design (3 cr; prereq 31, MM 40)
—1, Lect II MWF, E 305
—2, Lect VI MWF, E 305
—1, Lab VII-IX M, E 315
—2, Lab VII-IX T, E 302
—3, Lab I-III Th, E 315
—4, Lab VII-IX F, E 315

39 Structural Design: Steel, Timber (3 cr; prereq 38)
—1, Lect I MWF, E 305
—2, Lect III MWF, E 305

52 Highways, Pavements (3 cr; prereq 51)
—1, Lect V M, Ex 193, V F, ChE 240
—2, Lect V T, Ex 193, V F, ChE 240
—3, Lect V W, Ex 193, V F, ChE 240
—1, Lab VII-IX M, Ex 278
—2, Lab I-III T, Ex 278
—3, Lab VII-IX T, Ex 278
—4, Lab VII-IX W, Ex 278
—5, Lab VII-IX Th, Ex 278
—6, Lab VII-IX F, Ex 278

112 Aerial Surveying, Photogrammetry (3 cr; prereq 23 or ♯)
III MWF, E 316A

131 Structural Analysis (2 cr; prereq 130)
—1, Lect VI T, E 305
Lab VII-IX T, E 305
—2, Lect VI Th, E 305
Lab VII-IX Th, E 305

137 Structural Lab (3 cr; prereq 141, ¶131)
Lect III TTh, Ex 193
—1, Lab VI-VIII T, Ex 265
—2, Lab VII-IX W, Ex 265
—3, Lab VI-VIII Th, Ex 265

142 Reinforced Concrete Design (3 cr; prereq 130, 141)
—1, Lect I TTh, E 305
—2, Lect II TTh, E 305
—1, Lab VIII-IX M, TSCE 220
—2, Lab VIII-IX T, TSCE 220
—3, Lab VIII-IX Th, TSCE 220
—4, Lab VIII-IX F, TSCE 220

147 Foundations (3 cr; prereq 141)
—1, Lect I MWF, AE 19
—2, Lect II MWF, AE 19

148 Probs: Concrete (2-3 cr; prereq 146)
VII-IX MW, Ex 93

159 Soil Mechanics (3 cr; prereq 53)
IV MWF, Ex 22

161 Hydrology (3 cr; prereq Hydr 101 or 103)
Lect I TTh, Ex 193
—1, Lab II-IV T, E 302
—2, Lab VII-IX W, E 302

170 Water Supply (3 cr; prereq 160)
—1, Lect I MWF, Ex 193
—2, Lect VI MWF, Ex 22
—1, Lab VII-IX M, E 302
—2, Lab II-IV Th, E 302

171 Sewerage, Sewage Treatment (3 cr; prereq 161, 170)
Lect III MWF, Ex 193
Lab VII-IX W, TSCE 220

174 Sanitary Engineering Probs: Sewage Industrial Wastes (3 cr; prereq 171)
II MWF, Ex 250

177 Seminar: Sanitary Engineering (1 cr; prereq 5th yr)

235 Adv Theory of Structures (3-5 cr; prereq 132, 142)
II MWF, Ex 22

251 Adv Soil Mechanics Lab (3 cr; prereq 159 or ¶)
VI-IX MF, Ex 180

252 Adv Soil Mechanics Lab (3 cr; prereq 251)
VI-IX MF, Ex 180

261 Water Plant Design (3-5 cr; prereq 173)

264 Sanitary Engineering Unit Operations (3 cr)

280 Research (3-5 cr; prereq ♯)

281 Research (3-5 cr; prereq 280)

282 Research (3-5 cr; prereq 281)

Hydromechanics (Hydr)

101 Fluid Mechanics for Aeronautical, Electrical Engineering Students (3 cr; prereq MM 27)
—1, I MWF, AE 211
—2, VI MWF, AE 15

103 Fluid Mechanics (5 cr; prereq MM 27)
—1, I MTWThF, AE 227
—2, III MTWThF, Ex 22
—3, IV MTWThF, Ex 193
—4, V MTWThF, Ex 22
—5, VI MTWThF, AE 19

104 Fluid Mechanics Lab (1 cr; prereq 101 or 103 or ChEn 101 or ¶)
—1, III-IV M, Ex 138
—2, VI-VII M, Ex 138
—3, VIII-IX M, Ex 138
—4, II-III T, Ex 138
—5, VI-VII T, Ex 138
—6, III-IV W, Ex 138
—7, VI-VII W, Ex 138
—8, VIII-IX W, Ex 138
—9, II-III Th, Ex 138
—10, VI-VII Th, Ex 138

185 Adv Hydraulic Probs (2 cr; prereq 184)

190 Mechanics of Similitude, Dimensional Analysis (3 cr; prereq 101 or 103 or ‡)
3:00-4:30 WF, HL 307

191 Hydraulic Motors, Pumps (3 cr; prereq 187 or ‡)
1:15-2:45 WF, HL 307

294 Hydrodynamics (3 cr; prereq 293 or ‡)
8:00-9:30 TTh, HL 307

ELECTRICAL ENGINEERING (EE)

14 Laboratory (1 cr; prereq 12)
—1, VIII-IX M, EE 237
—2, VIII-IX T, EE 237
—3, VIII-IX W, EE 237

37 Elements (3 cr; prereq 36)
—1, I MWF, Arch 35
—2, 10:30-11:45 TTh, Arch 35

37A Laboratory (1 cr; prereq ¶37)
—1, I-II T, EE 118
—2, III-IV T, EE 118
—3, VI-VII T, EE 118
—4, VI-VII W, EE 118
—5, VIII-IX W, EE 118
—6, I-II Th, EE 118
—7, III-IV Th, EE 118
—8, V-VI Th, EE 118
—9, IV-V F, EE 118

38 Elements (3 cr; prereq 37)
V MWF, Arch 35

38A Laboratory (1 cr; prereq 37A, ¶38)
—1, VI-VII M, EE 118
—2, VIII-IX M, EE 118
—3, VIII-IX T, EE 118
—4, VII-VIII Th, EE 118
—5, VI-VII F, EE 118

40 Survey for Civil, Mining Engineering Students (4 cr; prereq 36)
Lect VII MWF, ME 110
—1, Lab VI-VII T, EE 107
—2, Lab VIII-IX W, EE 107
—3, Lab IV-V F, EE 107
—4, Lab VIII-IX F, EE 107

53 Electrical Engineering (5 cr; prereq 51)
—1, I MTWThF, Arch 50
—2, VI MTWThF, Arch 35

53H Honors Course: Electrical Engineering and Prob Solving Lab (6 cr; prereq 51H, △)
II MTWThF, EE 137, VIII-IX M, ME 110

54 Laboratory (1 cr; prereq 52, ¶53)
—1, IV-V M, EE 216
—2, VIII-IX M, EE 216
—3, I-II T, EE 216
—4, III-IV T, EE 216
—5, VIII-IX T, EE 216
—6, VI-VII W, EE 216
—7, VIII-IX W, EE 216
—8, I-II Th, EE 216
—9, III-IV Th, EE 216
—10, VII-VIII Th, EE 216
—11, VI-VII F, EE 216

54H Honors Course: Laboratory (1 cr; prereq 52H, ¶53H, △)
—1, V-VI T, EE 216
—2, V-VI Th, EE 216

54A Prob Solving Lab (1 cr; prereq 52A, ¶53)
For EE 53, Lect 1 students only
—1, VI-VII M, EE 137
—2, IV-V T, EE 137
—3, VI-VII T, EE 137
—4, V-VI Th, EE 137
For EE 53, Lect 2 students only
—5, I-II T, ME 214
—6, VIII-IX W, ME 214
—7, I-II Th, ME 208
—8, VII-VIII Th, ME 102

57 Engineering Electronics (3 cr; prereq 51)
—1, II MWF, Arch 35
—2, VII MWF, Arch 50

57H Honors Course: Engineering Electronics (3 cr; prereq 51H, △)
VI MWF, EE 237

58 Engineering Electronics Lab (1 cr; prereq ¶57)
—1, I-II M, EE 205
—2, VI-VII M, EE 205
—3, VIII-IX M, EE 205
—4, I-II T, EE 205
—5, III-IV T, EE 205
—6, VI-VII T, EE 205
—7, VIII-IX T, EE 205
—8, VI-VII W, EE 205
—9, I-II Th, EE 205
—10, III-IV Th, EE 205
—11, VI-VII Th, EE 205
—12, III-IV F, EE 205

58H Honors Course: Engineering Electronics Lab (1 cr; prereq ¶57H, △)
—1, VIII-IX W, EE 205
—2, VII-VIII F, EE 205

123 Analysis of Electromagnetic Devices (3 cr; prereq 121)
—1, V MWF, Arch 50
—2, VI MWF, Arch 50

123H Honors Course: Analysis of Electromagnetic Devices (3 cr; prereq 121H, △)
II MWF, EE 237

124 Experimental Study of Electromagnetic Devices (1 cr; prereq 122, ¶123)
—1, VII-IX M, VII W, EE 107 (¶ sec 1, EE 162A)
—2, I-III T, VII T, EE 107 (¶ sec 2, EE 162A)
—3, VII-IX T, VIII W, EE 107 (¶ sec 3, EE 162A)
—4, VII-IX W, VII M, EE 107 (¶ sec 4, EE 162A)
—5, I-III Th, VII Th, EE 107 (¶ sec 5, EE 162A)

124H Honors Course: Experimental Study of Electromagnetic Devices (1 cr; prereq ¶122H, ¶123H, △)
VII-IX F, VIII M, EE 121

133 Electronic Circuit Design (3 cr; prereq 131)
Lect II TTh, Arch 50
—1, Lab I-II M, EE 35
—2, Lab VIII-IX M, EE 35
—3, Lab III-IV T, EE 35
—4, Lab VI-VII T, EE 35
—5, Lab I-II W, EE 35
—6, Lab VI-VII W, EE 35
—7, Lab VIII-IX W, EE 35
—8, Lab III-IV Th, EE 35
—9, Lab V-VI Th, EE 35
—10, Lab I-II F, EE 35

134 Electric Machines (3 cr; prereq 132)
Lect III TTh, EE 137
Lab II-III F, EE 116

139 Electric Power Control (3 cr; prereq 138)
Lect IV TTh, EE 237
—1, Lab I-II W, EE 107
—2, Lab VI-VII W, EE 107

144 Engineering Acoustics (3 cr; prereq 143)
VIII MWF, ME 321

151 Thermodynamic Methods (3 cr; prereq Phys 51 or ME 30, ITM 153, ♯)
3:30-4:45 T, 2:30-3:45 Th, AE 309

154 Properties of Solids (3 cr; prereq 153)
4:00-5:15 MF, EE 137

158 Electronic Control (3 cr; prereq 157)
Lect I TTh, Arch 35
—1, Lab I-II M, EE 21
—2, Lab VI-VII M, EE 21
—3, Lab III-IV T, EE 21
—4, Lab VI-VII T, EE 21
—5, Lab VI-VII W, EE 21
—6, Lab III-IV Th, EE 21
—7, Lab V-VI Th, EE 21
—8, Lab VII-VIII Th, EE 21
—9, Lab VI-VII F, EE 21

162 Networks (3 cr; prereq 161)
—1, II MWF, Arch 50
—2, III MWF, Arch 50

162A Networks Lab (1 cr; prereq 161A, ¶162)
—1, VII-IX M, VII W, EE 208 (¶ sec 1, EE 124)
—2, I-III T, VII T, EE 208 (¶ sec 2, EE 124)
—3, VII-IX T, VIII W, EE 208 (¶ sec 3, EE 124)
—4, VII-IX W, VII M, EE 208 (¶ sec 4, EE 124)
—5, I-III Th, VII Th, EE 208 (¶ sec 5, EE 124)

162H Honors Course: Networks and Lab (4 cr; prereq 161H, △)
Lect 9:00-10:20 TTh, EE 237
Lab VII-IX F, VIII M, EE 121

165 Communication Circuits (3 cr; prereq 164)
Lect III TTh, EE 237
—1, Lab VI-VII M, EE 204
—2, Lab VIII-IX M, EE 204
—3, Lab VI-VII W, EE 204
—4, Lab IV-V Th, EE 204

168 Electromagnetic Theory, Application (3 cr; prereq 167)
Lect IV TTh, ME 106
—1, Lab VIII-IX T, EE 218
—2, Lab VI-VII W, EE 218

174 Physical Electronics (3 cr; prereq 173)
Lect I MWF, EE 137
Lab VI-VII Th, EE 204

179 Nonlinear Active Circuits (3 cr; prereq 178)
VI-VII TTh, EE 237

182B Transistor Principles, Circuits (3 cr, §135; prereq 182A)
7:00-8:15 TTh, EE 237

184 Electrical Lab (1-3 cr; prereq ♯)

188 Problems (3 cr; prereq 187)
Lect IV MWF, Arch 50
—1, Rec VIII M, ME 106
—2, Rec V T, EE 237
—3, Rec VIII T, ME 106
—4, Rec VIII W, ME 106

192 Active Network Theory (3 cr; prereq 191)
VII MWF, EE 237

195 Servomechanisms (3 cr; prereq 194)
V MWF, EE 237

198 Electrical Design of Machines I (3 cr; prereq 197)

212 Network Analysis, Synthesis (3 cr; prereq 211)
V-VI TTh

228 Stability of AC Power Systems (3 cr; prereq 227)

243 Gaseous Electronics (3 cr; prereq 242)

256 Analysis of AC Power-Systems Circuits (3 cr; prereq 255)

263 Probs: Electromagnetism (3 cr; prereq 261)

264 Seminar: Communication (1-3 cr; prereq 262)

268 Theory of Communication (3 cr; prereq 267)

282 Seminar: Energy Conversion (ar cr; prereq 281)

295 Adv Control Theory (3 cr; prereq 294)

MATHEMATICS (ITM)

8 Solid Geometry (no cr; prereq plane geom)
V MWF, E 227

11 College Algebra, Trigonometry I (5 cr; prereq 9)
—1, I MTWThF, AE 21
—2, II MTWThF, ChE 40
—3, IV MTWThF, ChE 158
—4, IV MTWThF, AE 19
—5, V MTWThF, AE 21
—6, VI MTWThF, AE 21
—7, VI MTWThF, ChE 158

12 College Algebra, Trigonometry II (5 cr; prereq 11)
—1, I MTWThF, ChE 162
—2, I MTWThF, ChE 50
—3, I MTWThF, E 227
—4, I MTWThF, AE 9

—5, I MTWThF, E 206
—6, II MTWThF, E 106
—7, II MTWThF, ChE 50
—8, II MTWThF, E 227
—9, II MTWThF, AE 9
—10, II MTWThF, AE 227
—11, III MTWThF, ChE 50
—12, III MTWThF, ChE 158
—13, III MTWThF, ChE 162
—14, III MTWThF, AE 21
—15, III MTWThF, AE 9
—16, IV MTWThF, AE 21
—17, IV MTWThF, AE 227
—18, IV MTWThF, AE 15
—19, IV MTWThF, E 305
—20, V MTWThF, ChE 50
—21, V MTWThF, AE 19
—22, V MTWThF, Ex 25
—23, VI MTWThF, Ex 25
—24, VI MTWThF, ChE 50
—25, VII MTWThF, E 106
—26, VII MTWThF, E 205

13A Calculus I: Analytic Geometry, Calculus (5 cr; prereq 8, 12)
—1, IV MTWThF, ChE 154
—2, V MTWThF, ChE 158
—3, V MTWThF, MinMet 116

24A Calculus II: Analytic Geometry, Calculus (5 cr; prereq 13A)
—1, II MTWThF, Ex 193
—2, II MTWThF, AE 15
—3, III MTWThF, AE 15
—4, III MTWThF, AE 227
—5, IV MTWThF, Ex 25
—6, VI MTWThF, AE 227
—7, VI MTWThF, E 227

25A Calculus III: Analytic Geometry, Calculus (5 cr; prereq 24A)
—1, I MTWThF, Ex 25
—2, I MTWThF, AE 15
—3, II MTWThF, E 229
—4, II MTWThF, E 217
—5, II MTWThF, Ex 25
—6, II MTWThF, AE 21
—7, III MTWThF, AE 19
—8, III MTWThF, ChE 150
—9, IV MTWThF, E 106
—10, V MTWThF, E 106
—11, V MTWThF, E 203
—12, VI MTWThF, E 203
—13, VI MTWThF, E 106

25H Honors Course: Calculus III—Analytic Geometry, Calculus (5 cr; prereq 24H, △)
IV MTWThF, ChE 162

26A Calculus IV: Differential Equations, Calculus (5 cr, §80; prereq 25A)
—1, V MTWThF, E 229
—2, V MTWThF, MinMet 120
—3, VI MTWThF, E 229

90 Engineering Statistics (3 cr; prereq 25 or 25A or ¶25A)
—1, I MWF, E 217
—2, I MWF, E 229
—3, III MWF, Ex 25

133 Statistical Theory with Applications (3 cr; prereq 132)
V MWF, E 217

133B Probability with Technological Applications (3 cr; prereq 132, 153...or 132, 148, 149...or ♯)
VI MWF, E 217

143 Vector, Matrix Theory with Applications (3 cr; prereq 142)
—1, II MWF, E 203
—2, II-III TTh, E 203

147 Vector Analysis (3 cr, §152, §old 154; prereq 25 or 25A)
I MWF, E 205

148 Differential Equations (3 cr, §150A; prereq 26 or 26A or 80)
—1, I MWF, E 104
—2, III MWF, E 205
—3, V MWF, E 205

150A Ordinary Differential Equations (3 cr, §148; prereq 26 or 26A or 80)
—1, IV MWF, E 227
—2, IV MWF, E 217

151 Calculus V: Adv (3 cr, §old 151A; prereq 26 or 26A or 80)
—1, IV MWF, E 205
—2, IV MWF, E 229

152 Calculus VI: Adv (3 cr, §147; prereq 151)
—1, I MWF, E 203
—2, I MWF, E 106
—3, III MWF, E 104
—4, III MWF, E 106
—5, IV MWF, E 203

152H Honors Course: Calculus VI—Adv (3 cr, §147; prereq 151H, △)
III MWF, E 229

162 Analytical Dynamics (3 cr; prereq 161)
IV MWF, E 206

165A Programming Modern Digital Calculators (3 cr, §165; prereq 25 or 25A)
VI MWF, E 205

174 Theory of Complex Variables (3 cr; prereq 26 or 26A)
—1, II MWF, E 104
—2, II MWF, E 205
—3, III MWF, E 227
—4, III MWF, E 217

182 Topics: Theory of Numbers (3 cr; prereq 181)
II MWF, ChE 162

185 Numerical Analysis (3 cr; prereq 147, 148, 149, 184...or 152, 153, 184 or ♯)
III MWF, E 203

190B Combinatorial Topology (3 cr; prereq 190A)
VI MWF, E 206

193B **Higher Geometry** (3 cr; prereq 193A)
VI MWF, ChE 162

199B **Prob Course** (3 cr; prereq ‡)
III-IV TTh, E 206

228 Computers, Control Devices (3 cr; prereq 227)
V MWF, E 206

249 Reading, Research (1-3 cr; prereq 248)

262 Functions of a Complex Variable (3 cr; prereq 261)
IV MWF, E 104

268 Topics: Theory of Analytic Functions (3 cr; prereq 267)
III-IV TTh, E 104

270A Adv Numerical Analysis of Partial Differential Equations (3 cr, §old 270B; prereq 173, 186 or ‡)
V MWF, E 104

275 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 274)
II MWF, E 206

280B Rings, Ideals (3 cr; prereq 180 or ‡)
III MWF, E 206

288 Hilbert Space, Functional Analysis (3 cr; prereq 287)
VI MWF, E 104

294B Theory of Local Rings (3 cr; prereq 294A)
V MWF, ChE 162

308 Probs: Theoretical Physics (3 cr; prereq 307)
VII MWF, E 104

MECHANICAL ENGINEERING

Engineering Graphics (EG)

14 **Engineering Graphics** (3 cr; prereq solid geom)
Lect II MW, Arch 10
—1, Rec II F, E 201
—2, Rec II Th, E 201
Lab open hrs, E 18
Lect VI MW, Arch 10
—3, Rec VI F, E 201
—4, Rec VI Th, E 201
Lab open hrs, E 18
Lect VII TTh, Arch 10
—5, Rec VIII Th, Arch 10
—6, Rec VII F, E 201
Lab open hrs, E 18

15 **Engineering Graphics** (3 cr; prereq 14)
Lect I MW, Arch 10
—1, Rec I F, Arch 10
—2, Rec I Th, Arch 10
Lab open hrs, E 101
Lect III MW, Arch 10
—3, Rec III F, Arch 10
—4, Rec III Th, E 201
Lab open hrs, E 306
Lect V MW, Arch 10
—5, Rec V F, Arch 10
—6, Rec V Th, E 201
Lab open hrs, E 101
Lect VII MW, Arch 10
—7, Rec VII F, Arch 10
—8, Rec VII Th, E 201
Lab open hrs, E 306
Lect II TTh, Arch 10
—9, Rec III Th, Arch 10
—10, Rec II F, Arch 10
Lab open hrs, E 101
Lect IV TTh, Arch 10
—11, Rec V Th, Arch 10
—12, Rec IV F, Arch 10
Lab open hrs, E 411
Lect VI TTh, Arch 10
—13, Rec VIII Th, E 201
—14, Rec VI F, Arch 10
Lab open hrs, E 411

16 **Engineering Graphics** (3 cr; prereq 15)
Lect IV MW, Arch 10
Rec IV F, E 201
Lab open hrs, E 18

51 **Graphic Representation, Computation** (3 cr; prereq 15, ITM 11)
V MWF, E 201

55 **Production Illustration** (2 cr; prereq 16)
Lect VI MW, E 201
Lab V-VII T, E 201

153 **Nomography** (3 cr; prereq 152)
III MWF, E 201

Industrial Engineering (IE)

50 **Elements, Mgt** (3 cr, §old 150; prereq 3rd yr)
—1, Lect I MWF, ME 208
—2, Lect II MWF, Arch 135
—3, Lect V MWF, ME 102

153 **Methods Engineering, Work Measurement** (3 cr; prereq 50 or ¶)
Lect III TTh, ME 208
—1, Lab VII-IX M, ME 180
—2, Lab VII-IX T, ME 180

154 **Adv Methods Engineering, Work Measurement** (3 cr; prereq 153)
Lect III TTh, ME 102
—1, Lab VII-IX W, ME 180
—2, Lab VII-IX Th, ME 180

163 **Process Planning, Development** (3 cr; prereq 50, ME 15, 16)
Lect IV TTh, ME 102
Lab VII-IX F, ME 180

167 **Materials Handling, Packaging** (3 cr; prereq 153)
I MWF, ME 106

170 **Production Planning, Control** (3 cr; prereq 50)
IV MWF, ME 102

171 **Quality Control** (3 cr; prereq ITM 90 or 132 or ‡)
III MWF, ME 106

173 Engineering Economic Analysis (3 cr; prereq 50)
II MWF, ME 106

190 Seminar (1 cr; prereq 12 cr)
VII-VIII M, ME 102

194 Applied Industrial Engineering (3 cr; prereq 15 cr)
V MWF, ME 106

195 Applied Industrial Engineering (3 cr; prereq 15 cr)

196 Applied Industrial Engineering (3 cr; prereq 195)

198 Sequential Analysis of Industrial Data (3 cr; prereq ITM 133 or ‡)
VI MWF, ME 102

252 Adv Industrial Engineering (3 cr; prereq 251)

262 Probs: Production Engineering (3-5 cr; prereq ‡)

272 Research (3-5 cr; prereq ‡)

Mechanical Engineering (ME)

15 Casting, Working, Welding Engineering Materials (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 18
—1, Lab VII-IX T, ME 50
—2, Lab VII-IX W, ME 50
—3, Lab VII-IX Th, ME 50

16 Cold Processing Materials (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 110
—1, Lab VII-IX M, ME 171
—2, Lab VII-IX T, ME 171
—3, Lab VII-IX W, ME 171
—4, Lab VII-IX Th, ME 171

22 Mechanisms of Automatic Machines (3 cr; prereq 21)
Lect V TTh, ME 321
—1, Lab VII-IX M, ME 325
—2, Lab VII-IX W, ME 325

23 Dynamics of Machinery (3 cr; prereq 22, MM 29)
—1, Lect III TTh, ME 110
—2, Lect IV TTh, ME 110
—1, Lab VII-IX M, ME 314
—2, Lab VII-IX T, ME 314
—3, Lab VII-IX W, ME 314
—4, Lab VII-IX Th, ME 314
—5, Lab VII-IX F, ME 314

24 Machine Design (3 cr; prereq MM 41)
Lect II TTh, ME 321
—1, Lab VII-IX T, ME 308
—2, Lab VII-IX W, ME 308
—3, Lab VII-IX Th, ME 308

30 Thermodynamics (3 cr, §old 130; prereq ITM 26A or ¶, Phys 14)
—1, Lect I MWF, Arch 55
—2, Lect IV MWF, Arch 55
—3, Lect VI MWF, Arch 40

31 Thermodynamics (3 cr, §old 131; prereq 30)
—1, Lect I MWF, Arch 40
—2, Lect II MWF, Arch 40
—3, Lect III MWF, Arch 40
—4, Lect IV MWF, Arch 40

33 Laboratory I (2 cr; prereq 30 or ¶)
Lect II T, ME 208
—1, Lab VII-IX Th, ME 370
—2, Lab VII-IX F, ME 370

34 Laboratory II (2 cr; prereq 33)
Lect IV T, ME 321
—1, Lab VII-IX M, ME 370
—2, Lab VII-IX T, ME 370
—3, Lab VII-IX W, ME 370
—4, Lab VII-IX Th, ME 370

90 Industrial Assignment (4 cr, †90-91-92-93; prereq regis coop work-study program)

91 Industrial Assignment (4 cr, †90-91-92-93; prereq 90)

92 Industrial Assignment (4 cr, †90-91-92-93; prereq 91)

93 Industrial Assignment (4 cr, †90-91-92-93; prereq 92)

110 Control of Metal Working Processes (3 cr; prereq 15, 16)
Lect III TTh, ME 106
Lab VII-IX M, ME 50

121 Machine Design (3 cr; prereq 24)
Lect II TTh, ME 110
—1, Lab VII-IX M, ME 302
—2, Lab VII-IX T, ME 302
—3, Lab VII-IX W, ME 302
—4, Lab VII-IX Th, ME 302

123 Creative Engineering (3 cr; prereq 4th yr)
Lect VI T, ME 325
Lab VII-IX TTh, ME 325

124 Experimental Stress Analysis (3 cr; prereq MM 41)
Lect III TTh, ME 351
Lab VII-IX M, ME 351

125 Machine Design Lab (2 cr; prereq 24)
—1, Lect VI M, ME 321
Lab VII-IX M, ME 357
—2, Lect VI W, ME 321
Lab VII-IX W, ME 357
—3, Lect VI F, ME 321
Lab VII-IX F, ME 357

133 Heat Transmission (3 cr; prereq 32, Hydr 101 or 103 or ¶...or Hydr 101 or 103, ‡)
—1, Lect II MWF, ME 214
—2, Lect IV MWF, ME 321

134 Thermodynamics of Fluid Flow (3 cr; prereq 32, Hydr 103)
—1, Lect I MWF, ME 102
—2, Lect VI MWF, ME 302

141 Heat Power Engineering (3 cr; prereq 32) I MWF, ME 214

143 Turbomachinery (3 cr; prereq 134 or ¶)
—1, Lect I MWF, ME 321
—2, Lect II MWF, ME 321

146 Combustion (3 cr; prereq 133 or ¶)
—1, Lect III MWF, ME 302
—2, Lect IV MWF, ME 106

147 **Heat Power Design** (3 cr; prereq 143, 146)
Lect VI T, ME 214
Lab VII-IX TTh, ME 214

148 **Chemistry of Combustion** (3 cr; prereq 146, InCh 15)
V MWF, ME 208

150 **Internal Combustion Engines** (3 cr; prereq 32)
V MWF, ME 321

152 **Diesel, Free Piston Engines** (3 cr; prereq 150)
II MWF, ME 302

159 **Heat Power Lab** (2 cr; prereq 143, 146)
—1, Lab VI-IX M, ME 480
—2, Lab VI-IX T, ME 480
—3, Lab VI-IX W, ME 480
—4, Lab VI-IX F, ME 480

160 **Psychrometrics, Air Conditioning** (3 cr; prereq 133 or ¶)
—1, Lect V MWF, ME 214
—2, Lect VI MWF, ME 214

161 **Heating, Air Conditioning Design** (3 cr; prereq 160, 180)
Lect VI T, ME 208
Lab VII TTh, ME 208

169 **Air Conditioning, Refrigeration Lab** (2 cr; prereq 34, 160, 180)
—1, Lab VI-IX M, ME 362
—2, Lab VI-IX W, ME 362
—3, Lab VI-IX F, ME 362

180 **Mechanical Refrigeration** (3 cr; prereq 32)
—1, Lect II MWF, ME 102
—2, Lect IV MWF, ME 214

181 **Adv Mechanical Refrigeration** (3 cr; prereq 180)
III MWF, ME 214

194 **Adv Problems** (2-4 cr; prereq 5th yr, ME maj, 2.5 GPA, △)

198 **Industrial Instrumentation, Automatic Control** (3 cr; prereq EE 38 or ¶)
Lect I TTh, ME 110
—1, Lab VII-IX M, ME 359
—2, Lab VII-IX T, ME 359
—3, Lab VII-IX W, ME 359
—4, Lab VII-IX Th, ME 359
—5, Lab VII-IX F, ME 359

231 Statistical, Non-equilibrium Thermodynamics (3 cr; prereq 230)
IV MWF, ME 302

234 Convection (3 cr; prereq 233)
II MWF, ME 208

236 Adv Theory of Heat Transfer (3 cr; prereq 133)
V MWF, ME 302

242 Adv Power Plants (3 cr; prereq 142)

247 Diffusion Flames (3 cr; prereq 146)
III MWF, ME 208

253 Adv Gas Turbines, Jet Propulsion (3 cr; prereq 157)
V TTh, VII-IX M, ME 208

266 Adv Psychrometric Processing (3 cr; prereq 265)
IV MWF, ME 208

280 Theoretical Refrigeration (3 cr; prereq 180)
III MWF, ME 102

290 Research (ar cr; prereq △)

291 Research (ar cr; prereq 290)

292 Research (ar cr; prereq 291)

296 Adv Servomechanisms (3 cr; prereq 199, ITM 174 or ¶)

METALLURGY (Met)

56 **Physical Metallurgy** (3 cr; prereq 3rd yr)
VII MWF, MinMet 116, Jerabek

57 **Physical Metallurgy Industrial Alloys** (3 cr; prereq 53 or 56 or 60)
III MWF, MinMet 410, Jerabek

90 **Industrial Employment** (2 cr; prereq ♯)

91 **Industrial Employment** (2 cr; prereq ♯)

92 **Industrial Employment** (2 cr; prereq ♯)

154 **Physical Metallurgy II** (3 cr; prereq 53 or ♯)
II MWF, MinMet 116, Sivertsen

154A **Physical Metallurgy Lab** (2 cr; prereq ¶154)
—1, VI-IX Th, MinMet 410, Sivertsen
—2, VI-IX F, MinMet 410
—3, VI-IX T, MinMet 410

159 **Dental Physical Metallurgy** (2 cr)
I TTh, Owre 12, Jerabek

162 **Nuclear Metallurgy** (1 cr; prereq 56 or ♯)
II Th, MinMet 120, Swalin

168 **Metal Fabrication** (3 cr, §old 158; prereq 155)
Lect VII TF, MinMet 410, Nicholson
Lab VII-IX W, MinMet 410, Nicholson

171 **Probs: Physical Metallurgy** (1-3 cr)

174 **Modern Theory of Metals, Alloys** (3 cr, §old 164A; prereq Phys 51 or ♯)
9:00-10:20 TTh, MinMet 124, Sivertsen

181 **Thermodynamics, Kinetics of Solid State** (3 cr; prereq 180)
II MWF, MinMet 410, Swalin

208 Physical Metallurgy (ar cr)

214 Seminar: Physical Metallurgy (ar cr)

251 Kinetics of Solid State Reactions (3 cr; prereq 182 or ♯) Swalin

MINES AND METALLURGY

Metallurgical Engineering (MetE)

90 **Industrial Employment** (2 cr; prereq ♯)

91 **Industrial Employment** (2 cr; prereq ♯)

107 **Prin Process Metallurgy** (3-4 cr; prereq 106)
Lect III MWF, MinMet 120, Bitsianes
Lab VI-IX W, MinMet B25

111 **Mineral Dressing** (4 cr; prereq 110)
Lect III TTh, MinMet 124, I Th, MinMet 120, Cooke
—1, Lab VI-VIII T, MinMet 16, 22
—2, Lab VI-VIII F, MinMet 16, 22
—3, Lab ar

119 **Practice** (ar cr; prereq ‡)
122 **Adv Mineral Dressing** (3 cr; prereq 112)
VI M, VII MTh, MinMet 124, Cooke
125 **Probs: Mineral Dressing** (ar cr; prereq 112) Cooke
135 **Unit Processes** (3 cr; prereq 11)
II MWF, MinMet 124, Joseph
142 **Probs: Process Metallurgy** (ar cr; prereq 108) Joseph, Bitsianes
202 Research: Process Metallurgy (ar cr) Bitsianes, Joseph
205 Research: Mineral Dressing (ar cr) Cooke
211 Seminar (ar cr)
IV T, MinMet 104

Mining Engineering (MinE)

16 **Mine Maps** (1-2 cr; prereq 15A or 15B)
VI-IX T, MinMet 321, Yardley
90 **Industrial Employment** (2 cr; prereq ‡)
91 **Industrial Employment** (2 cr; prereq 90)
92 **Industrial Employment** (2 cr; prereq 91)
112 **Development of Mineral Deposits** (3 cr; prereq 111 or ‡)
II MTWF, MinMet 104, Yardley
121 **Mine Plant Engineering** (3 cr; prereq 113, MM 28 or ‡)
IV-VI F, MinMet 124, VI-VIII Th, MinMet 104, Dorenfeld
132 **Rock Mechanics II** (3 cr; prereq 131)
IV MWF, MinMet 104, Fairhurst
142 **Surface Mining Engineering** (3 cr; prereq 112 or ‡)
II MWF, IV T, MinMet 120, Pfleider
143 **Coal Mining Engineering** (3 cr; prereq 113) Yardley
144 **Adv Mining Engineering** (2 cr; prereq 141)
VI-VIII MW, MinMet 321, Pfleider, Dorenfeld
152 **Problems** (ar cr; prereq 113)
180 **Geochemical Exploration** (3 cr; prereq ‡) Yardley
202 Seminar: Mineral Engineering (ar cr)
252 Adv Rock Mechanics II (3 cr; prereq 251)
IV MWF, MinMet 120, Fairhurst

Petroleum Engineering (PetE)

90 **Industrial Employment** (2 cr; prereq ‡)
91 **Industrial Employment** (2 cr; prereq 90)
112 **Oil Feld Production** (3 cr; prereq 111 or ‡)
III MTWF, MinMet 104, Lacabanne
134 **Natural Gas Engineering** (2 cr; prereq 112 or ‡)
IV TTh, MinMet 124, Lacabanne
144 **Adv Petroleum Engineering** (2 cr; prereq MinE 141)
VI-IX M, VI-VIII WF, MinMet 321, Pfleider
153 **Petroleum Production Technology** (3 cr; prereq 152)
Lect III Th, MinMet 104, Lacabanne
—1, Lab VII-IX Th, VI-VIII F, MinMet 216, 220
—2, Lab ar
156 **Problems** (ar cr; prereq ¶144 or ¶145 or ‡)
IV T, MinMet 216, Lacabanne
202 Seminar: Petroleum Natural Gas Engineering (ar cr; prereq 201) Lacabanne
206 Engineering Study: Oil Field (ar cr) Lacabanne, Pfleider
208 Research Probs (ar cr) Lacabanne, Pfleider

PHYSICS (Phys)

1 Physical Science (3 cr; prereq HS alg, plane geometry)
IV MWF, Ph 133, Nestvold
1A Physical Science Lab (1 cr; prereq 1 cr ¶)
2 Physical Science (3 cr; prereq 1)
III MWF, Ph 150, Wall
2A Physical Science Lab (1 cr; prereq 2 cr ¶)
5 Gen Physics: Heat, Electricity (5 cr; prereq 4)
I MTWThF, Ph 166, Buchta
Lab sec assigned during first 2 days of class
8 **Gen Physics** (5 cr; prereq 7, ¶ITM 24A or Math 53)
II MTWThF, Ph 166, Freier
Lab sec assigned during first 2 days of class
11 **Gen Physics** (5 cr; prereq ¶ITM 11 or ¶Math T)
V MTWThF, Ph 166, Stokes
Lab sec assigned during first 2 days of class
12 **Gen Physics** (5 cr; prereq 11, ¶ITM 12 or ¶Math 10)
—1, I MTWThF, Ph 150, Likely
—2, IV MTWThF, Ph 150, Williams
—3, VI MTWThF, Ph 150, Mantis
Lab sec assigned during first 2 days of class
14 **Interm Physics** (4 cr; prereq 13, ¶ITM 24A or Math 53)
V MTWThF, Ph 150, Valasek
14A Laboratory (1 cr; prereq ¶14)
50 **Interm Physics** (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54)
—1, I MTWThF, Ph 133, Nier
—2, III MTWThF, Ph 133, Winckler
—3, VI MTWThF, Ph 166, Earl
50H **Honors Course: Interm Physics** (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54, △)
II MTWThF, Ph 170, Ney
50A Physics Lab (1 cr; prereq ¶50)
52H Honors Course: Physics Lab (1 cr; prereq ¶50H, △) Likely
102 **Mechanics, Electromagnetism** (4 cr; prereq 100 or MM 29)
—1, I MTWF, Ph 170, Werntz
—2, I MTWF, Ph 145, Zimmermann
109 Modern Physics (3 cr; prereq 107 or ‡)
VI MWF, Ph 145, Johnston
110 Atomic Nuclear Physics (3 cr; prereq 108)
VI MWF, Ex 193, Geffen

116 Physical Investigation (3 cr; prereq △)
121 **Experimental Nuclear Physics I** (3 cr; prereq 50 or 107 or 108, ♯)
—1, VI-IX TTh, Ph 250, Johnson
—2, VII-X MF, Ph 250, Benson
124 Thermodynamics, Statistical Mechanics, Theories of Structure of Matter (3 cr; prereq 123, ¶109 or ¶110)
IV MWF, AH 9, Hwang
134 Experimental Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
Lect VII T, Ph 143, Valasek
Lab VIII-X TTh, Ph 348
146 **Vacuum Tubes, Associated Circuits** (4 cr; prereq 144 or ♯)
Lect II MWF, Ph 133, Blair
Lab ar, Ph 256
166 Meteorology I (3 cr; prereq 165 or ♯) Mantis
172 Theoretical Physics (3 cr; prereq 171)
II MWF, Ph 145, Cheston
183 Atomistics, Quantum Mechanics (3 cr; prereq 181)
IV MWF, Ph 143, Sanders
205 Statistical Thermodynamics (3 cr; prereq 204)
III TThS, Ph 145, Wall
211 Quantum Mechanics (3 cr; prereq 210)
VI MWF, Ph 143, Bolsterli
214 Seminar: Contemporary Experimental Physics (ar cr)
217 Seminar: Contemporary Theoretical Physics (ar cr)
223 Mathematical Physics (3 cr; prereq 222)
III MWF, Ph 145, Hill
229 Nuclear Physics (3 cr; prereq 228)
III MWF, Ph 143, Hintz
238 Seminar: Radiofrequency Spectroscopy (ar cr)
241 Seminar: Solid State, Low Temperature Physics (ar cr)
250 Solid State Physics (3 cr; prereq 173, 185 or ♯)
253 Seminar: Nuclear Physics (ar cr)
VIII-IX F, Ph 145
256 Seminar: Mass Spectroscopy (ar cr)
259 Seminar: Cosmic Rays (ar cr)
265 Elem Particle Physics (3 cr; prereq 181, 183, 185 or ♯) Gasiorowicz
274 Plasma Physics (3 cr; prereq 273)
II MWF, Ph 143, Kellogg
302 Research (ar cr)

UNATTACHED COURSES

General Engineering (GE)

70 **Slide Rule** (1 cr; prereq ITM 11 or ¶)
—1, III T, Arch 10
—2, V T, Arch 10
—3, I T, Arch 10
105 **Engineering Library Techniques** (1 cr)
VI T, E 206

Geophysics (GPhy)

91 **Industrial Employment** (2 cr; prereq 90) Mooney
108 **Gen Geophysics** (3 cr; prereq Geol 2, Phys 9 or 14...Geol 125 rec)
III MWF, MinMet 124, Thiel
126 **Seismic Exploration** (2 cr; prereq Phys 14, Geol 125, ITM 25A)
III TTh, MinMet 120, Mooney
136 **Problems** (ar cr; prereq ♯) Mooney
232 Theoretical Seismology (3 cr; prereq MM 180 or elasticity, adv calc) Mooney

COLLEGE OF VETERINARY MEDICINE

Veterinary Anatomy (VAna)

102 Comparative Anatomy (8 cr; prereq 101 or ♯)
Lect I MWF, VetS 257, Kitchell
Lab II-III M, VII-IX T, II-IV WThF, VetS 141
106 Surgical Anatomy (1 cr; prereq 103, VMC 101, ♯)
VIII-IX M, VetS 257, Kitchell, Usenik
152 Microscopic Anatomy of Domestic Animals (4 cr; prereq 151)
Lect VI WF, VetS 257, Weber
Lab VII-IX WF, VetS 247
190 Seminar (1 cr; prereq 101, 151, ♯) Kitchell, Weber
191 Special Studies (1-5 cr; prereq 151, ♯) Kitchell, Weber

Veterinary Bacteriology and Public Health (VBac)

103 Virology (4 cr; prereq 102, ♯)
Lect II MWF, VetS 229, Loken, Lindorfer, Pomeroy
Lab III-IV MW, III F, VetS 325
126 Public Health (3 cr; prereq 125)
VII MWF, VetC 125, Anderson
128 Probs: Bacteriology, Public Health (ar cr; prereq 103, ♯) Pomeroy, Anderson, Lindorfer, Loken

201 Adv Poultry Diseases (ar cr; prereq 131, ‡) Pomeroy

205 Adv Bacteriology (ar cr; prereq ‡) Pomeroy, Fenstermacher, Lindorfer

Veterinary Medicine and Clinics (VMC)

103 Large Animal Medicine (5 cr; prereq 102)
I MWF, VetA 103, I TTh, VetS 229, Sorensen

111 Clinics (5 cr; prereq 110)
II-IV MTWThF, I-III S, VetC 125, Hoyt, others

115 Clinics (5 cr; prereq 114)
II-IV MTWThF, I-III S, VetC 125, Hoyt, others

117B Clinical Conference (⅓ cr, ‡117A-117B-117C; prereq 117A)
IX W, VetC 125, Campbell

118B Clinical Conference (⅓ cr, ‡118A-118B-118C; prereq 118A)
IX W, VetC 125, Campbell

119 Jurisprudence, Business Methods (2 cr; prereq ‡)
VI TTh, VetC 125, Campbell

131 Infectious Diseases of Large Animals (5 cr; prereq ‡)
I MTWThF, VetC 125, Hoyt

201 Adv Veterinary Medicine (ar cr; prereq 104, 131, ‡)

202 Adv Diagnosis, Therapeutics of Animal Diseases (ar cr; prereq 104, 131, ‡)

203 Seminar (ar cr; prereq ‡)

204 Medical Conference (ar cr; prereq 104, 131, ‡)

Veterinary Obstetrics (VObs)

102 Animal Reproduction (4 cr; prereq 101, VMC 113, ‡)
VIII MTWF, VetC 125

201 Adv Diagnostic Methods (3 cr; prereq 102) Zemjanis

Veterinary Pathology and Parasitology (VPaP)

101 Parasitology (5 cr; prereq 151, ‡)
Lect I MWF, VI Th, VetS 229, Griffiths
—1, Lab VII-IX T, VetS 225, Griffiths, Bemrick
—2, Lab VII-IX Th, VetS 225, Griffiths, Bemrick

152 Special Pathology (5 cr; prereq 151, ‡)
Lect VI MWF, VetS 229, Sautter, Perman, Ball
Lab VII-IX MW, VetS 225, 229

156 Diseases of Fur-Bearing Animals (2 cr; prereq 153, VMC 122, ‡)
VII TTh, VetC 125, Perman

157 Veterinary Necropsies (1-3 cr; prereq 153, ‡) Sautter

158 Surgical Pathology (1-3 cr; prereq 153, ‡) Sautter

201 Adv Veterinary, Poultry Pathology (ar cr; prereq ‡) Fenstermacher

202 Seminar: Pathology (1 cr; prereq 153, ‡) Sautter

203 Neoplasms of Domestic Animals (ar cr; prereq ‡) Sautter

240 Adv Parasitology (ar cr; prereq 102, ‡) Griffiths

241 Probs: Parasitology (ar cr; prereq 102, ‡) Griffiths

Veterinary Physiology and Pharmacology (VPP)

51 Physiology of Domestic Animals (4 cr; prereq Biol 3, InCh 5)
VI-VII TTh, VetA 103, Sullivan, Dunlop, Burger

107 Animal Physiology (3 cr; prereq 105)
I TTh, VII F, VetA 103, Good, Bergman

108 Animal Physiology Lab (2 cr; prereq 106, ¶107)
II-IV TTh, TEH 103, Sullivan, Good, Bergman, Dunlop

130 Probs: Physiology (ar cr; prereq 109, or Phsl 106-107, ‡) Good

153 Clinical Pharmacology (3 cr; prereq 152, ‡)
Lect VII MW, VetA 103, Stowe, Hammond
Lab VII-IX F, TEH 103, Sullivan, Stowe, Hammond

171 Probs: Pharmacology (ar cr; prereq 152, ‡) Stowe, Hammond

Veterinary Surgery and Radiology (VSR)

102 Special Surgery (5 cr; prereq 101, ‡)
Lect VI MWF, VetA 103, Usenik, Clifford, Gourley, Kurtz
Lab VII-IX TTh, VetA 102

131 Heredity in Animal Disease (3 cr; prereq VMC 104, ‡)
VI MWF, VetC 125, Spurrell

210 Adv Radiology (2 cr; prereq 121, ‡) Spurrell

220 Anesthesia (ar cr; prereq 103, ‡) Usenik, Clifford

225 Adv Small Animal Surgery (ar cr; prereq 103, ‡) Usenik, Clifford

230 Adv Large Animal Surgery (ar cr; prereq 103, ‡) Usenik

235 Radiation Biology (3 cr; prereq 219, ‡) Spurrell, Caldecott, Loken, Marvin

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE (Air)

32 Air Science I (no cr)
Leadership Laboratory I M or V M or VI M, Bauer

35 Air Science II (2 cr; prereq 34)
Leadership Laboratory I M or V M or VI M
—1, I WF, A 12, Bauer
—2, III WF, A 12, Bauer
—3, IV WF, A 12, Bauer

132 Air Science III (3 cr)
Leadership Laboratory I M or V M or VI M
—1, I TWThF, A 11, Kramer
—2, V TWThF, A 11, Kramer

135 Air Science IV (3 cr)
Leadership Laboratory I M or V M or VI M
—1, II TWThF, A 11, Stockdale
—2, IV TWThF, A 11, Stockdale

MILITARY SCIENCE (Mil)

2 Military Science I (1 cr; prereq 1)
—1, I MWF, A 116A, Edwards
—2, II MWF, A 116A, Edwards
—3, III MWF, A 116A, Edwards
—4, V MWF, A 116A, Edwards
—5, VI MWF, A 116A, Edwards

5 Military Science II (1 cr; prereq 4)
—1, II MWF, A 201, Rutledge
—2, III MWF, A 201, Rutledge
—3, V MWF, A 201, Rutledge
—4, VI MWF, A 201, Rutledge

152 Military Science III (3 cr; prereq 151)
—1, I MTWThF, A 105, Elliott
—2, IV MTWThF, A 105, Elliott
—3, VI MTWThF, A 105, Elliott

155 Military Science IV (3 cr; prereq 154)
—1, II MTWThF, A 116, Carlton
—2, V MTWThF, A 116, Carlton

MORTUARY SCIENCE (Mort)

5 Restorative Art (1 cr, †4-5-6; prereq 4)
—1, VIII-IX T, NH 100, Gates
—2, VIII-IX Th, NH 100

8 Orientation in Funeral Service (1 cr)
I T, NH 213, Slater

9 Orientation in Funeral Service (1 cr)
I Th, NH 213, Thorsell

14 Mortuary Law (3 cr)
I MWF, JohH 122, Grayson

51 Anatomy (3 cr, †51-52; prereq Zool 3 or 15, Phsl 4)
Lect V TTh, JacH 304, Buckman
Lab VI-VII TTh, JacH 301, 302, 303

54 Pathology (3 cr, †53-54; prereq 53)
II MWF, JacH 104, Swallen

57 Embalming Theory, Practice (3 cr, †56-57-58; prereq 56)
III MWF, JacH 304, Thorsell•

59 Public Health, Minnesota Law, Regulations (2 cr; prereq △)
VI TTh, Z 313, Larson

61 Funeral Mgt (2 cr; prereq 11)
III TTh, JohH 105, Slater, Koschig

63 Business Methods (2 cr; prereq Econ 24)
II TTh, VH 211, Lund

64 Psychology of Funeral Service (2 cr; prereq GC 41 or Psy 1-2)
VII MW, JacH 304, Thorsell

70 Chemistry for Embalmers (3 cr, †70-71; prereq InCh 2)
IV MTTh, C 111, King

NAVAL SCIENCE (Nav)

12 Sea Power (3 cr)
—1, Lect III MWF, A 205, McCabe
—2, Lect IV MWF, A 205
—1, Lab III TTh, A 205
—2, Lab IV TTh, A 205

22 Naval Weapons (3 cr)
—1, Drill III Th, A 202
—2, Drill IV Th, A 202
—1, Lect III MWF, A 202, Laing
—2, Lect IV MWF, A 202
—1, Lab III T, A 202
—2, Lab IV T, A 202

52 Naval Engineering: Introd to Navigation (3 cr)
—1, Drill IV T, A 12A
—2, Drill VI T, A 12A
—1, Lect VI MWF, A 12A, Loberger
—2, Lect VII MWF, A 12A
—1, Lab I T, A 12A
—2, Lab II T, A 12A

55 Evolution of the Art of War II (3 cr)
Drill VI Th, A 205
Lect VI MWF, A 205, Meyer
Lab VI T, A 205

58 Naval Accounting: Basic Supply Afloat (3 cr)
Drill VI Th, A 202
Lect VI MWF, A 202, Donnelly
Lab VI T, A 202

62 Naval Operations: Leadership (3 cr)
—1, Drill VII T, A 12A
—2, Drill VIII T, A 12A
—1, Lect III MWF, A 12A, Simmering
—2, Lect V MWF, A 12A
—1, Lab III T, A 12A
—2, Lab V T, A 12A

65 Amphibious Warfare II (3 cr)
Drill VII Th, A 205
Lect VII MWF, A 205, Meyer
Lab VII T, A 205

68 Ships Store Afloat: Leadership (3 cr)
Drill V Th, A 202
Lect V MWF, A 202, Donnelly
Lab V T, A 202

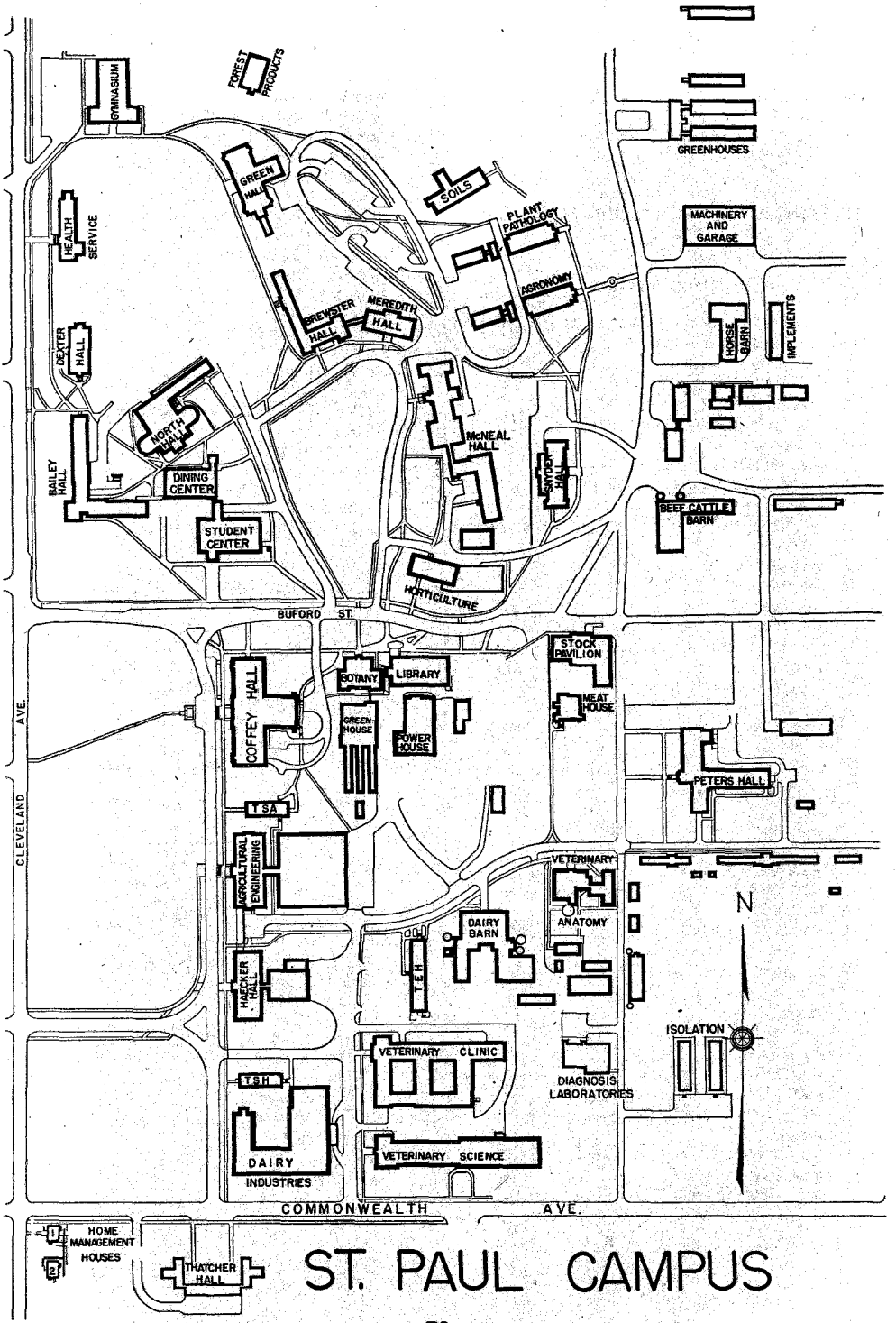
PHYSICAL EDUCATION FOR MEN (PEM)

Nonprofessional

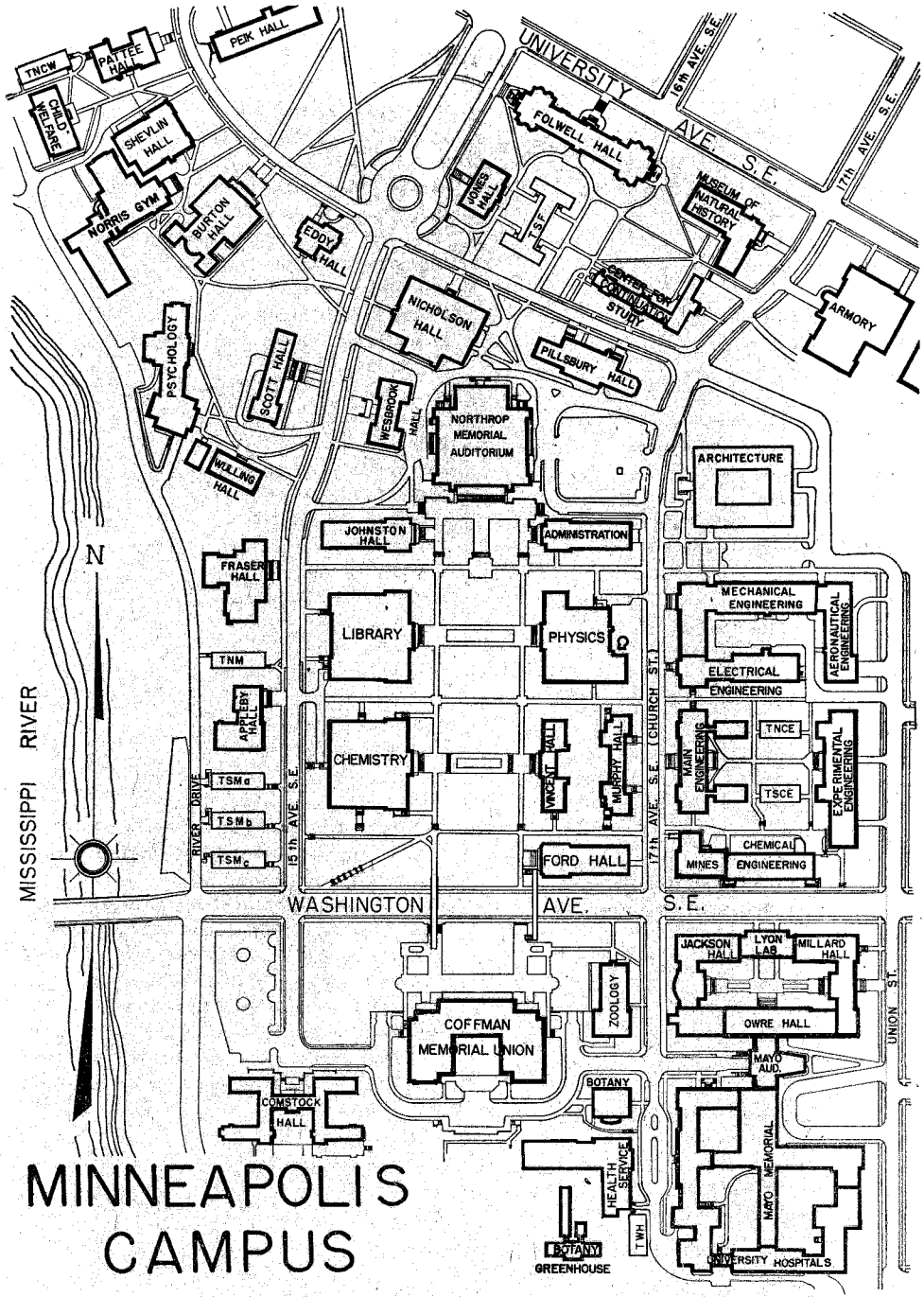
All classes meet the first day in CH Gymnasium

1B Sports Education (1 cr)
Adapted Activities
—1, III MWF, StadS, Osell
—2, IV MWF, StadS, Osell
—3, VIII MWF, StadS, Osell
Archery
—4, III MWF, FieldHse, Gostick
—5, 9:00-9:50 MWF, Gy 100 **(StP Campus)** McDonnell
—6, 10:00-10:50 MWF, Gy 100 **(StP Campus)** McDonnell
Badminton, Bgn
—7, III MWF, CH Gym, MacLeod
Basketball
—8, II MWF, CH Gym, Novak
—9, VII MWF, CH Gym, Daly
Bowling, Bgn
—10, I MWF, CMU, Kulbitski
—11, II MWF, CMU, Lewis
—12, 10:00-10:50 TTh, StCen **(StP Campus)** 1 hr ar, McDonnell
—13, 11:00-11:50 TTh, StCen **(StP Campus)** 1 hr ar, McDonnell
Golf
—14, VI MWF, StadS, Bolstad
—15, VII MWF, StadS, Bolstad
—16, II TTh, StadS, 1 hr ar, Bolstad
—17, III TTh, StadS, 1 hr ar, Bolstad
Handball
—18, 2:00-2:50 TTh, Gy 100 **(StP Campus)** 1 hr ar, Chopp
Handball-Paddleball
—19, IV MWF, StadN, Gostick
Skating, Bgn
—20, VI MWF, WmsA, Novak
Swimming, Bgn
—21, II MWF, CH Pool, Boyce
—22, VII MWF, CH Pool, Thorpe
—23, II-III T, II Th, CH Pool, Boyce
Tennis
—24, VI MWF, CH Gym, Lewis
Volleyball
—25, VI TTh, CH Gym, 1 hr ar, Novak
Weight Lifting
—26, VI MWF, CH Weight Room, MacLeod
Freshman Basketball
—27, Ar, Reed
Freshman Gymnastics
—28, Ar, Piper
Freshman Ice Hockey
—29, Ar, Ryman
Freshman Swimming
—30, Ar, Heusner
Freshman Track
—31, Ar, Kelly
Freshman Wrestling
—32, Ar, Johnson

2B Sports Education (1 cr)
Badminton, Adv
—1, IV MWF, CH Gym, MacLeod
Body Building
—2, VIII MWF, StadS, Osell
Ballroom Dancing
—3, IV TTh, NGW
—4, VII TTh, NGW
Square-Folk Dancing
—5, II TTh, NGW
Golf
—6, 11:00-11:50 MWF, Gy 100 **(StP Campus)** McDonnell
Gymnastics
—7, VI MWF, App Gym, Daly
Life Saving
—8, III MWF, CH Pool, Boyce
Squash Racquets
—9, V MWF, StadN, Gostick
Swimming, Bgn-Interm
—10, 2:00-2:50 MWF, Gy Pool **(StP Campus)** Chopp
—11, 3:00-3:50 MWF, Gy Pool **(StP Campus)** Chopp
Swimming, Interm
—12, II T, II-III Th, CH Pool, Boyce
—13, VI MWF, CH Pool, Thorpe
—14, VI T, VI-VII Th, CH Pool, Thorpe
—15, VI-VII T, VI Th, CH Pool, Thorpe
Trampoline
—16, V MWF, App Gym, Daly
Varsity Basketball
—17, Ar, Kundla
Varsity Gymnastics
—18, Ar, Piper
Varsity Ice Hockey
—19, Ar, Mariucci
Varsity Swimming
—20, Ar, Heusner
Varsity Track
—21, Ar, Kelly
Varsity Wrestling
—22, Ar, Johnson



ST. PAUL CAMPUS



MINNEAPOLIS CAMPUS

BUILDING ABBREVIATIONS

A, Armory
AE, Aeronautical Engineering
AgBot (StP), Agricultural Botany
AgEng (StP), Agricultural Engineering
Agr (StP), Agronomy
AH, Appleby Hall
Arch, Architecture
Bo, Botany
BoG, Botany Greenhouse
Bu, Burton Hall
C, Chemistry
CH, Cooke Hall
ChE, Chemical Engineering
CMU, Coffman Memorial Union
CofH (StP), Coffey Hall
CW, Child Welfare
DCB (StP), Dairy Cattle Barn
DI (StP), Dairy Industries
E, Main Engineering
EdH, Eddy Hall
EE, Electrical Engineering
Ex, Experimental Engineering
FieldHse, Fieldhouse
FP (StP), Forest Products
FolH, Folwell Hall
ForH, Ford Hall
FraH, Fraser Hall
GH (StP), Green Hall
Gy (StP), Gymnasium
HH (StP), Haecker Hall
HL, Hydraulic Lab (Hennepin Island)
HolB, Holman Bldg (2035 Univ Ave)
Hosp, University Hospitals
Hr (StP), Horticulture
HS, Health Service
J, Jones Hall
JacH, Jackson Hall
JohH, Johnston Hall
Lib, Walter Library
LsPav (StP), Livestock Pavilion
LyonL, Lyon Laboratories
Mayo, Mayo Memorial
McNH (StP), McNeal Hall
ME, Mechanical Engineering
MeH (StP), Meredith Hall
MEx, Mines Experiment Station
MH, Millard Hall
MinMet, Mines and Metallurgy
MMA, Mayo Memorial Auditorium
MNH, Museum of Natural History
MSh (StP), Meat Shop
MurH, Murphy Hall
MusEd, Music Education
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
Owre, Owre Hall
P, Pillsbury Hall
PeikG, Peik Hall Gymnasium
PeikH, Peik Hall
PetH (StP), Peters Hall
Ph, Physics
PoH, Powell Hall
PP (StP), Plant Pathology
Psy, Psychology
Pt, Pattee Hall
SBH, State Board of Health
ScH, Scott Hall
ShH, Shevlin Hall
SnH (StP), Snyder Hall
So (StP), Soils
Stad, Stadium
TEH (StP), Temporary, East of Haecker Hall
TNCE, Temporary, North Court of Engineering
TNCW, Temporary, North of Child Welfare
TNM, Temporary, North of Mines (Appleby Hall)
TSCE, Temporary, South Court of Engineering
TSF, Temporary, South of Folwell
TSH (StP), Temporary, South of Haecker Hall
VCHH, Variety Club Heart Hospital
VetA (StP), Veterinary Anatomy
VetC (StP), Veterinary Clinic
VetS (StP), Veterinary Science
VH, Vincent Hall
WeH, Wesbrook Hall
WmsA, William Arena
WuH, Wulling Hall
Z, Zoology

DIRECTORY OF DEPARTMENTAL OFFICES

Admissions and Records, Office of:
Minneapolis Campus 105Adm
St. Paul Campus 220CofH
Aeronautical Engineering 107AE
Agricultural Biochemistry 214SnH
Agricultural Economics 303HH
Agricultural Education 205Hr
Agricultural Engineering 200AgEng
Agricultural Journalism 107CofH
Agronomy and Plant Genetics 303Agr
Air Science 3A
American Studies 101TSF
Anatomy 201JacH
Anesthesiology C596Mayo
Animal Husbandry 122PetH
Anthropology 325ForH
Architecture 110Arch
Art 108J
Art Education 106J
Astronomy 358Ph
Bacteriology 1060Mayo
Biology 104Z
Biophysics 48Ph
Botany 8Bo
Business Administration 109VH
Cancer Biology 274LyonL
Chemical Engineering 151ChE
Chemistry 139C
Child Development and Welfare 103CW
Civil Engineering 123E
Classics 311FolH
Dairy Husbandry 202HH
Dairy Industries 225DI
Dental Assisting ..... 360A Owre
Dental Hygiene ..... 360B Owre
Dentistry ..... 136 Owre
Economics 221VH
Electrical Engineering 139EE
Engineering Graphics 142ME
English 219FolH
Entomology and Economic Zoology 300CofH
Family Study Center 400eForH
Food Technology 214SnH
Forestry 110GH
General College 106NH
General Education 204Bu
Geography 290aForH
Geology and Mineralogy 108P
Geophysics 207MinMet
German 210FolH
History 200ForH
Home Economics 200McNH
Home Economics Education 117McNH
Horticulture 111Hr
Industrial Education 103TNCW
Interdisciplinary Studies In General Education 225JohH
Journalism 111MurH
Laboratory Medicine C205Mayo
Law 125FraH
Library 3Lib
Linguistics and Philology 311FolH
Mathematics (IT) 114E
Mathematics (SLA) 119FolH
Mechanical Engineering 125ME
Medicine C309Mayo
Metallurgy 403MinMet
Military Science 108A
Mines and Metallurgy 112MinMet
Mortuary Science 155NH
Music 107ScH
Music Education 214ScH
Naval Science 203A
Nursing ..... 125 Owre
Obstetrics and Gynecology A616Mayo
Ophthalmology A684Mayo
Otolaryngology A605Mayo
Pathology 110JacH
Pediatrics 1403Mayo
Pharmacology 105MH
Pharmacy 115AH
Philosophy 100WeH
Physical Education for Men 111CH
Physical Education for Women 101NGW
Physical Medicine 860Mayo
Physics 148Ph
Physiological Chemistry 227MH
Physiology 424MH
Plant Pathology and Agricultural Botany 304PP
Political Science 395ForH
Poultry Husbandry 205PetH
Psychiatry and Neurology B692Mayo
Psychology 112Psy
Public Health 1325Mayo
Radiology B238Mayo
Rhetoric 230AgEng
Romance Languages 200FolH
Scandinavian 13FolH
Slavic and Oriental Languages 322FolH
Social Work 400ForH
Sociology 400ForH
Soils 125So
Speech 309FolH
Student Counseling Bureau 101EdH
Surgery B518Mayo
Veterinary Medicine 301VetS
Zoology 108Z

FINAL EXAMINATIONS

Hours and days—The time of your examination is based on the hours and days the class is regularly scheduled, and the college under which the course is listed in the *Class Schedule*. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine . . . or to courses numbered over 200 which have no regularly scheduled classrooms.

In determining your proper final examination time from this schedule:

- Go by the lecture hours rather than the laboratory or recitation hours.
- Follow the MWF sequence if your class meets four or more days a week.
- Use the first full class hour if your class meets for more than one continuous hour.
- Use the common examination hour if your course is listed on the following page.

Classes meeting I-II Hour Saturday only will be examined 8:00-10:00 S March 11.

Classes meeting III-IV Hour Saturday only will be examined 10:30-12:30 S March 11.

Courses Listed Under Business Administration, General College, and Institute of Technology

Class Hours					Class Hours				
I	MWF	3:45- 5:45	S	Mar 11*	VI	MWF	1:30- 3:30	F	Mar 10*
I	TThS	10:45-12:45	W	Mar 15	VI	TTh	4:00- 6:00	F	Mar 10
II	MWF	1:30- 3:30	T	Mar 14*	VII	MWF	8:00-10:00	T	Mar 14*
II	TThS	1:30- 3:30	Th	Mar 16	VII	TTh	10:30-12:30	T	Mar 14
III	MWF	8:00-10:00	Th	Mar 16*	VIII	MWF	7:00- 9:00 pm	F	Mar 10*
III	TThS	10:45-12:45	M	Mar 13	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	10:15-12:15	S	Mar 11*	IX				
IV	TThS	1:30- 3:30	W	Mar 15	X				
V	MWF	1:30- 3:30	M	Mar 13*					
V	TTh	4:00- 6:00	M	Mar 13					

Courses Listed Under Science, Literature, and the Arts, Education, Medical Sciences#, Dentistry#, and Unattached Departments**

Class Hours					Class Hours				
I	MWF	1:30- 3:30	S	Mar 11*	VI	MWF	1:30- 3:30	F	Mar 10*
I	TThS	10:45-12:45	W	Mar 15	VI	TTh	4:00- 6:00	F	Mar 10
II	MWF	3:45- 5:45	T	Mar 14*	VII	MWF	8:00-10:00	T	Mar 14*
II	TThS	1:30- 3:30	Th	Mar 16	VII	TTh	10:30-12:30	T	Mar 14
III	MWF	10:15-12:15	Th	Mar 16*	VIII	MWF	7:00- 9:00 pm	F	Mar 10*
III	TThS	10:45-12:45	M	Mar 13	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:00-10:00	S	Mar 11*	IX				
IV	TThS	1:30- 3:30	W	Mar 15	X				
V	MWF	1:30- 3:30	M	Mar 13*					
V	TTh	4:00- 6:00	M	Mar 13					

Courses Listed Under Agriculture, Forestry, and Home Economics

Class Hours					Class Hours				
I	MWF	1:30- 3:30	S	Mar 11*	VI	MWF	1:30- 3:30	F	Mar 10*
I	TThS	10:45-12:45	W	Mar 15	VI	TTh	4:00- 6:00	F	Mar 10
II	MWF	1:30- 3:30	T	Mar 14*	VII	MWF	8:00-10:00	T	Mar 14*
II	TThS	1:30- 3:30	Th	Mar 16	VII	TTh	10:30-12:30	T	Mar 14
III	MWF	8:30-10:30	Th	Mar 16*	VIII	MWF	7:00- 9:00 pm	F	Mar 10*
III	TThS	10:45-12:45	M	Mar 13	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:30-10:30	S	Mar 11*	IX				
IV	TThS	1:30- 3:30	W	Mar 15	X				
V	MWF	1:30- 3:30	M	Mar 13*					
V	TTh	4:00- 6:00	M	Mar 13					

* Classes meeting four or more hours per week may give three-hour examinations provided the instructor notifies the Room Scheduling Office of his intention to do this. Three-hour examinations will be scheduled from 8:30-11:30 or 1:30-4:30 on the respective morning or afternoon the examination would otherwise be given (6:30-9:30 p.m. for VIII Hour classes).

Courses offered primarily to students other than medical and dental students.

** Courses listed under Air Science, Military Science, Mortuary Science, Naval Science, and nonprofessional Physical Education for Men.

Common Examinations—All sections of the following courses are examined together at time indicated.

BA 5—7:00-9:00 **pm** T ..... Mar 14
BA 24, 25, 26—10:45-12:45 F ..... Mar 10
Biol 2, 2A—7:00-9:00 **pm** M ..... Mar 13
Comm 1, 2—4:00-6:00 W ..... Mar 15
Comp X—7:00-9:00 **pm** T ..... Mar 14
Econ 1, 1H, 2—4:00-6:00 Th ..... Mar 16
EG 14—10:45-12:45 W ..... Mar 15
EG 15—10:45-12:45 M ..... Mar 13
EG 16—1:30-3:30 Th ..... Mar 16
Engl B, 2A* .....
Engl 1B, 2B—4:00-6:00 W ..... Mar 15
Fren 1C, 2B, 2C—7:30-10:30 M ..... Mar 13
GC 10A—8:15-10:15 M ..... Mar 13
GC 32A—10:45-12:45 F ..... Mar 10
Ger 1C, 2C, 4—8:15-10:15 M ..... Mar 13
ITM 11, 26A—7:30-10:30 M ..... Mar 13
ITM 12, 24A—7:30-10:30 W ..... Mar 15
ITM 13A, 25A, 25H—7:30-10:30 F ..... Mar 10
Math X, T, 55—8:15-10:15 F ..... Mar 10
Math H, 10, 10H, 40, 40H, 53, 54—7:30-10:30 W ..... Mar 15
ME 30, 31—10:45-12:45 F ..... Mar 10
MM 27, 28, 29—7:30-10:30 F ..... Mar 10
MM 40, 41—7:30-10:30 W ..... Mar 15
Psy 4, 5—7:00-9:00 **pm** W ..... Mar 15
Span 1C, 2C—7:30-10:30 M ..... Mar 13

Rooms—Examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Instructors note: Requests for special final examination rooms are submitted to the Office of Room Assignments and Scheduling by your department office on Form A123. These rooms will be scheduled beginning February 13.

Conflicts and Three Examinations in One Day—Report conflicts with examinations in other courses and situations involving three examinations in one day to your college office.

Changes in Final Examination Hours—All requests for adjustment of final examination hours should be made by March 3 to permit publication and orderly consideration of hardships. Additional common examinations may be requested on Form A163, which is available in department offices. The same form is used to request exceptions to official examination hours. Please note Regulations Regarding Examinations below.

University Schedule Committee Regulations Regarding Examinations

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the chairman of the University Scheduling Committee. This prohibition precludes also moving a final examination from a scheduled time to the last or earlier meetings of the class, except laboratory final examinations which cannot be held in accordance with the regular final examination schedule.

2. Instructors requesting any variation from the official final examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one day because of the change in hours being requested.

3. No variations from the University final examination schedule will be considered official until published in the Official Daily Bulletin.

4. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.

Recommended: In order to give students an opportunity for thorough review prior to final examinations, instructors are requested not to schedule quizzes or term papers to be due during the last week of class.

GRADES

Academic Staff—Grades are due in the Office of Admissions and Records within 90 hours after the examination. Winter quarter grades are due beginning March 14 with last day examination grades due by noon, Monday, March 20. Messenger service is provided. Please call Extension 6658 when grades are ready. Do not put reports in campus mail.

Students—Your Winter Quarter grade reports will be available Friday, March 24 as follows:

Agriculture, Forestry, Home Economics; Veterinary Medicine—in post office boxes, St. Paul Campus.

Business Administration; Education; General College; Graduate School; Institute of Technology; Medical School; Science, Literature, and the Arts; University College—at Admissions and Records Office.

Other Colleges—at the college offices except for Law grades which will not be reported until the end of the year.

On Monday, March 27, SLA grades will be in the Library basement study room and IT grades will be in the Mechanical Engineering lobby.

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* Follow regular final examination schedule using sectional rather than lecture hours.

GRADING SYSTEM

1. There shall be four permanent grades, A (highest), B, C, and D (lowest), which shall be acceptable for the completion of a single course.

2. There shall be a permanent grade of F (failure) given when a student does not complete successfully the work of a course.

3. There shall be a temporary grade of I (incomplete) which may be assigned when there is not sufficient information immediately available to permit the assignment of a permanent grade. This would be the case if the student has not done all the work of the course or if the instructor does not know why a student, officially registered for his course, his not appeared or has left. If the instructor is able to ascertain that the student has no adequate excuse or if the student attended beyond the sixth week and was failing, F is the appropriate grade.

   An I which is not turned into a permanent grade or into a W (official cancellation with approval of the student's college) by the end of the sixth week of the next regular quarter of attendance shall become an F. (This does not apply to students in the Graduate School or to students in a Master's degree program in undergraduate colleges; their I grades remain until changed by the instructors to some other grade.) Permission to complete the work must be obtained from the instructor. He may set a makeup deadline of less than 6 weeks.

   An extension of time may be permitted for removal of I grades upon recommendation of the instructor concerned and with approval of the Scholastic Committee of the college in which the student is registered. If the petition is presented after the end of the sixth week of the next quarter of residence, a restoration of the mark of I and the completion of the required work would be considered in the nature of a special examination for which the special examination fee would be required.

4. There shall be a symbol W to indicate official cancellation from a course without grade. This shall be assigned in all cases of official concellation during the first 6 weeks of classes irrespective of the student's standing. Whether cancellation is permitted is within the authority of the student's college to determine. After 6 weeks, W shall be posted only if the student is not failing at the time of official cancellation. W is a registration symbol, not a grade, and shall be posted by the Recorder on the basis of the student's registration activity as approved by the student's college.

5. A student who cancels officially or otherwise leaves a class after the sixth week of classes and is failing at the time shall receive an F.

6. There shall be a symbol X which may be reported in continuation courses in which a student is permitted to continue but in which a grade cannot usually be determined until the sequence is completed. The instructor shall submit a grade for each X when the student has completed the entire sequence.

7. In courses numbered 200 and higher, the permanent grade S (satisfactory) may be used to indicate satisfactory work for graduate students. In calculating grade point averages, it counts as a B.

8. In the Doctor of Medicine program, the permanent grade P (pass) may be used to indicate satisfactory work for Doctor of Medicine candidates. The student's standing will be calculated using more detailed evaluations available in the college office.

9. There shall be a registration symbol V (visitor) to indicate registration as an auditor or visitor.

10. There shall be a symbol T (transferred) indicating credits transferred from another institution, or from one college to another within the University when a revaluation is required. It shall be posted as a preceding supplement to the original grade.

11. For purposes of determining scholarship averages, grade points shall be assigned as follows:

Each credit of A	4 grade points
Each credit of B	3 grade points
Each credit of C	2 grade points
Each credit of D	1 grade point
Each credit of F	0 grade points

   A student's scholastic average—or grade point average—shall be the sum of grade points divided by the sum of credits passed and failed. In general, all credits must enter into the grade point average. If a course is repeated, usually both grades should enter into the computation of the grade point average. However, the faculty of a school or college may determine which credits and grade points are to be included in the average.

12. Any college or school may set special scholastic standards or other standards as a condition for registration in particular courses of study, for placing students on probation, for admission to the college or school, for promotion, for honors, for continued residence in the college or school, or for degrees, etc.

13. The official grade point average shall be calculated in accordance with paragraph 11 above regardless of when grades were earned.

COURSE FEES

All fees are per quarter unless otherwise indicated.

Students taking the following courses will pay course fees in addition to tuition as follows:

Civil Engineering (Summer)
$35.00 per term—23

Composition (SLA)
*$21.00—X Preparatory Composition

English (Duluth and Morris)
*$21.00—X Preparatory English

Itasca Biological Station (Summer)
$10.00—Laboratory fee
*$25.00—Research Table fee

Mathematics (IT and Morris)
*$21.00—8 Solid Geometry

Mathematics (SLA and Morris)
*$35.00—X Preparatory Mathematics

Modern Language Institute (Summer)
$40.00 per term—French (22, 58, 109); or German (22, 66, 107); or Spanish (22, 58, 109)

Music
$35.00 for 1 half-hour individual lesson per week; $70.00 for 2 half-hour lessons or 1 hour lesson per week—A, D (no cr) ¶¶
$35.00 (2 cr) for 1 half-hour individual lesson per week; $70.00 (4 cr) for 2 half-hour lessons or 1 hour lesson per week—11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 100 ¶¶
$50.00—for 2 half-hour individual lessons per week or 1 hour lesson per week—13B (Summer)
$25.00—60B, 61B, 62B (Summer)
$70.00—for 1 hour lesson per week—204 ¶¶
$10.00—Piano for Children, ages 6-16

Music Education
225E—Same as Music 11-27, 100 ¶¶

Physical Education (men)
Towel and locker fee for students using PE facilities for activity, $2.50 per quarter payable at department
Uniforms (optional for class of recreation activity) $2.00 per quarter payable at department

Physical Education (women)
$3.25 (maximum $6.50 per quarter—All nonprofessional courses except Horseback Riding, 20A, 20B, 20C, 21A, 21B, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 40D, 41A, 41B, 42A, 45, 54, 76, 87, 88

Physical Education (Duluth)
$1.25—1 through 8, 10 through 44, 46 through 49
$5.00—9 (Bowling)

Public Health
$100.00—169, 190
$185.50—231, 232
*$200.00—230 (September field course)

Rhetoric (AFHE)
*$7.00 per credit for more than 6 credits in Rhet 1

SPECIAL FEES

Supplement to *General Information Bulletin.*

English for foreign students
$15.00 per qtr—required of foreign students needing special instruction in English

Music Practice Room
$1.00 per qtr for one, $2.00 for two, 50 cents for each addtl hr per week—all instruments except organ
.20 per hr—small organ
.40 per hr—large organ

Record Service Fee
$1.00—Required of all new students. This fee provides three certified copies of student records. When more than three copies of records are requested, a charge of $1 will be made for each additional copy.

Speech and Hearing Clinic—Students
$5.00 per qtr—spec clinical treatment

Speech and Hearing Clinic—Nonstudents
Articulatory cases, per 10 weeks—$15.00 for one, $25.00 for two, $30.00 for three, $35.00 for four, $40.00 for five lessons per week.
Stuttering, per session—$100.00 for full time remediation

DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry cards are $10; Agricultural Biochemistry, Art, Pharmacy, and Physiological Chemistry cards are $5.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be refunded at the end of the course.

You must present your deposit card to be assigned a laboratory desk. Veterans (P.L. 346, 16, 894) will receive information from their instructor concerning deposit cards and laboratory assignments.

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* In lieu of tuition.

¶¶ Number of lessons are doubled per Summer Session term for courses listed in these sections.

COURSES TALLIED IN COLLEGE OFFICES

Aeronautical Engineering
All courses under 200—E 136

Agricultural Biochemistry
2—CofH 220

Agricultural Economics
1, 2 (lect and rec), 25—CofH 220

Agricultural Engineering
All courses under 200—E 136

Agronomy and Plant Genetics
1, 21, 121—CofH 220

Air Science
All courses—A 1

Analytical Chemistry
All courses under 200—E 136

Animal Husbandry
1, 37A—CofH 220

Anthropology
1A, 2A, 165, 171—JohH 210

Architecture
All courses under 200—E 136

Art
All courses under 193 *except* 1, 50, 57, 137, 177—JohH 210
24A, 61A—E 136

Art Education
17, 18, 19, 53, 84—Bu 206

Astronomy
20—JohH 210

Bacteriology
53—CofH 220 for AFHE, Mayo C205 for Med Tech, WuH 101 for Pharm, Owre 125 for Nurs, Mayo 1325 for PubH Nurs, Mayo 860 for PT, and JohH 210 for other students

Biology
2 (lect and lab), 2A (lect and lab)—CofH 220 for AFHE, Owre 125 for Nurs, and JohH 210 for other students

Botany
12, 53, 119, 121—JohH 210

Business Administration
5, 25, 26—JohH 210
24—WuH 101 for Pharm, and JohH 210 for other students
All other courses under 200 *except* 32, 33, 36, 38, 195A—VH 107

Chemical Engineering
All courses under 200—E 136

Child Development and Welfare
80, 81—JohH 210

Civil Engineering
All courses under 200 (lect and lab for 19, 32, 52, 142, 170)—E 136

Communication
All courses—JohH 210

Curriculum and Instruction
60, 61, 62, 63, 64, 65, 66, 109, 110—Bu 206

Economics
1T, 2T—E 136
1—WuH 101 for Pharm, and JohH 210 for other students
2—JohH 210
All other courses under 200 *except* 190—VH 107 for BA, and JohH 210 for other students

Education
55A, 55B, 75A, 75B—Bu 206

Educational Psychology
116A, 142, 150, 151, 217A, 233, 253, 281, 282A—Bu 206

Electrical Engineering
All courses under 200—E 136

Engineering Graphics
All courses—E 136

English (SLA)
A, B, 1A, 1B, 2A, 2B—E 136 for IT, and JohH 210 for other students
11H, 21, 22, 38, 55, 56, 72, 73—JohH 210
85, 86—E 136

English Composition
All courses under 200—JohH 210

Entomology and Economic Zoology
52, 56, 63, 126, 145, 152, 259—CofH 220

Family Life
All courses—JohH 210

Forestry
76, 111, 124, 199—CofH 220

French
1C, 2B, 2C, 3C, 4, 54—JohH 210

General College
7A, 7C, 10A, 10B, 26A—CofH 220 for AFHE, and NH 106 for other students
All other courses—NH 106

General Engineering
All courses—E 136

Geography
1, 4, 41, 70, 138—JohH 210

Geology and Mineralogy
A, 1—CofH 220 for AFHE, and JohH 210 for other students
B, 2—JohH 210
6—E 136

Geophysics
All courses under 200—E 136

German
1C, 2A, 2B, 2C, 3C, 4, 5, 56, 57, 58, 62, 65, 71, 74, 77, 92, 95—JohH 210
51—E 136 for IT, and JohH 210 for other students

History
1, 1H, 2, 2H, 5, 12, 20, 20H, 21, 21H, 54, 71, 98, —JohH 210

History and Philosophy of Education
180—Bu 206

Home Economics
1, 20, 21, 50, 120—CofH 220 for AFHE, and JohH 210 for other students
All other courses under 200 *except* 115, 123, 141—CofH 220

Humanities
1A, 2A, 24—CofH 220
All other courses—JohH 210

Hydromechanics
All courses under 200—E 136

Industrial Education
1—Bu 206
3, 8, 12, 15, 20, 50, 55—TNCW 103

Industrial Engineering
All courses under 200—E 136

Inorganic Chemistry
4—CofH 220 for AFHE, Owre 125 for Nurs, E 136 for IT, and JohH 210 for other students
5—CofH 220 for AFHE, and JohH 210 for other students
25, 25H—WuH 101 for Pharm, E 136 for IT, and JohH 210 for other students
All other courses under 200—E 136

Italian
2—JohH 210

Journalism
11, 12, 13, 14, 18, 41, 53, 55, 56, 59, 73, 74, 79, 85, 141, 161, 162, 164—CofH 220 for AFHE and JohH 210 for other students

Mathematics (IT)
All courses under 200—E 136

Mathematics (SLA)
X, H, T, 10, 40—CofH 220 for AFHE, and JohH 2 0 for other students
5, 10H, 20, 21, 40H, 40A, 53, 54, 55, 59, 62, 100B, 102B, 107—JohH 210

Mechanical Engineering
All courses under 200—E 136

Mechanics and Materials
All courses under 200—E 136

Mechanized Agriculture
2, 3, 4, 7, 23, 24, 25, 39, 45, 45A—CofH 220

Metallurgy
All courses under 200—E 136

Metallurgical Engineering
All courses under 200—E 136

Military Science
All courses—A 106

Mining Engineering
All courses under 200—E 136

Mortuary Science
All courses—NH 150

Music
1, 1T, 2T, 4T, 5T, 7B, 11B, 11H, 12C, 35, 43, 50—JohH 210

Music Education
4, 5, 6, 50B, 51, 52—Bu 206

Natural Science
All courses *except* 172—JohH 210

Naval Science
All courses—A 203

Organic Chemistry
61—JohH 210
62—WuH 101 for Pharm, and E 136 for other students
All other courses under 200—E 136

Orientation
1—CofH 220

Personal Orientation
All courses—JohH 210

Petroleum Engineering
All courses under 200—E 136

Philosophy
1, 2, 3, 10, 51—E 136 for IT, and JohH 210 for other students

Physical Chemistry
108—JohH 210
All other courses under 200—E 136

Physical Education for Men
1B (1, 2, 3, 4, 7, 8, 9, 10, 11, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32)—JohH 210
1B (secs 5, 6, 12, 13, 18)—CofH 220
2B (secs 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22)—JohH 210
2B (secs 6, 10, 11)—CofH 220
4A, 5B, 52—Bu 206

Physical Education for Women
B (non-professional) (secs 6, 21, 23, 45)—CofH 220, and JohH 210 for other sections
25, 45, 70, 91—Bu 206

Physics
8, 11, 12, 14, 50, 50H, 102, 121, 146—E 136

Plant Pathology and Botany
51, 120, 214—CofH 220

Political Science
A, 1—JohH 210

Psychology
1, 2—CofH 220 for AFHE, E 136 for IT, Owre 125 for Nurs, and JohH 210 for other students
4, 5 (lect and lab), 5H, 130, 201, 222, 225—JohH 210

Public Health
2, 121—JohH 210
52—CofH 220

Rhetoric
22, 47, 51, 52, 54, 56, 91, 151—CofH 220

Russian
2—JohH 210

Social Science
1, 2, 3—E 136 for IT, and JohH 210 for other students
All other courses—JohH 210

Social Work
266, 269—JohH 210

Sociology
1—CofH 220 for AFHE, Owre 106 for DH, E 136 for IT, and JohH 210 for other students
2, 2H—E 136 for IT, and JohH 210 for other students
3, 45, 53—JohH 210

Soils
1, 20, 129—CofH 220

Spanish
1C, 2A, 2C, 3C, 54—JohH 210

Speech and Theater Arts
5, 6, 31, 32, 33, 34, 51, 56, 65, 66, 67, 69, 75, 78, 81, 82, 83, 91, 102, 106, 112, 131, 136, 141, 162, 172—JohH 210

Zoology
52, 56, 57, 59, 81, 126, 145, 160, 243, 259—JohH 210

CALENDAR

December

26 Holiday (Sunday, December 25, Christmas Day)
27 Winter quarter fees due for students in residence fall quarter
29-30 Registration for new students

January

2 Holiday (Sunday, January 1, New Year's Day)
3 Registration continues. Fees due for new students in all undergraduate colleges
Winter quarter classes begin
6 Last day for registration and payment of fees for the Graduate School, and for teachers in service

JANUARY

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

February

2 Senate meeting, 3:30 p.m.
20-26 University of Minnesota Week
22 Holiday (Washington's Birthday)
23 Charter Day Convocation, 11:30 a.m., IV hour classes excused

March

9 Senate meeting, 3:30 p.m.
10-16 Final examination period
16 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
16 Commencement, 8:30 p.m.
18 Winter quarter closes

MARCH

			1	2	3	4
5	6	7	8	9	10	11
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Physiological Chemistry, 32
Physiology, 32
Plant Pathology and Botany, 11
Political Science, 52
Portuguese, 55
Poultry Husbandry, 11
Practical Nursing, 30
Psychiatry and Neurology, 33
Psychology, 53
Public Health, 33

Radiology, 35
Rhetoric, 12
Romance Languages, 54
Russian, 56

Sanskrit, 40
Scandinavian, 56
Slavic, 56
Social Science, 48
Social Work, 56
Sociology, 57
Soils, 12
Spanish, 55
Speech and Theater Arts, 58
Statistics, 59
Surgery, 35

Veterinary Medicine, 72

Zoology, 59

REGISTRATION DATES

Students in attendance fall quarter must register during the period set for their college and pay fees by December 27.

Students returning to the University who were not in attendance fall quarter may register during the period set for their college or on December 29, 30, January 3 with fees due January 3.

Orientation and registration for new students will be on December 29 and 30 with fees due January 3.

Agriculture, Forestry, Home Economics (220 Coffey)
Seniors, November 21, 22
Juniors, November 23, 28
Sophomores, November 29, 30, December 1
Freshmen, Special Students, December 2-8

Business Administration (107 Vincent)
Issue of Material, November 21 (8 a.m.-12, 1:30-4:30)
Tally, November 22, 23

Dental Hygiene (106 Owre)
November 21, 22, 23

***Dentistry** (136 Owre)
December 29, 30, January 3

Education (206 Burton)
November 21-December 8

General College (106 Nicholson)
Saturday, November 19 (8 a.m.-1 p.m.)
Students registering this day will turn in material to Admissions and Records on Monday, November 21
Wednesday, November 23 (8 a.m.-5 p.m.; classes will not meet)
November 28-December 2 (classes meet as usual)
Returning students: December 5-16

Graduate School (316 Johnston)
November 21-January 6 (Fees due January 6)

***Law** (125 Fraser)
December 29, 30, January 3

Medical Technology (C-205 Mayo)
November 21-December 2

***Medicine** (1360 Mayo)
December 29, 30, January 3

Mortuary Science (156 Nicholson)
November 21, 22, 23

Nursing (125 Owre)
November 21-December 2

Occupational Therapy (860 Mayo)
November 21-December 2

Pharmacy (101 Wulling)
November 21-December 2

Physical Therapy (860 Mayo)
November 21-December 2

Public Health (1325 Mayo)
November 21-December 8

Science, Literature, and the Arts
Lower Division (216B Johnston)
Upper Division (223 Johnston)
Special Students (216 or 225 Johnston)
Issue of material starts November 17
Tally starts November 21
Students should complete registration by December 8 because advisers will not be available after that date.

Technology, Institute of
Engineering and Architecture (133 Main Engineering)
Chemistry (127 Chemistry)
Mines and Metallurgy (112 Mines and Metallurgy)
Physics (148 Physics)
November 21-December 1

University College (225 Johnston)
Dates same as for Science, Literature, and the Arts

***Veterinary Medicine** (220 Coffey)
December 29, 30, and January 3

Education and Graduate students taking Saturday classes only may also register on Saturday, January 7 at 206 Burton

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* Students in these colleges have normally already registered for the entire year.

University of Minnesota

CLASS SCHEDULE

Spring Quarter

1961

Minneapolis and St. Paul Campuses

including

- Registration instructions, page 2
- Final examination schedule, page 80
- Courses tallied in college offices, page 84
- Course fees, page 83
- Calendar, page 86

Every Student Is Held Accountable for Information Contained Herein and Should Save This Bulletin for Future Reference.

Courses Are Listed Under the Departments Which Offer Them. Consult Index on Page 87.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office.

Follow the instructions given you by your college. Registration dates for each college are listed on the back cover.

Step 2—Get class reservation cards for courses tallied in the college offices.

Courses which are tallied in college offices are listed on page 84.

Step 3—New students (who have not already done so) go to the University Health Service and make an appointment for your physical examination. Required of all undergraduate students taking 6 credits or more and of all graduate students except "teachers in service" taking less than 6 credits.

Step 4—Turn in your registration permit, class reservation cards, and approved registration blank at your record window in the Office of Admissions and Records to obtain statement of fees. New students, in addition, must present physical examination appointment slip (if required) and turn in University Relations mailing slips, Dean of Students information card, and religious census card.

Step 5—Pay your fees to the bursar.

Every fee statement must be receipted, even when no payment is required, before you are considered officially registered.

Fees for students in residence winter quarter in undergraduate colleges are due Thursday, March 16.

Fees for new students in undergraduate colleges are due Friday, March 24.

Fees for students in the Graduate School are due Thursday, March 30.

Change of registration—Have your "cancel-add" blank approved by your college office, get necessary class reservation cards for courses you are adding as in step 2 above, and present to your college window in the Office of Admissions and Records. You will get a supplementary fee statement or fee refund statement as necessary.

Withdrawal from the University—Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. All-University property such as library books, military, athletic or band equipment, laboratory material, locker keys or locks, athletic tickets, etc., must be turned in before you leave. P.L. 346, 16, and 894 veterans must also notify 102 Administration Building.

Accounts Paid by Various Agencies

If you have authorization for the University to bill a donor for your tuition and fees, you must have your fee statement approved at window 18 in the Office of Admissions and Records (or room 200 Coffey Hall, St. Paul Campus) and *receipted by the bursar.* Failure to have your fee statement receipted before the last date for payment will necessitate a "late fee."

Veterans and War Orphans

P.L. 550 veterans and P.L. 634 war orphans—You must register and pay fees like every other student. Your business with the Veterans Administration is separate, and you must attend to it on your own responsibility. The University assists you by certifying that your claims for payment are justified. You initiate this business at window 18 on the first floor of the Administration Building (or room 220 Coffey Hall, St. Paul Campus). Do the following:

Make application to the Veterans Administration for benefits on or before your first day of classes. You don't get paid unless you do apply. A Certificate of Education and Training comes to you from the Veterans Administration about a month after you apply. Turn this in as soon as you complete your registration at one of the above addresses.

If you are returning for another session, your previous training period under either law having been officially interrupted, you have to make out a re-entrance form to notify the Veterans Administration that you wish to return to training status. Do this at one of the above addresses.

Make a report of your attendance every month. During the first five days of each month, fill out the Certification of Attendance Form and turn it in at one of the above addresses. The Admissions and Records Office adds to this form a certification of the amount of work you are doing and sends it on to the Veterans Administration, which in turn sends you a check at your home address. If you want full benefits, take 14 credits per quarter as an undergraduate or 12 credits in the Graduate School.

P.L. 16, 346, and 894 veterans—Have your fee statement approved at window 18 in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), and then receipted by the bursar. Present the receipted statement and your course list to room 102 Administration Building to obtain an order for books and supplies.

Additional information and assistance with problems concerning any of the above laws may be obtained at room 102 Administration Building.

Graduate School Fees for Staff Members

All academic appointees giving 25 per cent or more of full time service and all 75 per cent time or more civil service appointees, when enrolled in the Graduate School, will pay tuition at the Graduate School resident rate, regardless of source of fund, resident status, or curriculum pursued. Similar staff members when enrolled in the final year of a Master's degree curriculum in an undergraduate college will pay tuition at the respective college resident rate. If you are a non-resident, entitled to resident fee privileges under these regulations, tell the fee statement clerk that you are a staff member when you turn in your approved registration blank at your college window in the Admissions and Records Office.

If You Are Graduating This Year

For the June Commencement, you must file a form called "Application for Degree" at the appropriate window in the Admissions and Records Office (or room 220 Coffey Hall, St. Paul Campus), preferably with your spring quarter registration material. A graduation fee of $10 is due April 24 for June graduation.

If you expect to graduate anytime within the year (through August 1962), file your formal Application for Degree now. Shortly thereafter you will receive a balance sheet which shows whatever requirements for the degree you still must complete.

Foreign Students

Your first action upon arriving at the University should be to show your passport at the Foreign Student Adviser's Office, 302 Eddy Hall. There you will be given full information about federal, state, and local regulations, and about housing, finance, health and personal problems. Following this, you register in the same manner as all other students.

HOW TO USE THIS BULLETIN

Bold face titles—You must obtain a class reservation card to enroll in courses which appear with **bold face** titles. Instructions on where to get these class reservation cards precede the index at the back of this bulletin.

Prerequisites—Before you can enroll in some courses, you must have completed or be concurrently enrolled in certain other courses or possess some particular qualification or class standing. These requirements are known as prerequisites. If no prerequisites are listed, there are none, except insofar as the course number indicates a class standing requirement.

Class standing requirements, unless otherwise noted, are indicated by the course number:

1-49 for freshmen and sophomores
50-99 for juniors, seniors, and fifth-year students
100-199 for juniors, seniors, fifth-year students, and graduate students
200 and over for graduate students only

A minimum of prerequisite information is shown. For example, when courses which must be taken in sequence are prerequisites, only the last course of the sequence is listed. A comma always means "and" while a semi-colon indicates that there are alternative prerequisites.

Example: prereq 2 or 5, Psy 1 (you must have had Psychology 1 plus either course 2 or 5)

Example: prereq C; or Comp 6 or Comm 3, 5 addtl cr; or 5 cr in 21-22-23 (you must have had either course C; or 5 credits in the same department plus either Composition 6 or Communication 3; or 5 credits from either course 21, course 22, or course 23)

When no departmental designation precedes the course number listed as a prerequisite, that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.

Work equivalent to a prerequisite course (having the same content) is ordinarily accepted in lieu of that prerequisite. You will also note that the instructor may, in some instances, waive prerequisites at his discretion. See your college bulletin for further information.

Symbols—The following symbols are used throughout this bulletin:

† To receive credit, all courses listed after the dagger must be completed.
‡ Students may enter any quarter.
§ No credit if credit received for equivalent course after the symbol.
¶ Means "concurrent registration in."
♯ Means "consent of instructor."
△ Means "consent of department or school offering the course."

Hours and days—Class hours are identified by Roman numerals and continue for 50 minutes after the beginning time shown below:

Hour	I	II	III	IV	V	VI	VII	VIII
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00

A class listed I-III TTh meets the first through the third hours Tuesdays and Thursdays, the hyphen always indicating "through." Days of the week are abbreviated M, T, W, Th, F, and S.

Building name abbreviations—Refer to the index for page reference.

Choice of classes—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll. Many courses have a choice of laboratory or recitation periods, but only a single lecture period for all students taking the course. Occasionally there will be a choice of both lecture and laboratory or recitation periods. The choice of the laboratory or recitation section will determine the lecture section whenever the lecture sections have no identifying section number.

Examples:

—1, I TThS	Lect III MWF	Lect II T	—1, Lect II T
—2, II MWF	—1, Lab V-VI M	—1, Lab III-IV T	—2, Lect II Th
—3, IV TThS	—2, Lab V-VI W	—2, Lab III-IV Th	—1, Lab III-IV T
		Lect II Th	—2, Lab III-IV Th
		—3, Lab VI-VII T	—3, Lab VI-VII T
		—4, Lab VI-VII Th	—4, Lab VI-VII Th

Missing information—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

Changes—Changes made subsequent to publication of the *Class Schedule* are published in the Official Daily Bulletin, which appears in the *Minnesota Daily*. Room changes are posted on classroom doors.

Important Note to *STUDENTS*—

Accurate registration is your personal responsibility. You will receive credit in only those courses for which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel it on a regular cancellation form.

Colleges of the University reserve the right to cancel courses in which enrollment is not sufficient to warrant giving the course.

Do not register from the *Class Schedule* alone. Your college bulletin contains full course descriptions, college rules and requirements, and other information necessary for sound program planning.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

Courses offered on the St. Paul Campus by Minneapolis Campus departments:

Math H, T, 10
Mus 45S
PubH 52
Soc 1A
Spch 251
PEM 1C, 2C
PEW C

For additional information, see the course listing under the appropriate department.

AGRICULTURAL BIOCHEMISTRY (AgBi)

1A Biochemistry (5 cr; prereq InCh 5)
Lect II MTThF, HH 100, Liener
—1, II W, HH 100
—2, II W, SnH 116
—3, II W, McNH 201
—4, II W, AgBot 107
—5, II W, LsPav 203

5 Plant Biochemistry (3 cr; prereq 3)
I MWF, SnH 113, Kirkwood

6 Animal Biochemistry (3 cr; prereq 3)
II MWF, Agr 202, Schultze

10 Dairy Chemistry (5 cr; prereq 3)
Lect VI MWF, SnH 113, Jenness
Lab VII-IX WF, SnH 102

105 Plant Biochemistry (3 cr; prereq 3)
I MWF, SnH 113, Kirkwood

106 Animal Biochemistry (3 cr; prereq 3)
II MWF, Agr 202, Schultze

108 Wheat, Wheat Products (3 cr; prereq 5)
IV MWF, SnH 113, Glass

110 Flour Lab Methods (3-5 cr; prereq 2, 108 or ¶)
VI-IX MWF, SnH 208, Glass

117 Lab Probs: Animal Nutrition (3 cr; prereq 116, ♯) Liener

118 Lab Probs: Biochemistry (3-5 cr; prereq ♯)

122 Lipides (3 cr; prereq 119 or ♯)
II WF, SnH 113, VI W, SnH 116, Lundberg

123 Enzymes (3 cr; prereq 120 or ¶120 or ♯... PCh 107, 108 rec)
III MWF, SnH 116, Kirkwood

132 Lipides Lab (2 cr; prereq 2, ¶122)
VI-VIII MW, SnH 202, Lundberg

133 Enzymes Lab (2 cr; prereq 2, ¶123)
VI-VIII TTh, SnH 202, Kirkwood

203 Research Probs (2-5 cr; prereq ♯)

205 Topics: Literature (1-3 cr; prereq ♯)

208 Seminar: Cereal Chemistry (1 cr; prereq 108 or ♯) Glass

213 Seminar: Dairy Chemistry (1 cr; prereq 103, ♯) Jenness

216 Seminar: Nutrition, Enzymes (1 cr; prereq 116, 123, ♯) Schultze, Liener, Kirkwood

219 Seminar: Colloids (1 cr; prereq 119, ♯) Briggs

220 Seminar: Proteins (1 cr; prereq 120, ♯) Briggs, Jenness

221 Seminar: Carbohydrates (1 cr; prereq 121, ♯) Smith

222 Seminar: Lipides (1 cr; prereq 122, ♯) Lundberg

224 Seminar (1 cr)
IX F, SnH 113, Briggs

AGRICULTURAL ECONOMICS (AgEc)

2 Principles of Economics I (3 cr; prereq 1)
—1, Lect II MW, DI 15, Hess
—2, Lect IV MW, DI 15, Hess
—1, Rec I Th, HH 210, Johnson
—2, Rec III Th, HH 210, Johnson
—3, Rec IX Th, HH 100, Johnson
—4, Rec I F, HH 9, Johnson
—5, Rec III F, HH 210, Johnson
—6, Rec IV F, HH 100, Johnson
—7, Rec VI F, HH 100, Johnson

3 Principles of Economics II (3 cr; prereq 2)
11:00-12:15 TTh, HH 210, Hess

12 Farm Mgt I (3 cr; prereq 2)
III MWF, HH 100, Nodland

30 Agricultural Prices (3 cr; prereq soph, 2)
VII MWF, HH 100, Learn

82 Farm Mgt II (3 cr; prereq 12)
9:00-10:15 TTh, AgEng 109, Jensen

107 Farm Work Simplification (3 cr; prereq 2)
VIII-IX MWF, HH 210, Engene

108 Agricultural Policy (3 cr, §old 8)
II MWF, AgEng 109, Berg

144 Co-operative Organization (3 cr; prereq 40)
IV MWF, HH 210, Koller

150 Adv Farm Finance (3 cr; prereq 50)
1:30-2:45 TTh, HH 210, Dahl

170 Land Economics (3 cr; prereq 110 or ♯)
I MWF, HH 100

208 Seminar: Agricultural Price, Income Policies (3 cr)
1:00-2:15 MW, DI 118

211 Economics of Agricultural Production II (3 cr; prereq 110, Econ 165 or ♯)
VIII-IX MW, HH 100, Jensen

226 Seminar: Farm Mgt (3 cr)
3:00-4:15 TTh, HH 210, Jensen, Engene

AGRICULTURAL ENGINEERING

Mechanized Agriculture (MeAg)

3 **Technical Drawing** (3 cr, §2)
III-IV MWF, AgEng 303, Christopherson

4 **Mechanical Training** (4 cr)
Lect IV-V M, AgEng 108, Olson
—1, Lab VI-VII MWF, AgEng 20, Olson
—2, Lab VIII-IX MWF, AgEng 20, Olson
Lect IV-V W, AgEng 108, Olson
—3, Lab VI-VII MWF, AgEng 20, Olson
—4, Lab VIII-IX MWF, AgEng 20, Olson
Lect IV-V F, AgEng 108, Olson
—5, Lab VI-VII MWF, AgEng 20, Olson
—6, Lab VIII-IX MWF, AgEng 20, Olson

7 **Farm Building Construction** (3 cr)
Lect VI TTh, AgEng 41, Pomroy
—1, Lab VII-IX T, AgEng 48, Pomroy
—2, Lab VII-IX Th, AgEng 48, Pomroy

12 **Machinery** (3 cr)
Lect V TTh, AgEng 109, Solstad
—1, Dem III Th, AgEng 49, Solstad
—2, Dem IV Th, AgEng 49, Solstad

12A **Machinery Lab** (1 cr; prereq 12 or ¶)
VII-VIII Th, AgEng 49, Solstad

14 Farm Buildings (3 cr)
I MWF, AgEng 303, Christopherson

25 **Agricultural Physics II** (4 cr; prereq 24)
Lect I MWF, AgEng 101, Culmer
—1, Lab III-IV T, AgEng 102, Culmer
—2, Lab VI-VII T, AgEng 102, Culmer
—3, Lab VI-VII M, AgEng 102, Culmer

35 **Household Physics** (5 cr)
Lect II MWF, AgEng 101, Culmer
—1, Lab I-II TTh, AgEng 102, Culmer
—2, Lab VIII-IX MW, AgEng 102, Culmer
—3, Lab VIII-IX TTh, AgEng 102, Culmer

42 **Surveying** (4 cr; prereq 3, Math T)
Lect VI TTh, AgEng 103, Machmeier
Lab VII-IX TTh, AgEng 305, Machmeier

45 **Engines, Tractors** (3 cr; prereq 23)
Lect VI MW, AgEng 109, Solstad
—1, Dem VI F, AgEng 109, Solstad
—2, Dem VII F, AgEng 109, Solstad

45A **Engines, Tractors Lab** (1 cr; prereq 45 or ¶)
VIII-X M, AgEng 49, Solstad

108 Probs: Soil, Water Conservation (4 cr; prereq 106 or 107)
VI-IX MW, AgEng 305, Manson

114 Probs: Farm Buildings (2-4 cr; prereq 3, 7, 14) Otis, Christopherson

124 Machinery, Mechanical Power Mgt (3 cr; prereq 9 cr incl 12, 23)
8:00-9:30 TTh, AgEng 101, Flikke

125 Topics: Agricultural Physics (3 cr; prereq Phys 50 or inte calc, 25) Hustrulid

130 **Farm Shop Mgt** (3 cr; prereq AgEd maj, 4, 3 addtl cr, AgEd 91)
Lect VII TTh, AgEng 35, Taylor
Lab VIII-IX TTh, AgEng 20, Taylor

AGRONOMY AND PLANT GENETICS (Agro)

1 **Introduction** (4 cr)
Lect IV MWF, Agr 202, Smith
—1, Lab III-IV T, Agr 104, Smith
—2, Lab VI-VII T, Agr 104, Smith
—3, Lab III-IV Th, Agr 104, Smith

22 Grain, Hay Grading (3 cr; prereq 1)
I-II MWF, Agr 104, Lambert

24 Identification, Judging (1 cr; prereq soph, 1)
VIII-IX Th, Agr 104, Schmid

122 Grain, Hay Grading (3 cr; prereq 1)
I-II MWF, Agr 104, Lambert

134 Adv Forage Crops (4 cr; prereq 27)
Lect VI MWF, Agr 202, Schmid
Lab VII MWF, Agr 104, Schmid

201 Research: Farm Crops (ar cr; prereq 121, 127) Behrens, Robinson, Schmid, Smith

241 Research: Plant Genetics (ar cr) Myers, Burnham, Rinke, Ausemus, Thomas, Lambert

242 Seminar: Plant Breeding (1 cr)
VIII-IX F, Agr 408

243 Methods in Plant Breeding (3 cr; prereq 132, 240)
II MWF, Agr 408, Myers

245 Topics: Plant Breeding (2 cr; prereq 240, 243, 244 or △)

253 Methods: Plant Genetics (3 cr; prereq 240)
I MWF, Agr 408, Burnham

255 Topics: Genetics (2 cr; prereq 252 or △)

ANIMAL HUSBANDRY (AnHu)

1 **Introduction** (4 cr)
II MTWThF, Center LsPav, Meiske, Kolari

9 Livestock Judging (3 cr; prereq 8)
III-IV MWF, Center LsPav, Jordan

31 Meats (3 cr; prereq 1, 30)
VI-VIII TTh, MSh 102, Aunan

65 Beef Cattle Production (3 cr, §165; prereq 37, 37A, 62 or ♯)
I TTh, II-III T, LsPav 203, Harvey

107 Meat Probs (3 cr; prereq 53) Aunan

165 Beef Cattle Production (3 cr, §65; prereq 37, 37A, 62 or ♯)
I TTh, II-III T, LsPav 203, Harvey

204 Adv Animal Breeding III (3 cr; prereq 162, Agro 261)
VI T, VI-IX Th, PetH 108, Comstock
210 Seminar: Animal Husbandry (1 cr)
VIII M, PetH 108, Smith
213 Research: Animal Husbandry (3-9 cr)
223 Protein, Amino Acid Nutrition (3 cr; prereq 37A, AgBi 6 or ‡...AgBi 116 rec)
VI MWF, PetH 108, Meade
226 Ruminant Nutrition (3 cr; prereq 37A, AgBi 6 or ‡...Bact 121, 123 rec)
VII MWF, PetH 108, Kolari

DAIRY HUSBANDRY (DyHu)

1 Dairying (3 cr, §DInd 1)
III MWF, DI 15, Morris, Williams
5 Practice (3 cr; prereq soph, △) Williams
9 **Dairy Cattle Judging** (1 cr; prereq soph)
VI-VIII T, HH 9, Wilk, Cole, others
19 Dairy Cattle Mgt (1 cr; prereq ¶11)
VI-VIII Th, HH 9, Wilk
49 Reproduction, Artificial Insemination (3 cr; prereq 1)
II-IV TTh, HH 102, Graham
51 Classification, Evaluation of Dairy Cattle (2 cr; prereq 9)
VI-VIII TF, DCB, Cole, Wilk
123 Dairy Production III (4 cr; prereq 19, 49)
VI-VIII TTh, HH 102, Williams
149 **Reproduction, Artificial Insemination** (3 cr, §49; prereq grad or ‡)
II-IV TTh, HH 102, Graham
199 Special Probs (1-3 cr; prereq ‡)
202 Research: Dairy Production (ar cr)
220 Lactation (3 cr)
VI-VII TTh, HH 24
223 Protein, Amino Acid Nutrition (3 cr; prereq AnHu 37A, AgBi 6 or ‡...AgBi 116 rec)

DAIRY INDUSTRIES (DInd)

1 Dairying (3 cr, §DyHu 1)
III MWF, DI 15, Morris, Williams
2 Dairying Lab (2 cr; prereq 1)
VII-VIII TTh, DI 10, 15, Thomas
4 Dairy Products Practice I (3 cr; prereq soph) Thomas
5 Dairy Products Practice II (3 cr; prereq 4) Thomas
20 Household Microbiology (4 cr; prereq 3rd qtr fr, ‡)
VI MWF, DI 15, VII W, DI 15, Olson
103 Market Milk (3 cr; prereq 2, 50, AgBi 10)
IV MW, DI 255, VI-VIII Th, DI 155, 150, Thomas
106 Cheese (3 cr; prereq 2, 50, AgBi 10)
IV TS, DI 255, VI-VIII T, DI 150, 151, Morris
107 Technical Control of Dairy Products (3 cr; prereq sr, 105 or 106, AgBi 10)
I-III TTh, DI 155, 218, Jezeski
130 Adv Dairy Products Judging (1 cr; prereq 3)
VIII-IX W, DI 95A, 95B, Thomas
151 Adv Dairy Bacteriology (3 cr; prereq sr, 105 or 106)
II-III MWF, DI 218, Jezeski
205 Seminar (1 cr)
210 Research: Dairy Products (2-5 cr)
212 Research: Dairy Bacteriology (2-5 cr)

ENTOMOLOGY AND ECONOMIC ZOOLOGY (Ent)

1 **Insect Life** (4 cr)
Lect IV MWF, PetH 110, Holdaway
—1, Lab VI-VIII Th, CofH 302, Holdaway
—2, Lab VI-VIII F, CofH 302, Holdaway
1A **Biological Studies with Insects** (1 cr; prereq 1 or ¶, Biol 3) Holdaway
21S Beekeeping (5 cr)
VI-VIII MWF, CofH 307, Haydak
50 Economic Entomology (5 cr; prereq 1 or Biol 3)
Lect VI MWF, LsPav 203, Peterson
Lab VII-IX MW, CofH 302, Peterson
67 Forest Wildlife Mgt (2 cr; prereq 64)
114 Apiculture (3 cr; prereq 9 cr ent or biol)
I MW, CofH 307, Haydak
117 Field Ecology (3 cr; prereq Zool 65 or ‡... Bot 50 or 130 rec)
Lect II TTh, Z 323 (**Mpls Campus**), Underhill, lab ar
127 **Adv Entomology** (4 cr, §Zool 127; prereq 126, ‡...org chem or biochem rec)
Lect I MWF, Z 211 (**Mpls Campus**), Richards
Lab II-V M, Z 13 (**Mpls Campus**), Richards
128 **Aquatic Entomology** (2 cr; prereq 52)
I-III MW, CofH 302, Cook
140 Biological Microscopy (4 cr; prereq sr, 9 cr biol, ‡)
Lect VI WF, CofH 8, Richards
Lab VII-IX WF, CofH 8, Richards
146 **Helminthology** (3 cr; prereq 15 cr zool incl Biol 3, ‡)
Lect VI TTh, Z 211 (**Mpls Campus**), Wallace
Lab VII-VIII TTh, Z 208 (**Mpls Campus**)
150 Economic Entomology (3 cr; prereq grad or ‡, 52)
Lect VI MWF, LsPav 203, Peterson
Lab VII-IX MW, CofH 302, Peterson
166 Wildlife Mgt (3 cr; prereq 63, 65, Bot 50, Zool 58 or ‡)
Lect V TTh, CofH 307, Beer, lab ar
171 Techniques in Fishery Biology, Mgt (3 cr; prereq 65, 119, 121 or ‡)
Lect VI TTh, LsPav 203, Waters
Lab VII-VIII TTh, LsPav 203
197 Introd Research (ar cr; prereq sr, △)
236 Gen Ecology of Insects (3 cr; prereq 118)
Lect VI TTh, CofH 307, Hodson
Lab VII-VIII TTh, CofH 15, Hodson

244 Insect Microbiology (4 cr; prereq 9 cr biol, ‡...243 rec)
Lect I TTh, CofH 8, Brooks
Lab II-IV TTh, CofH 8

FORESTRY (For)

4 Dendrology (4 cr; prereq Biol 3 or ¶ or bot)
Lect IV MWF, GH 120, Rees, lab ar

8 **Timber Estimating, Forest Surveys** (3 cr; prereq 7)
Lect IV TTh, GH 120, R Brown
—1, Lab VI-VIII T, GH 206
—2, Lab VI-VIII W, GH 206

10 **Farm Forestry** (3 cr; prereq not open to forestry majors)
Lect IV TTh, GH 203, Scholten
—1, Lab VI-VIII M, GH 203
—2, Lab VI-VIII T, GH 203

47 Forest Economy (2 cr; prereq AgEc 2 or ‡)
III TTh, GH 120, Skok

55 Fire Protection (2 cr)
V TTh, GH 120, Irving

60 Forest Engineering (2 cr; prereq MeAg 42)
Miles

61 Forest Recreation (1 cr) Duncan

62 Forest Policy (1 cr; prereq 124) Irving, Skok

82 Wood Preservation (3 cr, §old 125; prereq 76, org chem)
Lect III TTh, FP 204, Kaufert, Kelso, lab ar

86 Wood Fiber, Particle Products (3 cr, §old 57; prereq 85 or ¶)
Lect IV TTh, FP 204, Butler
Lab VIII-IX Th, FP 204, Butler

88 Building Cost Estimating (3 cr, §old 120; prereq 78, MeAg 7, Ind 9)
VII-IX W, FP 204, Ziemer

128 Silviculture (6 cr, §128-129; prereq 127)
B Brown

131 Forest Policy (3 cr; prereq sr)
1:30-2:50 TTh, GH 201, Irving, Skok

133 Forest Mgt, Utilization (2 cr; prereq 124)
B Brown

134 Forest Inventory, Photographic Interpretation (3 cr; prereq 59, 111 or Biom 90)
Meyer

137 Forest Tree Seed (2 cr; prereq Biol 3 or bot)
III TTh, GH 201, Hansen, Duncan, Bakuzis, Sucoff

149 Adv Forest Measurements (3 cr, §old 112; prereq 111 or ‡) R Brown

176 Timber Engineering (4 cr, §old 116; prereq 79)
Lect VI W, GH 211, Rees
Lab VI-VIII MF, GH 211

177 Wood Chemistry (3 cr, §old 142; prereq 76, org chem)
II MWF, FP 204, Hossfeld

178 Woody Tissue Microtechnique (4 cr, §old 119; prereq 76 or ‡)
Lect IX T, FP 210, Hossfeld, Shiue
Lab VI-VIII TTh, FP 210

182 Adv Wood Preservation (3 cr; prereq 82)
Kelso, Kaufert

184 Adv Wood Chemistry (2 cr; prereq 177, AgBi 2) Hossfeld

200 Research Probs: Silviculture (ar cr) Hansen, Duncan, B Brown, Bakuzis

203 Research Probs: Forest Mgt (ar cr) Duncan, Meyer, Irving, B Brown, Shiue, Winsness

205 Research Probs: Forest Economics (ar cr) Skok

207 Research Probs: Forest Products Engineering (ar cr) Hossfeld, Rees, Kaufert

213 Research Probs: Forest Utilization (ar cr) Hossfeld, Rees, Kaufert

218 Research Probs: Forest Measurements, Photogrammetry (ar cr) R Brown, Meyer, Shiue

220 Probs: Forest-Tree Genetics (ar cr) Pauley

221 Probs: Forest Influences (ar cr) Duncan

222 Probs: Forest Policy (ar cr) Irving, Skok, Winsness

225 Seminar (1 cr; prereq 224)
VIII-IX Th, GH 202

227 Statistical Methods (1 cr; prereq 6 cr stat or ‡) Shiue

HOME ECONOMICS (HE)

1 **Choice, Care of Clothing** (3 cr, §GC 3 C; not open to men, sr)
II MWF, McNH 350, Baumgartner

3 **Clothing Construction A** (3 cr; prereq 3rd qtr fr, 1)
—1, III-IV MWF, McNH 327, Williams
—2, VI-VII MWF, McNH 327, Williams

4 **Clothing Construction B** (3 cr; prereq soph, 3)
—1, II-IV TTh, McNH 328, Gorham
—2, VI-VIII TTh, McNH 327, Williams

17 **Personal, Family Living** (3 cr, not open to sr)
V MWF, McNH 227, Gallagher

20 **Related Art** (3 cr)
IV MWF, McNH 350, Myren

21 **Color, Design** (3 cr; prereq 20)
—1, III-IV MWF, McNH 359, Abell
—2, VI-VII MWF, McNH 359, Abell
—3, VI-VIII TTh, McNH 359, Forsyth

24 **Probs: Home Planning, Furnishing** (5 cr, §GC 3D, FL 15; prereq soph, 20...21, 49 rec)
—1, III-IV MWF, McNH 360, Forsyth
—2, V-VI MWF, McNH 360
—3, VII-VIII MWF, McNH 360, Myren

25 **Design Applied to Crafts** (3 cr; prereq 20 ...21 rec)
VI-VIII TTh, McNH 433, Abell

28 **Construction, Refinishing of Home Furnishings** (3 cr; prereq ‡)
II-IV TTh, McNH 433, Myren

30 **Nutrition** (2 cr, §31 or GC 3B or PNurs 14; prereq ‡ for HE maj; others, none)
VII MW, JohH 122 (**Mpls Campus**), North

31 **Nutrition** (3 cr, §30 or GC 3B or PNurs 14, not open to HE sr)
III MWF, McNH 48, North

40 **Food Preparation** (5 cr; prereq 3rd qtr fr, 2 qtrs chem)
—1, Lect III TTh, McNH 48, Hanson
Lab III-IV MWF, McNH 157
—2, Lect VII TTh, McNH 48, Hanson
Lab VI-VII MWF, McNH 157
—3, Lect VI MW, McNH 227
Lab VI-VIII TTh, McNH 157

41 **Food Mgt, Marketing** (5 cr; prereq soph, 31, 40)
—1, Lect III T, McNH 125, III Th, McNH 150, Trammell
Lab III-IV M, III-V F, McNH 150, 152, 156
Conf IV T, McNH 125
—2, Lect IV TTh, McNH 150, Lund
Lab III-IV M, III-V W, McNH 150, 152, 156
Conf III T, McNH 150
—3, Lect VII MW, McNH 150, Lund
Lab VII-VIII T, VII-IX Th, McNH 150, 152, 156
Conf VIII M, McNH 150

49 **Household Equipment** (3 cr; prereq soph, MeAg 35 or ‡)
—1, Lect I-II M, McNH 124, 128, Ehrenkranz
Lab I-II W, McNH 124, 128
—2, Lect II-III T, McNH 124, 128, Ehrenkranz
Lab II-III Th, McNH 124, 128

50 **Textiles** (4 cr; prereq 3rd qtr soph, 1, InCh 5 or GC 7C)
III-IV MWF, McNH 303, Gorham

53 **Adv Clothing** (3 cr; prereq 4, 50 or ¶)
VI-VII MWF, McNH 328, Gorham

63 **Quantity Food Purchasing, Production** (5 cr; prereq 41, 3rd qtr soph)
Lect V TTh, McNH 201, Hitchcock
Lab I-IV WF, Cafeteria

64 **Food Service Equipment** (4 cr; prereq 63)
Lect 9:00-10:15 TTh, McNH 44, Hitchcock
Lab II-IV M

66 **Administrative Food Service Experience** (5 cr; prereq 65) Hitchcock

71 **Demonstrations** (1 cr; prereq 3rd qtr jr, 41)
VI-VIII F, McNH 150, Asp

76 **Nutrition of the Family** (4 cr, §170, 171; prereq 31, 40, phsl or hum biol)
II MTWTh, McNH 48, North

79 **Probs for Dietitians** (3 cr; prereq regis HE, 170)
II MWF, McNH 44

85 **Home Mgt** (3 cr; prereq 40...41 rec)
VII MWF, McNH 201, Jeary

86 **Home Mgt Lab** (4 cr; prereq 85 or ¶...41 rec)
—1, I MTWThFS, Home Mgt House, Sands, Steensland
—2, I MTWThFS, Home Mgt House, Sands, Steensland

88 **Food Quality Evaluation** (3 cr; prereq 70)
Lect VI TTh, McNH 44, Noble
Lab VII-VIII T, McNH 56

120 **Art History** (3 cr)
VIII MWF, McNH 350, Forsyth

122B Interior Design Probs (3 cr; prereq 120, 122A, 123 or ‡...180 rec)
II-IV TTh, McNH 342, Ludwig

125 **Adv Costume Design** (3 cr; prereq 3, 22 or ‡)
VI-VIII TTh, McNH 342, Esteros

126 **Special Problems in Crafts** (1-3 cr; prereq 25 or ‡)
VI-VIII TTh, McNH 433, Abell

127 **Purchasing Home Furnishings** (3 cr; prereq 24, 50)
VI-VIII TTh, McNH 360, Ludwig

146 **Probs: Food** (3 cr; prereq sr, 142)
Lect VI MW, McNH 44, Trammell
Lab VII-VIII MW, McNH 56

171 **Maternal, Child Nutrition** (3 cr; prereq 170, HEEd 90)
III MW, McNH 44, III F, ForH 50, IV-V one day ar (**Mpls Campus**), Doyle

173 **Diet Therapy** (4 cr; prereq 170...35 rec)
Lect 10:30-11:45 TTh, McNH 44
Lab VI-VII F, McNH 144

176 **Adv Nutrition** (4 cr; prereq 35 or ¶, AgBi 2)
Lect VI MW, McNH 48, Morse
Lab VII-IX MW, McNH 254, Morse

178 **Clinical Probs: Nutrition** (2 cr; prereq 35 or ¶, 170)
Lect V M, McNH 44
—1, Lab VI-VIII T, U Hosp (**Mpls Campus**)
—2, Lab VI-VIII Th, U Hosp (**Mpls Campus**)

185 **Family Relationships** (3 cr; prereq 17, HEEd 90 or ‡)
II-III T, II Th, McNH 227, Gallagher

187 Readings: Family Relationships (1-3 cr; prereq ‡) Gallagher

188 **Evaluation of Food Quality** (3 cr; prereq 142, AgBi 2, Biom 90 or 100)
Lect VI TTh, McNH 48, Noble
Lab VII-VIII T, McNH 56

189A Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

189B Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

189C Construction, Use Characteristics of Household Appliances (3 cr; prereq 89) Ehrenkranz

190 Colloquium: Family Relationships (1 cr; prereq 185 or 15 cr child dev or psy or soc)
IX Th, McNH 201, Gallagher
202 Animal Fibers (2 cr; prereq adv textiles, ‡) Davison
204 Plant, Other Cellulosic Fibers (2 cr; prereq bot, adv textiles, ‡) Davison
208 Microanalysis of Textile Fibers (ar cr; prereq bot, zool, adv textiles, ‡)
VI-VII TTh, McNH 303, 304, Davison
209 Seminar: Textiles, Clothing (1 cr; prereq ‡) Davison
220 Readings: Related Art (1-3 cr; prereq ‡) Esteros
221 Probs: Textile Design (1-3 cr; prereq 121 or ‡) Esteros
227 Probs: Home Planning, Furnishing (1-3 cr; prereq 180 or ‡...122B rec) Ludwig, Esteros
272 Human Metabolic Studies in Health, Diseases (4 cr; prereq 173, ‡)
Given at Rochester, Code
273 Adv Diet Therapy (4 cr; prereq 173 or ‡)
Given at Rochester, Victor
279 Seminar: Nutrition (1 cr; prereq ‡) Morse
295 Probs: Home Economics (1-5 cr; prereq ‡) Davison, Ehrenkranz, Esteros, Ford, Noble
296 Probs: Home Economics (1-5 cr; prereq 295) Davison, Ehrenkranz, Esteros, Ford, Noble

HORTICULTURE (Hort)

1 Gen Horticulture (3 cr)
III MWF, Hr 102, Snyder
10 **Ornamental Horticulture** (3 cr)
III MWF, Hr 8, 1 hr ar, Phillips
16 Greenhouse Mgt (3 cr; prereq Biol 3 or 6 cr bot)
Lect IV TTh, Hr 8, Widmer
Lab VI-VIII F
22 **Plant Materials: Spring, Summer Aspects** (3 cr; prereq Biol 3 or 6 cr bot)
VI-VIII MW, Hr 8, Johnson
32 Vegetable Growing (3 cr; prereq Biol 3 or 6 cr bot)
II MWF, Hr 102, Turnquist
40 **Horticultural Practices** (2 cr; prereq soph, 6 or ‡)
VI-IX W, Hr 8, Weir
61 Planting Composition (3 cr; prereq 60 or ‡)
VI-VIII MF, Phillips
62 Probs: Landscape Design, Composition (2-4 cr; prereq sr, 61 or ‡) Phillips
76 Landscape Construction, Maintenance (3 cr; prereq 60 or 61 or ‡) Phillips
105 Frozen Food Probs (2-4 cr, §FTec 105; prereq 104 or ‡) Trantanella
154 Commercial Floriculture: Spring Crops (3 cr; prereq 16)
Lect III TTh, Hr 8, Widmer
Lab VI-VIII T
192 Problems (2-4 cr; prereq ‡)
247 Report: Special Topics (1-9 cr)
249 Research: Crop Breeding (ar cr) Currence, Hutchins, Wilcox

PLANT PATHOLOGY AND BOTANY (P|Pa)

1 **Plant Pathology** (5 cr, §51, prereq soph, 9 cr pl sci incl 6 cr bot or Biol 3)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105, Moore
—2, Lab VI-VII MWF, PP 105, Moore
3 **Weeds, Seeds** (3 cr; prereq 6 cr bot or Biol 3)
Lect II TTh, AgBot 107, Kommedahl
—1, Lab III-IV T, Kommedahl
—2, Lab III-IV Th, Kommedahl
104 Industrial Mycology (3 cr; prereq 1 or 51 or 56)
I-II TThS, PP 103, 105, C Christensen
107 Mycology (3 cr; prereq 1 or 51 or 56)
VI-VIII TTh, PP 105, C Christensen, Anderson
116 Diseases of Fruit Crops (3 cr; prereq 1 or 51 or 120)
Lect I MF, PP 103, King
Lab I-II W, PP 105, King
119 Plant Disease Control (3 cr; prereq 1 or 51 or 120)
III-V TTh, PP 103, 105, King
120 **Plant Pathology for Adv Students** (3 cr, §1 or 51; prereq 14 cr pl sci or ‡)
Lect VIII MWF, PP 103, Moore
—1, Lab IX-X MWF, PP 105, Moore
—2, Lab VI-VII MWF, PP 105, Moore
137 Animal Diseases, Poisonous Plants (3 cr, §VMC 137; prereq ‡)
Lect VII M, AgBot 107, Kommedahl
Lab VIII-IX M, AgBot 106, Kommedahl
161 Technology of Fruits, Vegetables (3 cr; prereq 15 cr pl sci or ‡) Landon
203 Research (ar cr) J Christensen, others
207 Probs: Mycology (ar cr; prereq 105, 106, 107) J Christensen, others
213 Seminar (1 cr)
IX-X T, PP 103, J Christensen, others
217 Ecology of Plant Pathogens (3 cr; prereq 1 or 51 or 120, 156)
Lect III-IV W, PP 401, Wilcoxson
Lab II-IV F, PP 105, Wilcoxson
251 Seminar: Agricultural Botany (1 cr)
IX Th, AgBot 107, J Christensen, others
254 Research Probs: Applied Plant Physiology (ar cr) Landon, Rowell
260 Research Probs: Agricultural Botany (ar cr) J Christensen, others

POULTRY HUSBANDRY (PoHu)

1 Poultry Production (3 cr)
II MWF, PetH 110, Snetsinger

55 Problems (1-3 cr; prereq 6 cr, ‡)

57 Commercial Egg Operations (3 cr; prereq 1)
I MWF, PetH 108

105 Comparative Vertebrate Physiology (3 cr; prereq VPP 41 or ‡)
II MWF, PetH 108, Burger

153 Poultry Nutrition (3 cr; prereq 1, AgBi 1A)
IV MWF, PetH 108, Waibel

214 Research: Poultry Husbandry (ar cr; prereq ‡)

215 Research: Poultry Nutrition (ar cr; prereq 9 cr agr biochem) Waibel, Johnson

216 Research: Poultry Breeding (ar cr; prereq 9 cr genetics) Shoffner

217 Seminar (1 cr; prereq ‡) Snetsinger

218 Research: Poultry Products (ar cr; prereq ‡) Swanson

223 Protein, Amino Acid Nutrition (3 cr; prereq AnHu 37A, AgBi 6 or ‡...AgBi 116 rec)
VI MWF, PetH 108, Meade

RHETORIC (Rhet)

1-2-3 Communications I, II, III (3 cr per qtr)
Three days assigned from I MTWThF. All entering freshmen and students transferring with fewer than nine credits of freshman English meet in Peters Hall Auditorium the first period MT for the first week for diagnostic tests and sectioning. Students already tested during freshman week and students who have taken Rhetoric 1 or 2 will find section assignments posted on 2nd floor AgEng Bldg March 27.

22 **Public Speaking** (3 cr; prereq rhet comm req)
—1, II MWF, AgEng 307, Thiss
—2, III MWF, AgEng 307, Nichols
—3, III MWF, AgEng 317, Cashman
—4, IV MWF, AgEng 307, Wright
—5, V MWF, AgEng 307, Seeden
—6, VII MWF, AgEng 307, Richardson
—7, III TThS, AgEng 307, Cashman

25 **Parliamentary Procedure** (1 cr)
V TTh, AgEng 306, Miller

26 **Original Writing** (3 cr; prereq rhet comm req)
IV MWF, AgEng 315, Thurston

28 **Literature of Theater** (3 cr; prereq rhet comm req)
VIII MWF, AgEng 315, Brown

32 Novel, Short Story (3 cr; prereq rhet comm req)
V MWF, AgEng 105, Nadon

33 American Life in American Literature (3 cr; prereq rhet comm req)
II MWF, AgEng 306, Horberg

41 **Humanities: Enlightenment** (3 cr)
III MWF, AgEng 109, Price

42 **Humanities: Industrial Revolution** (3 cr; prereq 41)
III MWF, AgEng 108, Drake

43 **Humanities: Age of Darwin** (3 cr; prereq 41)
—1, I MWF, DI 15, Drake
—2, 1:35-2:50 TTh, AgEng 109, Drake

44 **Humanities: American Experience** (3 cr; prereq 41)
II MWF, AgEng 108, Carr

47 **Efficient Reading** (3 cr, SLA students see SLA bul)
VI MWF, AgEng 315, Brown

51 **Exposition** (3 cr; prereq rhet comm req)
—1, IV MWF, AgEng 306, Mixon
—2, V MWF, AgEng 317, Horberg
—3, VI MWF, AgEng 306, Mixon
—4, VII MWF, AgEng 306, Wright
—5, II TThS, AgEng 315, Brown

52 **Technical Writing** (3 cr; prereq 51)
III MWF, AgEng 306, Thurston

54 **Adv Public Speaking** (3 cr; prereq 22)
II MWF, AgEng 105, Seeden

56 **Discussion Methods** (3 cr, §old 12; prereq rhet comm req)
—1, IV MWF, AgEng 109, Cashman
—2, VII MWF, AgEng 105, Cashman

151 **Report, Thesis Writing** (3 cr; prereq 51 or ‡)
IX M, IX-X W, AgEng 306, Thurston

251 Seminar: Listening Comprehension (2 cr, §Spch 251; prereq undergrad spch maj, ‡)
VIII-IX W, AgEng 221, Nichols

SOILS (Soil)

3 Forest Soils (3 cr; prereq soph, InCh 5)
III MWF, GH 120, Arneman

3B **Forest Soils Lab** (1 cr; prereq 3 or ¶)
—1, Lab VI-VIII M, So 126, 115
—2, Lab VI-VIII T, So 126, 115

19 **Interm Soils** (4 cr; prereq InCh 5)
Lect IV MWF, So 115, Arneman, Martin
—1, Lab VI-VIII M, So 126, 115
—2, Lab VI-VIII T, So 126, 115

21 Soils of Minnesota (3 cr; prereq 1 or 3 or 19)
Lect I TTh, So 115, Arneman, Farnham
Lab VI-VIII Th, So 132

22 Soil Conservation (3 cr; prereq 1 or 3 or 19)
Lect II TTh, So 115, MacGregor
Lab VI-IX T, So 132

119 **Interm Soils** (4 cr, §19; prereq InCh 5)
Lect IV MWF, So 115, Arneman, Martin
—1, Lab VI-VIII M, So 126, 115
—2, Lab VI-VIII T, So 126, 115

121 Soils of Minnesota (3 cr, §21; prereq 1 or 3 or 19)
Lect I TTh, So 115, Arneman, Farnham
Lab VI-VIII Th, So 132

123 Fertilizers (3 cr; prereq 3 or 19 or 119 or ‡)
II MWF, So 115, Caldwell

127 **Soil Microbiology** (4 cr, §Bact 103; prereq Bact 53, 8 cr org chem, ‡)
Lect I MWF, So 115, Schmidt
Lab II-III MF, So 120, Schmidt
130 Problems (2-4 cr; prereq 1 or 3 or 19 or 119)
131 **Physical Chemistry of Soils** (3 cr; prereq phys chem or ‡)
Lect VI TTh, So 215, Rust
Lab VII-VIII TTh, So 322
133 Micro-Climatology (3 cr; prereq Math 10, MeAg 23) Baker

UNATTACHED COURSES

Agricultural Journalism (AgJo)

53 Publicity (3 cr; prereq rhet comm req)
I MWF, AgBot 107, Swanson, Wolf, McKay

Biometrics (Biom)

90 Statistics (3 cr; prereq col alg or ‡)
II MWF, DI 118, Gates
201 Experimental Design (3 cr; prereq 101)
III-IV T, IV Th, Agr 408, Sentz

Food Technology (FTec)

105 Frozen Food Probs (2-4 cr, §Hort 105; prereq 104 or ‡) Trantanella

Orientation (Orie)

1 College Orientation Lectures (1 cr)
I T, DI 255, DeBoer

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

1 **Business, American Economy** (3 cr; prereq no previous BA or econ)
I MWF, ScH 108, Gaumnitz
5 **Statistics** (4 cr, §151 or Soc 45; prereq Math 10)
—1, I MTWF, Arch 60, Neter
—2, II MTWF, C 115
—3, IV MTWF, ME 110
—4, V MTWF, VH 207
24 **Accounting** (3 cr, §55A; prereq 3rd qtr fr)
—1, I MWF, ForH 130, Bentley
—2, II MWF, ME 110
—3, III MWF, ForH 115
—4, IV MWF, Arch 135
—5, V MWF, VH 113
25 **Accounting** (3 cr, §55B; prereq 24)
—1, V MWF, VH 306, Bentley
—2, VI MWF, VH 301
—3, VI MWF, AH 150
—4, VII MWF, VH 301
26 **Accounting** (3 cr, §55B; prereq 25)
—1, I MWF, ForH 85, Bentley
—2, II MWF, ForH 85
—3, III MWF, ForH 85
—4, IV MWF, ForH 85
—5, V MWF, VH 1
—6, VI MWF, ForH 85
28 **Business Law** (3 cr, §58; prereq soph with 6 cr, regis AFHE or IT or Pharm, cons adv)
I MWF, VH 2, Eastlund
32 Typewriting (1 cr)
I MTWThF, VH 209
33 Interm Typewriting (1 cr; prereq 30 words a min, 32 or 1 yr HS type)
II MWF, VH 209, 2 hrs ar, Stanley
34 Typewriting Procedures (2 cr; prereq soph, 33, 45 words a min or 2 yrs HS type)
VI MWF, VH 209, 2 hrs ar, Stanley
39 Shorthand (3 cr, †37-38-39; prereq 38, 34 or ¶ or 2 yrs HS shorthand)
III MWF, VH 209, 2 hrs ar, Stanley
50 **Production Mgt** (3 cr, §150; prereq Econ 2)
III MWF, MNH Aud, Wickesberg
51 **Business Statistics** (3 cr, §161; prereq soph with ‡, 5)
—1, 9:00-10:30 TTh, VH 1, Hastings
—2, III MWF, VH 6, Willis
—3, 10:30-12:00 TTh, VH 1, Neter
52 **Modern Industrial Relations: Labor Marketing** (3 cr, §152; prereq Econ 2)
Lect II TTh, NH 211, Heneman
—1, III T, VH 113
—2, III T, VH 4
—3, III Th, VH 113
—4, IV T, VH 113
—5, IV T, VH 2
—6, IV Th, VH 113
—7, V T, VH 113
—8, V Th, VH 113
53 **Risk Mgt, Insurance** (3 cr, §153; prereq Econ 2)
—1, II MWF, VH 306, Fleischer
—2, III MWF, VH 306, Fleischer
—3, IV MWF, VH 207, Hansen
—4, 10:30-12:00 TTh, VH 306, Fleischer

54 Transportation I: Principles (3 cr, §154; prereq Econ 2)
—1, I MWF, VH 1, Harper
—2, II MWF, VH 1, Harper
—3, II MWF, VH 2, Nightingale

55B Accounting (4 cr, §25-26; prereq 55A)
VI MWF, VH 2, VI T, VH 1, Meyers

55C Managerial Cost (3 cr, §115A or 115B or 265A; prereq 26)
IV MWF, VH 1, Meyers

56 Corporation Finance (3 cr, §156; prereq 26)
—1, II MWF, VH 113, Norgaard
—2, III MWF, VH 207, Norgaard
—3, 10:30-12:00 TTh, VH 207, Gustafson

57 Marketing (3 cr, §157; prereq Econ 2)
—1, I MWF, VH 207, Hancock
—2, II MWF, VH 4, Hancock
—3, II MWF, VH 6, Holloway

58 Business Law: Contracts (3 cr, §158; prereq Econ 2)
Lect III T, ForH 155, Wright
—1, I TTh, VH 4, Wright
—2, II TTh, VH 4, Wright

60 Business Policy, Mgt Control (3 cr, §160; prereq 3rd qtr sr)
—1, I MWF, VH 113, Glaskowsky
—2, III MWF, VH 205, Glaskowsky
—3, IV MWF, VH 205, Glaskowsy

72 Modern Industrial Relations: Manpower Mgt (3 cr, §172; prereq 52 or 152)
VI MWF, VH 1, Rhode

75A Accounting Lab I (1 cr; prereq 26)
VI-VII Th, VH 306

75B Accounting Lab II (1 cr; prereq 115A)
VI-VII T, VH 306

76 Financial Mgt (3 cr, §276; prereq 56)
8:30-10:00 TTh, VH 6

77 Advertising (3 cr, §207; prereq 57...Psy 156 rec)
III MWF, VH 113, Lewis

88 Business Law: Sales, Negotiable Instruments (3 cr, §188; prereq 58)
Lect III Th, ForH 155, Wright
—1, I TTh, VH 301, Neville
—2, II TTh, VH 301, Neville
—3, III T, IV Th, VH 307, Neville
—4, IV TTh, VH 4, Eastlund

89B Tabulating Equipment Applied to Business: Lab (2 cr; prereq 5, 26)
Lect III T, VH 211, Hammond
—1, IV-V Th, VH 211, Hammond
—2, V-VI T, VH 211, Hammond

92 Industrial Relations Employment Security (3 cr; prereq 52)
IV MWF, VH 307, Lazar

97C Marketing Research II (3 cr, §217C; prereq sr, 97)
2:00-3:30 MF, VH 205, Holloway

99 Office Mgt: Admin Services (3 cr; prereq Econ 2)
IV MWF, VH 301, Donaldson

103 Property, Liability Insurance II (3 cr, §243; prereq 53...93 rec)
IV MWF, VH 112, Ulseth

105B Interm Accounting II (3 cr; prereq 105A)
IV MWF, VH 306, Nelson

105C Interm Accounting III (3 cr, §55D; prereq 105A)
—1, II MWF, VH 307, Nelson
—2, III MWF, VH 2, Nelson

107 Retail Mgt I (3 cr, §227; prereq 57)
2:00-3:30 MF, VH 6, Hancock

115B Cost Accounting (3 cr, §55C; prereq 115A)
I MWF, VH 306, Bentley

116 Investments (3 cr, §old 176; prereq 56 or 156)
VI MWF, VH 306, Stevenson

117 Sales Mgt I (3 cr, §237; prereq 57)
II MWF, VH 207, Lewis

125 Auditing Principles, Procedures (4 cr; prereq 105B, 105C or ¶)
Lect VI TTh, VH 301, Lund
—1, I-II TTh, VH 307
—2, VII-VIII TTh, VH 307

126 Investment Mgt (3 cr, §old 196B; prereq 116)
1:30-3:00 TTh, VH 205, Stevenson

135 Income Tax Accounting (4 cr; prereq 55D or 105A or ♯)
I MTWF, VH 112

139 Analysis of Office Functions (3 cr; prereq sr, 99 or ♯)
2:30-4:00 TTh, VH 211, Donaldson

147 Adv Advertising Procedure (3 cr; prereq 77 or 207)
III MWF, VH 211, Longstaff

149 Practice Course (ar cr) Donaldson

152 Principles of Industrial Relations: Labor Marketing (3 cr, §52; prereq grad or ♯, Econ 2)
Lect II TTh, NH 211, Heneman
Rec III T, VH 112, Heneman

158 Business Law: Contracts (3 cr, §58; prereq grad or ♯)
Lect III T, ForH 155, Wright
Rec II TTh, VH 4, Wright

160 Mgt Organization, Business Policy (3 cr, §60; prereq grad or ♯)
VI MWF, VH 113, Gaumnitz

161 Business Statistics (3 cr, §51; prereq grad or ♯, 151)
II MWF, VH 205, Willis

174 Transportation II: Traffic Mgt (3 cr; prereq 54 or 154)
IV MWF, VH 2, Harper

175A Adv Cost Accounting (3 cr; prereq 115B)
II MWF, VH 301, Meyers

184B Intl Transportation: Water, Air (3 cr; prereq 54 or 154)
I MWF, VH 205, Nightingale

185B Auditing, Public Accounting (3 cr; prereq 125)
1:30-3:00 TTh, VH 2, Berryman

188 **Business Law: Sales, Negotiable Instruments** (3 cr, §88; prereq grad or ♯, 158)
Lect III Th, ForH 155, Wright
Rec II TTh, VH 301, Neville

194C **Gen Transportation Mgt** (3 cr, §264; prereq sr, 194B, ♯)
IV MWF, VH 211, Nightingale

207 Advertising (3 cr, §77; prereq 57...Psy 156 rec)
III MWF, VH 113, Lewis

217C Marketing Research II (3 cr, §97C; prereq 97 or 217)
2:00-3:30 MF, VH 205, Holloway

222 Wage, Salary Admin (3 cr; prereq 72 or 172)
III MWF, VH 210, Mahoney

243 Property, Liability Insurance II (3 cr, §103; prereq 153...223 rec)
IV MWF, VH 112, Ulseth

247 Marketing Mgt (3 cr; prereq 57 or 157)
IV MWF, VH 210, Holloway

250 Executive Leadership (3 cr; prereq 2nd yr grad)
2:30-4:00 MF, VH 113, Basil

257 Govt, Business Enterprise II (3 cr; prereq 256)
2:00-3:30 TTh, VH 210, Seltzer

259 Quantitative Approaches to Admin Probs II (3 cr; prereq 258)
1:00-2:30 MF, VH 210, Willis

265A Managerial Cost Accounting (3 cr, §55C or 115A or 115B; prereq 26)
IV MWF, VH 1, Meyers

265B Corporate Statements (3 cr, §55D or 105C; prereq 26)
VII-VIII M, VH 306, Nelson

276 Financial Mgt (3 cr, §76; prereq 56 or 156)
10:30-12:00 TTh, VH 210, Stevenson

282 Topics: Industrial Relations (3 cr; prereq 272)
2:00-3:30 TTh, VH 113, Lazar

307 Seminar: Marketing (3 cr; prereq 57 or 157)
VIII-IX M, VH 210, Lewis

345A Adv Accounting Probs (3 cr)
3:30-5:00 MTh, VH 2, Berryman

350 Seminar: Production (3 cr; prereq 100)
V-VI W, VH 307, Basil

360 Seminar: Mgt (3 cr; prereq 260)
4:00-6:00 F, VH 210, Basil

372 Seminar: Industrial Relations Research Methods (3 cr)
VIII-IX M, VH 307, England

ECONOMICS (Econ)

C **Economic Analysis** (3 cr, §1-2 or 1T-2T, prereq B or 50A, 50B)
11:00-12:30 TTh, Arch 25, Weiss

1 **Principles** (3 cr, §C or 1T or 50A; prereq 3rd qtr fr)
—1, I MWF, EE 237
—2, I MWF, AE 309
—3, II MWF, MurH 420
—4, III MWF, Z 211
—5, III MWF, EE 237
—6, IV MWF, MH 213
—7, IV MWF, EE 237
—8, V MWF, VH 4
—9, V MWF, VH 6
—10, VI MWF, AE 309
—11, VII MWF, VH 1

1H **Honors Course: Principles** (3 cr, §C or 1T or 50A; prereq 3rd qtr fr, GPA of 3.0)
II MWF, VH 211

2 **Principles** (3 cr, §C or 2T or 50B; prereq 1)
—1, I MWF, VH 307
—2, I MWF, VH 4
—3, II MWF, CW 218
—4, II MWF, AH 150
—5, III MWF, MH 213
—6, IV MWF, Arch 60
—7, V MWF, VH 2
—8, VI MWF, VH 4

2H **Honors Course: Principles** (3 cr, §C or 2T or 50B; prereq 1, GPA of 3.0)
II MWF, VH 210

2T **Principles** (3 cr, §2; prereq 1T)
—1, IV MWF, MinMet 116
—2, VI MWF, MinMet 116

40 **Decision Making, Scientific Inference** (3 cr)
IV MWF, VH 4, Hurwicz

50B **Probs: American Economy** (3 cr, §2 or 2 T; prereq 50A)
IV MWF, ForH 40, Smith

65 **Interm Economic Analysis: The Firm** (3 cr, §165; prereq 2)
—1, 8:30-10:00 TTh, VH 2, Knudtson
—2, II MWF, Owre 113, Sjaastad
—3, III MWF, VH 1, Schmookler

66 **Interm Economic Analysis: Income, Employment** (3 cr, §166; prereq 2 or ♯)
—1, 8:30-10:00 TTh, VH 207, Coen
—2, II MWF, C 325, Coen
—3, III MWF, VH 4, Merrill
—4, III MWF, VH 301, Helmberger

67 **Money, Banking** (3 cr; prereq 2)
—1, I MWF, VH 6, Smith
—2, IV MWF, VH 6, Andersen
—3, IV MWF, VH 113, Gregory

68 **Public Finance** (3 cr, §168 or 178A; prereq 2)
—1, IV MWF, JacH 304, Borak
—2, VII MWF, VH 207, Andersen

69 **Govt Regulation of Business** (3 cr, §169; prereq 65 or 165 for maj, law or pol sci or ♯ for others)
—1, I MWF, VH 301, Maynes
—2, II MWF, ME 18, Schmookler
—3, VI MWF, VH 207, Schmookler

75 **Interm Economic Analysis: Household, Policy** (3 cr, §175; prereq 65)
10:30-12:00 TTh, VH 205, Brownlee

101C **Econometrics** (3 cr; prereq 101B or ¶121C or ¶Math 123, Math 40 or ♯)
2:00-3:30 TTh and ar, VH 207, Hildreth

104 **International Economics** (3 cr; prereq 2)
IV MWF, Owre 113, Coen

120 **Consumption** (3 cr; prereq 65, 66 or ‡)
IV MWF, MinMet 116, Maynes

121C **Theory of Statistics II** (3 cr; prereq 121B, Math 53 or ‡)
III MWF, Arch 45, D Richter

134 **Probs: Intl Economics** (3 cr; prereq 104)
III MWF, ForH 75, Smith

162 **Union Govt, Policies** (3 cr; prereq BA 52 or 152)
10:30-12:00 TTh, VH 6, Seltzer (for grads)

164 **Economy of USSR** (3 cr; prereq 2)
10:30-12:00 TTh, VH 301, Boddy

166 **Economic Analysis: Income, Employment** (3 cr, §66; prereq grad, 2 or ‡)
IV MWF, ForH 75, Kareken

176B **Theory of Employment, Natl Income, Price Level II** (3 cr; prereq 176A)
VIII-IX Th, VH 113, Brownlee

181C **Topics: Theory of Sample Surveys** (3 cr, §Stat 181C; prereq 181B)
2:00-3:30 TTh, VH 112, Neter

185B **Market Structure** (3 cr; prereq 185A or ‡)
2:00-3:30 TTh, VH 6, Boddy

185C **Income Distribution** (3 cr; prereq 65, 66)
VII MWF, VH 112, Bronfenbrenner

188 **State, Local Taxation** (3 cr; prereq 68 or 168 or 178B)
III MWF, VH 307, Borak

190 Readings (ar cr; prereq cons adv, instr)

192 **Contemporary Labor Issues** (3 cr; prereq BA 52 or 152)
IV MWF, ForH 170, Simler

245C Mathematical Economics C (3 cr; prereq 245B)
III-IV Th, VH 2, Hurwicz

281C Adv Topics: Statistics (3 cr)

301 Seminar: Statistical Inference, Econometrics (3 cr)
VIII-IX F, VH 306, Hurwicz

304 Seminar: Intl Economics (3 cr; prereq 114, 224)
9:00-10:30 TTh, VH 210, Krueger

377 Seminar: Monetary Policy (3 cr)
VIII-IX M, VH 205, Kareken

391A Seminar: Workshop in Econometrics (ar cr, †391A-391B-391C; prereq 101C, ‡ or 201C or ¶, ‡) Hildreth

392C Workshop: Labor Economics (ar cr; prereq 392B)
VIII-IX F, VH 205, Gregory, Simler, Turnbull

393C Seminar: Workshop in Economic Development (ar cr, †393A-393B-393C; prereq 393B)
VIII-IX Th, VH 210, Bronfenbrenner, Krueger, Schmookler

398C Seminar: Workshop in Public Finance, Fiscal Policy (ar cr, †398A-398B-398C; prereq 398B)
VIII-IX W, VH 210, Brownlee, M Richter

399B Workshop: Industrial Organization (ar cr; prereq 399A)
VIII-IX M, VH 211, Weiss

SCHOOL OF DENTISTRY

Dental Assisting (DA)

8 Health Care (1 cr; prereq 7)
1:00-2:00 Th, Owre 113, Holte

9 Dental Radiography (½ cr; prereq 7)
2:00-5:00 M, Owre 202, Petersen

10 Office Mgt (1 cr; prereq 7)
9:00-10:00 T, Owre 113, Thorson

11 Clinic III (5 cr; prereq 7)
10:00-12:00 T, 9:00-12:00 Th, 2:00-5:00 TWTh, Owre 310, Tuchner

12 Lab Procedures (1 cr; prereq 7)
2:00-5:00 M, MH 356, Tuchner

Dental Hygiene (DH)

9 Dental Anatomy (2 cr; prereq 8)
Lect VI W, MH 356
Lab VII-IX W, MH 356

22 Dental Prophylaxis (2 cr; prereq 21)
Lect I F, MH 356
—1, Lab I-IV M, Clinic
—2, Lab II-IV T, Clinic
—3, Lab II-IV Th, Clinic
—4, Lab I-IV F, Clinic

42 Dental Health Education (2 cr; prereq 41)
Lect VI T, MH 356, lab ar

47 Dental Assisting (2 cr; prereq 46)
Lect VI Th, I T, MH 356, lab ar

55 Dental Prophylaxis (2 cr; prereq 54)
—1, VII-IX T, Clinic
—2, II-IV W, Clinic
—3, VII-IX W, Clinic
—4, VII-IX Th, Clinic

59 Prosthetic Dentistry, Dental Lab (3 cr; prereq 58)
Lect I Th, MH 356
Lab II-IV TTh, MH 356

62 Dental Radiology (2 cr)
I W, MH 356

Dentistry (Dent)

52 Dental Anatomy (3 cr; prereq 51)
Lect VI T, Owre 12, Hall
Lab VII-IX T, I-III F, Owre 1, Hall

62 Dental Prosthetics (3 cr; prereq 61)
Lect I M, Owre 113, Hall
Lab II-IV M, VII-IX Th, Owre 1, Hall

72C Dental Prosthetics Clinic (2 cr; prereq 70)
Lect I S, Owre 111, Morstad
Clinic II-IV S, Clinic, Morstad

77 Crown, Bridge Technic (4 cr; prereq 76)
Lect 1:00-2:00 M, Owre 12, Serr
Lab VII-IX M, II-IV WTh, Owre 1, Serr

80 Oral Diagnosis (1 cr; prereq regis Dent)
1:00-2:00 T, Owre 111, Bartholdi

81 Radiodontics (1 cr; prereq regis Dent)
1:00-2:00 Th, Owre 12, Petersen

86 Operative Dentistry (4 cr; prereq 85)
Lect 1:00-2:00 F, Owre 111, Wakely
Lab II-IV T, VII-X WF, Owre 1, Wakely

90 Anesthesia (1 cr; prereq regis Dent)
1:00-2:00 W, Owre 12, Holland

112C Dental Prosthetics Clinic (2 cr; prereq 111C) Morstad

117C Dental Prosthetics Clinic (2 cr; prereq 116C) Morstad

118 Seminar: Restorative Dentistry (1 cr)
8:00-9:00 Th, Owre 113, Morstad

122 Crown and Bridge (1 cr; prereq 120)
8:00-9:00 T, Owre 111, Yock

122C Crown and Bridge Clinic (2 cr; prereq 121C) Yock

127C Crown and Bridge Clinic (2 cr; prereq 126C) Yock

132C Radiodontics Clerkship (1 cr) Petersen

136 Oral Medicine (1 cr; prereq 135)
8:00-9:00 F, Owre 113, Bartholdi

137C Oral Diagnosis Clinic (1 cr; prereq 80 or 130) Bartholdi

142 Operative Dentistry (2 cr; prereq 140)
8:00-9:00 MTh, Owre 111, Jensen

142C Operative Clinic (3 cr; prereq 141C) Jensen

147C Clinical Operative Dentistry (2 cr; prereq 146C) Jensen

150 Exodontics (1 cr; prereq 90)
8:00-9:00 W, Owre 111, Holland

157C Oral Surgery, Hospital Clinics (3 cr; prereq 156) Clark

172C Pedodontics Clinic (1 cr; prereq 171) Wittich

177C Pedodontics Adolescent Clinic (1 cr; prereq 176C) Wittich

182 Periodontics (1 cr)
8:00-9:00 F, Owre 111, Schaffer

182C Periodontics Clinic (1 cr; prereq 181C) Schaffer

196 Practice Mgt (1 cr; prereq regis Dent)
8:00-9:00 T, Owre 113, Thorson

197 Professional Orientation (1 cr)
8:00-9:00 W, Owre 113, Crawford

200 Adv Orthodontic Technics (ar cr) Steadman

201 Treatment Procedures in Orthodontics (ar cr) Steadman

202 Case Analysis (ar cr) Steadman

203 Treatment Planning (ar cr) Steadman

204 Adv Clinical Orthodontics (ar cr) Steadman

205 Osteology, Myology of the Head (ar cr) Steadman

206 Growth of the Head (ar cr) Steadman

207 Comparative Odontology (ar cr) Steadman

208 Seminar: Orthodontics (ar cr) Steadman

209 Probs, Research: Orthodontics (ar cr) Hall

220 Adv Dental Anatomy (ar cr) Hall

230 Adv Oral Diagnosis (ar cr) Bartholdi

231 Adv Clinical Oral Diagnosis (ar cr) Bartholdi

232 Research: Oral Medicine (ar cr) Bartholdi

240 Adv Technical Restorative Dentistry (ar cr) Jensen, Wittich, Yock

243 Adv Clinical Restorative Dentistry (ar cr) Jensen, Wittich, Yock

247 Research Probs: Restorative Dentistry (ar cr) Jensen, Wittich, Yock, Crawford

250 Adv Oral Surgery (ar cr) Clark

251 Seminar: Oral Surgery (1 cr) Clark

252 Research: Oral Surgery (ar cr) Clark

253 Probs: Oral Surgery (ar cr) Clark

261 Adv Dental Radiographic Technique (ar cr) Petersen

262 Research: Oral Pathology (ar cr) Gorlin

263 Seminar: Dental Research (1 cr) Gorlin

264 Clinical Oral Pathology Conference (1 cr) Gorlin, Bartholdi, Clark

280 Adv Periodontics Clinic (ar cr) Schaffer

281 Adv Periodontics Lectures (3 cr) Schaffer

282 Research: Periodontics (ar cr) Schaffer

283 Seminar: Periodontics (1 cr) Schaffer

284 Supporting Structures of the Teeth (3 cr) Schaffer

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AgEd)

20 Rural Education, Community Leadership (3 cr)
11:00-12:15 TTh, Hr 302, Swanson

82 Teaching in Secondary School (4 cr; prereq 81, Ed 55B or ¶)
Lect IV MWF, Hr 301, Kitts
Lab VII-VIII Th, Hr 301, Kitts

91 Supervised Teaching Experience (6 cr; prereq sr, 82, ‡) Kitts

104 Planning Programs (3 cr; prereq 3rd qtr sr or ‡)
11:00-12:15 TTh, Hr 301, Peterson

120 Rural Education, Community Leadership (3 cr; prereq grad or ‡)
11:00-12:15 TTh, Hr 302, Swanson

221 Field Probs (3 cr) Peterson, Kitts, Swanson

232 Research (ar cr; prereq 15 cr educ) Peterson, Kitts, Swanson

291 Seminar (ar cr) Peterson, Kitts, Swanson

ART EDUCATION (ArEd)

17 **Pictorial Expression for Elem Education** (3 cr)
—1, I-II MWF, TSF 259, Cherry
—2, III-IV MWF, TSF 259, Cherry
—3, VIII-IX MWF, TSF 259, Cherry

18 **Design Activities for Elem Education** (3 cr)
—1, III-IV MWF, TSF 256, Hegg
—2, VI-VII MWF, TSF 256, Hegg
—3, VIII-IX MWF, TSF 256, Hegg

19 **Functional Arts, Crafts in Elem Education** (3 cr)
—1, I-II MWF, TSF 256, Wold
—2, VI-VII MWF, TSF 259, Cherry

54 **Adv Weaving** (3 cr)
VI-VII MWF, TSF 203, Smits

58 Principles, Experiences (5 cr; prereq 14)
III-IV MTWThF, J 109, Hastie, Wold

84 **Teaching in Elem School** (3 cr; prereq 6 cr from 17, 18, 19)
Lect VII TTh, P 210, Gayne
—1, Lab VI TTh, J 109, Gayne
—2, Lab VIII TTh, J 109, Gayne

84A **Teaching in Elem School** (3 cr; prereq III-A prog)
I-IV S, TSF 256, Wold

88 Student Teaching, Supervision (3 cr, †86-87-88; prereq sr, 56, 57, Ed 55A, 55B, ¶88A) Hastie, Wold

88A Teaching, Supervision (2 cr, †86A-87A-88A; prereq sr, 56, 57, Ed 55A, 55B, ¶88)
IX-X T, J 109, Gayne

295 Problems (ar cr; prereq cons maj adv) Gayne, Hastie

296 Seminar (1 cr)
IX-X Th, J 109, Gayne, others

CHILD DEVELOPMENT AND WELFARE (CD)

80 **Child Psychology** (3 cr; prereq Psy 2)
—1, III MWF, CW 218, Ruebush
—2, V MWF, CW 218, Hartup
—3, VI MWF, CW 218, Moore

81 **Adolescent Psychology** (3 cr, §old 132; prereq Psy 2)
—1, I MWF, CW 218, Duker
—2, IV MWF, CW 226, Hurst

85 Psychological Appraisal of Child Behavior (3 cr, §old 100; prereq 80)
VI TTh and ar, Bu 123, Hurst

90 Child Rearing (3 cr; prereq Psy 2)
VI TTh and ar, CW 226, Robinson

125 Experimental Child Psychology (3 cr; prereq sr, 80, Psy 5, 12 cr educ psy or psy or soc)
I-II TTh, CW 226, Palermo

143 Probs: Mental Deficiency (3 cr; prereq sr, 12 cr psy)
I MWF, CW 226, Ruebush

144 Psychology of the Gifted Child (3 cr; prereq 80, 9 cr educ psy or psy or soc or HE)
III MWF, CW 226, Robinson

182 Learning in Young Children (3 cr; prereq 80)
VI MWF, CW 226, Wright

183 Language, Thought in Children (3 cr; prereq 80)
V MWF, CW 206, Templin

185 Children in Society (3 cr; prereq sr, 12 cr psy or educ psy or soc or HE)
VI MWF, FolH 101, Templin

190 Topics (ar cr, §old 95; prereq 18 cr with B avg incl 80, Psy 70 or BA 5 or Soc 45)

212 Design of Research (3 cr; prereq 211)
9:00-10:30 TTh, CW 206

213 Adv Adolescent Psychology (3 cr; prereq 12 cr psy or educ psy or soc or HE)
4:00-5:30 TTh, CW 218, Briggs

227 Multiple Factor Analysis (2 cr; prereq 3 qtrs stat, ment meas)
VIII-IX F, Bu 103, Roff

238 Seminar: Human Development (2 cr; prereq 237)
VIII-IX W, CW 206, Hartup

249 Treatment of Disturbed Children (3 cr; prereq 248)
IX-X MF, CW 206, Wirt

250 Practicum: Clinical Child Psychology (ar cr; prereq ‡)
V-VII MW, CW 117, Hafner

272 Readings, Research: Child Development (ar cr; prereq MA plan B students or ‡)

284 Experimental Child Psychology (2 cr; prereq 283)
VIII-IX M, CW 134, Wright

292 Practicum: Psychological Appraisal of Children (ar cr; prereq ‡)

295 Seminar: Projective Methods with Children, Adolescents (ar cr; prereq ‡)
VI-VII Th, CW 206, Hafner

GENERAL EDUCATION

Curriculum and Instruction (EdCI)

56 Methods, Observation in Kindergarten (3 cr; prereq 55 or ¶)
VII MWF, CW 218, Headley

57 Nursery School-Kindergarten Lab: Art, Literature, Social Studies, Science (6 cr; prereq 55 or ¶)
VIII MTWThF, Bu 123, Headley

58 Core Curriculum Foundations (1 cr; prereq ‡)
3:00-4:20 M, Bu 103, Bossing

59 Methods, Observation in Nursery School (2 cr; prereq 55 or ¶)
3:30-5:30 Th, CW 226, Kilmer

60 **Teaching Reading in Elem School** (3 cr; prereq Ed 75A)
—1, II MWF, Bu 120, Bond
—2, VI MWF, Bu 120, Odland

61 **Teaching Social Studies in Elem School** (3 cr; prereq Ed 75B)
—1, II MWF, CW 226, Lambert
—2, VII MWF, CW 226, Lea
—3, VI-VII T, VI Th, CW 218, Lea

62 **Teaching Mathematics in Elem Schools** (3 cr; prereq Ed 75A)
—1, III MWF, Pt 202, Stochl
—2, IV MWF, Pt 202, Jackson
—3, VI MWF, Pt 202, Stochl

63 **Children's Literature** (2 cr)
—1, IX-X T, Bu 120, Odland
—2, VI TTh, Bu 120, Odland

64 **Teaching English in Elem School** (3 cr; prereq Ed 75A)
—1, VI MWF, Bu 211, Dykstra
—2, VII MWF, Bu 120, Chase

65 **Teaching Science in Elem School** (3 cr; prereq Ed 75A, 10 cr nat sci)
—1, VII-VIII M, VII W, Bu 211, Goossen
—2, IX-X T, IX Th, Bu 211, Goossen

66 **Treatment of Learning Difficulties** (3 cr; prereq 60, 62, ¶student tchg)
IX-X W, Bu 120, Dykstra

101 **Driver Education** (3 cr)
—1, I-IV S, ForH 15, Gebhard
—2, VI-IX S, ForH 15, Gebhard

103 Teaching Science in Elem School (3 cr; prereq sr, Ed 75B or tchg exper)
III-IV S, Bu 123, Goossen

105 Audio-Visual Materials in Education (3 cr; prereq sr)
I-II Th, WeH 201, 1 hr ar, Pearson

109 **Audio-Visual Materials, Equipment Lab** (3 cr; prereq 105 or ¶ or ‡)
Lect VI-VII T, WeH 206, Pearson
—1, VI-VII W, WeH 206, Pearson
—2, IX-X Th, WeH 206, Pearson

110 **Practicum: Laboratory School Teaching, K-6** (ar cr; prereq tchg exper, cons adv)

113 High School Curriculum (3 cr; prereq Ed 55B)
III-IV S, JohH 113, Winter

120 Education of Blind Children in the Secondary Schools (3 cr; prereq 118, ‡)
IX-X M, JohH 126, Kenmore

122 Literature for Adolescents (3 cr; prereq Ed 55B or jr-sr HS tchg exper)
I-II S, Bu 120, Kegler

125 **Occupational Information Lab** (3 cr; prereq ‡)
—1, II MWF, Bu 125, Dugan, Wright, Winfrey (guidance institute students)
—2, 3:45-5:15 TTh, Bu 129, Tennyson

132 Teaching Basic Business Subjects (3 cr)
III-IV S, Bu 211, Price

133 Consumer Education in Schools (3 cr)
IX-X Th, Bu 103, Price

141 Co-operative Part-Time Work Experience Programs (3 cr)
4:00-6:20 W, Bu 103, Meyer

144 Teaching Reading in Secondary Schools (3 cr; prereq 9 cr educ)
IX-X W, Bu 211, 1 hr ar, Chase

145 Reading Difficulties (3 cr; prereq 143 or 144)
IX-X T, Bu 123, 1 hr ar, Bond

149 Teaching, Supervision of Mathematics in Elem School (3 cr; prereq 9 cr educ)
4:30-6:00 MW, Pt 202, Stochl

150 Supervision, Improvement of Instruction (3 cr; prereq 9 cr educ)
I-II S, Pt 202, Lambert

151 Diagnosis, Treatment of Learning Difficulties (3 cr)
IX-X M, CW 226, Wesenberg

153 Supervision, Teaching of English in Elem Schools (3 cr; prereq Ed 75B)
III-IV S, Bu 103, Archer

155 Materials Lab for Social Studies Teachers (3 cr; prereq ‡)
IX-X T, PeikH 165, West

159 Materials Lab, Secondary School Distributive Education (3 cr; prereq 137A or EdT 90C or ‡)
4:00-6:20 T, Bu 103, Meyer

171 Curriculum Lab Practice (0-3 cr; prereq 170A or 170B, ‡) Bossing, Goossen

173B Organizing Units of Instruction in Secondary School (3 cr; prereq 113 or ‡)
IX-X Th, JohH 105, Bossing

174 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 164; prereq Spch 163)
Starr

175 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 165; prereq 174) Starr

176 Clinical Methods, Practice in Speech Pathology (3 cr, §Spch 166; prereq 175) Starr

182 Education of Partially Seeing Children (3 cr; prereq 115, 118, ‡)
IX-X W, JohH 126, Kenmore

192 Mathematics Lab (3 cr; prereq grad or tchg exper)
IX-X Th, PeikH 315, D Johnson

193C High School Mathematics: Content, Teaching Techniques (4 cr; prereq 193B)
V TTh, VI MTWThF, FolH 11, D Johnson

199E Internship (ar cr) Davies, others

201 Probs: Teaching Social Studies (3 cr; prereq 155 or 168, 204 or ‡) Morse, West

203 Supervision, Admin of Special Education (3 cr; prereq ‡)
IX-X T, Pt 202, Force

205 Probs: Audio-Visual Education (ar cr; prereq ‡) Pearson

215 Probs: School Health Education Program (ar cr; prereq ‡) Grout

222 Seminar: Current Probs in Techniques of High Shcool Instruction (ar cr; prereq Ed 55B, sr methods)
IX-X W, PeikH 275, Bossing, Keller, Winter, Popper

225 Probs: Secondary School Supervision (ar cr; prereq ‡) Keller, Lane, Popper

226 Seminar: Elem School Probs (2 cr)
IX-X Th, Bu 120

227 Probs: Rural Education (ar cr; prereq EdAd 117) Archer

228 Probs: Higher Education, Teacher Education (ar cr; prereq ‡) Eckert

238 Probs: Distributive Education (ar cr; prereq ‡) Meyer

239 Probs: Business Education (ar cr; prereq ‡) Price

252 Effective College Teaching (3 cr; prereq 18 cr educ or 1 yr grad study in any field)
I-II T, I Th, Bu 123, Eckert

253 Seminar: Improvement of College Instruction (ar cr; prereq ‡)
7:00-9:30 pm W, Eckert

254 Directed Experience in College Instruction (ar cr; prereq ‡) Hill

261 Probs: Improvement of Instruction (ar cr; prereq ‡) Archer, Goossen, Curtin, Stochl

266 Supervision of High School Instruction (3 cr; prereq EPsy 193 or 293 or ‡)
IX-X M, JohH 205, 1 hr ar, Popper

271 Probs: Curriculum Construction (3-6 cr; prereq ‡)

273 Probs: Reading (ar cr; prereq 143 or 144 or ‡) Bond, Chase, Odland, Reynolds, Balow

280 Supervision of Counseling (3 cr; prereq ‡) Dugan, Tennyson, Soldahl, Blocher

284 Probs: Student Teaching (3-9 cr; prereq ‡) Davies

286 Professional Education of Teachers (3 cr; prereq 285 or ‡)
III-IV S, PeikH 75, 77, Davies

296 Probs: Teaching English (ar cr) Kegler

Education (Ed)

55B Introd Secondary School Teaching (5 cr; prereq 55A or ‡)
Lect I MWF, NH 45, Neale
—1, I TTh, Bu 120
—2, I TTh, Bu 211
—3, II TTh, Bu 120
—4, II TTh, Pt 202
—5, II TTh, FolH 102
—6, III TTh, Bu 123
—7, III TTh, Bu 211
—8, V TTh, Bu 123

55N Introd Teaching Nursing (5 cr; prereq Psy 2)
VI-VIII T, VI-VII Th, ForH 160, Sagen

75B Introd Elem School Teaching (5 cr, §old 71A; prereq 75A)
Lect IV MWF, Arch 5, Dykstra
—1, III-IV TTh, Pt 202, Balzer
—2, III-IV TTh, Psy 115, Kerfoot
—3, VI-VII TTh, Bu 211, Dykstra

81 Education for Public Health Nurses (3 cr, not open to educ degree cand; prereq PubH 62, 100, 133)
III MWF, Mayo 1210, Grout

Educational Administration (EdAd)

118 The Community School (3 cr; prereq sr)
IX-X W, Psy 115, Archer

167 Junior High School (3 cr; prereq sr, 9 cr educ)
IX-X T, Psy 109, Bossing

215 Elem School Principalship (3 cr)
III-IV S, Pt 202, Curtin

218 Recent Literature in Secondary Education (ar cr)
IX-X W, PeikH 275, Bossing, Keller, Winter

224 Legal Aspects of Public School Admin (3 cr)
I-II S, Bu 123, 1 hr ar, Hooker

226 School Plant Planning, Mgt (3 cr; prereq 227)
I-II S, JohH 115, 1 hr ar, Domian

228 Probs: Educational Admin (1-3 cr; prereq 225) Hooker, Lane, Domian

235 Seminar: Educational Admin (no cr)
IX-X M, JohH 113, Bossing, Domian, Hooker, Keller, Lane, Popper

236 Field Study (0-10 cr; prereq ‡) Domian, Hooker, Lane, Popper

265 Admin of Noninstructional Activities in Secondary School (3 cr)
IX-X Th, Bu 123, Thompson

270A Probs: Elem Educ (ar cr; prereq ‡) Archer, Bond, Curtin, Goossen

270B Probs: Secondary Educ (ar cr; prereq ‡) Bossing, Domian, Hooker, Lane, Popper

Educational Psychology (EPsy)

100 Individual Appraisal for Counseling (3 cr; prereq 9 cr educ)
I MWF, Bu 125, Dugan, Wright, Winfrey (guidance institute students)

110 Measurement in the Classroom (3 cr)
VIII MWF, JohH 115, Merwin

117 Measurement (3 cr; prereq 116 or 216 or Psy 70)
VIII MWF, JohH 113, Lathrop

125 Group Dynamics (3 cr)
IX-X T, AH 101, 150, 2 hrs ar, Flanders

133 Procedures in Student Personnel Work (3 cr; prereq 9 cr educ)
I-II S, JohH 205, R Johnson

134 School Counseling Procedures (3 cr; prereq 110 or 117, 133, ‡)
III MWF, Bu 125, Dugan, Wright, Winfrey (guidance institute students)

140 Instruments, Techniques of Measurement (3 cr; prereq sr, 110 or 117)
VIII MW, VIII-IX F, Bu 120, Edson

142 **Individual Mental Testing** (3 cr; prereq sr, 110 or 117 or ¶117 with ‡)
IX-X Th, Pt 202, Reynolds, Hodges

143 Adv Individual Mental Testing (3 cr; prereq 142, ‡)
VIII MWF, Pt 202, Balow

148 Clinical Diagnosis of Reading Difficulties (3 cr; prereq EdCI 145)
I-II S, Psy 115, Balow

150 **Clinical Practice in Remedial Teaching** (3 cr; prereq EdCI 145 or 151, ‡) Balow

151 **Clinical Practice in Educational Diagnosis** (3 cr; prereq 142, EdCI 145, ‡)
1:00-4:00 MTWThF, Pt 108, Balow, Reynolds, Hodges

152 School Psychological Services (3 cr)
III-IV S, Psy 115, Hodges

159 Personality Development, Mental Hygiene (3 cr; prereq grad)
II MWF, Bu 123, Wrenn

179 Research: Education of Deaf Children (3 cr)

182 Education of Exceptional Children (3 cr; prereq Ed 55B or 75B)
I-II S, CW 218, Force

184 Education of Mentally Retarded Children in the Elem Schools (3 cr; prereq 182 or ‡)
IX-X W, CW 226, Capobianco

200 Seminar: Institute in Guidance (3-9 cr; prereq ‡)
VI-VII MWF, Bu 125, Dugan, Wright, Winfrey (guidance institute students)

208 Methods in Educational Research (3 cr)
I MWF, Bu 123, Collier

218 **Statistical Methods** (3 cr; prereq 217)
II MWF, Pt 202, Collier

218A **Statistical Methods Lab** (2 cr; prereq 217A)
—1, I-II TTh, Bu 251, MacEachern
—2, III-IV TTh, Bu 251, MacEachern

226 Interviewing Procedures in Counseling (3 cr; prereq 225)
IV MWF, Bu 103, Wrenn

233 **Probs: Guidance, Personnel Work** (1-9 cr)
—1, VI-VII M, Bu 123, Tennyson, Blocher
—2, Ar, Tennyson
—3, Ar, Dugan, Wrenn, Edson, Hagenah, Wilk, Snoke

240 Probs: Measurement (3 cr) Hoyt

243 Probs: Statistics for Students in Education, Psychology (3 cr) Collier

244 Research: Special Education (3 cr; prereq 116, 117, ‡)
IX-X Th, Psy 109, Force, Capobianco

253 **Research Probs** (ar cr; prereq ‡)
—1, VI-VII M, Bu 123, Tennyson, Blocher
—2, Ar, Hoyt
—3, Ar, Hodges
—4, Ar

254 Measurement, Evaluation in Higher Education (3 cr)
VIII-IX T, JohH 126, 1 hr ar, Hoyt

259 Personality Theory in Mental Hygiene (3 cr)
I-II S, Bu 211, Torrance

260 Seminar (no cr)

280 Practicum in Group Leadership (3 cr; prereq ‡) Flanders

281 **Practice in Personnel Work** (3 cr; prereq 226 or ‡)
—1, VI-VII Th and ar, EdH 204, Hagenah
—2, Ar, Snoke

282A **Field Practice in Guidance** (3 cr; prereq ‡)
I-VIII Th, Bu 125, Dugan, Wright, Winfrey (guidance institute students)

282B Supervised Practicum in Counseling (3 cr; prereq ‡)
I-VIII T, Bu 129, Tennyson, Soldahl, Blocher

287 Practicum: School Psychological Services (1-3 cr; prereq ‡) Hodges

History and Philosophy of Education (HEd)

156 History of Ideas in American Education (3 cr)
IX-X T, CW 226, Bagley

180 **The School, Society** (3 cr; prereq sr)
—1, VII-VIII T, VII Th, Bu 120, Bagley
—2, III MWF, Bu 120, Corwin
—3, IV MWF, CW 218, Corwin
—4, VIII M, VIII-IX W, CW 218, Bagley
—5, I MWF, Pt 202, Corwin

182 Comparative Philosophies of Education (3 cr)
IX-X M, P 210, Beck
241 Problems (ar cr; prereq ‡) Beck, Bagley
280 Education, Social Change (3 cr) (guidance institute students)
VI-VII M, Bu 125, Beck

HOME ECONOMICS EDUCATION (HEEd)

90 Chlid Development (3 cr; prereq soph, Psy 2)
VI TTh, McNH 201, 1 hr ar, Peterson
91 Observation, Materials, Teaching (5 cr; prereq HE 4, 21, 41, Ed 55B, ¶93)
VIII MWF, IX W, McNH 103, Kafka
92 Teaching Probs (2 cr; prereq sr, 91, 93, ¶94, ¶192, ¶194A)
II MW, I-II F, McNH 102, Wantoch
93 Supervised Teaching (3 cr; prereq HE 4, 21, 41, Ed 55B)
IX MF, McNH 103, Kafka, Wantoch
94 Supervised Teaching (6 cr; prereq 93)
VI-VII T and ar, McNH 102
95 Field Experience for Home Agents (6 cr; prereq 91, 93, △, cons dir agric ext) Ford
190 Readings (1-3 cr; prereq ‡) Brown, Ford, Holmblade
192 Evaluation in Home Economics (2-3 cr; prereq sr, 91, 93, Ed 55B)
III-IV TTh, McNH 102, Brown
193A Curriculum: Secondary Level (3 cr; prereq 94 or ‡)
IX-X T, McNH 102, 1 hr ar, Holmblade
194A Adult Education (3 cr; prereq 91, 93)
III-IV MWF, McNH 103, Ford
197 Organization, Methods of Related Art Teaching (1-3 cr; prereq sr, 91, HE 24)
IX-X W, McNH 342, Esteros
293 Problems (1-9 cr; prereq ‡...294 rec) Brown, Esteros, Ford, Holmblade

INDUSTRIAL EDUCATION (Ind)

1 **Handicrafts** (3 cr)
I-III TTh, TNCW 218, Kelle
4 Wood Processing III (3 cr; prereq △)
5 Wood Processing IV (3 cr; prereq 4, △)
6 **Industrial Arts Teaching** (5 cr)
VII-IX TTh, VIII W, PeikH 32, Randleman
9 **Building Construction Drafting** (3 cr; prereq 7)
II-IV TTh, TNCW 201, Kavanaugh
15 **Graphic Arts I** (3 cr)
II-IV TTh, TNCW 1, Flug (OT students only)
16 **Graphic Arts II** (3 cr)
III-IV MWF, TNCW 14, Nelson
22 **Industrial Electronics** (3 cr; prereq 21)
VI-VII MWF, TNCW 15, Kavanaugh
23 Applied Electronics I (3 cr; prereq △)
24 Applied Electronics II (3 cr; prereq △)
25 Metal Processing I (3 cr; prereq △)
26 Metal Processing II (3 cr; prereq △)
27 Metal Processing III (3 cr; prereq △)
28 Metal Processing IV (3 cr; prereq △)
29 Metal Processing V (3 cr; prereq △)
30 Small Gas Engines (3 cr; prereq △)
50 **Industrial Practices, Processes** (3 cr; prereq 35)
VI-VIII T, TNCW 116, Widdowson
60A Student Teaching (3 cr, †60A-60B-60C; prereq 6, 55 or 6, 100, △) Randleman
60B Student Teaching (3 cr, †60A-60B-60C; prereq 60A) Randleman
60C Student Teaching (3 cr, †60A-60B-60C; prereq 60B) Randleman
60D Student Teaching (3 cr) Randleman
90 Independent Study (3 cr; prereq up div or ‡)
VIII W, TNCW 116, Nelson, Flug
91 Independent Study (3 cr; prereq 90)
VIII W, TNCW 116, Nelson, Flug
92 Independent Study (3 cr; prereq 91)
VIII W, TNCW 116, Nelson, Flug
110 Vocational Guidance (3 cr; prereq Ed 55B)
IX-X Th, TNCW 113, Nelson
125 Philosophy, Practice (3 cr, §35)
IX-X M, TNCW 113, Widdowson
135 Course Construction (3 cr, §40)
IX-X T, TNCW 113, Kavanaugh
200 Research Probs (3, 6 or 9 cr)
III-IV M, TNCW 103, Micheels, Nelson, Kavanaugh
251 Research (3 cr; prereq ‡)
IX-X W, TNCW 113, Micheels

METHODS AND STUDENT TEACHING (EdT)

50 Junior Practicum in Special Education (3 or 6 cr; prereq ‡) Capobianco, Force, Kenmore
51B Teaching: Nursing (6 cr; prereq 51A)
I TTh, VIII-IX Th, ForH 285, Dunning, Weise
52 Student Teaching (ar cr) Davies, others
53A Teaching Handicapped Children (6 cr; prereq ‡)
IX M and ar, Chase, Sorensen, others
53B Teaching Handicapped Children (6 cr; prereq ‡)
IX M and ar, Chase, Sorensen, others
54A Student Teaching: Elem School (6 cr)
IX M and ar, Chase, others
54B Student Teaching: Elem School (6 cr; prereq 54A)
IX M and ar, Chase, others
60 Student Teaching: Library Science (3 cr; prereq sr, Lib 53, 62, 70, 74, 171, 172 or ‡) Zimmerman

67 Student Teaching: Mathematics (3 or 6 cr, †9 cr; prereq sr, ¶67C, Math 60 or ¶)
IX-X M and ar (for off-campus) D Johnson, Goralski, others

67C Teaching Secondary School Mathematics (1 cr, †67A-67B-67C; prereq 67B)
IX-X W, PeikH 315, D Johnson

67M Teaching Secondary School Mathematics (3 cr; prereq minor only)
IX-X TTh, PeikH 325, D Johnson

68 Student Teaching: Science (3 or 6 cr, †9 cr; prereq sr, ¶68C)
IX-X M and ar (for off-campus), Boeck, Goralski, others

68C Teaching Secondary School Science (1 cr, †68A-68B-68C; prereq 68B)
IX-X W, PeikH 365, Boeck

68M Teaching Secondary School Science (3 cr; prereq minor only)
IX-X TTh, PeikH 365, Boeck

69 Student Teaching: Social Studies (1 or 3 or 6 cr; prereq jr, ¶Ed 55A...or sr, ¶69C)
VIII M, PeikH 165, IX-X M and ar (for off-campus), West, Goralski, others

69C Teaching Social Studies in Secondary School (1 cr, †69A-69B-69C; prereq 69B)
IX-X W, PeikH 165, West

70 Student Teaching: Modern Languages (3 or 6 cr, †9 cr; prereq sr, ¶70C)
IX-X M and ar (for off-campus), Birkmaier, Goralski, others

70C Teaching Modern Languages (1 cr, †70A-70B-70C; prereq 70B)
IX-X W, PeikH 225, Birkmaier

71 Student Teaching: Latin (3-9 cr, †9 cr; prereq sr, ¶71C)
IX-X M and ar (for off-campus) Birkmaier, Goralski, others

71C Teaching Latin (1 cr, †71A-71B-71C; prereq 71B)
IX-X W, PeikH 225, Birkmaier

72 Student Teaching: Distributive Education (3-9 cr, †9 cr; prereq Ed 55B, ‡) Meyer

73 Student Teaching: Business Subjects (3-9 cr, †9 cr; prereq Ed 55B, ‡) Price

75 Student Teaching: Language Arts (3 or 6 cr, †9 cr; prereq sr, ¶75C or ¶75D)
IX-X M and ar (for off-campus), Kegler, Goralski, others

75C Teaching Language Arts in Secondary Schools (1 cr, †75A-75B-75C; prereq 75B)
IX-X T, PeikG 55, Osborne (Engl maj or Engl core)

75D Teaching Language Arts in Secondary Schools (1 cr; prereq sr)
IX-X W, FolH 306, Smith (Spch maj or Spch core)

75G Teaching Language Arts in Secondary Schools (3 cr; prereq Engl, Lang Arts min, maj other than Spch)
IX-X TTh, PeikH 275, Kegler

76G Teaching Language Arts in Secondary Schools (3 cr; prereq Spch min, maj other than Engl)
IX-X TTh, PeikG 55, Osborne

77 Student Teaching: Nursery School (4 cr)
4:30-6:00 M and ar, CW 12, Robinson

78 Student Teaching: Kindergarten (6 cr)
4:30-6:00 M and ar, CW 218, Sorensen, others

79 Student Teaching: Primary Grades (6 cr)
4:30-6:00 M and ar, CW 218, Sorensen, others

80 Teaching Typewriting, Bookkeeping (2 cr; prereq Ed 55B or ¶)
VIII-IX M, JohH 105, Price

84A Practice, Field Work in Recreation Leadership (2 cr; prereq jr, recr maj)
I T, CH 206, 6 hrs ar, Giles

84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
I T, CH 206, 6 hrs ar, Giles

84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
I T, CH 206, 6 hrs ar, Giles

85A Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq sr, recr maj or min)
V W, CH 206, 3 hrs ar min, 6 hrs ar maj, Giles

85B Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85A)
V W, CH 206, 3 hrs ar min, 6 hrs ar maj, Giles

85C Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85B)
V W, CH 206, 3 hrs ar min, 6 hrs ar maj, Giles

90C Teaching Distributive Education Subjects (2 cr, †90A-90B-90C; prereq 90B)
V TTh, Bu 103, Meyer

MUSIC EDUCATION (MuEd)

4 **Applied Instrumental Technique** (2 cr; prereq mus educ maj)
VI TWThF, MusEd 200, Loeffler

5 **Applied Instrumental Technique** (2 cr; prereq 4)
IV MWThF, ScH 4, Prescott

6 **Applied Instrumental Technique** (2 cr; prereq 5)
VII MTWTh, NMA 4, Prescott

7 **Applied Instrumental Technique** (2 cr; prereq 6)
VII TWThF, MusEd 102, Loeffler

50A **Teaching in Primary Grades** (2 cr; prereq ‡)
III WF, ScH 4, 1 hr ar, Berryman (MuEd maj only)

51 **Teaching Music** (2 cr; prereq Mus 1)
—1, I MWF, NMA 5, Berryman
—2, V MWF, ScH 104, Alpuerto
—3, VIII MWF, ScH 104, Alpuerto

52 **Teaching Music** (2 cr; prereq 51 or ‡)
—1, III MWF, ScH 104, Abelson
—2, VI MWF, ScH 104, Alpuerto

59 Choral Literature, Conducting (2 cr sr, 1 cr others)
V MTTh, NMA 4, Caswell

60 Supervision, Teaching (3 cr; prereq sr, 50B, 53, Ed 55B, ‡)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

61 Supervision, Teaching (3 cr; prereq 60)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

62 Supervision, Teaching (3 cr; prereq 61)
IX-X W, ScH 4, 5 hrs ar, Caswell, Ivory

64 Band Organization (3 cr; prereq 6, ‡)
VI MWF, NMA 5, Prescott

67 **Teaching Instrumental Music in Elem School** (2 cr; prereq ‡)
III MWF, NMA 4, Ivory

68 **Teaching Instrumental Music in Secondary Schools** (2 cr; prereq sr, 65)
III TTh, NMA 4, Ivory

103 **Psychological Foundations** (3 cr; prereq sr, ‡)
IX-X M, ScH 4, Caswell

224 Research Probs (3-9 cr; prereq elem stat)
VIII W, ScH 214, Caswell, Ivory

PHYSICAL EDUCATION

Undergraduate Courses for Men (PEM)

4C Track Fundamentals (1 cr)
VI-VII TTh, CH 206, Kelly, Novak

5C **Stunts, Contests, Softball, Baseball** (1 cr)
III-IV TTh, App Gym, Ostrander, Siebert, Gostick

6C **Aquatics** (1 cr)
V MWF, CH Pool, Heusner

7C Recreational Games (1 cr)
II-III TTh, CH Gym, Piper, Novak, Osell

8 **Tennis, Golf** (1 cr)
IV-V TTh, StadS, Bolstad, Lewis

9B **Square, Ballroom Dancing** (1 cr)
V T, IV-V Th, NGW, Piper, MacLeod

45 **Camp Craft** (2 cr)
V-VII Th, CH 215, Ostrander

46 Camp Leadership (2 cr)
VII MW, CH 206, Osell, Ostrander

58 Leadership in Community Recreation (3 cr; prereq 57)
IV MWF, CH 215, Giles

59 **Instructor's Course in First Aid** (3 cr; prereq age 20, PEW 25)
II MWF, CH 206, Osell

60A **Prevention, Care of Injuries** (3 cr; prereq 50 or Anat 51, 57)
IV MWF, CH 206, Stein

60B Athletic Training Lab (1 cr; prereq 60A)
Stein

61 History of Physical Education (3 cr)
I MWF, CH 206, Donnelly

63 Organization, Admin (3 cr; prereq 32 or 101, 55)
III MWF, CH 215, Piper

64B Leadership in Nature Recreation (2 cr; prereq 64A)
V-VII T, CH 215, Chapman

67 Football Coaching (2 cr; prereq 4A or 1 yr squad exper)
I MWF, CH 215, Nash

73 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

74 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

75 Directed Teaching (2 cr; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

76 Directed Teaching-Block Plan (9 cr, not open to students who have taken 73, 74, 75; prereq 55, Ed 55B)
I T and ar, CH 214, Ostrander

96 Admin of Intramural Sports (2 cr)
V MWF, CH 215, Mueller

Undergraduate Courses for Women (PEW)

C Nonprofessional Physical Education
Aquatics (activity rating 1)
Swimming, Bgn
—1, II MWF, NGW 3, 51 (1½ cr)
—2, VI MWF, NGW 3, 51 (1½ cr)
Swimming, Adv Bgn
—3, VIII MWF, NGW 4, 51 (1½ cr)
—4, III MWF, NGW 51 (1½ cr)
—5, VI TTh, NGW 51 (1 cr)
Swimming, Interm
—6, III TTh, NGW 4, 58 (1 cr)
—7, VII TTh, NGW 58 (1 cr)
Swimming, Adv and Diving
—8, IV MWF, NGW 3, 58 (1½ cr)
Swimming, Adv and Synchronized
—9, VII MWF, NGW 3, 58 (1½ cr)
ARC Sr Life Saving
—10, V MWF, NGW 3, 58 (1½ cr)
Water Safety Instructor's Course
—11, VIII MWF, NGW 58, 201 (1½ cr)
Posture and Individualized Activities
Posture, Individual Exercise (activity 1, 2, 3)
—12, II MWF, NGW 153a, 201 (1½ cr)
—13, VI TTh, NGW 153a (1 cr)
—14, II TTh, NGW 153a (1 cr)
—15, V MWF, NGW 153a (1½ cr)
—16, IV MWF, NGW 153a (1½ cr)
Conditioning Exercises (activity rating 1, 2)
—17, VIII TTh, NGW 153a (1 cr)
Individual and Dual Sports

Archery, Bgn, Interm (activity rating 1, 2, 3)
—18, VI TTh, NGW 60 (1 cr)
—19, VII TTh, NGW 4, 60 (1 cr)
Fencing, Bgn (activity rating 1, 2)
—20, IV MWF, NGW 153, 201 (1½ cr)
Golf, Bgn (activity rating 1, 2, 3)
—21, II TTh, Gy 100 **(StP Campus)** (1 cr)
—22, III TTh, Gy 100 **(StP Campus)** (1 cr)
—23, III MWF, NGW 4, 60 (1½ cr)
—24, IV MWF, NGW 4, 60 (1½ cr)
—25, V MWF, NGW 4, 60 (1½ cr)
—26, VI MWF, NGW 4, 60 (1½ cr)
—27, III TTh, NGW 60 (1 cr)
Golf, Interm
—28, IV TTh, NGW 3, 60 (1 cr)
—29, V TTh, NGW 3, 60 (1 cr)
Golf, Adv
—30, Ar
Riding, Bgn (activity rating 1, 2)
—31, VI Th, NGW 3 (1 cr)
—32, VII Th, NGW 3 (1 cr)
Tennis, Bgn (activity rating 1, 2)
—33, IV TTh, Gy 100 **(StP Campus)** (1 cr)
—34, V TTh, Gy 100 **(StP Campus)** (1 cr)
—35, I MWF, NGW 4, 151 (1½ cr)
—36, II MWF, NGW 4, 151 (1½ cr)
—37, III MWF, NGW 4, 151 (1½ cr)
—38, II TTh, NGW 4, 151 (1 cr)
—39, III TTh, NGW 151 (1 cr)
—40, VI TTh, NGW 4, 151 (1 cr)
Tennis, Interm Adv
—41, IV TTh, NGW 4, 151 (1 cr)
—42, V TTh, NGW 151, 201 (1 cr)

Rhythm
Folk, Square Dance (activity rating 1, 2)
—43, VIII TTh, NGW 151, 201 (1 cr)
Modern Dance, Bgn (activity rating 1, 2)
—44, VI MWF, NGW 153 (1½ cr)
Modern Dance, Interm (activity rating 1, 2)
—45, VII MWF, NGW 151 (1½ cr)
Ballroom Dance, Bgn (activity rating 1, 2, 3)
—46, I TTh, NGW 4, 151 (1 cr)
—47, VII TTh, NGW 151, 201 (1 cr)

Team Sports
Softball
—48, II TTh, NGW 60 (1 cr)

Professional Courses

22A Folk, Ballroom Dance (1 cr)
V TTh, IV Th, NGW 153, 153a

22B **Golf** (1 cr)
—1, VII MWF, NGW 60, Lamb
—2, VIII MWF, NGW 60

22C **Tennis** (1 cr)
—1, IV MWF, NGW 151, Tenney
—2, V MWF, NGW 151, Tenney

25 **ARC First Aid: Standard, Adv** (2 cr)
—1, III MWF, NGW 153a, 201, Slocum
—2, V MWF, NGW 153, 201, Wells

40C Stunts, Tumbling, Apparatus (1½ cr)
VII MTWF, NGW 153, 153a, 1 hr ar, Lamb

42A Senior Life Saving (1 cr; prereq 41A)
VI MWF, NGW 58, Tinker

45 **Physical Education Activities for the Elem School** (2 cr; prereq elem educ maj only)
—1, III MWF, NGW 153, 153a, Lampe
—2, VIII MWF, NGW 153, 153a, Bockstruck

49 Teaching Team Sports (2 cr)
I MTWTh, NGW 60, 153, 153a, 201, Hauptfuehrer

54 **Camp Leadership** (3 cr)
IV MWF, NGW 201, Tinker

70 **Teaching, Health, Physical Education in the Elem School** (3 cr; prereq 3rd qtr soph, elem educ maj, 45)
—1, III TTh, IV T, NGW 153, 201, Bockstruck
—2, VI MWF, NGW 153, 201, Slocum

77 Teaching Aquatics (2 cr; prereq 42A)
II MTWThF, NGW 58, Stoner

80 History, Trends in Dance (3 cr; prereq ‡)
I MWF, NGW 3, Michel

90A Student Teaching (3 cr; prereq Ed 55B, phys educ maj)
III TTh and ar, NGW 3, Jaeger

90C Student Teaching (3 cr; prereq 90B)
III F and ar, NGW 4, Jaeger

90E Student Teaching (2-3 cr; prereq 4th qtr student teacher) Jaeger

93 Student Teaching for Minors (2 cr; prereq Ed 55B, phys educ min)
III TTh and ar, NGW 4, Hauptfuehrer

94 Student Teaching: School Health Education (2 cr; prereq sr, 83, ‡)
III Th and ar, NGW 202, Slocum

95 Administration (3 cr; prereq sr)
III MWF, NGW 3, Baker

Advanced Courses for Men and Women (PE)

104 Teaching Physical Educ for the Handicapped Child (3 cr; prereq ‡)
III-IV S, NGW 3, 1 hr ar, Wells

112 Programming in Recreation (3 cr; prereq PEM 58)
VI MWF, CH 206, Chapman

114 Admin of School Health Education Program (3 cr; prereq sr, PEW 83, PubH 50 or ‡)
4:00-5:30 TTh, NGW 3, Slocum

118E Probs: Teacher Education in Health, Physical Education, Recreation (ar cr; prereq ‡) Baker, Jaeger, Slocum, Wells

121 Recreation Methods (3 cr; prereq EdT 84C)
II T, II-III Th, CH 206, Chapman, Fitzgerald

124 Supervision (3 cr; prereq ‡)
4:00-5:30 MW, NGW 3, Jaeger

142 Leadership in Hospital Recreation (3 cr; prereq 141)
III MWF, CH 206, Chapman

221 Seminar: Physical Education (no cr)
Baker, Jaeger, Slocum, Wells

224 Research Probs: School Health Education, Physical Education, Recreation (ar cr; prereq 236, 135 or EPsy 116 or ♯) Baker, Chapman, Donnelly, Fitzgerald, Heusner, Jaeger, Slocum, Stish, Wells

238 Admin of Physical Education in Colleges, Universities (3 cr; prereq PEM 63 or ♯)
II MWF, CH 214, Stish

242 Community Organization for Recreation (3 cr; prereq ♯)
III TTh, CH 214, 1 hr ar, Fitzgerald

261A Seminar: Contemporary Probs (3 cr; prereq 236, ♯)
VI MWF, CH 214, Stish

GENERAL COLLEGE (GC)

1A Individual Adjustment (4 cr)
II-III TTh, FolH 6, King

1B Vocational Planning (5 cr; prereq ♯ or cons couns)
V MTWThF, NH 111, Long

2A Psychology in Modern Society (5 cr)
—1, II MTWThF, FraH 102, Burris
—2, VII MTWThF, FraH 102, Martin

2B Fields of Applied Psychology (5 cr; prereq 2A)
III MTWThF, Arch 35, Borow

3A Home Life: Marriage, Family Living (5 cr)
—1, II MTWThF, NH 213, Anderson
—2, V MTWThF, P 210, Anderson
—3, VII MTWThF, ForH 185

3C Clothing Selection, Purchase, Care (3 cr)
VII MWF, JohH 205, Baumgartner

3E Income Mgt: Individual, Household Buying (2 cr)
II MW, TSF 109, Kafka

5A Functions, Probs of Philosophy (3 cr)
III MWF, WeH 202, Petersen

5B Functions, Probs of Logic (3 cr)
—1, V MWF, P 110, Petersen
—2, VIII MWF, NH 209, Petersen

5C Probs of Ethics (3 cr)
I MWF, P 210, Benson

7A Physical Science: Elements of Physics (5 cr)
II MTWThF, Ph 150, Rassweiler

7B Physical Science: Elements of Light, Astronomy (5 cr)
IV MTWThF and ar, Ph 133, Policoff

7C Physical Science: Elements of Chemistry (5 cr)
III MTWThF, Ph 170, Stoppel

7D Physical Science: Elements of Geology (5 cr)
I MTWThF, P 2, M Harris

7E Physical Science: Modern (3 cr; prereq phys and chem, one in college)
IV MWF, Ph 170, Schwabacher

7F Physical Science: Historical Geology (5 cr; prereq 7D)
III MTWThF, P 110, M Harris

8A Applied Mathematics (5 cr)
—1, I MTWThF, NH 207, 1 hr ar, Stoppel
—2, III MTWThF, NH 207, 1 hr ar, Baldwin
—3, V MTWThF, NH 207, 1 hr ar, Baldwin
—4, VI MTWThF, NH 207, 1 hr ar, Policoff
—5, VIII MTWThF, NH 207, 1 hr ar, Giese

8B Applied Mathematics (5 cr; prereq 8A)
—1, III MTWThF, Arch 30, Schluck
—2, IV MTWThF, Arch 30, Mandeville
—3, VI MTWThF, Arch 30, Schwabacher

9A Statistics (5 cr)
—1, II MTWThF, NH 207, McCutcheon
—2, VII MTWThF, NH 207, Giese

10A Human Biology: Fundamental Similarities in Living World (3 cr)
I MWF, NH 211, lab ar, Jefferson

10B Human Biology: Living Machinery in Man (3 cr; prereq 10A)
III MWF, NH 211, Dearden

10C Human Biology: Healthful Living (3 cr)
—1, II MWF, NH 211, Jefferson
—2, V MWF, NH 211, Jefferson

12 Nature Study (3 cr)
VII-VIII MW, NH 216, Dearden

16A Bookkeeping, Accounting Lab (3 cr)
—1, II-III WF, ForH 185, Donnelly
—2, II-III TTh, FraH B25, Donnelly

16B Bookkeeping, Accounting Lab (3 cr; prereq 16A or ♯)
IV-V TTh, FraH B25, Donnelly

17C Small Business Operation (3 cr)
9:00-10:20 TTh, Arch 55, Gustafson

18C Retailing, Selling (5 cr; prereq ♯)
—1, II M, II-III TTh, Bu 103, Wallace
—2, II M, II-III WF, Bu 103, Wallace

18D Salesmanship (3 cr)
I MWF, Bu 211, Wallace

19A Probs of Business Transactions (5 cr)
—1, I MTWThF, Arch 30, Stolte
—2, V MTWThF, Arch 30, Larson
—3, VII MTWThF, Arch 30, Larson

19B Probs of Investment Transactions (5 cr; prereq 19A or ♯)
IV MTWThF, NH 207, McCutcheon

20A Practical Law (5 cr)
—1, II MTWThF, Arch 25, Newcomb
—2, IV MTWThF, Bu 211, Newcomb

21 Gen Arts (3 cr)
—1, III MWF, NH 111, Caswell
—2, VII MWF, NH 111, Gates

22C Creative Personalities of Our Time (3 cr)
IV MWF, NH 111, Safer

23A Art Lab (3 cr)
—1, I-II MW, NH 102, 1 hr ar, MacInnes
—2, III-IV WF, NH 102, 1 hr ar, Gates
—3, VI-VII TTh, NH 102, 1 hr ar, MacInnes

23B Commercial Art (3 cr)
II-III TTh, NH 102, Safer

24C Music Today: Contemporary American Developments (3 cr)
—1, I-II TTh, NH 111, Seecamp
—2, III-IV TTh, NH 111, Caswell
—3, VI-VII TTh, NH 111, Caswell

25A Chorus: Techniques, Performance (2 cr)
II MWF, NH 111, Caswell

26A Photography (3 cr)
I-III T, I-II Th, J 2, Agar

26B Photography (3 cr; prereq 26A or exper, ♯)
IV-V TTh, J 2, Agar

28B French Language, Civilization (5 cr)
II MTWThF, Psy 115, Finnberg

29A World Literature I (5 cr)
I MTWThF, WeH 202, Sheldon

29B World Literature II (5 cr)
VI MTWThF, NH 213, Burrows

29E Reading Short Stories (3 cr)
III MWF, NH 213, Kurak

29I Reading Novels (3 cr)
VII MWF, NH 213, Rathburn

30A Reading, Vocabulary Development (5 cr)
—1, I MTWThF, NH 216, Draxten
—2, II MTWThF, NH 216, Stockdale

30B Fundamentals of Usage, Style (3 cr)
I MTWTh, NH 209, Kurak

31A Writing Lab: Personal Writing (3 cr)
—1, II MW, I-II F, NH 209, Elsenpeter
—2, III-IV M, III WF, NH 209, Elsenpeter
—3, III-IV M, III WF, NH 216, Sheldon
—4, V-VI M, V WF, NH 122, Finnberg
—5, V-VI M, VI WF, NH 209, Keeler

31B Writing Lab: Organizing Ideas (3 cr; prereq 31A)
—1, I-II TTh, NH 122, McBride
—2, III-IV M, IV WF, WeH 302, Draxten
—3, III-IV TTh, WeH 302, Hagen
—4, IV-V TTh, NH 209, Bergstrom
—5, IV-V WF, NH 209, Beck
—6, V-VI M, VI WF, NH 216, Trachtenberg

31C Writing Lab: Communicating in Society (3 cr; prereq 31B)
—1, I-II TTh, WeH 302, Bergstrom
—2, III-IV TTh, JohH 307, Kurak
—3, IV-V WF, NH 216, Stockdale
—4, VI-VII TTh, NH 209, Finnberg

31D Writing Lab: Business Writing (3 cr; prereq 31A...31B rec)
—1, I-II M, I WF, NH 122, Keeler (for DA students only)
—2, I-II M, I WF, WeH 302, Trachtenberg
—3, II-III TTh, NH 209, Reisman
—4, III-IV TTh, NH 122, Sheldon
—5, V-VI M, V WF, WeH 302, Kivits
—6, V-VI TTh, WeH 302, McBride
—7, V-VI TTh, NH 122, Kivits

31E Writing Lab: Individual Writing (3 cr; prereq 31A, ♯)
III-IV TTh, NH 216, Rathburn

31F Writing Lab: Research Writing (3 cr; prereq 31B)
—1, I-II TTh, JohH 307, Burrows
—2, VI-VII WF, WeH 302, Reisman

32A Oral Communication: Basic Prin (3 cr)
—1, I MWF, JohH 105, Manfull
—2, II MWF, JohH 126, Blue
—3, III MWF, NH 107, Manfull
—4, VII MWF, NH 107, Blue
—5, VII MWF, JohH 106, Hagen

32B Oral Communication: Applications of Speech (3 cr; prereq 32A)
—1, I MWF, NH 107, Amram
—2, V MWF, NH 107, Blue

32C Oral Communication: Speech Organization (3 cr; prereq 32A)
—1, II MWF, C 215, Benson
—2, III-IV TTh, NH 107, Blue

32D Oral Communication: Group Discussion (3 cr; prereq 32A)
V-VI TTh, NH 107, Hagen

32E Oral Communication: Business Speech (3 cr; prereq 32A)
III MWF, JohH 105, Hagen

33B Oral Communication: Creative Speech Activities (3 cr; prereq 32A, ♯)
I-II TTh, NH 107, Amram

38A Geography (5 cr)
V MTWThF, NH 213, Steinhauser

38B Conservation, Utilization of Natural Resources (5 cr)
I MTWThF, NH 213, Steinhauser

39 Anthropology (3 cr)
—1, V MWF, FraH 102, Tefft
—2, VIII MWF, NH 213, Tefft

41A Man in Society: His Personal Role (5 cr)
—1, V MTWThF, JohH 205, McGarry
—2, VII MTWThF, FolH 5, McGarry

41B Man in Society: His Organizational Role (5 cr; prereq 41A)
II MTWThF, P 210, F Harris

41C Man in Society: His Intl Role (5 cr; prereq 41A...41B rec)
VI MTWThF, FolH 5, Jones
43A Background of Modern World (5 cr)
VI MTWThF, Arch 25, Traphagen
43B Historical Biography (3 cr)
I MWF, Bu 120, Moen
43C The Far East (5 cr)
III MTWThF, FraH 102, Matsumoto
44B Current History (2 cr)
—1, V TTh, NH 211, Matsumoto
—2, VII TTh, NH 213, Matsumoto
45A Growth of American Democracy (5 cr)
IV MTWThF, NH 211, Traphagen
46B Probs of State Govt (3 cr)
IV MWF, WeH 202, F Harris
46D Probs of Intl Relations (5 cr)
VIII MTWThF, Arch 45, Jones

COLLEGE OF MEDICAL SCIENCES

ANATOMY (Anat)

4 Elem Anatomy (5 cr; prereq MedT, 5 yr nurs, OT, pharm, PT students, Zool 3 or Biol 3A)
Lect I MTWF, JacH 304, Buckman
Lab VIII-IX TTh, JacH 301, 302, 303

57 Anatomy for Physical Education Students (4 cr)
Lect III MWF, JacH 304
Lab IV MWF, JacH 301, 302, 303

102 Head, Neck (6 cr; prereq 59)
Lect VI MWF, JacH 304, Felts, Smithberg
Lab VII-IX MWF, JacH 306, 307, 308

104 Human Histology (4 cr, †103-104; prereq 103)
Lect I TTh, IV Th, JacH 102, Carpenter, Lazarow
—1, Lab II-III TTh, JacH 212, 215
—2, Lab VII-VIII TTh, JacH 212, 215

111 Human Neuroanatomy (5 cr; prereq 104, Zool 150, ‡ or regis Med)
Lect I MWF, JacH 102, Hartmann
—1, Lab II-IV MF, JacH 212, 215
—2, Lab II-IV WS, JacH 212, 215

155 Adv Anatomy (ar cr; prereq ‡) Carpenter, Felts, Hartmann, Heggestad, Lazarow, Morgan, Smithberg, Sundberg, Wells

167 Seminar: Hematology (1 cr; prereq 166) Sundberg

203 Research (ar cr; prereq ‡) Carpenter, Felts, Lazarow, Hartmann, Morgan, Sundberg, Wells

207 Seminar: Anatomy (1 cr; prereq ‡) Lazarow, others

ANESTHESIOLOGY (Anes)

181 Externship (ar cr; prereq regis Med) Van Bergen, others

182 Externship: Anesthesiology, Respiratory Probs (ar cr; prereq 181) Van Bergen, others

265 Gen Anesthesia (12 cr)
IX M, MMA 100

266 Regional Anesthesia (4 cr)
X M, MMA 100

267 Preoperative, Postoperative Evaluation (2 cr)
X W, MMA 100

268 Seminar (2 cr)
IX W, MMA 100

269 Research (ar cr)

BACTERIOLOGY (Bact)

53 Gen Bacteriology (5 cr; prereq soph with C avg in prereq courses, 10 cr chem, 4 cr biol sci or ‡)
Lect VII MWF, MMA 100, Skarnes
Lab VIII-IX MWF, Mayo A205

100 Bacteriology for Dental Students (6 cr; prereq regis Dent or Grad)
Lect I TThS, MMA 125, McLaren
Lab II-IV TThS, Mayo A205

102 Medical Bacteriology (4 cr; prereq 116, not open to med students)
Lect VI TTh, MMA 125, Brand
Lab VII-IX TTh, Mayo A205

103 Soil Microbiology (4 cr, §Soil 127; prereq 53, 8 cr org chem, ‡)
Lect I MWF, So 115 (StP Campus), Schmidt
Lab II-III MF, So 150 (StP Campus)

152 Problems (ar cr; prereq grad, ‡)

153 Gen Bacteriology (3 cr, §53; prereq grad, 10 cr chem, 4 cr biol sci or ‡) Skarnes

201 Research (ar cr)

202 Diagnostic Microbiology (ar cr; prereq bact maj, ‡) Syverton, Bridges

203 Seminar (1 cr)
V W, Mayo 1050, McLaren

204 Adv Bacteriology (ar cr; prereq 122 or ¶, ‡) Lichstein

205 Adv Bacteriology (ar cr; prereq 204) Lichstein

LABORATORY MEDICINE

Laboratory Medicine (LMed)

102 Clinical Lab Medicine (3 cr; prereq regis Med, PhCh 100, Path 101 or ¶)
Lect III T, IV W, Hosp EustisAmph, Evans, Benson, others
—1, Lab VII-IX T
—2, Lab VII-IX Th

184 Probs: Clinical Lab Medicine (ar cr; prereq regis Med) Evans, others

235 Adv Clinical Lab Medicine (ar cr; prereq Anat 166) Evans, others

236 Research: Clinical Lab Probs (ar cr) Evans, others

Medical Technology (MedT)

12 Orientation (1 cr; prereq 11)
VIII W, Owre 113, Hovde

32 Case Presentations (1 cr; prereq 31)
V Th, Hosp EustisAmph, Hovde

52 Clinical Diagnosis by Lab Methods (3 cr; prereq 51)
V MWTh, Hosp EustisAmph, Hammer

60 Blood Grouping, Cross Matching (2 cr)
Lect VI F, Owre 12, Ruspino
—1, Lab VII-IX F, Mayo B209
—2, Lab II-IV F, Mayo B209

61 Clinical Microscopy (2 cr)
Lect II T, Owre 12, Hanauer
—1, Lab VI-VII M, I-II W, Mayo B209
—2, Lab VIII-IX M, III-IV W, Mayo B209

62 Clinical Chemistry (3 cr)
Lect VI W, Owre 113, Freier
—1, Lab II-III M, VII-IX W, Mayo B209
—2, Lab III-IV T, II-IV W, Mayo B209

70A Lab Methods in Clinical Chemistry A (10 cr) Peterson

70B Lab Methods in Clinical Chemistry B (5 cr) Freier

73 Electrocardiography, Basal Metabolism Testing (2 cr) Halsted

75 Clinical Hematology (5 cr) Gonyea

80 Clinical Microbiology (9 cr) Delaney

82 Blood Bank Techniques (4 cr) Ruspino

85 Histologic Techniques (4 cr) McMasters

90 Applied Lab Methods (2 cr)
I W, Mayo C295, Hammer

98 Adv Lab Techniques (4 cr) Gonyea

111 Adv Clinical Lab Techniques (5 cr) Rausch

131 Elements of Admin (3 cr) Hovde

150 Topics: Bacteriology (ar cr) Delaney

151 Topics: Chemistry (ar cr) Freier

152 Topics: Hematology (ar cr) Gonyea

153 Topics: Immunology (ar cr) Ruspino

MEDICINE (Med)

101 Physical Diagnosis (2 cr; prereq Med, Anat 100, Phsl 106-107)
1:30-2:30 Th, Hosp ToddAmph, Tobian

104 Clinical Lecture: Internal Medicine (1 cr per qtr, †3 qtrs; prereq 101, 102)
4:30-5:30 W, Hosp EustisAmph, Carey

112 Junior-Senior Clinical Clerkship (8 cr; prereq regis Med)
9:00-12:00, 1:00-3:00 MTWThF, Goetz

124 Senior Clerkship: Dermatology (2 cr; prereq regis Med)
2:30-3:30 MW, 1:30-3:30 F, Hosp EustisAmph, Lynch

201 Clinical Medicine (ar cr) Watson, others

202 Diseases of Cardiovascular Apparatus (ar cr) Frantz

203 Research: Medicine (ar cr) Watson, others

205 Diseases of Chest (ar cr) Hall, MacDonald, Rossing

206 Clinical Conference (1 cr)
9:00-9:50 F, Hosp ToddAmph, Watson

207 Clinical Pathological Conference (1 cr)
11:00-11:50 W, Hosp ToddAmph, Dawson

208 Clinical Radiological Conference (1 cr)
9:00-9:50 M, Hosp ToddAmph, Peterson, Watson, others

210 Seminar: Infectious Disease (1 cr) Spink

211 Electrocardiographic Conference (1 cr) Tuna

213 Seminar: Psychosomatic Medicine (1 cr, §NPsy 244) Magraw

225 Clinical Dermatology (ar cr) Lynch, others

226 Dermatology (ar cr) Laymon, others

227 Histopathology of Skin (ar cr) Lynch, Goltz, others

228 Research: Dermatology, Syphilology (ar cr) Lynch, Goltz, Rukavina

NURSING

Nursing (Nurs)

50 Medical, Surgical Nursing (12 cr)
I-III, VI-VIII T, III, VI-VIII Th, PoH Amph, Town, Brennan

52 Nurse-Patient Relationships (1½ cr; prereq regis Nurs)
—1, I-II Th, MH 123, Titt
—2, I-II Th, PoH 1303, Brennan
—3, I-II Th, PoH 2317, Bass
—4, I-II Th, PoH 2309, Brown
—5, I-II Th, Pennebaker

54 Pathology (2 cr)
I-III, VI-VIII T, III, VI-VIII Th, PoH Amph, Coe

56 Operating Room Nursing (6 cr) Ellison

58 Orthopedic Nursing (2 cr)
1:00-4:30 MTWTh, PoH 2309, Kume

59 Gynecologic Nursing (4 cr)
1:00-4:30 MTWTh, PoH 2309, Shrimpton

60 Maternal, Child Nursing (12 cr)
III TTh, PoH 1326, VI-VII TTh, MH 116, Whitney
61 Maternal, Child Nursing (12 cr; prereq 60)
VI-VIII MW, MH 213, VI-VIII T, Owre 113, Cook, Geis
66 Neuropsychiatric Nursing (4 cr)
VI-VII TTh, PoH 2317, Clipper, Lediger
67 Care of Neuropsychiatric Patients (8 cr)
III MTTh, PoH 2309, VI W, PoH 2317, Lediger
98 The Nursing Profession (3 cr)
VI-VIII W, ForH 180
151C Medical Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, MH 214, Coe
Lab I-III TTh, MH 128
152C Obstetric Nursing (6 cr; prereq NuEd or NuAd maj)
Lect III MWF, PoH 1326, Whitney
Lab I-II TTh, PoH 1326, Whitney
153C Operating Room Nursing (6 cr; prereq NuEd or NuAud maj)
Lect III MWF, Owre 111, Ellison
Lab I-III TTh, Owre 112, Ellison
157C Surgical Nursing (6 cr)
Lect III MWF, Owre 111, Town
Lab I-III TTh, PoH 1404, Town
165 Work Simplification in Nursing (4 cr)
VI-VIII TTh, MH 128, Grainger

Nursing Administration (NuAd)

110 Field Practice (10-15 cr)
I-IV M, Walseth
160 Ward Admin (3 cr; prereq 170)
I MWF, MH 128, Grainger
170 Nursing Service Admin (3 cr, not open to students in MNA prog)
V MWF, MH 128, Walseth
177 Practicum (15 cr; prereq 175, ‡)
I-III, VI-VII M, MH 116, Walseth
199D Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡)
II-III, VI-VIII F, MH 116, Walseth
199S Field Experience: Nursing Service Admin (15 cr; prereq 192, ‡)
II-III, VI-VIII F, MH 116, Walseth

Nursing Education (NuEd)

69 Conditions, Trends in Nursing (3 cr)
VI-VIII F, ForH 244, Fritz
168 Evaluation of Achievement (3 cr; prereq sr, Ed 55N or NuAd 173 or ‡)
II MWF, MH 214, Holm
171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51B or ‡)
VII M, VI-VII W, MH 128, Weise
198E Adv Teaching (6 cr; prereq 197E)
II-IV, VI-VIII F, MH 128, Dunning

Practical Nursing (PNurs)

3 Elements of Nursing Care (8 cr)
Lect 8:30-10:30, 1:30-3:30 M, PoH Amph, Taylor, Hansen, Moncure
—1, Lab 1:30-3:30 WF, PoH Amph, Taylor
—2, Lab 1:30-3:30 WF, PoH 1326, Hansen
11 Child Care (3 cr)
1:30-3:30 TTh, PoH 1326, Moncure

OBSTETRICS AND GYNECOLOGY (Obst)

135 Clinical Clerkship (6 cr; prereq regis Med) McKelvey, others
201 Adv Obstetrics, Gynecology I (ar cr) McKelvey, others
202 Adv Obstetrics, Gynecology I (ar cr; prereq 201) McKelvey, others
203 Adv Obstetrics, Gynecology I (ar cr; prereq 202) McKelvey, others
204 Adv Obstetrics, Gynecology I (ar cr; prereq 203) McKelvey, others
205 Adv Obstetrics, Gynecology II (ar cr; prereq 204) McKelvey, others
206 Adv Obstetrics, Gynecology II (ar cr; prereq 205) McKelvey, others
207 Adv Obstetrics, Gynecology II (ar cr; prereq 206) McKelvey, others
208 Adv Obstetrics, Gynecology II (ar cr; prereq 207) McKelvey, others
209 Adv Obstetrics, Gynecology III (ar cr; prereq 208) McKelvey, others
210 Adv Obstetrics, Gynecology III (ar cr; prereq 209) McKelvey, others
211 Adv Obstetrics, Gynecology III (ar cr; prereq 210) McKelvey, others

OPHTHALMOLOGY (Opth)

100 Ophthalmology (½ cr, †3 qtrs; continuation of 100w)
4:30-5:30 Th, Bo B6

OTOLARYNGOLOGY (Otol)

101 Clinical Lecture: Otology (2 cr; prereq regis Med)
4:30-5:30 Th, Bo B6, Boies, others
230 Clinical Otology (3 cr)
9:00-12:00 MWF, ENT Clinic, Boies, Kusske, Langsjoen, Pollak, Ulvestad
231 Clinical Rhinology, Laryngology (3 cr)
9:00-12:00 MWF, ENT Clinic, Boies, Kusske, Langsjoen, Pollak, Ulvestad
232 Surgery of Ear, Nose, Throat (3 cr)
237 Endoscopy (2 cr) Priest
238 Pathology of Ear, Nose, Throat (1 cr) Lober
241 Seminar (1 cr) Boies

PATHOLOGY (Path)

60 Pathology for Physical Therapists (3 cr; prereq regis PT)
VII T, VII-VIII Th, MH 213

100 Pathology for Dental Students (8 cr; prereq regis Dent)
Lect I MTWThF, JacH 104, Dawson, others
Lab II-III MF, VII-VIII TTh, JacH 104, 107, 108

104 Autopsies (ar cr; prereq 102) Dawson

105 Diseases of Kidney (3 cr; prereq 102)
V-VI TTh, JacH 104, Hebbel

110 Seminar (1 cr; prereq 102)
V-VI M, JacH 104, Dawson

111 Conference on Autopsies (1 cr; prereq 102)
V-VI T, JacH 104, Dawson

113 Surgical Pathology (ar cr; prereq 102) Hebbel

201 Research (ar cr) Dawson

PEDIATRICS (Ped)

120 Clinical Lecture: Pediatrics (2 cr; prereq regis Med)
4:30-5:30 W, Hosp EustisAmph, Anderson, others

135 Clinical Clerkship (16 cr; prereq regis Med) Anderson, others

181 Externship (16 cr; prereq regis Med) Anderson, others

182 Externship: Pediatric Service (16 cr; prereq regis Med) Anderson, others

183 Clinical Program: Cardiology (16 cr; prereq regis Med) Anderson, others

184 Clinical Training: Neurology (16 cr; prereq regis Med) Anderson, others

185 Clinical Training: Endocrinology, Metabolism (16 cr; prereq regis Med) Anderson, others

186A Hematology (16 cr; prereq regis Med) Anderson, others

186B Infectious Disease (16 cr; prereq regis Med) Anderson, others

186C Immunology, Inflammatory Diseases (16 cr; prereq regis Med) Anderson, others

186D Renal Diseases (16 cr; prereq regis Med) Anderson, others

186E Metabolic, Endocrinologic Research (16 cr; prereq regis Med) Anderson, others

200 Seminar (1½ cr)
3:45 T, Anderson, others

202 Clinic (ar cr; prereq ‡) Anderson, others

204 Residency (ar cr; prereq ‡) Anderson, others

206 Pediatric Special Interest (ar cr) Anderson, others

208 Research (ar cr; prereq ‡) Anderson, others

PHARMACOLOGY (Phcl)

9 Pharmacology for Nursing Students (2 cr, †9-10)
IV TTh, Owre 113, Cranston

57 Pharmacology of Official Medicinal Agents (3 cr; prereq 56)
II MWF, AH 9, White

102 Gen, Experimental Pharmacology (7 cr; prereq regis Med, 101)
Lect II MTWThF, MMA 125, Bieter, Wright, Cranston, others
—1, Lab VII-IX MW, MH 101, 129, 136
—2, Lab VII-IX TF, MH 101, 129, 136

106 Gen Pharmacology (2 cr; prereq 105)
1:00-2:00 TTh, MMA 100, Wright, Cranston

108 Prescription Writing for Dental Students (1 cr; prereq 101, 106)
1:00-2:00 F, Owre 113, Wright

109 Problems (ar cr; prereq ‡) Wright, Bieter, White

111 Adv Toxicology (ar cr; prereq 110 or ¶) Wright

124 Special Systems (ar cr; prereq ‡) Wright, Bieter

162 Biological Assay of Drugs (3 cr; prereq 101 or ‡)
Lect I M, AH 215, White
Lab I-III TTh

203 Research (ar cr; prereq 101, 102 or ‡) Bieter, Wright, Cranston, White

204 Adv Pharmacology (1 cr; prereq 101 or ‡)

205 Gen Discussions (1 cr; prereq 101 or 102, ‡)

PHYSICAL MEDICINE AND REHABILITATION (PMed)

1 Introd to Occupational Therapy (1 cr)
VII T, Hosp D138, Hansen

2A Orientation to Physical Therapy, Rehabilitation (1 cr; prereq soph)
I Th, Mayo 810, Moen

5 Therapeutic Recreation (2 cr; prereq pre-OT)
VI TTh, Hosp D138, Hansen

55 Process of Rehabilitation (2 cr; prereq regis OT)
VI MW, Hosp D138, Hansen

61 Physical Medicine, Rehabilitation Applied to Medical Sciences (5 cr; prereq regis OT or PT)
I MTWThF, Z 313, Kottke, others

63 Junior Clinic (1 cr; prereq regis OT or PT)
II W, Hosp EustisAmph, Gullickson

73 Theory of Occupational Therapy (3 cr; prereq 72)
III TTh, Owre 111, VI-VII F, Hosp D138, Eliason

76 Techniques of Occupational Therapy (3 cr; prereq 75)
I-III TTh, Hosp D138, Esch, Lepley

77 Study of Physical Disabilities (5 cr)
VI-VII MWF, Mayo 825, Esch, Lepley
78 Prin, Practice of Occupational Therapy (3 cr; prereq regis OT) Eliason
80A Therapeutic Exercises (4 cr; prereq regis PT)
Lect III M, II F, Mayo 825, Knapp, Mundale
Lab II-III TTh, Mayo 825, Mundale
82 Physiology of Muscles, Nerves, Circulation (3 cr; prereq regis PT)
II M, III WF, Mayo 825, Kubicek
84 Rehabilitation Procedures (3 cr; prereq regis OT)
Lect III W, Hosp D138, Allison (for OT students)
Lab VI-VII MWF, Mayo 825, Allison
87 Clinical Practice (3 cr; prereq regis PT) Moen
89 Clinical Practice (18 cr, §old 91) Moen
90 Conference (1 cr; prereq regis PT)
IX F, Mayo 810, Kottke
93 Orientation to Pre-Vocational Therapy (2 cr; prereq sr OT)
VII MW, Hosp D138, Hansen
96 Clinical Affiliation (18 cr; prereq 95) Eliason
97 Introd Scientific Research (2 cr; prereq sr, regis OT or PT)
VI TTh, Mayo 825, Skowlund
103 Clinic: Physical Therapy (ar cr; prereq grad)
123 Senior Clerkship (1 cr; prereq regis Med)
125 Clinic: Physical Medicine, Rehabilitation (1 cr; prereq regis Med, ‡)
161 Clinical Medicine in Rehabilitation (5 cr)
I MTWThF, Z 313, Kottke, others
200 Service (ar cr) Kottke, others
203 Clinic: Poliomyelitis (ar cr) Kottke, others
205 Readings (1 cr) Kottke, others
206 Conference (1 cr) Kottke, others
210 Research (ar cr) Kottke, others
220 Seminar (ar cr)
IV M, Hosp EustisAmph, Kubicek

PHYSIOLOGICAL CHEMISTRY (PhCh)

103 Physiological Chemistry for Veterinary Medicine (6 cr; prereq 102)
Lect IV TTh, MH 213, VI-VII F, VetS 257 (StP Campus)
Lab I-III TTh, MH 201
153 Problems (ar cr; prereq 101, ‡)
200 Seminar: Physiological Chemistry (1 cr)
V T, MH 213
205 Research (ar cr)
207 Radiotracers, Mineral Metabolism (3 cr; prereq 101)
IX MWF, MH 213, Armstrong
212 Quantitative Histochemistry Lab (ar cr; prereq 101, ‡) Glick
236 Seminar: Radio-Isotope (1 cr, §Rad 236)

PHYSIOLOGY (Phsl)

4 Human Physiology (4 cr; prereq 1 qtr chem, 1 qtr zool)
VII-VIII TTh, Owre 12, King
11 Principles (3 cr; prereq 1 yr col chem, 1 yr col phys, math through inte calc)
IV T, III-IV Th, MH 307, Johnson
55 Principles (5 cr; prereq 1 yr col chem, 1 yr col phys, math through inte calc)
IV T, III-IV Th, MH 307, conf ar, Johnson
106 Human Physiology for Medical Students (7 cr, †106-107; prereq regis Med or Grad, neuroanat, org chem, zool)
Lect VI MTTh, IX WF, Owre 15
—1, Lab II-IV, VI-VIII W, MH 307
—2, Lab II-IV, VI-VIII F, MH 307
113 Probs: Physiology (ar cr; prereq 106-107)
202 Readings (ar cr)
203 Research (ar cr)
210 Topics: Permeability (ar cr; prereq 106-107, ‡)
211 Topics: Heart, Circulation (ar cr; prereq 106-107, ‡)
215 Topics: Intermediary Metabolism (ar cr; prereq 106-107, ‡)
216 Topics: Neurophysiology (ar cr; prereq 107, ‡)

PSYCHIATRY AND NEUROLOGY (NPsy)

102 Psychiatry (1 cr; prereq regis Med or grad clin psy)
4:30-5:30 T, Bo B6, Gregory
103 Junior Clinical Clerkship (8 cr; prereq regis Med)
120 Basic Behavioral Science (1 cr, †3 qtrs; prereq regis Med)
121 Behavior Pathology, Psychiatric Methods (2 cr, †2 qtrs for Med; prereq regis Med or grad clin psy)
4:30-5:30 Th, Bo B6
145 Readings: Psychiatry (ar cr; prereq regis Med)
145X Readings: Neurology (ar cr; prereq regis Med)
146 Common Behavior Disorders in Children (ar cr; prereq regis Med)
151 Survey of Neuropathology (ar cr, §212 or Path 119; prereq regis Med)
181 Externship: Neurology (ar cr; prereq regis Med, ‡)
182 Probs: Basic, Clinical Neurology (ar cr; prereq regis Med, ‡)
191 Externship: Adult Psychiatry (ar cr; prereq regis Med, ‡)
192 Externship: Child Psychiatry (ar cr; prereq regis Med, ‡)
193 Probs: Psychiatry (ar cr; prereq regis Med, ‡)

201 Clinical Seminar for Psychologists (1 cr; prereq ♯) Schofield
202 Case Conference (1 cr; prereq ♯)
203 Psychometric Clerkship (ar cr; prereq ♯)
204 Seminar: Interm (1 cr; prereq ♯) Hathaway
205 Seminar: Adv (1 cr; prereq ♯) Hathaway
208 Clinical Neurology (ar cr)
209 Research (ar cr)
212 Survey of Neuropathology (1 cr, §151 or Path 119)
213 Neuropharmacology (1 cr)
216 Clinical Neurochemistry (1 cr)
217 Neuro-embryology (1 cr)
220 Adv Clinical Neurology (1 cr)
224 Infectious Diseases of the Nervous System (2 cr)
226 Neurological-Neurosurgical Conference (1 cr, §Rad 163 or Surg 318)
228 Research: Neuropathology (ar cr)
230 Electroencephalography (1 cr)
231 Applied Electroencephalography, Myography (1 cr)
233 Applied Neuropathology (1 cr)
238 Neurological Clinical Pathological Conference (1 cr)
239 Neuroanatomy (1 cr)
240 Neuropathology Conference (1 cr)
248 Applied Neurophysiology (2 cr)
251 Clinical In-Patient Psychiatry (ar cr; prereq MD degree)
252 Clinical Out-Patient Psychiatry (ar cr; prereq MD degree)
253 Clinical Child Psychiatry (ar cr; prereq MD degree)
254 Adv Clinical In-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
255 Adv Clinical Out-Patient Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
256 Adv Clinical Child Psychiatry (ar cr; prereq 251, 252, 253, MD degree)
257 Special Assignments (1 cr; prereq 251, 252, 253, MD degree)
258 Research (ar cr; prereq MD degree or ♯)
262 Clinical Observation, Evaluation (1 cr; prereq MD degree or ♯) Jepson
266 Therapeutic Dynamics in Hospital Psychiatry (1 cr; prereq MD degree or ♯) Koutsky
269 Psychotherapy (3 cr; prereq MD degree or ♯) Meehl
271 Readings: Psychoanalysis I (1 cr; prereq MD degree or ♯) Hambidge
273 Survey of Psychosomatic Medicine (1 cr; prereq MD degree or ♯) Magraw
275 Collaborative Theory (1 cr; prereq MD degree or ♯) Gross, Hambidge
276 Current Research (1 cr; prereq MD degree or ♯)
279 Development of Psychiatric Thought (1 cr, §old 261; prereq MD degree or ♯) Sukov
281 Readings: Psychoanalysis II (1 cr; prereq MD degree or ♯) Hambidge
283 Seminar: Special Topics (1 cr; prereq MD degree or ♯) Schiele
284 Readings: Child Psychiatry (1 cr) Jensen
285 Seminar: Current Literature in Child Psychiatry (1 cr) Jensen
286 Diagnostic, Therapeutic Methods in Child Psychiatry (1 cr) Jensen, Lawton
291 Seminar: Current Literature (1 cr; prereq MD degree or ♯) Simon
292 Special Supervision in Psychotherapy (1 cr; prereq MD degree or ♯)
293 Probs in Teaching Psychiatry (ar cr; prereq MD degree or ♯)
294 Seminar: Adv Critical Examination of Systems, Theories (1 cr; prereq MD degree or ♯) Hathaway
295 Group Therapy (1 cr, §old 274; prereq MD degree or ♯)

PUBLIC HEALTH (PubH)

2 Personal, Public Health (2 cr, §3 or 50)
VI TTh, Bo B6, Reiter
3 **Personal Health** (2 cr, §2 or 50)
VI MW, NH 45, Thomson
4 **Health Probs of Community** (2 cr; prereq 3 or 3A)
III TTh, ScH 108, Thomson
50 **Personal, Community Health** (3 cr, §2 or 3 or 3A or 3B or 4 or 5 or 51 or 52)
III MWF, ScH 108, Thomson
52 **Home Nursing, Family Care** (1 cr; prereq HE students, 50 or ♯)
—1, VIII-IX T, MeH 01 (**StP Campus**), Simons
—2, VIII-IX Th, MeH 01 (**StP Campus**), Simons
53 Introduction (5 cr; prereq regis nurs or nurses, 3 or 50, bact)
II MTWThF, MH 213, G Anderson, Thomson, Schuman
57 Health of Infant, Child (2 cr; prereq 4 or 50 or 51 or 52)
VII TTh, JacH 304, Stocking
58 Maternal, Child Health (3 cr; prereq nurses, 53, 133 or ¶)
I-II T, I Th, Mayo 1205, Stocking
62 Public Health Nursing I (3 cr; prereq nurses, 53, 95, 133, Soc 50, ¶65 or Nurs 87)
—1, II-III, VI-VII Th, Mayo 1203, Blanchard
—2, II-III, VI-VII Th, Mayo 1260, Cline
—3, II-III, VI-VII F, Mayo 1203, Fritz
—4, II-III, VI-VII F, Mayo 1245, Pennebaker
—5, II-III, VI-VII F, Mayo 1260, Fredlund
—6, II-III, VI-VII F, Rochester, Von Bergen
63 Public Health Nursing II (2 cr; prereq nurses, 62, 65 or ♯)
I MF, Mayo 1205, Murphy
64 Long-term Patient Care (6 cr; prereq nurses, 53, 95, 133, Soc 50)
I-II TWThF, E Anderson

65 Field Practice: Public Health Nursing (ar cr; prereq 58, 95, 133, Soc 50, ¶62, C avg) Murphy, others

69 The Nurse in School (3 cr; prereq nurses, 62, 95, 133 or ‡)
VI-VII W, VII Th, Mayo 1205, Stocking

75 Environmental Sanitation (3 cr; prereq 3 cr)
IV MWF, Owre 111, Bond, Bosch

76 Public Health for Dental Students (1 cr; prereq regis Dent)
I W, Owre 12, Jordan

90 Medical Statistics I (2 cr; prereq regis Med or ‡)
III M, IV F, MMA 125, VII-VIII MF, Mayo 1220, 1235, Bearman, Thornton

100 Preventive Medicine, Public Health (6 cr; prereq Med students)
I MTWThFS, Owre 15, G Anderson, Thomson, Schuman

100C Elements of Public Health III (1 cr; prereq 100B)
IV-V M, MMA 100, G Anderson, others

101 Admin, Field Work (2 cr; prereq sr Med) Thomson

102A Environmental Sanitation (2 cr; prereq 100A or ¶, ‡)
I MW, MMA 100, Bosch

103 Bacteriology (ar cr; prereq grad, Bact 102, 116, ‡)
I-II MWF, SBH Lab, Bauer

105 Epidemiology II (3 cr; prereq 104)
II-III T, II Th, Mayo 1220, Schuman, Klimt

107A Maternal, Child Health Program (1 cr, ¶107; prereq 106 or ‡)
I MWF, Mayo 1250

109 Institutional Sanitation (3 cr; prereq hosp admin maj or ‡, 100A)
I-II T, II Th, Mayo 1250, Bosch, Bond

112C Public Health Engineering-Plan Examinations: Swimming Pools, Plumbing (1 cr, §114; prereq engr degree, 102, ‡) Bosch

113C Public Health Engineering-Field Investigations: Swimming Pools, Plumbing (2 cr, §114; prereq engr degree, 102, ‡) Bosch

116 Public Health Engineering Admin (2 cr, §114; prereq ‡)
III TTh, Mayo 1108, Bosch

119 Sanitary Biology (3 cr; prereq 118)
VI-IX TF, Mayo 1138, Olson

122 Admin Probs (3 cr; prereq 106)
III MWF, Owre 113, G Anderson

123 Topics (ar cr; prereq ‡)

125 Education (2 cr; prereq ‡)
—1, VI-VII T, Mayo 1210, Grout
—2, VI-VII F, Mayo 1210, Grout

125A Public Health Education (1 cr; prereq hosp admin maj)
I MWF, Mayo 1250, Grout

126 Occupational Health Program (3 cr; prereq 100A or ¶, InCh 5 or ‡)
VI MWF, VH 211, Foker

130 Biostatistics III (3 cr; prereq 120 with grade C, ¶131)
III MWF, Owre 12, Brown

131 **Biostatistics Lab III** (2 cr; prereq ¶130)
Lect III TTh, Owre 12, Knatterud, Keenan
—1, Rec II MWF, Arch 15, Knatterud
—2, Rec IV MWF, Arch 15, Keenan
—3, Rec VI MWF, Arch 15, Knatterud
—4, Rec VI-VIII T, Arch 15, Keenan

132 Mental Health Program (1 cr; prereq 106 or ‡) Williams

133 Mental Health (3 cr; prereq ‡)
I MWF, Mayo 1220, Cline

139 Adv Field Practice in Public Health Nursing: Block Placement (ar cr; prereq ‡) Von Bergen

141 Social, Economic Aspects of Medical Care (3 cr; prereq ‡) Detwiller

142 Medical Economics (2 cr; prereq sr Med students)
4:30-5:30 M, Bo B6, Detwiller

153 Hospital, Community (1 cr; prereq ‡) Stephan

154 Control of Radiation Hazards (ar cr; prereq ‡)
Lect IV TTh, Mayo 1220, Michaelsen, others
—1, Lab VI-VII W, Mayo 1120
—2, Lab VIII-IX W, Mayo 1120

156 Air Pollution Surveys (2 cr; prereq 155, ‡)
VI-IX M, Mayo 1205, Paulus

164 Organization, Mgt of Hospitals (6 cr; prereq 163)
VI-VII MTWThF, Mayo 1250, Hamilton, Stephan, Dunn

167 Mgt Probs in Hospital Admin (6 cr; prereq ¶164)
II-III MWFS, III-IV TTh, Mayo 1250, Hamilton

169 Administrative Residency (ar cr) Hamilton, Lentz, Stephan

170A Public Health Nursing (1 cr, §170; prereq ‡)
I MWF, Mayo 1250, Murphy

172 Studies: Public Health Nursing (3 cr; prereq 171) Murphy

174B Seminar: Admin, Supervision, Consultation (2 cr; prereq 174A)
VI-VII W, Mayo 1220, Murphy, Blanchard

177 Adv Practice in Public Health Nursing (3 cr; prereq 176)
Lect VI-VII Th, Mayo 1220, Williams
—1, VI-VII M, Mayo 1245, Von Bergen
—2, VI-VII M, Mayo 1203, Cline
—3, VI-VII T, Mayo 1245, Fritz
—4, VI-VII T, Mayo 1203, Cline

178 Seminar: Mental Health (ar cr; prereq ‡) Williams

183 Principles, Methods in Public Health Education (3 cr; prereq 182)
VI-VII MW, Mayo 1210, Grout

190 Field Work: Health Education (ar cr; prereq 183, 227) Grout

200 Research (ar cr)

201 Topics: Biometry (ar cr; prereq 130, ♯) Bearman, others

202 Seminar: Physiological Hygiene (1 cr)

207 Research Design in Biometry (3 cr; prereq 205)
II MWF, Mayo 1220, McHugh

208 Theory of Research Design in Biometry (2 cr; prereq 206, ¶207)
II TTh, Mayo 1210, McHugh

210 Seminar: Public Health (ar cr)
VIII-IX Th, MMA 125

211 Seminar: Biometry (ar cr)

212 Seminar: Public Health Engineering, Sanitation (ar cr; prereq ♯)
VI-VII Th, Mayo 1108, Bosch

213 Seminar: Epidemiology (ar cr)
VI-VIII F, Mayo 1205, Schuman

215 Maternal, Child Health (ar cr; prereq MD degree, ♯)

220 Readings: Probs of Physiological Hygiene (ar cr; prereq ♯) Keys, others

227 Probs: Public Health Education (ar cr; prereq ♯) Grout

241 Epidemiology of Noncommunicable Diseases (3 cr; prereq 104)
III Th, II-III S, Mayo 1220, Schuman, Klimt

* 252 Foundations of Biometry (2 cr; prereq 251)

290 Research: Physiological Hygiene, Related Areas (ar cr)

RADIOLOGY (Rad)

102 X-Ray Conference (1 cr; prereq ♯)
5:00-6:00 T, Hosp EustisAmph, Peterson, others

104 Radiological Physics I (2 cr; prereq 1st yr res)
4:00-5:00 T, Mayo C-239, Loken

111 Medical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 M, Hosp ToddAmph, Peterson, others

124 Pediatric-Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 T, Hosp EustisAmph, Lester, Feinberg

135 Surgical Roentgenologic Conference for Graduate Students (1 cr)
9:00-9:50 S, Hosp ToddAmph, Carey

163 Neurosurgical-Roentgenologic Conference for Graduate Students (1 cr)
1:00-2:00 F, Hosp ToddAmph, Peterson, others

180 Externship (ar cr; prereq regis Med) Peterson, others

181 Externship: Diagnostic Radiology (ar cr; prereq regis Med) Peterson, Lester

182 Externship: Radiation Therapy (ar cr; prereq regis Med) Mosser, others

183 Probs: Radiation Biology, Radioactive Isotope Methods (ar cr; prereq regis Med) Mosser, others

184 Probs: Diagnostic Radiology (ar cr; prereq regis Med) Lester, others

200 Research: Roentgenology (ar cr) Peterson, others

201 Neuroradiology (2 cr)
7:00-9:00 pm M, Hosp ToddAmph, Peterson

202 Cardiovascular Roentgenologic Conference (1 cr)
2:30-4:00 M, Hosp ToddAmph, Lester

204 Tumor Clinic Conference (ar cr)
11:00-12:00 Th, Hosp ToddAmph, Mosser, others

205 Research: Radiation Therapy, Nuclear Medicine, Radiobiology (ar cr; prereq ♯) Mosser, others

206 Roentgenoscopy (3 cr) Peterson, others

207 Roentgen, Radium Therapy (ar cr) Mosser, others

209 Roentgen Diagnosis (3 cr) Peterson, others

210 Roentgen Technique (2 cr) Peterson, others

217 Roentgenologic Conference on Chest Diseases (1 cr)
4:00-5:00 F, Hosp ToddAmph, Amplatz

218 Seminar: Radiobiology (1 cr; prereq ♯) Mosser, others

220 Urologic-Roentgenologic Conference (1 cr)
5:00-6:00 M, Hosp EustisAmph, Creevy, Baggenstoss, Peterson

236 Seminar: Radioactive Isotope (1 cr, §PhCh 236)
12:30-1:20 W, Mayo C-239, Mosser, others

237 Radiological Physics II (2 cr; prereq 104)
4:00-5:00 F, Mayo C-239, Loken

238 Roentgen-Surgical Pathology Conference (1 cr)
4:00-6:00 Th, Hosp ToddAmph, Peterson, Lober, others

240 Radiation Therapy Conference (1 cr)
4:00-5:00 M, Mayo C-239, Mosser, others

SURGERY (Surg)

121 Principles of Surgery (3 cr; prereq regis Med)
VI MW, IV T, Hosp EustisAmph, Wangensteen, others

135 Junior Clinical Clerkship (16 cr; prereq regis Med) Wangensteen, others

180 Externship: Urology (ar cr) Creevy, others

181 Externship: General Surgery (ar cr; prereq Med students other than Minn) Wangensteen, others

182 Probs: Clinical Investigation and/or Experimental Surgery (ar cr) Wangensteen, others

183 Extramural Surgical Program (ar cr) Wangensteen, others

185 Externship: Orthopedic Surgery, Fractures (ar cr) Moe, others

186 Research Probs (ar cr) Moe, others
188 Neurosurgical Externship (ar cr) French, others
189 Neurosurgical Externship (ar cr) French, others
190 Neurosurgical Investigation (ar cr) French, others
200 Out-Patient Clinic in Surgery (1 cr) Wangensteen, others
202 Applied Surgical Anatomy on Cadaver (1 cr) Wangensteen, others
203 Proctoscopy, Sigmoidoscopy (1 cr)
I-IV TTh, Mayo SurgClinic, Wangensteen, others
204 Tumor Clinic (1 cr)
IV Th, Mayo Surg-Clinic, Wangensteen, others
205 Surgical Diagnosis (1 cr) Wangensteen, others
208 Surgical Service (1 cr) Wangensteen, others
211 Operative Surgery (1 cr) Wangensteen, others
214 Surgical Ward Conference (1 cr) Wangensteen, others
215 Roentgenological-Surgical Conference (1 cr)
II-IV S, Hosp ToddAmph, Wangensteen, others
216 Research: Surgery (1 cr) Wangensteen, others
217 Seminar: Surgery (1 cr) Wangensteen, others
218 Medical, Surgical Pathological Conference (1 cr)
IV W, Hosp ToddAmph, Wangensteen, others
219 Surgical Literature Conference (1 cr)
I T, Mayo SurgLib, Wangensteen, others
220 Peripheral Vascular Surgery (1 cr)
I-IV T, Mayo SurgClinic, Wangensteen, others
221 Seminar: Surgery-Physiology (1 cr)
3:30-4:30 T, MMA 125, Wangensteen, others
250 Urological Surgery (4 cr) Creevy, others
251 Cystoscopy, Urological Diagnosis (4 cr) Creevy, others
252 Urological Conference (4 cr) Creevy, others
253 Research: Urology (4 cr) Creevy, others
254 Urological Seminar (3 cr) Creevy, others
255 Urological Radiological Conference (3 cr) Creevy, others
256 Urological Pathological Conference (3 cr) Creevy, others
305 Neurosurgical Diagnosis (3 cr) French, others
308 Neurosurgical Service (4 cr) French, others
311 Operative Neurosurgery (4 cr) French, others
316 Neurosurgical Research (3 cr) French, others
318 Neurosurgical Conference (1 cr) French, others
405 Orthopedic Diagnosis (ar cr) Moe, others
408 Orthopedic Service (ar cr) Moe, others
411 Orthopedic Operative Surgery (ar cr) Moe, others
416 Orthopedic Research (ar cr) Moe, others

UNATTACHED COURSES

Biophysics (BPhy)

138 Seminar: Gen Physiology, Biophysics (ar cr)
170 Radiation (3 cr; prereq #)
204 Research: Biophysics, Physiology of Radiation (ar cr)
221 Research: Biophysics (ar cr)
222 Research: Biophysics (ar cr)
223 Research: Biophysics (ar cr)

Cancer Biology (CBio)

140 Seminar (1 cr)
12:30-1:30 Th, LyonL 271, Bittner, Halberg
141 Problems (ar cr) Bittner
207 Research (ar cr) Bittner

Comprehensive Clinic (CoCl)

150 Clerkship: Comprehensive Care of Ambulatory Patients (ar cr; prereq regis Med)

COLLEGE OF PHARMACY

Pharmaceutical Chemistry (PhmC)

2 Inorganic Pharmaceutical Products (4 cr; prereq 1)
Lect I MW, AH 150, Soine
Rec I F, AH 150, Soine
—1, Lab VI-VIII MT, AH 325, Soine
—2, Lab VI-VIII ThF, AH 325, Soine
55 Quantitative Pharmaceutical Chemistry (5 cr; prereq 54)
Lect 9:00-10:30 TTh, AH 150, DiGangi
Lab VII-IX MW, AH 316, DiGangi
Rec VII MW, AH 150, DiGangi
163 Organic Medicinal Agents (3 cr; prereq 162)
Lect IV MWF, AH 9, Gisvold
Quiz V Th, AH 9, Gisvold

166 Special Probs (ar cr)
201 Seminar (1 cr) Gisvold
211 Terpenes, Carotinoids, Tannins, Anthocyanins (3-5 cr; prereq OrCh 63 or ‡) DiGangi
212 Fats, Waxes, Steroids, Related Compounds (3-5 cr; prereq OrCh 63 or ‡) Gisvold
214 Research (ar cr)

Pharmaceutical Technology (PhmT)

1C Orientation (1 cr)
IV T, AH 150, Netz, Hager
56 Pharmaceutical Preparations (4 cr; prereq 55)
Lect I MW, AH 9, Rippie
Lab VI-VIII TTh, AH 125, Rippie
60 Prescription Compounding (5 cr; prereq 59)
Lect II MWF, AH 350, Hadley
Lab VI-VIII MW, AH 104, Hadley, Miller
Rec VI MW, AH 9, Hadley
65 Cosmetics (3 cr; prereq sr, 56)
Lect I M, III Th, AH 101, Miller
Lab I-III T, AH 104, Miller
71 Pharmaceutical Specialties (3 cr; prereq 3rd qtr sr, PhmC 163)
III MWF, AH 350, Soine
72 Veterinary Products (3 cr; prereq sr)
I F, III TTh, AH 9, Hadley
173 Special Probs (ar cr; prereq 56, PhmC 163)
201 Seminar (1 cr) Rippie
204 Adv Analytical Methods (3-5 cr; prereq 203) Rippie

Pharmacognosy (Phcg)

3 Vegetable Drug Histology (3 cr; prereq 2)
Lect IV TTh, AH 9, Fischer
Lab VI-VIII T, AH 225, Fischer
164 Insecticides, Fungicides (3 cr; prereq Phcl or ‡)
I MWF, AH 350, Fischer
173 Special Probs (ar cr)

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AmSt)

92 Proseminar (3 cr; prereq 91)
VIII-IX Th, FolH 103, Weber
202 Introduction (3 cr; prereq 201)
VIII-IX T, FolH 103, Noble, Kwiat
213 Seminar (3 cr; prereq 212)
VIII-IX W, FolH 103, Foster
242 Materials for Study of American Civilization (2 cr; prereq 241)
VIII-IX F, TSF 109, Turpie

ANTHROPOLOGY (Anth)

1A **Introduction: Prehistoric Man, Culture** (5 cr)
Lect II MWThF, MNH Aud, Jennings
—1, I T, ForH 120
—2, II T, ForH 120
—3, II T, ForH 85
—4, II T, ForH 115
—5, II T, ForH 180
—6, III T, ForH 160
—7, III T, ForH 185
—8, IV T, ForH 285
2A **Introduction: Cultural Anthropology** (5 cr)
Lect IV MTWF, MNH Aud, Johnson
—1, I Th, ForH 120
—2, II Th, ForH 120
—3, III Th, ForH 285
—4, III Th, ForH 150
—5, IV Th, ForH 170
—6, IV Th, ForH 50
—7, IV Th, ForH 160
—8, IV Th, ForH 150
90 Archaeology of North America (3 cr; prereq 1A)
IV MWF, ForH 180, Jennings
119 Contemporary Middle American Communities (3 cr; prereq 2A or 100...or none for Lat Am Area St maj)
VI MWF, ForH 150, Johnson
124 Culture Sphere of China (3 cr; prereq 2A or 100 or △)
III MWF, ForH 150, Gerlach
126 Peoples, Cultures of SE Asia, Indonesia (3 cr; prereq 2A or 100 or △)
II MWF, ForH 180, Spencer
128 Islam in Africa (3 cr; prereq 2A or 100 or △)
I MWF, ForH 170, Gerlach
154 Ethnological Field Techniques (3 cr; prereq ‡)
1:30-3:00 MF, ForH 30, Gibbs
161 Primitive Religion (3 cr; prereq 2A or 100)
IV MWF, ForH 160, Spencer
165 **Culture, Personality** (3 cr; prereq sr, 2A or 100 or △...or none for PubH nurs, psy, soc, SW maj)
III MWF, ForH 55, Gibbs
169 Comprehensive Survey (3 cr; prereq sr, △)
8:30-10:00 MF, ForH 175, Gibbs

172 Physical Anthropology (4 cr; prereq 171)
Lect III TTh, ForH S40, Murrill
Lab 1:30-3:00 TTh, ForH S40

175 Human Physical Growth, Development (3 cr; prereq 1A or ♯ or none for child develop maj)
II MWF, ForH 130, Murrill

192 Research (ar cr; prereq 191)

196 Proseminar: East, South Asia (3 cr, §Geog 196, Pol 196; prereq sr)
3:30-5:00 F, ForH 467, Spencer

206 Seminar: Anthropology (3 cr; prereq 205)
VIII-IX M, ForH 70

ART (Art)

1 Principles (5 cr, §50)
Lect III MWF, NH 45, Eitner, lab ar

2 **Ancient, Medieval Art** (3 cr; prereq 1)
III MWF, Arch 55, Simon

3 **Renaissance, Modern Art** (3 cr; prereq 1)
III MWF, J 207b, Torbert

10 **Photography** (3 cr)
I-II MWF, J 2, Liebling

12 **Photography** (3 cr; prereq 11 or △)
III-IV MWF, J 2, Liebling

20 **Drawing** (2 cr)
I-II TThS, J 200, Quirt

25 **Drawing, Design I** (3 cr; prereq 24)
—1, I-II MWF, J 104, Downs
—2, III-IV MWF, J 104, Downs
—3, V-VI MWF, J 104, Hanson
—4, VII-VIII MWF, J 104, Crowell
—5, III-IV TThS, J 200, Quirt
—6, VII-IX TTh, J 104, Mitra

25A **Drawing, Painting for Architects I** (2 cr; prereq 24A)
—1, II-IV TTh, J 11, Crowell
—2, II-IV TTh, J 10, Kutzik
—3, II-IV TTh, J 4, Perez
—4, VI-VIII TTh, J 10, Kutzik

32 **Printmaking** (3 cr)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers

33 **Printmaking** (3 cr; prereq 32)
—1, I-II TThS, J 203, Myers
—2, III-IV TThS, J 203, Myers

42 **Sculpture I: Design Workshop** (3 cr; prereq 1)
—1, I-II MWF, HolB 154, Morton
—2, I-II TThS, HolB 154, Rood
—3, III-IV TThS, HolB 154, Rood

45 **Ceramic Processes** (3 cr)
—1, I-II MWF, HolB 134, MacKenzie
—2, III-IV MWF, HolB 134, MacKenzie

50 Visual Arts (3 cr, §1)
III MWF, NH 45, Eitner

51 **Pictorial Design** (2 cr; prereq 25)
III-IV MW, J 4, Corbett

52 **Drawing II** (3 cr; prereq 25, △)
I-II MWF, J 10, Perez

53 **Drawing II** (3 cr; prereq 52)
I-II MWF, J 10, Perez

54 **Life Drawing** (3 cr; prereq 52, △)
III-IV MWF, J 10, Munoz

55 **Life Drawing** (3 cr; prereq 54)
III-IV MWF, J 10, Munoz

58 **Renaissance, Baroque Art: 1650-1800** (3 cr; prereq 1 or 50 or △)
II MWF, J 207b, Waldfogel

62A **Drawing, Painting for Architects II** (2 cr; prereq 61A)
—1, VI-VIII T, II-IV S, J 4, Michener
—2, VI-VIII T, II-IV S, J 11, Munoz
—3, 6:00-9:00 pm TTh, J 4, Munoz

68 **Modern Art: Contemporary European, American** (3 cr; prereq 1 or 50 or △)
IV MWF, Arch 55, Waldfogel

70 **Oil Painting** (3 cr; prereq 54)
—1, VI-VIII MW, J 200, Corbett
—2, VI-VIII TTh, J 200, Quirt

71 **Oil Painting** (3 cr; prereq 70)
—1, VI-VIII MW, J 200, Corbett
—2, VI-VIII TTh, J 200, Quirt

72 **Oil Painting** (3 cr; prereq 71)
—1, VI-VIII MW, J 200, Corbett
—2, VI-VIII TTh, J 200, Quirt

80 **Sculpture II** (3 cr; prereq 42)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

80A **Direct Metal Sculpture, Constructions** (3 cr; prereq 42 or △)
VI-VII MWF, HolB 154, Morton

81 **Sculpture II** (3 cr; prereq 80)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

81A **Metal Sculpture in Relief, Repousse** (3 cr; prereq 80A)
VI-VII MWF, HolB 154, Morton

82 **Sculpture II** (3 cr; prereq 81)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood

82A **Bronze Casting, Wax Modeling** (3 cr; prereq 81A)
VI-VII MWF, HolB 154, Morton

85 **Photography II** (3 cr; prereq 84)
VI-VII MWF, J 2, Liebling

90 **Printmaking** (3 cr; prereq 32 or △)
VI-VIII TTh, J 203, Myers

91 **Printmaking** (3 cr; prereq 90)
VI-VIII TTh, J 203, Myers

92 **Printmaking** (3 cr; prereq 91)
VI-VIII TTh, J 203, Myers

94 **Ceramic Design** (3 cr; prereq 45 or △)
VI-VII MWF, HolB 134, MacKenzie

95 **Ceramic Design** (3 cr; prereq 94)
VI-VII MWF, HolB 134, MacKenzie

102 Romanesque, Gothic (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
II MWF, J 207a, Tselos

113 **Design in Jewelry** (3 cr; prereq 25, △)
III-IV MWF, HolB 154, Morton

114 **Adv Design in Jewelry** (3 cr; prereq 113)
III-IV MWF, HolB 154, Morton

115 **Probs: Jewelry Design** (3 cr; prereq 114)
III-IV MWF, HolB 154, Morton
118 Renaissance, Baroque Painting (3 cr; prereq 117)
VI MWF, J 207a, Thomas
125 **Film Workshop** (3 cr; prereq 124)
VI-VII MWF, J 4, Downs
128 18th Century Art (3 cr; prereq 127)
IV MWF, J 207b, Thomas
138 Art in the United States (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
V MWF, J 207b, Torbert
142 Scandinavian Sculpture, Minor Arts (3 cr; prereq 9 cr art hist...or 9 cr hist or lit with △)
I MWF, J 207a, Nelson
150 **Probs: Painting** (ar cr; prereq 72, △)
—1, VI-VIII MW, J 200, Corbett
—2, VI-VIII TTh, J 200, Quirt
151 **Probs: Painting** (ar cr; prereq 150)
—1, VI-VIII MW, J 200, Corbett
—2, VI-VIII TTh, J 200, Quirt
152 **Probs: Painting** (ar cr; prereq 151)
—1, VI-VIII MW, J 200, Corbett
—2, VI-VIII TTh, J 200, Quirt
158 European, American Painting: 1775-1900 (3 cr)
V MWF, J 207a, Eitner
178 20th Century European, American Painting (3 cr; prereq sr, 1 or 50, 9 cr art hist... or 9 cr hist or lit with △)
IV MWF, J 207b, Tselos
180 **Probs: Sculpture** (ar cr; prereq 82, 82A or △)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood
181 **Probs: Sculpture** (ar cr; prereq 180)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood
182 **Probs: Sculpture** (ar cr; prereq 181)
—1, VI-VII MWF, HolB 154, Morton
—2, VI-VIII TTh, HolB 154, Rood
190 **Probs: Printmaking** (ar cr; prereq 92 or △)
VI-VIII TTh, J 203, Myers
191 **Probs: Printmaking** (ar cr; prereq 190)
VI-VIII TTh, J 203, Myers
192 **Probs: Printmaking** (ar cr; prereq 191)
VI-VIII TTh, J 203, Myers
193 Adv Probs: Design (ar cr; prereq 9 up div cr in design, cons maj adv)
194 Adv Probs: Design (ar cr; prereq 193)
195 Adv Probs: Design (ar cr; prereq 194)
196 Readings: Art History, Criticism (3 cr; prereq sr, △)
197 Readings: Art History, Criticism (3 cr; prereq sr, △)
198 Readings: Art History, Criticism (3 cr; prereq sr, △)
200 Adv Probs: Studio Work (ar cr; prereq ♯)
201 Adv Probs: Studio Work (ar cr; prereq 200)
202 Adv Probs: Studio Work (ar cr; prereq 201)
236 Seminar: Probs in Art History, Criticism (ar cr; prereq ♯) Tselos
237 Seminar: Probs in Art History, Criticism (ar cr; prereq 236) Tselos
238 Seminar: Probs in Art History, Criticism (ar cr; prereq 237) Tselos
250 Thesis Seminar (no cr; prereq cons adv)
251 Thesis Seminar (no cr; prereq 250)
252 Thesis Seminar (no cr; prereq 251)

ASTRONOMY (Ast)

11 **Descriptive Astronomy** (5 cr, §51)
IV MTWF, Ph 150, Luyten
53 Stellar Astronomy (3 cr; prereq 11 or Phys 9, Math 53)
II MWF, Ph 358, Danby
106 Celestial Mechanics (3 cr; prereq 105)
V MWF, AE 211, Danby

BOTANY (Bot)

10 **Minnesota Plant Life** (3 cr)
VI-VIII T, VI-VII Th, HS 45, Kaul
51 **Plant Physiology** (5 cr; prereq bot or biol, InCh 5 or 25)
Lect VI MW, HS 45, Brown
—1, Lab II-III MW, Bo 104
Conf IV M, Bo 110
—2, Lab VII-VIII MW, Bo 104
Conf IX M, Bo 110
52 **Taxonomy** (3 cr; prereq 3 or 5 or Biol 3 or NSci 9)
VI-VIII MW, Bo 401, Kaul
54 **The Plant Kingdom** (5 cr, §104; prereq 3 or 5 or Biol 3 or NSci 9)
II-IV MWF, Bo 209, Abbe
104 **The Plant Kingdom** (5 cr, §54; prereq 3 or 5 or Biol 3 or NSci 9)
II-IV MWF, Bo 209, Abbe
115 Flora of Minnesota (4 cr; prereq 52 or ♯)
VI-VIII TTh, Bo 401, Ownbey
120 **Research Methods: Cytology** (3-5 cr; prereq 3 or 5 or Biol 3 or NSci 9, 118 or 119, ♯) Dahl
137 Adv Ecology (5 cr; prereq 50, 50A or 130, 130A, ♯)
V T, Bo 214, Lawrence
140 Adv Survey of Plant Physiology (3 cr, §51; prereq elem biol or bot or zool or ♯, org chem or biochem)
VI MW, HS 45, Brown
155 Fresh-water Algae (4 cr; prereq 10 cr biol or ♯)
Lect VI MW, Bo 110, Norris
Lab VII-VIII MW, Bo 209
199 Problems (1-5 cr; prereq 20 cr nat sci, ♯)
203 Research Probs: Morphology of Vascular Plants (ar cr) Abbe
207 Research Probs: Taxonomy (ar cr) Morley, Ownbey
223 Research Probs: Ecology (ar cr) Lawrence, Martin

227 Research Probs: Plant Physiology (ar cr) Brown
231 Research Probs: Cytology (ar cr) Dahl
235 Probs: Phycology (ar cr) Norris
242 Seminar: Morphology (1 cr) Abbe
245 Seminar: Taxonomy (1 cr) Morley, Ownbey
251 Seminar: Ecology (1 cr) Lawrence, Martin
254 Seminar: Plant Physiology (1 cr) Brown
257 Seminar: Cytology (1 cr) Dahl
260 Seminar: Cryptogamic Plants (1 cr) Norris

CLASSICS

Classics (Clas)

24 Technical Terms of Science, Medicine, Humanities (3 cr, §124; prereq soph)
VI MWF, FolH 204, R Swanson
42 Greek Mythology (2 cr; prereq soph)
V MW, FolH 303, Forbes
107 Study of Language (3 cr; prereq 106)
VII MWF, FolH 305, D Swanson
124 Technical Terminology (3 cr, §24)
VI MWF, FolH 204, R Swanson
193 Classical Literary Traditions (3 cr; prereq 9 cr lit)
VII MWF, FolH 304, DeWitt

Greek (Grk)

3 Attic Prose (5 cr; prereq 2)
Lect II MWThF, FolH 303, Allen
—1, II T, FolH 205½
—2, III T, FolH 205½
53 Homer (3 cr, §153; prereq 3)
IV MWF, FolH 5, McDonald
73 Hellenistic Greek (3 cr; prereq △) R Swanson
153 Homer (3 cr, §53; prereq 3)
IV MWF, FolH 5, McDonald
173 Advanced Reading (3 cr; prereq 172)
III-IV TTh, FolH 305½, Furley
203 Seminar: Greek Literary Bibliography, Criticism (3 cr; prereq 202)
VIII T, Lib 316, D Swanson

Latin (Lat)

3 Interm Latin (5 cr; prereq 2 or 1 yr HS Lat)
Lect I MWF, FolH 303, Forbes
Lab I TTh, FolH 301, Weber
53 Survey of Literature (3 cr, §153; prereq 52)
VI MWF, FolH 304, Furley
73 Prose Composition (3 cr; prereq 3 yrs HS Lat or △) McDonald
133 Vulgar Latin (3 cr; prereq ‡)
VI MWF, FolH 213, D Swanson
153 Survey of Literature (3 cr, §53; prereq 152)
VI MWF, FolH 304, Furley
173 Adv Reading (3 cr; prereq 53 or △)
II-III S, FolH 304, DeWitt
223 Seminar: Lyric Poetry (3 cr; prereq 222)
VIII Th, Lib 316, R Swanson

Sanskrit (Skt)

130 Readings (3 cr; prereq 129)
VIII MWF, FolH 304, D Swanson

ENGLISH

English (Engl)

B Literature, Composition (5 cr, §2A or 2B or Comm 2; prereq A)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MTWF, FolH 225
—2, Rec V MWThF, AH 101, Griscom

C Literature, Composition (5 cr, §3A or 3B or Comm 3; prereq B)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MTWF, TSF 109, Bredeson
—2, Rec I MTWF, JohH 122, McGinnis
—3, Rec I MTWF, JohH 205, Burton Weber
—4, Rec I MTWF, JohH 306, Albrecht
—5, Rec II MWThF, Ph 236a, Joseph
—6, Rec II MWThF, TNM 115, M Shaw
—7, Rec II MWThF, Arch 20, Denzell Smith
—8, Rec III MWThF, FolH 11, Shea
—9, Rec III MWThF, FolH 5, Mooney
—10, Rec III MWThF, MurH 420, Mays
—11, Rec III MWThF, Ph 236a, Joseph
—12, Rec III MWThF, P 218, Johnson
—13, Rec IV MTWF, MurH 420, Jones
—14, Rec IV MTWF, TNM 115, Klein
—15, Rec V MTWF, FolH 107, McGinnis
—16, Rec V MTWF, Arch 145, David Smith
—17, Rec V MTWF, JohH 122, George
—18, Rec V MTWF, FolH 306, Klein
—19, Rec VI MTWF, FolH 114, George
—20, Rec VI MTWF, FolH 223, Mays
—21, Rec VI MTWF, JohH 105, Fort

2A Freshman English (4 cr, §B or 2B or Comm 2; prereq 1A)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec V MWF, FolH 5, Ryley

2B Freshman English (4 cr, §B or 2A or Comm 2; prereq 1B)
—1, Lect IV M, Bo B6
—2, Lect V T, MNH Aud
—1, Rec I MWF, C 111, Rudisill
—2, Rec I MWF, C 115, Potter
—3, Rec I MWF, C 215, Daniel
—4, Rec III MWF, FolH 205, Daniel
—5, Rec III MWF, FolH 2.3, Guidera
—6, Rec III MWF, Bu 123, Black
—7, Rec V MWF, FolH 205, Guidera
—8, Rec V MWF, Bu 103, Nelson

—9, Rec V MWF, C 111, Fraser
—10, Rec V MWF, C 115, Kvernes
—11, Rec VI MWF, FolH 102, Nelson
—12, Rec VI MWF, C 111, Anderson
—13, Rec VII MWF, FolH 9, Simson
—14, Rec VII MWF, FolH 3, Erisman
—15, Rec I MWF, E 2.5, Black
—16, Rec V MWF, Arch 45, Anderson
—17, Rec V MWF, Arch 60, Erisman

3A Freshman English (4 cr, §C or 3B or Comm 3; prereq 2A)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MWF, Lib 4A, Breslin
—2, Rec I MWF, P 218, Jones
—3, Rec II MWF, VH 112, Mooney
—4, Rec II MWF, Arch 45, Duus
—5, Rec III MWF, C 115, Korges
—6, Rec III MWF, C 111, Duus
—7, Rec IV MWF, FolH 11, Gurian
—8, Rec IV MWF, FolH 303, Lohmann
—9, Rec V MWF, C 215, Hoople
—10, Rec V MWF, JohH 105, Hansen
—11, Rec VI MWF, C 115, Johnson
—12, Rec VII MWF, C 115, Hoople

3B Freshman English (4 cr, §C or 3A or Comm 3; prereq 2B)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
—1, Rec I MWF, Psy 115, Denzell Smith
—2, Rec I MWF, Bu 103, Wilson
—3, Rec I MWF, Ph 143, Weingart
—4, Rec I MWF, Ph 236a, Mann
—5, Rec I MWF, AE 317, Reid
—6, Rec II MWF, TNCW 113, Burton Weber
—7, Rec II MWF, ChE 54, Breslin
—8, Rec II MWF, ForH 40, Foy
—9, Rec II MWF, MurH 311, David Smith
—10, Rec II MWF, Arch 145, Jensen
—11, Rec II MWF, MurH 308, Peterson
—12, Rec III MWF, TSF 109, Warner
—13, Rec III MWF, TNCW 113, Buchwald
—14, Rec III MWF, Bu 211, Steller
—15, Rec III MWF, C 315, Reid
—16, Rec III MWF, ChE 162, Mann
—17, Rec III MWF, EE 137, Fort
—18, Rec III MWF, AH 101, Cribb
—19, Rec III MWF, ChE 40, Bullock
—20, Rec III MWF, ChE 54, Schmitt
—21, Rec IV MWF, C 115, Bullock
—22, Rec IV MWF, C 111, Warner
—23, Rec IV MWF, C 215, R Shaw
—24, Rec IV MWF, TSF 109, Buchwald
—25, Rec IV MWF, C 315, M Shaw
—26, Rec IV MWF, ChE 40, Peterson
—27, Rec V MWF, P 218, Cribb
—28, Rec V MWF, Psy 115, Lohmann
—29, Rec V MWF, TSF 109, Bredeson
—30, Rec V MWF, Ph 143, Gibson
—31, Rec V MWF, Ph 236a, R Shaw
—32, Rec V MWF, Ph 145, Wise
—33, Rec V MWF, ForH 30, Korges
—34, Rec V MWF, TNM 115, Barker
—35, Rec VI MWF, C 215, Weingart
—36, Rec VI MWF, JohH 306, Gibbs
—37, Rec VI MWF, TSF 109, Sorensen
—38, Rec VII MWF, C 111, Keller
—39, Rec VII MWF, FolH 110, Gibbs
—40, Rec VIII MWF, FolH 101, Keller
—41, Rec I MWF, Arch 135, Steller
—42, Rec I MWF, Arch 45
—43, Rec IV MWF, AH 101, Hansen
—44, Rec V MWF, Arch 135, Wilson
—45, Rec V MWF, VH 112, Gurian
—46, Rec VII MWF, Arch 45, Wise

12H Honors Course: Literature, Composition C (5 cr; prereq △)
—1, Lect II T, NMA Aud
—2, Lect III T, NMA Aud
—3, Lect VIII M, C 100
Rec III MWThF, Arch 20, McClure

22 Introd Literature (5 cr, §19 or 20; prereq C or 3A or 3B or 12H or Comm 3 or exemption)
II MTWThF, JohH 114, Montgomery

23 Introd Literature (5 cr, §19 or 20; prereq C or 3A or 3B or 12H or Comm 3 or exemption)
—1, III MTWThF, FolH 207, Moore
—2, IV MTWThF, FolH 204, R Foster
—3, VI MTWThF, FolH 308, Buckley

39 Modern Literature (3 cr; prereq soph, C or 3A or 3B or 12H or Comm 3)
—1, III MWF, FolH 308, R Foster
—2, VII MWF, FolH 204, Myers

54 English Novel (3 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 12H...or 21 or 22 or 23...or exemption, 5 cr lit)
II MWF, FolH 108, Frank

55 Shakespeare: Early Plays (3 cr; prereq C... or 3A or 3B or Comm 3, 5 addtl cr...or 12H...or 21 or 22 or 23...or exemption, 5 cr lit)
—1, II MWF, FolH 206, Youngblood
—2, III MWF, FolH 107, Cody
—3, VI MWF, FolH 206, Youngblood

56 Shakespeare: Later Plays (3 cr; prereq 55 or △)
—1, II MWF, FolH 107, Madsen
—2, III MWF, FolH 113, Buckley
—3, VI MWF, FolH 205, Myers

73 American Literature (3 cr; prereq 72 or ‡)
II MWF, FolH 101, R Foster

74 American Literature (3 cr; prereq 72 or ‡)
—1, II MWF, FolH 308, Turpie
—2, VII MWF, FolH 308, C Foster

75 Chaucer (4 cr; prereq C...or 3A or 3B or Comm 3, 5 addtl cr...or 12H...or 21 or 22 or 23...or exemption, 5 cr lit)
IV MWThF, FolH 207, McClure

86 **Adv Technical Communication for Engineers** (3 cr; prereq 85)
—1, I MWF, E 4, Haga
—2, II MWF, E 215, Foulke
—3, II MWF, E 4, Guthrie
—4, IV MWF, E 215, Foulke
—5, IV MWF, E 4, Guthrie
—6, V MWF, E 215, Haga
—7, V MWF, E 4, Simson

100 Old English (4 cr; prereq 5 cr above C)
VII MWThF, FolH 207, Allen

103 Beowulf (3 cr; prereq 100)
VII MWF, FolH 108, Brown

106 Whitman, Mark Twain (3 cr; prereq 5 cr above C)
II MWF, FolH 207, Kwiat

113 American Short Story (3 cr; prereq 5 cr above C)
II MWF, FolH 204, Wright

129 Modern Drama (3 cr; prereq 56 or 126, 127)
IV MWF, FolH 206, Moore

139 **19th Century Literature** (3 cr; prereq 5 cr above C)
III MWF, FolH 206, Stange

141 Adv Chaucer (3 cr; prereq 140)
VI MWF, FolH 103, Clark

143 20th Century Literature (3 cr; prereq 5 cr above C)
VII MWF, Arch 55, O'Connor

155 American Novel (3 cr; prereq 5 cr above C)
II TThS, FolH 206, Bowron

158 American Poetry (3 cr; prereq 157)
1:30-2:45 TTh, FolH 303, Levenson

162 Milton (3 cr; prereq 21, 22 or 56)
IV MWF, FolH 108, Madsen

166 Historical Backgrounds of Modern English (3 cr; prereq 5 cr above C)
VI MWF, FolH 201, Allen

173 Dr Johnson, His Circle (3 cr; prereq 5 cr above C, △)
II MWF, FolH 305, Moore

174 American English (3 cr)
VI TTh, VII T, FolH 304, Allen

175 Chaucer (4 cr, §75; prereq 100)
VI MTWF, FolH 107, Jackson

183 Poetry of T S Eliot (3 cr; prereq 5 cr above C)
VII MWF, FolH 113, Youngblood

186 Form, Idea in Dramatic Literature (3 cr; prereq 5 cr above C...56 rec)
VII MWF, FolH 205, Hurrell

196 Elizabethan Literature: Prose, Poetry, Drama (3 cr; prereq 5 cr above C)
2:00-3:15 TTh, FolH 205, Hurrell

199 17th Century Literature (3 cr; prereq 5 cr above C)
IV MWF, FolH 107, Hurrell

212 17th Century Literature (3 cr; prereq 211)
VIII-IX M, FolH 108, Madsen

213 Bibliography, Methods of Literary Research (2 cr)
VIII-IX W, FolH 208, O'Connor

227 Elizabethan Drama (3 cr; prereq 226)
VIII-IX M, FolH 203, Brown

236 Medieval English Culture (3 cr; prereq 235)
VIII-IX Th, FolH 304, Clark

247 English Literary Criticism (3 cr; prereq 246)
VIII-IX F, FolH 108, O'Connor

267 American Renaissance II: Hawthorne, Dickinson, Thoreau (3 cr; prereq 266)
VIII-IX Th, FolH 203, C Foster

269 Aesthetics (3 cr; prereq 268)
VIII-IX Th, FolH 108, Steinmann, Donagan

278 American Realism (3 cr; prereq 279)
VIII-IX F, FolH 208, Bowron

299 Independent Reading (3 cr; prereq 298)

English Composition (Comp)

X **Preparatory Composition** (0 cr)
—1, I MWF, MurH 311
—2, IV MWF, Bu 123
—3, IV MWF, MurH 302
—4, V MWF, Bu 123
—5, V MWF, FolH 4

27 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3)
—1, II MWF, FolH 4, Hart
—2, III MWF, FolH 103, Hart
—3, IV MWF, FolH 205, Cody
—4, VI MWF, FolH 207, Cody
—5, VII MWF, FolH 114, Ryley

28 **Adv Writing** (3 cr; prereq C or 3A or 3B or Comm 3...27 rec)
—1, II MWF, FolH 103, Schneider
—2, IV MWF, FolH 103, Myers
—3, V MWF, FolH 103, Schneider
—4, VII MWF, FolH 103, Fraser

58 **Business Reports, Letters** (3 cr; prereq regis BA or ♯, C or 3A or 3B or Comm 3)
II MWF, ForH 50, Haga

103 **Writing of Fiction, Poetry** (3 cr; prereq 102)
VIII-IX M, FolH 208, Blum

FAMILY LIFE (FL)

1 **Preparation for Marriage** (3 cr, §1A)
—1, I MWF, JohH 106
—2, II MWF, JohH 106
—3, II T, II-III Th, JohH 106, Torbett
—4, III MWF, JohH 106, Pitzer
—5, IV MWF, JohH 106, Latts
—6, IV MWF, JohH 306, Hansen
—7, V MWF, JohH 106

1A **Preparation for Marriage** (3 cr, §1; prereq up div or married students)
—1, II T, II-III Th, JohH 306, Pitzer (engaged and married students)
—2, V MWF, JohH 306, Hansen (older students)

15 **The Home, Its Furnishing** (3 cr but cr added to SLA grad req)
II MWF, JohH 205, Ludwig

20 Consumer Economics (3 cr but cr added to SLA grad req)
II MWF, JohH 306, Maynes

25 Child Development, Adjustment (3 cr, §CD 40 or 80, not open to NKP or psy maj)
III MWF, JohH 205, Peterson

50 The Educated Woman in the U S (2 cr, but cr added to SLA grad req; prereq ♯)
VII-VIII Th, JohH 105, Senders

GEOGRAPHY (Geog)

1 Natural Resources (5 cr)
Lect II MWThF, Owre 15, Barrett
—1, I T, ForH 60
—2, I Th, ForH 60
—3, III M, ForH 60
—4, III T, ForH 60
—5, III W, ForH 60
—6, III Th, ForH 60
—7, III F, ForH 60
—8, IV F, ForH 60
—9, V M, ForH 60
—10, V W, ForH 60
—11, V F, ForH 60
—12, VI F, ForH 60

4 Human Geography (5 cr)
Lect III MWF, Owre 15, Lucas
—1, I MW, ForH 70
—2, I TTh, ForH 70
—3, II TTh, ForH 70
—4, II WF, ForH 70
—5, III TTh, ForH 70
—6, IV MW, ForH 70
—7, IV TTh, ForH 70
—8, V MW, ForH 70
—9, V TTh, ForH 70
—10, VI MW, ForH 70
—11, VI TTh, ForH 70
—12, VII MW, ForH 70

41 Primary Production (5 cr)
Lect VI MWThF, ForH 55, Lukermann
—1, I W, ForH 60
—2, II T, ForH 60
—3, II Th, ForH 60
—4, IV T, ForH 60
—5, IV Th, ForH 60
—6, VI T, ForH 60

67 Minnesota (3 cr; prereq 5 cr or ♯)
IV MWF, ME 18, Borchert

100 Geographical Exploration, Discovery (3 cr; prereq 10 cr or ♯)
III MWF, ForH 285, Webb

102 Central Europe (3 cr; prereq 10 cr or ♯)
VI MWF, ForH 185, Kostrowicki

112 Western United States (3 cr; prereq 10 cr or ♯)
I MWF, ForH 285, Mather

126 Australia, New Zealand, Oceania (3 cr; prereq 10 cr or ♯)
VII MWF, ForH 285, Barrett

135 Adv Physical Geography (3 cr; prereq 134 or ♯)
IV MWF, ForH 80, Barrett

139 **Air Photo Interpretation** (3 cr; prereq 70 or ♯)
I-II TTh, ForH 80, Porter

140 **Adv Cartography** (3 cr; prereq 138)
V MWF, ForH 80, Porter

152 Industrial Geography (3 cr; prereq 41 or ♯)
II MWF, ForH 285, Lukermann

170 Field Course (3 cr; prereq sr, 15 cr)
VIII M, ForH 285, Webb

190 Readings (1-3 cr; prereq sr)

252 Seminar: Agricultural Geography (ar cr; prereq ♯)
VIII-IX M, ForH 175, Mather

253 Seminar: Comparative Geography of the Tropics (ar cr; prereq ♯)
VIII-IX W, ForH 175, Barrett, Porter, Webb

254 Seminar: Agricultural Geography and Land Use in Poland (ar cr; prereq ♯)
VIII-IX T, ForH 346, Kostrowicki

301 Research Probs (ar cr)

GEOLOGY AND MINERALOGY (Geol)

A Gen Geol Lab (2 cr; prereq 1 or 8 or 51 or ¶)
—1, III-IV TTh, P 22
—2, V-VI TTh, P 22
—3, III-IV MW, P 22
—4, I-II MW, P 22
—5, V-VI MW, P 22
—6, VII-VIII TTh, P 22
—7, VII-VIII MW, P 22
—8, I-II TTh, P 22
—9, III-IV TTh, P 20
—10, VII-VIII MW, P 20

B Gen Geol Lab (2 cr; prereq A, 2 or ¶2)
—1, I-II MW, P 20
—2, III-IV MW, P 20
—3, V-VI TTh, P 20
—4, I-II TTh, P 20
—5, V-VI TTh, P 20

1 Gen Geology (3 cr, §5)
—1, IV MWF, P 2, Thiel
—2, II MWF, P 2, Craddock
—3, VI MWF, P 210, Dickinson

2 Gen Geology (3 cr, §6; prereq 1 or 8 or 51)
—1, IV MWF, P 110, Sloan
—2, VII MWF, P 110, Sloan

25 Rock Study (2 cr; prereq soph, 24)
Lect I T, P 210, Phinney
Rec I Th, P 210
—1, Lab VI-VII T, P 100
—2, Lab VIII-IX T, P 100

109 Adv Invertebrate Paleontology (3 cr; prereq 108) Sloan

111 Economic Geology (3 cr; prereq 110)
I TTh, VIII F, P 218, Schwartz

120 Glacial Geology (3 cr; prereq B)
I MWF, P 110, Wright

132 Petrology (4 cr; prereq 131)
Lect III MWF, P 210, Phinney
Lab VI-VII WF, P 200

145 Aerial Photographs (3 cr; prereq 118 or 125 or ♯)
VI-VIII TTh, P 125, Wright

152 Stratigraphy II (3 cr; prereq 151)
II MWF, P 218, Swain

153 **Subsurface Stratigraphy** (2 cr; prereq 151)
VII-VIII TTh, P 10, Swain

167 Mineralography (3 cr; prereq 166) Schwartz

170 Geologic Probs (1-3 cr)

171 Preparation of Geologic Report (1 cr; prereq sr, 150 or △)

179 Mining Geology (3 cr; prereq 111) Schwartz

183 Adv Geochemistry (3 cr; prereq 182, diff equat or ♯) Gast

227 Geotectonics (3 cr; prereq 125) Craddock

266 X-ray Mineralogy (3 cr; prereq 24, 121 or ♯)
II TTh, P 110, Zoltai

268 Seminar: Mineralogy (ar cr; prereq 161 or ♯) Zoltai

273 Adv Metamorphic Petrology (3 cr; prereq 132, 272) Phinney

GERMAN (Ger)

1C **Bgn German** (5 cr, §1A or 1B or HS Ger)
—1, IV MTWThF, FolH 209½
—2, IV MTWThF, FolH 9
—3, V MTWThF, FolH 207
—4, V MTWThF, FolH 206

2C **Bgn German** (5 cr, §2A or 2B; prereq 1C or 1 yr HS Ger)
—1, III MTWThF, FolH 209½
—2, III MTWThF, FolH 8
—3, VI MTWThF, FolH 209
—4, VI MTWThF, FolH 209½

3A **Bgn German: Conversational** (5 cr, §3B or 3C; prereq 2A)
Lect I MWF, FolH 209½
Lab I TTh

3B **Bgn German: Language, Culture** (5 cr, §3A or 3C; prereq 2B)
Lect II MWF, FolH 209½
Lab II TTh

3C **Bgn German** (5 cr, §3A or 3B; prereq 2C or 2 yrs HS Ger)
—1, Lect I MWF, FolH 209
Lab I TTh
—2, Lect II MWF, FolH 209
Lab II TTh
—3, Lect III MWF, FolH 209
Lab III TTh
—4, Lect IV MWF, FolH 209
Lab IV TTh
—5, V MTWThF, FolH 209½
—6, V MTWThF, FolH 209

4 **Interm German** (3 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
VII MWF, FolH 209

5 **Interm German** (2 cr; prereq 3A or 3B or 3C or 3 yrs HS Ger)
VII TTh, FolH 209

52 **Reading German: Bgn for Juniors, Seniors** (3 cr, §3A or 3B or 3C; prereq 51)
—1, I MWF, FolH 207
—2, II MWF, FolH 213
—3, II MWF, P 110
—4, VII MWF, FolH 2

56 **Reading, Analysis of Literary Texts** (3 cr; prereq 4 or 4 yrs HS Ger)
—1, IV MWF, FolH 304
—2, IV MWF, FolH 114

57 **Composition** (2 cr; prereq 4, 5)
VI MF, FolH 306

58 **Composition** (2 cr; prereq 57)
VI MF, FolH 10

59 **Composition** (2 cr; prereq 58)
—1, VI MF, FolH 208
—2, VI MF, FolH 108

63 **Conversation** (2 cr; prereq 4, 5)
—1, VI TTh, FolH 208
—2, VI TTh, FolH 108
—3, VI TTh, FolH 103

66 **Adv Conversation, Essay Writing** (2 cr; prereq 59, 63)
VII TTh, FolH 208

72 **Lyric Poetry from Goethe to Rilke** (2-3 cr; prereq 56...or 4, △)
IV TTh, FolH 208

75 **Drama from Lessing to the Present** (3 cr; prereq 56...or 4, △)
IV MWF, FolH 208

78 **Prose of the 19th, 20th Century** (2-3 cr; prereq 56...or 4, △)
III TTh, FolH 208

93 **Civilization, Culture** (3 cr; prereq 3 cr above 69)
VII MWF, FolH 208

96 **Survey of Literature** (3 cr; prereq 3 cr above 69)
III MWF, FolH 208

105 Syntax, Composition (1 cr; prereq sr, 66)

112 Middle High German (3 cr; prereq 111)
VIII-IX M, FolH 305½, C Wood

149 Directed Readings (2-3 cr)

159 Old Norse: Language, Literature (3 cr, §old Scan 197, †157-158-159; prereq 158)
V-VI W, FolH 10, C Wood

162 Klopstock, Wieland, Lessing, Herder (3 cr; prereq sr, 14 cr above 69)
VIII-IX Th, FolH 208, Ramras

179B Drama from Naturalism to Present: 1910 to present (3 cr; prereq 179A)
VIII-IX W, FolH 108, Hirschbach

188 Lyric Poetry (3 cr; prereq sr, 14 cr above 69)
VIII-IX T, FolH 208, F Wood

HISTORY (Hist)

2 Civilization of the Modern World (3 cr)
Lect II MW, FraH 101, Wright
—1, II Th, ForH 30
—2, II F, ForH 30
—3, I T, ForH 130
—4, I Th, ForH 15
—5, I F, ForH 60
—6, II F, ForH 60
—7, VI Th, ForH 30
—8, III W, ForH 70

2H Honors Course: Civilization of the Modern World (3 cr; prereq △)
Lect II MW, FraH 101, Wright
Rec IV W, ForH 244, Wright

8 Civilization of the Modern World (3 cr)
Lect II TTh, NH 45, Wolf
—1, I M, ForH 50
—2, I T, ForH 50
—3, I W, ForH 50
—4, I Th, ForH 50
—5, I F, ForH 50
—6, II M, ForH 185
—7, II F, ChE 150
—8, III T, ForH 50
—9, III Th, ForH 50
—10, IV T, ForH 50
—11, VI M, ForH 60
—12, VI W, ForH 50
—13, VI F, ForH 50
—14, VII T, ForH 50
—15, II W, ForH 170
—16, III W, ForH 50
—17, VI T, ForH 30
—18, I T, ForH 170
Lect III TTh, NH 45, Payne
—19, I Th, ForH 30
—20, I T, ForH 30
—21, I F, ForH 150
—22, II M, ForH 30
—23, II Th, ForH 50
—24, III M, ForH 50
—25, IV Th, ForH 30
—26, VII Th, ForH 50
—27, III W, ForH 30
—28, IV Th, ForH 40
Lect VI TTh, NH 45, Taylor
—29, I M, ForH 150
—30, I W, ForH 150
—31, I Th, ForH 180
—32, II W, ForH 30
—33, III T, ForH 30
—34, III Th, ForH 30
—35, IV F, ForH 70
—36, III T, ForH 130

8H Honors Course: Civilization of the Modern World (3 cr; prereq △)
—1, Lect II TTh, NH 45, Wolf
Rec VI W, ForH 160, Wolf
—2, Lect III TTh, NH 45, Payne
Rec VI W, ForH 60, Payne
—3, Lect VI TTh, NH 45, Taylor
Rec I F, ForH 244, Taylor

6 English History (3 cr)
Lect IV MW, FraH 102, Willson
—1, I M, ForH 60
—2, IV T, ForH 30
—3, IV T, ForH 160
—4, VI W, ChE 150
—5, VI F, ChE 150
—6, IV F, MurH 308

13 Medieval, Renaissance History (3 cr; prereq art or mus maj or △)
IV MWF, ForH 115, Thompson

16 Ancient Civilization (3 cr, §16A)
VII TWTh, MNH Aud, Jones

16A Ancient Civilization with Readings (5 cr, §16)
VII TWTh, MNH Aud, VII MF, ForH 115, Jones

19 Asia (3 cr, §61)
VI MWF, ForH 120, Stein, Taylor

21 American History (3 cr; prereq soph)
Lect II MW, Bo B6, Murphy
—1, VI T, ForH 50
—2, I Th, ForH 150
—3, I M, ChE 154
—4, II T, ForH 160
—5, II Th, ForH 160
—6, III T, ForH 15
—7, IV T, ForH 115

21H Honors Course: American History (3 cr; prereq soph, △)
Lect II MW, Bo B6, Murphy
Rec II F, ForH 346

22 American History (3 cr; prereq soph)
Lect I MW, Bo B6, Rutman
—1, II M, ForH 70
—2, I T, ForH 180
—3, VI T, ForH 40
—4, III W, E 4
—5, III Th, ForH 160
—6, I Th, ForH 85
—7, II Th, ForH 15
—8, II T, ForH 50
Lect II TTh, C 100, Berkhofer
—9, I M, MurH 420
—10, VI M, ForH 50
—11, III T, ForH 285
—12, IV T, E 4
—13, III W, E 215
—14, IV W, ForH 175
—15, VII W, ForH 50
—16, III Th, ForH 15
—17, VI Th, ForH 150
—18, I Th, ForH 130
—19, II M, ForH 170
Lect VIII MW, ForH 155, Chambers
—20, V M, ForH 50
—21, II T, ForH 30
—22, IV W, ForH 60
—23, VII W, ForH 30

22H Honor Course: American History (3 cr; prereq soph, △)
—1, Lect I MW, Bo B6, Rutman
Rec IV W, ForH 30, Rutman
—2, Lect II TTh, C 100, Berkhofer
Rec I T, ForH 244, Berkhofer
—3, Lect VIII MW, ForH 155, Chambers
Rec VIII T, ForH 75, Chambers

52 Ancient Civilization (3 cr, §16)
VII TWTh, MNH Aud, Jones

55 Civilization of the Modern World (3 cr, §3)
Lect II TTh, ForH 55, Altholz
—1, II M, ForH 60
—2, III M, ForH 70
—3, II F, ForH 170
—4, VI W, ForH 30

58 England (3 cr, §6)
Lect IV MW, FraH 102, Willson
Rec IV F, ForH 30

61 Asia (3 cr, §19)
VI MWF, ForH 120, Stein, Taylor

72 English Constitutional History (3 cr; prereq prelegal soph, C avg or jr)
I MWF, ForH 115, Thompson

81 United States in 20th Century (3 cr)
VI MWF, Bo B6, Chambers

88 American Colonies (3 cr)
II MWF, Arch 55, Rutman

92 The American West (3 cr)
III MWF, ForH 120, Berkhofer

95 American Diplomatic History (3 cr)
I MWF, ForH 155, Beatty

99 Minnesota, the Northwest (3 cr)
III MWF, ForH 155, Jordan

102 The Ancient Near East (3 cr)
VIII MWF, ForH 115, Jones

105A Renaissance, Reformation (3 cr)
1:30-3:00 TTh, ForH 120, Giesey

108 Early Modern Europe (3 cr)
1:30-3:00 TTh, ForH 15, Wolf

108A Europe in the 19th Century (3 cr)
1:30-3:00 TTh, ForH 115, Altholz

111 Europe in the 20th Century (3 cr)
II MWF, ForH 55, Payne

126B 20th Century Russia (3 cr; prereq 108A or 109 or 127 or ♯)
VI MWF, ME 18, Stavrou

126C Modern Near East (3 cr; prereq 1, 2, 3 or ♯)
IV MWF, ForH 285, Stavrou

127 Russia (3 cr)
IV MWF, ForH 55, Anderson

127A Eastern Europe, Middle East in 19th, 20th Centuries (3 cr; prereq 1-2-3)
III MWF, ForH 160, Anderson

130 Modern England: Tudor, Stuart Periods (3 cr)
II MWF, ForH 150, Willson

136 World War II (3 cr)
I MWF, MNH Aud, Deutsch

139 Early Natl Period in United States History (3 cr)
I MWF, ForH 160, Jordan

139A American History: 1850-1900 (3 cr)
II MWF, ForH 120, Loehr

148 American Economic, Social History (3 cr)
III MWF, ForH 130, Loehr

148A The South (3 cr)
10:30-12:00 TTh, ForH 55, Noble

151 Social, Intellectual History of the United States (3 cr)
VI MWF, Arch 5, Noble

151A American Constitutional History (3 cr)
IV MWF, AH 350, Murphy

156B South Asia, Especially India (3 cr)
1:30-3:00 TTh, ForH 170, Stein

159 Latin-American History (3 cr)
III MWF, ForH 180, Beatty

162A Readings: 18th Century Europe (3 cr, †160A-161A-162A; prereq 161A)
VIII-IX M, ForH 256, Wright

166 History of China: Prehistoric to Present (3 cr; prereq 165)
10:30-12:00 TTh, ForH 244, Taylor

169 Readings: Works of Great Historians (2 cr; prereq sr)
3:30-5:30 T, ForH 244, Giesey

172 Readings: Ancient History (3 cr, †170-171-172; prereq 171) Jones

175 Readings: Medieval, Renaissance History (3 cr, †173-174-175; prereq 174)
VI-VII M, ForH 75, Giesey

175A Readings: Medieval English History (3 cr, †173A-174A-175A; prereq 174A)
1:30-3:00 Th, ForH 244, Thompson

178 Readings: 17th Century France (3 cr, †176-177-178; prereq 177)
VII-VIII W, ForH 256, Wolf

178A Readings: Russian History (3 cr, †176A-177A-178A; prereq 177A)
VII-VIII F, ForH 256, Anderson

178B Readings: India (3 cr, †176B-177B-178B; prereq 177B)
VIII-IX F, ForH 175, Stein

178C Readings: Recent European History (3 cr, †176C-177C-178C; prereq 177C)
1:00-2:40 M, ForH 244, Deutsch

184 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq 183)
VI-VII F, ForH 175, Willson

187 Readings: American Political, Constitutional History (3 cr, †185-186-187; prereq 186)
VIII-IX W, ForH 244, Murphy

187B Readings: American Diplomatic History (3 cr, †185B-186B-187B; prereq 186B)
VI-VII M, ForH 175, Beatty

187C Readings: 20th Century American History (3 cr, †185C-186C-187C; prereq 186C)
1:00-2:50 T, ForH 75, Chambers

187E Readings: 17th, 18th Century American (3 cr, †185E-186E-187E; prereq 186E) Rutman

190 Readings: American Economic History (3 cr, †188-189-190; prereq 189)
VII-VIII M, ForH 346, Loehr

190B Intellectual History of United States in 19th, 20th Centuries (3 cr; prereq 189B)
VI-VII Th, FolH 12, Noble

202 Historical Bibliography, Criticism (2 cr, †200-201-202; prereq 201)
VI-VII W, ForH 115, Jordan

212 Ancient History (3 cr, †210-211-212; prereq 211)
8:00-10:00 pm Th, ForH 244, Jones

222 Medieval English History (3 cr, †220-221-222; prereq 221) Thompson

225 English History, Tudor-Stuart Period (3 cr, †223-224-225; prereq 224) Willson

255 Russian History (3 cr, †253-254-255; prereq 254)
VII-VIII F, ForH 256, Anderson

262 Latin American History (3 cr, †260-261-262; prereq 261) Beatty

265 History of India (3 cr, †263-264-265; prereq 264) Stein

275 19th Century American History (3 cr, †273-274-275; prereq 274) Jordan

285 American Economic History (3 cr, †283-284-285; prereq 284) Loehr

288 American Political, Constitutional History (3 cr, †286-287-288; prereq 287)
VIII-IX W, ForH 244, Murphy

295 American Diplomatic History (3 cr, †293-294-295; prereq 294) Beatty

298 Intellectual History of United States in 19th, 20th Centuries (3 cr; prereq 297)
VI-VII Th, FolH 12, Noble

INTERDISCIPLINARY PROGRAMS

Communication (Comm)

1 Communication (4 cr, §Engl A or 1A or 1B; prereq classif 1 or 1A or 2 or 3)
—1, II MTWF, TNM 9, O'Hara
—2, IV MTWF, TNM 107, Willcoxon
—3, V MTWF, TNM 107, Bryan

2 Communication (4 cr, §Engl B or 2A or 2B; prereq 1)
—1, I MTWF, TNM 115, Giltner
—2, III MTWF, TNM 115, White
—3, IV MTWF, TNM 9, Hausdorff
—4, V MTWF, TNM 106, Morrison
—5, VI MTWF, TNM 107, Greis

3 Communication (4 cr, §Engl C or 3A or 3B; prereq 2)
—1, I MTWF, TNM 114, Scanlon
—2, I MTWF, TNM 106, White
—3, I MTWF, TNM 107, Connolly
—4, I MTWF, TNM 9, Regnier
—5, II MTWF, TNM 114, Brook
—6, II MTWF, TNM 106, Jensen
—7, II MTWF, TNM 107, Morrison
—8, III MTWF, TNM 114, Willcoxon
—9, III MTWF, TNM 106, Cox
—10, III MTWF, TNM 107, Scanlon
—11, III MTWF, TNM 9, Regnier
—12, IV MTWF, TNM 114, O'Hara
—13, IV MTWF, TNM 106, Cox
—14, V MTWF, TNM 114, Hausdorff
—15, V MTWF, TNM 9, Giltner
—16, VI MTWF, TNM 114, Bryan

Humanities (Hum)

1 Modern World I (5 cr)
—1, I MTWThF, JohH 115, Blum
—2, II MTWThF, JohH 122, Siegelman
—3, III MTWThF, FolH 114, Fredricks
—4, IV MTWThF, JohH 113, Ames
—5, V MTWThF, JohH 114, Altholtz
—6, VI MTWThF, Arch 145, Kaynar

2 Modern World II (5 cr; prereq 1)
—1, III MTWThF, JohH 113, Ramsland
—2, IV MTWThF, ForH 15, Frank
—3, VI MTWThF, ForH 285, W Wright

3 Modern World III (5 cr; prereq 2)
—1, III MTWThF, Arch 60, Wood
—2, V MTWThF, JohH 115, J Wright

3H Honors Course: Modern World III (5 cr; prereq 2, △)
III MTWThF, ForH 40, Siegelman

4 Modern World IV (5 cr; prereq 1 or 2 or 3)
VII MTWThF, JohH 113, Ludwig

13 Renaissance, Reformation (5 cr)
II MTWThF, JohH 105, Swanson

23 American Life III (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
—1, II MWF, FolH 6, Hoople
—2, III MWF, FolH 6, Weber
—3, IV MWF, FolH 6, Turpie
—4, VI MWF, FolH 6, Berkhofer

53 Modern World (5 cr, §3)
—1, III MTWThF, FolH 204, Kwiat
—2, VI MTWThF, FraH B1, Amberg

53H Honors Course: Modern World (5 cr, §3; prereq △)
VI MTWThF, JohH 122, Ludwig

54 Modern World (5 cr, §4)
—1, III-IV TTh, JohH 114, 1 hr ar, Berryman
—2, VI MTWThF, JohH 113, Vogelbaum

63 European Heritage (5 cr, §13)
—1, II MTWThF, JohH 115, Ames
—2, III-IV TTh, JohH 115, 1 hr ar, Vogelbaum

73 Humanities in the United States (3 cr, §9 cr in 21, 22, 23, 71, 72, 73)
VII MWF, FolH 6, Levenson

133 Proseminar (3 cr; prereq 132)
—1, VII-VIII T, JohH 105, Berryman
—2, VII-VIII T, JohH 106, Ross

Natural Science (NSci)

3 **Orientation** (5 cr; prereq 2)
III MTWThF, Ph 166, Graubard, lab ar

6 **Physical World** (4 cr, §Geol 1; prereq 5)
Lect VII MWF, P 210, Thiel
—1, Lab I-II F, P 22
—2, Lab III-IV F, P 22
—3, Lab V-VI F, P 22

173 Development of Sciences (3 cr; prereq 1 yr of HS biol, 1 yr of HS phys sci or ♯)
IV MWF, Ph 236a, Graubard

Social Science (SSci)

1 **Introduction** (3 cr)
—1, III MWF, JohH 114, Roshwald
—2, IV MWF, JohH 205, Roshwald
—3, VI MWF, JohH 114

2 **Introduction** (3 cr; prereq 1)
—1, IV MWF, JohH 114, Engelbourg
—2, VI MWF, JohH 115, Roshwald
—3, VII MWF, JohH 115, Uppal

3 **Introduction** (3 cr; prereq 2)
—1, I MWF, JohH 113, Engelbourg
—2, II MWF, ForH 15
—3, 9:00-10:20 TTh, JohH 113, Kanun
—4, III MWF, JohH 115, Engelbourg
—5, IV MWF, JohH 115
—6, V MWF, JohH 113, Merrill
—7, VI MWF, JohH 205, Cooperman
—8, VII MWF, JohH 114, Cooperman

53 **Introduction** (4 cr, §3)
IV MWF, JohH 105, Cooperman

JOURNALISM (Jour)

13 **Journalistic Writing for Majors** (4 cr; prereq soph, C avg, Engl C or 3A or 3B or Comm 3, typ 35 words/min or BA 32 or 33)
I-II MWF, IV T, MurH 212, Sim

14 **Newspaper Reporting for Majors** (3 cr; prereq 13 with grade C or ♯, ¶Comp 27 or 28, typ 35 words/min or ¶BA 33)
I-III TTh, MurH 212, Lindsay

15 **Newspaper Reporting for Majors** (3 cr; prereq 14 with grade C or ♯, ¶Comp 27 or 28)
—1, I-II TTh, MurH 210, 1 hr ar, Hage
—2, VI-VII TTh, MurH 212, 1 hr ar, Charnley

18 **Prin Advertising** (3 cr; prereq 13, C avg, ¶Comp 27 or 28)
I MWF, MurH 302, Watters

41 **Publications Editing** (3 cr; prereq soph, 11 or 13)
Lect IV M, MurH 308, Sim
—1, I-II, TTh, MurH 206
—2, IV-V WF, MurH 206
—3, VI-VII TTh, MurH 206

51 **News Editing** (3 cr; prereq 15 or B avg in 13, 14)
Lect III T, MurH 302, Carter
Lab VIII-IX MW, MurH 206, Gompertz

54 **Advertising Layout, Typography** (3 cr; prereq Jour adv maj or min in Educ or BA or AFHE or ♯)
Lect III T, MurH 308, Wilson
—1, III-IV MW, MurH 315, 320
—2, I-II TTh, MurH 315, 320

58 **Newspaper, Periodical Design, Typography** (3 cr; prereq 55, ♯)
VI-VII TTh, MurH 315, 320, Wilson

65 Graphic Arts: Processes (3 cr)
8:30-10:00 TTh, MurH 308, Wilson

66 **News, Feature Photography** (3 cr; prereq 12, 13 or ♯)
VI-VIII TTh, MurH 20, Schuneman

69 **Business News, Feature Writing** (3 cr; prereq 41)
—1, II TTh, MurH 302, 1 hr ar, Watters
—2, VII MWF, MurH 212, Schuneman

79 **Advertising Copy Writing** (3 cr; prereq 41 or 51, 54, 65)
IV MWF, MurH 212, Watters

82 Supervision of School Publications (3 cr; prereq 41 or 51)
VI MWF, MurH 308, Emery

90 Mass Communications, News (3 cr; prereq non-jour maj)
III MWF, MurH 308, Gardner

95 Newspaper Mgt (3 cr; prereq 41 or 51)
8:30-10:00 TTh, MurH 311, Sim

101 **Reporting Public Affairs** (3 cr; prereq sr, 51)
III MWF, MurH 311, Hage

103 Literary Aspects (3 cr; prereq ♯)
VII MWF, MurH 311, Hage

115 Communications Analysis: Content, Audiences, Effects (3 cr; prereq BA 5 or Soc 45 or Psy 70 or ♯...Psy 167 rec)
II TTh, MurH 420, 1 hr ar, Jones

118 Adv Projects (1-3 cr; prereq sr, jour maj, B avg, ♯)

122 **Current Communications Probs** (3 cr; prereq sr, 51)
VI-VII T, MurH 302, 1 hr ar, Gerald

126 Communications in Authoritarian Society (3 cr; prereq 15 cr soc sci...up div course in intl rel or compar govt rec)
VII MWF, MurH 302, Gardner

142 **News Interpretation for Radio, Television** (3 cr; prereq jour maj, 85, 140...or others, ♯)
VI MWF, MurH 302, Lindsay

150 Institutional Public Relations (3 cr; prereq non-jour maj, sr, ♯)
3:30-5:00 MW, MurH 302, Emery

163 Advertising Media Analysis (3 cr; prereq sr, 18, 161, 162, ♯...or 161, 162, BA 77 or ♯)
VII MWF, MurH 308, Mindak

164 Current Advertising Developments, Probs (3 cr; prereq 54, 79, 163 or ♯)
III MWF, MurH 302, Mindak

177 Freedom of Press, Communications Law (3 cr; prereq 15 cr soc sci)
IV MWF, MurH 311, Gerald

190 Adv Probs: Journalistic Writing (3 cr; prereq grad, ♯) Charnley

209 Seminar: History of Communications (3 cr; prereq 109, 110, cons adv) Emery

216 Seminar: Communications Analysis (3 cr; prereq 215) Carter

222 Communication Agencies as Social Institutions (3 cr; prereq 221) Gerald

264 Seminar: Advertising Research (3 cr; prereq 115 or 218 or ♯) Mindak

279 Govt, Mass Communications (3 cr; prereq 278) Gerald

292 Probs: Mass Communications (3 cr; prereq ♯)

LIBRARY (Lib)

70 Selection Library Materials (3 cr)
6:30-9:00 pm Th, Lib 4A, Wezeman

74 Materials in Classroom (3 cr; prereq school librarians on cert prog)
III MWF, JohH 307, Zimmerman

131 Public Library Extension, Development (3 cr; prereq 55)
10:30-12:00 MW, Lib 4B, Wezeman

153 History of Books, Printing (3 cr)
II MWF, Lib 4A, Shove

162 Literature of Natural Sciences (3 cr; prereq 62)
9:00-10:30 TTh, Lib 4A, Shove

175 Publishers, Publishing (3 cr)
IV MWF, Lib 4A, Shove

176 Communication Media, Library (3 cr)
10:30-12:00 TTh, Lib 4A, Berninghausen

182 Adv Descriptive Cataloguing (3 cr; prereq 83)
III MWF, Lib 4A, Simonton

259 Probs: Public Librarianship (3 cr; prereq 154)
1:00-3:00 W, Lib 4B, Wezeman

272 Children's, Young People's Work (3 cr; prereq 154 or 157)
1:00-3:00 M, Lib 4A, Zimmerman

281 Seminar: Theories of Bibliographical Organization (3 cr; prereq 181)
1:00-3:00 W, Lib 4A, Simonton

MATHEMATICS (Math)

X Preparatory Mathematics (no cr; prereq △)
—1, III MTWThF, FolH 2
—2, V MTWThF, FolH 114

H Higher Algebra (3 or 5 cr; prereq 1 yr elem alg)
—1, III MTWThF, Arch 5
—2, V MTWThF, FolH 308
—3, II MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

T Trigonometry (3 cr; prereq plane geom, H or HS higher alg)
—1, I MWF, FolH 113
—2, I TThS, FolH 11
—3, IV MWF, FolH 104
—4, VI MWF, FolH 2
—5, IV MWF, AgEng 103 **(StP Campus)** (for AFHE students)

5 Foundations of Arithmetic (3 cr; prereq 1 yr elem alg, 1 yr HS geom)
II MWF, Arch 5

10 College Algebra (5 cr; prereq plane geom or △, H or HS higher alg)
—1, I MTWThF, FolH 105
—2, V MTWThF, FolH 109
—3, VI MTWThF, FolH 105
—4, III MTWThF, AgEng 103 **(StP Campus)** (for AFHE students)

20 Investment (5 cr; prereq 10)
I MTWThF, FolH 107

40 Mathematical Analysis I (5 cr; prereq 10, T or ¶ or HS trig)
—1, I MTWThF, Arch 5
—2, II MTWThF, FolH 2
—3, V MTWThF, Arch 5
—4, VII MTWThF, FolH 109

40H Honors Course: Mathematical Analysis I (5 cr; prereq 10, T or ¶ or HS trig, △)
I MTWThF, FolH 4

40A Mathematical Analysis I (5 cr; prereq pre-acctg students, 10)
I MTWThF, FolH 5

53 Mathematical Analysis II (5 cr; prereq 40)
—1, II MTWThF, Bu 211
—2, III MTWThF, FolH 105
—3, V MTWThF, FolH 105

54 Mathematical Analysis III (5 cr; prereq 53)
—1, I MTWThF, FolH 102
—2, IV MTWThF, FolH 105

55 Interm Calculus (3 cr; prereq 54)
—1, III MWF, FolH 101
—2, VII MWF, FolH 105

59 Elem Differential Equations (2 cr; prereq 53)
III TTh, FolH 101

60 Synthetic Metric Geometry (3 cr; prereq 40)
II MWF, FolH 109

100C Foundations of Arithmetic, Algebra, Geometry (3 cr; prereq 54, ♯)
—1, IV MWF, FolH 102, Engeler
—2, VII MWF, FolH 102

106 Differential Equations (3 cr; prereq 55)
I MWF, FolH 101

108 Adv Calculus (3 cr; prereq 107)
V MWF, FolH 101, Gil de Lamadrid, Miracle

115C Differential Geometry (3 cr; prereq 115B)
V MWF, FolH 102, Guggenheimer

123 Theory of Statistics (3 cr; prereq 122)
IV MWF, Arch 45, Richter

125 **Theory of Geometrical Constructions** (3 cr; prereq 40)
II MWF, FolH 102, Carlson (for AYI students only)

125B Critical Reasoning in Mathematical Analysis (3 cr; prereq 125A)
III MWF, FolH 104, Engeler

131B Adv Algebraic Theory (3 cr; prereq 131A)
VII MWF, FolH 101, Harper

159 Methods of Applied Mathematics (3 cr; prereq 158)
II TThS, FolH 101, Turner

172 Modern Algebra (3 cr; prereq 171)
VI MWF, FolH 110, Kalisch

178C Introd to Probability (3 cr; prereq 178B)
11:30-12:45 TTh, FolH 102, Jamison

187A Finite Planes, Orthogonal Latin Squares (3 cr; prereq 100B or 131A or ♯)
VIII MWF, FolH 104, Parker

208 Theory of Functions of Real, Complex Variables (3 cr; prereq 207)
II MWF, FolH 104, Storvick

209C Theory of Finite Riemann Surfaces (3 cr; prereq 209B)
V TTh, FolH 101, 1 hr ar, Garsia

210C Foundations of Algebra (3 cr; prereq 210B)
IV TTh, FolH 101, 1 hr ar, Jonsson

211C Adv Methods of Applied Mathematics (3 cr; prereq 211B)
1:30-3:00 TTh, FolH 101, Kalisch

212C Point Set Topology (3 cr; prereq 212B)
III TTh, FolH 102, 1 hr ar, Slye

245B Lebesgue Integrals (3 cr; prereq 245A)
VII MWF, FolH 104, Knight

247 Integration in Function Space (3 cr; prereq 246)
V MWF, FolH 108, Cameron

273 Ordinary Differential Equations (3 cr; prereq 272)
III MWF, FolH 102, Loud

284C Stochastic Processes (3 cr; prereq 284B)
1:30-3:00 TTh, FolH 102, Orey

MUSIC (Mus)

A Piano (no cr)
Ar, ScH 107, Weiser, Freed, Hunter, Lillestol

D Voice (no cr)
Ar, ScH 107, Knowles, Oja, Rice

1 **Fundamentals** (2 cr; prereq non-mus maj)
—1, I MW, MusEd 103, I TTh, NMA 4, Oja
—2, II MW, MusEd 103, II TTh, ScH 104, Oja
—3, V MTWTh, ScH 4, Glemming
—4, VIII-IX TTh, ScH 4, Oja

2T **Theory** (3 cr; prereq 1T)
V MTWThF, ScH 3, Loeffler

3T **Theory** (3 cr; prereq 2T)
—1, I MTWThF, ScH 3, Barry
—2, III MTWThF, ScH 3, Barry
—3, VI MTWThF, ScH 3, Glemming
—4, VII MTWThF, ScH 3, Barry

5T **Theory** (4 cr; prereq 4T)
V MTWThF, ScH 103, Bencriscutto

6T **Theory** (4 cr; prereq 5T)
—1, II MTWThF, ScH 103, Malcolm
—2, III MTWThF, ScH 103, Malcolm
—3, VI MTWThF, ScH 103, Malcolm

7C **Ear Training** (2 cr; prereq 7B)
I TWThF, ScH 103, Malcolm

11 Piano (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Weiser, Freed, Hunter, Lillestol

11C **Piano: Class Lessons** (2 cr; prereq 11B)
Mu Hr IV T, ScH 108
—1, III MWF, MusEd 103, Duckworth
—2, V MWF, MusEd 103, Duckworth
—3, VI MWF, MusEd 103, Duckworth

11H **Honors Course: Piano Class Lessons** (2 cr; prereq maj only, ♯)
III TTh, MusEd 103, Duckworth

12 Voice (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Knowles, Oja, Rice

12C **Voice: Class Lessons** (2 cr)
Mu Hr IV T, ScH 108
—1, V MWF, MusEd 104, Knowles
—2, VI MWF, MusEd 104, Knowles
—3, VII MWF, MusEd 104, Knowles
—4, IV MWF, MusEd 4, Abelson

13 Violin (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Loeffler, Carol

14 Viola (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Loeffler

15 Cello (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Jamieson

16 Double Bass (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch

17 Flute (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Opava

18 Oboe (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Angelucci

19 Clarinet or Saxophone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Fitch, Williams

20 Bassoon (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Santucci

21 Trumpet (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Chenette

22 French Horn (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Speyer

23 Trombone (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Weinman

24 Tuba (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Walton

25 Percussion (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Dahlgren

26 Harp (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107, Miller

27 Organ (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, organ lab IV Th, ScH 103, lesson ar, ScH 107, Fleischer

33 Music Literature (2 cr)
II TTh, ScH 108, 1 hr ar, Ivory

36 **History of Music** (2 cr; prereq 35)
I MTWThF, ScH 4, Houle

39 Women's Glee Club (1 cr; prereq ♯)
VI MWF, NMA 4, Barry

42 Orchestra (1 cr; prereq ♯)
7:00 pm W, NMA stage, sectionals ar, Oberg

43 **Chorus** (1 cr, †3 qtrs; prereq ♯)
—1, IV MWF, NMA 4, 5, 7:30 pm T, NH 45, Zinman
—2, VIII MWF, NMA 5, 7:30 pm T, NH 45, Zinman

45S St Paul Campus Chorus (1 cr; prereq ♯)
4:30-6:00 **TTh, CofH 225 (StP Campus),** Abelson

48 Concert Band (1 cr; prereq ♯)
—1, VIII MTTh, NMA 4, 5, Bencriscutto
—2, VIII MWF, NMA 4, Bencriscutto
—3, VIII-IX TThF, NMA 4, 5, Bencriscutto

49 Men's Glee Club (1 cr; prereq ♯)
V MWF, NMA 5, Abelson

50 Introduction (5 cr)
VI MTWThF, ScH 4, Houle

62 Instrumental Ensemble (2 cr)
VII MWF, ScH 104, VII TTh, ScH 105, Oberg

68 Chamber Singers (2 cr; prereq ♯)
VII MWF, NMA 5, Zinman

72 Normal Piano (2 cr; prereq 71)
II TTh, MusEd 103, IV ar, MusEd 2, Duckworth

76 **Form, Analysis** (3 cr; prereq 6T)
I MWF, ScH 104, Argento

92 Adv Instrumental Ensemble (2 cr; prereq sr, 62)
VII MWF, ScH 104, VII TTh, ScH 105, Oberg

99 Counterpoint (2 cr; prereq 98)
III TTh, ScH 4, Fetler

100 Adv Applied Music (2 or 4 cr; prereq entr exam)
Mu Hr IV T, ScH 108, lesson ar, ScH 107

106 American Music (2 cr; prereq 105)
III TTh, ScH 104, Riedel

120 Piano Literature (2 cr; prereq 12 cr in 11 or ♯)
VI TTh, ScH 104, Weiser

123 Adv Harmony (2 cr; prereq 122)
II TTh, ScH 3, Argento

126 History of Opera (3 cr; prereq 125)
VII MWF, ScH 103, Argento

129 Composition (2 cr; prereq 128)
II MW, ScH 2, 1 hr ar, Fetler

132A Music of Romantic Period (3 cr; prereq 131A)
VII MWF, ScH 4, Riedel

136 History of Church Music (2 cr; prereq 135)
VIII-IX T, ScH 103, Riedel

143 Orchestration (2 cr; prereq 142)
I TTh, ScH 104, Argento

149 Opera Workshop (2 cr)
6:30-8:00 pm M, MusEd 104, Knowles

166 Baroque Era (2 cr; prereq 165)
VII TTh, ScH 4, Houle

177 Analysis of Contemporary Music (3 cr; prereq 6T)
IV MWF, ScH 103, Fetler

199 Adv Counterpoint (2 cr; prereq 198)
II TTh, ScH 2, Fetler

203 Notation of Polyphonic Music (3 cr; prereq ♯)
VIII-IX F, ScH 103, Riedel

204 Applied Music (3 cr, †3 qtrs; prereq entr exam)
Ar, ScH 107

212 Problems (3-9 cr; prereq 110)
VIII W, ScH 2, Riedel, others

227 Seminar: Composition, Orchestration (3 cr)
VI MW, ScH 2, 1 hr ar, Fetler

228 Seminar: Composition, Orchestration (3 cr; prereq 227)
VI MW, ScH 2, 1 hr ar, Fetler

229 Seminar: Composition, Orchestration (3 cr; prereq 228)
VI MW, ScH 2, 1 hr ar, Fetler

272 Organization, Guidance of Piano Classes (2 cr, §70, 80; prereq 272)
II TTh, MusEd 103, Duckworth

PHILOSOPHY (Phil)

1 **Probs of Philosophy** (5 cr, §1A; prereq 3rd qtr fr)
Lect II MWF, WeH 202, Brodbeck
—1, Rec I TTh, Arch 135
—2, Rec II TTh, Arch 135
Lect VI MWF, WeH 202, Raab
—3, Rec VI TTh, JohH 205
—4, Rec VII TTh, JohH 205

2 **Logic** (5 cr, §2A)
Lect I MWF, Arch 25, Terrell
—1, Rec I TTh, Arch 45
—2, Rec II TTh, Arch 45
—3, Rec III TTh, Arch 50
Lect IV MWF, Arch 25, Garver
—4, Rec III TTh, Arch 45

—5, Rec IV TTh, Arch 45
—6, Rec V TTh, Arch 45
Lect III MWF, P 2, Potter
—7, Rec II TTh, Arch 145
—8, Rec III TTh, Arch 145
—9, Rec IV TTh, Arch 145

3 **Ethics** (5 cr; prereq 3rd qtr fr)
III MTWThF, JohH 122, Garver

11 **World Religions** (5 cr)
I MTWThF, ForH 55, Magel

40 Logic of Scientific Reasoning (3 cr; prereq 2)
IV MWF, FraH B1, Maxwell

52 **History of Western Philosophy** (5 cr)
II MTWThF, MMA 100, Donagan

109 History of Ethics (3 cr; prereq 3 or hist of phil or ‡)
IV MWF, FraH B25, Terrell

114 Aristotle (3 cr; prereq 50 or 51 or 52 or ‡)
VI MWF, JohH 307, Allen

123 Leibniz (2 cr; prereq 121 or ‡)
III TTh, JohH 105, Garver

134 Kant (3 cr; prereq 52 or ‡)
IV MWF, P 218, Mason

138 Contemporary Existentialism (3 cr; prereq 52 or 137 or ‡)
VI MWF, JohH 106, Mason

140 Contemporary Philosophy (3 cr; prereq 52 or ‡)
IV MWF, JohH 122, Raab

150 Ethical Theory (3 cr; prereq 3 or ‡)
III MWF, JohH 306, Raab

151 Aesthetics (3 cr; prereq ‡)
III MWF, Arch 145, Donagan

160 Philosophy of Science (4 cr; prereq 2 or ‡)
II MWF, JohH 113, Feigl

182 Philosophy of Religion (3 cr; prereq 6 cr)
VII MWF, WeH 202, Veatch

192 Seminar (3 cr; prereq sr, 9 cr or ‡) Potter

194 Probs: Theology in Ancient Near East (3 cr; prereq △) Nygren

219 Seminar: Social, Political Philosophy (3 cr; prereq ‡) Ross

223 Seminar: Epistemology (3 cr; prereq 158 or ‡) Brodbeck

232 Adv History of Philosophy (3 cr)
VII MWF, JohH 306, Terrell

236 Seminar: History of Philosophy of Religion (3 cr; prereq 182, ‡) Veatch

241 Seminar: Philosophy of Physical Sciences (3 cr; prereq ‡) Feigl

261 Seminar: Metaphysics (3 cr; prereq 157 or ‡) Raab

269 Seminar: Studies in Aesthetics (3 cr; prereq ‡) Donagan, Steinmann

POLITICAL SCIENCE (Pol)

B **State in Modern World** (3 cr, †A-B; prereq A)
II MWF, JacH 102, Baird

C State in Modern World (3 cr; prereq B or ¶)
III MWF, Bo B6, Lippincott

E Tutorial: State in the Modern World (3 cr; prereq A or B, with grade of B or better)
1:30 T, ForH 384, Holt

2 **American Govt, Politics** (3 cr, †1-2, §5; prereq 1)
II MWF, ChE 240, Backstrom

3 American Govt, Politics (3 cr; prereq 2)
IV MWF, ChE 240

5 **American Govt, Politics** (5 cr, §1-2)
VI MTWThF, FraH 102, Hathaway

25 World Politics (3 cr)
VI MWF, Ph 166, Mills

27 Analysis of Intl Relations (3 cr; prereq 25 or 26 or ‡)
VI MWF, ChE 240, Holt

93H Honors Works (ar cr; prereq 18 cr, cons maj adv)

95 Major Paper (no cr; prereq pol sci maj)

103 American Constitution III (3 cr; prereq 101 or 102)
10:30-12:00 TTh, ForH 180, Chase

122 Municipal Probs (3 cr; prereq 121 or ‡)
8:30 T, Lib 15, Peterson

127 Govt, Economic Order II (3 cr; prereq 2 or 5 or ‡)
10:30-12:00 TTh, ForH 120, Warp

133 Public Admin (3 cr; prereq 131 or ‡)
II MWF, ForH 160, Short

138 American Political Campaigns, Elections (3 cr; prereq 2 or 5 or ‡)
VII MWF, ForH 150, Backstrom

143 Govt of USSR (3 cr; prereq B or 12 cr soc sci or ‡)
VI MWF, ForH 155, Turner

157 Topics: Latin-American Govt (3 cr; prereq 155 or 156 or ‡)
II MWF, ForH 75

159 Comparative Govt Systems: Principles, Probs (3 cr; prereq 153)
1:30-3:00 TTh, ForH 175, Holt

162 Recent Political Thought (3 cr; prereq B or 9 cr soc sci or ‡)
IV MWF, ForH 155, Sibley

163 Political Theory, Utopia (3 cr; prereq B or 9 cr soc sci or ‡)
1:30-3:00 MW, ForH 40, Sibley

166 Development of Political Thought: Early Modern (3 cr; prereq B or 9 cr soc sci or ‡)
I MWF, ForH 15, Sibley

169 Political Behavior (3 cr; prereq 168)
1:30-3:00 TTh, ForH 180, Hoffmann

182 Intl Law: Pacific Relations (3 cr; prereq 181)
8:30-10:00 TTh, ForH 185, McLaughlin

183 Intl Law: Conflict (3 cr; prereq 181 or ‡)
1:30-3:00 TTh, ForH 130, McLaughlin

186 Intl Relations, Organization III (3 cr)
I MWF, ForH 180, Rogers

196 Proseminar: East, South Asia (3 cr, §Anth 196, Geog 196; prereq sr)
3:30-5:00 F, ForH 346, Turner, Mills
204 Seminar: Constitutional Law (3 cr; prereq 203)
VI-VII T, ForH 346, Chase
206 Seminar: Administrative Law (3 cr; prereq 205)
VI-VII W, ForH 244, Chase
212 Seminar: Public Admin (3 cr, †210-211-212; prereq 211)
3:30-5:00 TTh, Lib 13, Short
213 Probs: Contemporary Latin American Govt, Politics (3 cr; prereq 155 or 156 or ‡)
II MWF, ForH 75
215 Seminar: Comparative Public Admin (3 cr; prereq 9 cr pub admin and/or comp govt or ‡)
1:00-3:00 Th, ForH 346, Warp
218 Seminar: Comparative European Govt (3 cr; prereq 217)
VIII-IX W, ForH 75, Turner
227 Readings: Classics of Politics (3 cr; prereq 225)
VIII-IX T, ForH 175, Lippincott
240 Intl Constitutional Law (3 cr; prereq 181 or ‡)
VI-VII F, ForH 75, McLaughlin
244 Topics: Colonization (3 cr; prereq 243)
3:00-5:00 W, ForH 346, Mills
247 Seminar: East Asian Govt, Intl Relations (3 cr; prereq 246)
IV-V M, ForH 346, Turner

PSYCHOLOGY

Personal Orientation (PO)

1 **How to Study** (2 cr but cr added to SLA grad req)
—1, I MWF, JohH 307, Wark
—2, II MWF, JohH 307, Wark
—3, IV MWF, JohH 307, Carlson
—4, V MWF, JohH 307, Carlson

Psychology (Psy)

1-2 Gen Psychology (6 cr; prereq soph or 3rd qtr fr with B avg)
VI MTWThF, MNH Aud, VII T, NH 45, Sperling
2 Gen Psychology (3 cr, †1-2; prereq 1)
VII MWF, NH 45, Heron
4-5 **Lab Psychology** (4 cr; prereq 2 or ¶1-2)
Lect IV MW, Owre 12, Russell, others
—1, Lab V-VI MW, Psy 211, Russell, others
—2, Lab VII-VIII MW, Psy 211
—3, Lab IX-X TTh, Psy 211
5 **Lab Psychology** (2 cr, †4-5; prereq 4)
Lect I T, Bo B6, Russell, others
—1, Lab II-III T, Psy 211, Russell, others
—2, Lab V-VI T, Psy 211
—3, Lab VII-VIII T, Psy 211
—4, Lab I-II Th, Psy 211
—5, Lab III-IV F, Psy 211
—6, Lab IX-X F, Psy 211
6 **Lab Psychology** (2 cr; prereq 5)
Lect VI Th, Psy 115, Russell
Lab VII-VIII Th, Psy 211, Russell
10 Applications of Psychology (3 cr; prereq soph, 2)
I MWF, ForH 120, Hewer
52 Genetic Psychology (3 cr; prereq 2)
IV MWF, Psy 115, Heron
55 **Sensation, Perception** (3 cr; prereq 2)
10:30-11:45 MW, Psy 211, Senders
70 Psychological Measurement (3 cr; prereq 5)
VI MWF, Ph 170, Dunnette
130 **Vocational, Occupational Psychology** (3 cr; prereq 5 or 5 cr in stat)
Lect III TTh, Bu 120, Lofquist, others
—1, Lab V-VI F, Psy 211, Lofquist, others
—2, Lab VII-VIII F, Psy 211
137 Occupational Counseling (2 cr; prereq sr, 130)
VIII-IX M, Psy 115, Lofquist
141 Social Psychology of Small Groups (3 cr; prereq 5, 9 cr soc sci)
1:30-2:45 TTh, MurH 308, Kelley
145 Abnormal Psychology (3 cr, †144-145; prereq 144)
10:50-12:05 TTh, Bo B6, Lindzey
148 **Physiological Psychology** (3 cr; prereq 5 or Zool 3 or ‡)
III MWF, MMA 100, Hathaway
155 Industrial Psychology (3 cr; prereq 2, Math 10 or 10 cr in stat)
V MWF, Ph 133, Dunnette
173 Clinical Psychology I: Assessment (3 cr; prereq 172)
VI MWF, P 110, Meier
190 Project (ar cr; prereq sr, ‡)
202 Systematic Psychology (3 cr; prereq 201)
VIII-IX Th, Psy 115, Meehl
209 Group Dynamics (2 cr; prereq 208)
VI-VII Th, FolH 4, Schachter
212 Research Probs (ar cr)
220 **Psychology of Personality** (3 cr; prereq 219) Rosen
223 **Seminar: Personality Research** (3 cr; prereq ‡)
VI-VII T, FolH 4, Wirt
226 **Seminar: Adv Clinical Child Psychology** (1 cr; prereq CD 248, ‡) Hafner
229 Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 228)
IX-X alt F, Psy 109, Lofquist
232 Field Work: Psychometric, Applied Psychology (ar cr; prereq written cons)
237 Clinical Practice in Counseling (1-3 cr; prereq cons adv, ‡) Berdie, Snoxell
242 Seminar: Student Personnel Work (1 cr; prereq ‡) Williamson

243 Experimental Psychodynamics (3 cr; prereq 145, 129 or 117 or ♯)
VI MWF, Psy 115, Russell

244 Research Probs: Experimental Psychodynamics (3 cr; prereq 243) Russell

246 **Psycho-Analytic Theory** (3 cr; prereq 145, 172)
1:00-3:00 T, Psy 109, Lindzey

247 Mathematical Theories of Behavior (3 cr; prereq Math 40)

252 Adv Seminar: Vocational Rehabilitation Counseling (1 cr; prereq 251)
IX-X alt F, Psy 109, Lofquist

262 Seminar: Industrial Psychology (3 cr; prereq 261) Dunnette

267 Seminar: Adv Clinical Psychology (1 cr; prereq 266) Hathaway

270 Adv Psychological Measurement (3 cr)
VI MWF, Psy 109, Dunnette

273 Clinical Psychology II: Treatment (3 cr, †271-272-273; prereq 272)
4:00-5:50 Th, Mayo C608, Meehl, others

274 Pre-Clinical Practicum: Clinical Psychology (2 cr; prereq clin psy maj, 172, 291 or ¶291) Schofield

277 Seminar: Student Personnel Work (1 cr; prereq 276) Volsky

286 Seminar: Psychology of Language (3 cr; prereq 285)) Jenkins

297 Seminar: Individual Differences, Applied Psychology (1 cr; prereq written ♯)
VIII-IX alt W, Psy 109, Dunnette

ROMANCE LANGUAGES

French (Fren)

2C **Bgn French: Standard** (5 cr, §2A or 2B; prereq 1C)
—1, I MTWThF, FolH 201, Buckley
—2, II MTWThF, FolH 113, Vartanian
—3, III MTWThF, FolH 201, Erickson
—4, IV MTWThF, FolH 3, Lynch
—5, V MTWThF, FolH 202, Schubert

3B **Bgn French: Language, Culture** (5 cr, §3A or 3C; prereq 2B)
—1, I MTWThF, FolH 204, Burks, Schubert
—2, II MTWThF, FolH 226, Lampert
—3, III MTWThF, FolH 226, Falk, Schaefer
—4, V MTWThF, FolH 201, Christianson

3C **Bgn French: Standard** (5 cr, §3A or 3B; prereq 2C)
—1, I MTWThF, FolH 226, Kalb
—2, II MTWThF, FolH 205, Christianson
—3, II MTWThF, FolH 5, Poisson
—4, IV MTWThF, FolH 305, Blodgett
—5, V MTWThF, FolH 226, Green
—6, V MTWThF, FolH 8, Bjerkness

4 Interm French (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Fren)
IV MTWThF, FolH 2, Burks, Gale

20 Literary Texts (3 cr; prereq 4)
III MWF, FolH 3, Burks

52 Reading French: Bgn Course for Juniors, Seniors (3 cr; prereq 51)
V MWF, FolH 11, Poisson

53 Diction (1-2 cr; prereq 3A or 3B or 3C or 4, Fren play cand) Fiola

54 **Conversation, Pronunciation** (3 cr; prereq 4)
—1, II MTThF, FolH 208, Saada
—2, III MTThF, FolH 4, Lynch
—3, IV MTThF, FolH 4, Sullivan

55 **Adv Conversation** (3 cr; prereq 54)
V MWF, FolH 304, Sullivan

56 History of Language (3 cr; prereq 20)
VII MWF, FolH 202, Brackney

62 Civilization, Culture (4 cr; prereq 61)
II MTWThF, FolH 202, Malaquais

67 Survey of Literature (3 cr; prereq 4)
VI MWF, FolH 4, Brackney

72 17th Century Literature (2 cr, §65; prereq 20)
IV TTh, FolH 304, Burks

82 18th Century Literature (2 cr, §66; prereq 20)
III TTh, FolH 103, Vartanian

92 19th Century Literature (2 cr, §67; prereq 20)
IV MF, FolH 10, Falk

105 Syntax, Composition (2 cr; prereq 104)
III TTh, FolH 3, Sullivan

127 Classical Drama: Moliere (3 cr; prereq sr with ♯)
VI MWF, FolH 203, Vartanian

158 20th Century Novel: Proust (2 cr; prereq sr with ♯)
VII MF, FolH 303, Malaquais

161 20th Century Novel: Sartre, Camus (2 cr; prereq sr with ♯)
VII-VIII W, FolH 303, Malaquais

173 History of Language (3 cr; prereq 172)
IV T, IV-V Th, FolH 303, Brackney

261 Readings (ar cr; prereq 260)

Italian (Ital)

3 Bgn Italian (5 cr; prereq 2)
I MTWThF, FolH 208, Paolini

Portuguese (Port)

3 Interm Portuguese (3 cr; prereq 2)
VI TThF, FolH 3, Floripe

Spanish (Span)

2C **Bgn Spanish: Standard** (5 cr, §2A or 2B; prereq 1C)
—1, I MTWThF, FolH 206, Franklin
—2, II MTWThF, FolH 114, Dudley
—3, III MTWThF, FolH 9, Garofalo
—4, V MTWThF, FolH 6, Dudley

3A Bgn Spanish: Conversational (5 cr, §3B or 3C; prereq 2A)
Dem II MTWThF, FolH 201, Cuneo
—1, Lab I MTWThF, FolH 108, Shamblin
—2, Lab I MTWThF, FolH 203, Garofalo

3C Bgn Spanish: Standard (5 cr, §3A or 3B; prereq 2C)
—1, I MTWThF, FolH 202, Barta
—2, I MTWThF, FolH 9, Estelle
—3, II MTWThF, FolH 9, Shamblin
—4, V MTWThF, FolH 9, Reyes

3H Honors Course: Bgn Spanish-Standard (5 cr, §3A or 3B; prereq △)
—1, III MTWThF, FolH 203, Pattison
—2, IV MTWThF, FolH 203, Estelle

20 Interm Grammar, Composition (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
III MTWThF, FolH 10, Narvaez

21 Spanish, Spanish-American Literature, Culture (5 cr; prereq 3A or 3B or 3C or 3 yrs HS Span)
II MTWThF, FolH 10, Rundorff

55 **Composition, Conversation** (3 cr; prereq 54)
—1, IV MWThF, FolH 113, Narvaez
—2, IV MWThF, FolH 8, Duran

56 Phonetics, Diction (3 cr; prereq 3A or 3B or 3C)
V MWF, FolH 203, Cuneo

62 Adv Composition, Conversation (3 cr; prereq 61)
I MWF, FolH 10, Narvaez

67 Spanish Literature: The Modern Period (3 cr, §68, 69; prereq soph, 21)
VII MWF, FolH 203, Pattison

69 Spanish Literature: 19th Century to Present (5 cr, §65, 66, 67; prereq soph, 21)
VI MTWThF, FolH 202, Rundorff

72 Latin-American Civilization, Culture (3 cr; prereq 20 or 21 or ♯)
III MWF, FolH 202, Cuneo

76 Literature of Spanish America (3 cr; prereq 75)
II MWF, FolH 203, Floripe

79 Latin-American Thought: 1850-1957 (2 cr; prereq jr or ♯, 6 qtrs)
III TTh, FolH 206, Cuneo

105 Syntax, Composition (1 cr; prereq 104)
V T, FolH 203, Narvaez

112 19th Century Literature (3 cr; prereq 111)
IV MWF, FolH 201, Pattison

148 Spanish-American Novel, Short Story (3 cr; prereq 65, 66, 67 or 68, 69 or 76)
VII MWF, FolH 201, Floripe

SCANDINAVIAN (Scan)

3 Interm Norwegian (5 cr; prereq 2)
II MTWThF, FolH 11, Nelson

6 Adv Norwegian (3 cr; prereq 5)
III TTh and ar, FolH 12, Nelson

9 Interm Swedish (5 cr; prereq 8)
II MTWThF, FolH 12, Lorenzen

12 Adv Swedish (3 cr; prereq 11)
III MWF, FolH 12, Lorenzen

61 Norwegian Conversation (3 cr; prereq 3)
Nelson

71 Swedish Conversation (3 cr; prereq 9) Lorenzen

162 Contemporary Novel (3 cr; prereq 6 or 12 or 8 cr lit)
V MWF, FolH 12, Gustafson

173 Contemporary Theater (3 cr; prereq 6 or 12 or 8 cr lit)
IV MWF, FolH 12, Gustafson

193 Readings (3 cr; prereq 6 or 12) Gustafson, Nelson

SLAVIC AND ORIENTAL LANGUAGES

Arabic (Arab)

3 Spoken Arabic (5 cr; prereq 2)
I MTWThF, VII MTWThF, FolH 305½, Saada

51 Dialect Analysis (3 cr; prereq 3 or ♯)
I MWF, VII MTWThF, FolH 305½, Saada

63 Arabic Grammar, Reading (3 cr; prereq 62)
V MTWThF, FolH 305½, Rundorff

Chinese (Chin)

3 Bgn Chinese (5 cr; prereq 2)
VI MTWThF, FolH 305½, Mather

53 Interm Chinese (3 cr; prereq 52)
II MWF, Lib 329, Wang

58 Composition (2 cr; prereq 57)
II TTh, FolH 305½, Wang

103 Adv Chinese (3 cr; prereq 102)
III MWF, Lib 329, Wang

153 Readings (1-3 cr, §old 163; prereq 152) Mather

193H Honors Course (1-3 cr; prereq 192) Mather

Japanese (Jap)

3 Begin Japanese (5 cr; prereq 2)
III MTWThF, FolH 304, Copeland

53 Interm Japanese (3 cr; prereq 52)
II MWF, FolH 304, Copeland

103 Adv Japanese (3 cr; prereq 102)
III TTh, Copeland

153 Readings (1-3 cr, §old 163; prereq 152) Copeland

193H Honors Course (1-3 cr; prereq 192) Copeland

Russian (Russ)

3 **Bgn Russian** (5 cr; prereq 2)
—1, I MTWThF, FolH 8, Alexeev
—2, II MTWThF, FolH 105, Donchenko
—3, III MTWThF, FolH 303, Nice
—4, VI MTWThF, FolH 104, Niemi
—5, VII MTWThF, FolH 8, Donchenko

6 Interm Russian (3 cr, §old 53; prereq 5)
II MWF, FolH 8, Nice

53 Conversation (3 cr; prereq 57)
I MWF, FolH 305, Alexeev

63 Composition (2 cr; prereq 62)
I TTh, FolH 305, Alexeev

73 Readings in Literature (3 cr; prereq 72)
III MWF, FolH 108, Niemi

77 Civilization, Culture (3 cr; prereq 76)
VI MWF, FolH 305, Nice

112 Literature in Translation (3 cr, §old 103; prereq 111)
V MWF, FolH 305, Niemi

153 Readings (1-3 cr, §old 163) Niemi

SOCIAL WORK (SW)

203 Topics (ar cr) Oren

208 Readings (ar cr) Oren

212 Field Instruction I (ar cr; prereq 211, ¶265 or ¶275) Whitmore, others

217 Field Instruction II (ar cr; prereq 216) Boehm, others

227 Social Policy, Programs III (2 cr; prereq 226)
VI-VII T, ForH 150, Newhouse

229 Social Policy, Programs V (2 cr; prereq 228)
IV-V Th, ForH 115, Newhouse

250 Concepts of Human Growth, Behavior in Practice III (3 cr; prereq 249, ¶212 or ‡)
VIII-IX TTh, ForH 150, Saloshin, others

253 Concepts of Human Growth, Behavior in Practice VI (2 cr; prereq ¶217, 250)
IX-X Th, ForH 130, Lippman

260 Prin Administration (3 cr)
8:00-9:30 TTh, ForH 115, Kidneigh

267 **Social Casework III** (2 cr; prereq ¶212, 265)
—1, II TTh, ForH 175, Whitmore
—2, IV TTh, ForH 175, Whitmore

270 **Social Casework VI** (2 cr; prereq ¶216, 267)
—1, II-III T, ForH 75, Scott
—2, II-III T, ForH 447, Boehm

275 Social Group Work (3 cr)
IV-V TTh, ForH 130, Pernell (open to non-maj)

277 Social Group Work III (2 cr; prereq ¶212, 276)
II TTh, ForH 346, Pernell

280 Social Group Work VI (2 cr; prereq 278 or ‡)
II-III Th, ForH 447, Konopka

281B Use of Program in Groups I (1 cr; prereq 281A)
IV Th, ForH 346, Guzie

285 Special Studies (ar cr)
III TTh, ForH 115, Francel

SOCIOLOGY (Soc)

1 **Introduction: Man in Modern Society** (3 cr)
—1, II MWF, NH 45, Sirjamaki
—2, VII MWF, Bo B6, Korenbaum

1A Man in Modern Society (3 cr; prereq regis AFHE)
II MWF, McNH 227 (**StP Campus**), Taylor

2 **American Community** (3 cr; prereq 1 or 1A or 3)
I MWF, FraH 102, Martindale

3 **Social Probs** (3 cr)
—1, II MWF, ScH 108, Johnson
—2, VII MWF, FraH 101, Johnson

3H **Honors Course: Social Probs** (3 cr)
V MWF, ForH 115, Forster

14 Rural Sociology (3 cr)
IV MWF, ForH 185, Taylor

45 **Social Statistics** (5 cr, §BA 5)
Lect VII MWF, ForH 85, Francis
—1, Lab III-IV TTh, ForH 85, Francis, others
—2, Lab VI-VII TTh, ForH 85, Francis, others

53 **Criminology** (3 cr; prereq 1 or 1A or ‡)
II MWF, ForH 155, Vold

91 Case Method Applied to Study of Human Probs (3 cr; prereq 50 or cons maj adv)
IV MWF, ForH 120, Cohn

99H Tutorial, Honors Work (3 cr; prereq cons maj adv in soc)

101 Criminological Theories: Historical, Contemporary (3 cr; prereq 1, 53 or ‡)
IV MWF, ForH 150, Vold

117 Scandinavian Folk Movements: Social, Political Significance (3 cr; prereq 1 or ‡)
VI MWF, FolH 12

121 Adv Social Psychology (3 cr; prereq 120 or ‡)
IV MWF, ForH 130, Gross

140 Social Organization (3 cr; prereq 1 or ‡)
V MWF, ForH 155, Sirjamaki

141 The Family (3 cr; prereq 1 or ‡)
11:30-12:45 TTh, ForH 155, Johnson

144 Social Stratification, Mobility (3 cr; prereq 1 or ‡)
VI MWF, ForH 130, Gross

151 Comparative Social Organization (3 cr; prereq 20 cr soc or econ or pol or ‡)
III MWF, ForH 175, Forster

161 Rural Community Analysis (3 cr; prereq sr, 1 or ‡)
VI MWF, ForH 170, Taves

172 Backgrounds of Modern Social Thought (3 cr; prereq 1 or ‡)
III MWF, Z 313, Martindale

180 Methods of Social Research (3 cr; prereq 45)
VII MWF, ForH 120, Taves

183 Probs: Social Measurement (3 cr; prereq 45 or 182)
V MWF, ForH 130, Francis

202 Seminar: Research Probs in Crime, Social Conflict (2 cr)
VI-VII Th, ForH 467, Vold

205 Seminar: Research Probs in Juvenile Delinquency (2 cr) Monachesi

228 Seminar: Contemporary Research on Marriage, Family (3 cr; prereq ‡)
II-III TTh, ForH 467, Hill

246 Seminar: Research in Urban Sociology (2 cr)
VIII-IX M, ForH 467, Sirjamaki

247 Seminar: Research in Large Scale Organization (2 cr)
VIII-IV W, ForH 170, Gross

253 Probs: Comparative Sociology (2 cr; prereq 252)
VIII-IX Th, ForH 175, Forster

272 Seminar: Social Theory (2 cr)
VI-VII W, ForH 175, Martindale

286 Seminar: Statistical Theory in Relation to Social Theory, Practice (2 cr)
VI-VII F, ForH 467, Monachesi

299 Seminar (ar cr)
V TTh, Francis

SPEECH AND THEATER ARTS (Spch)

5 **Fundamentals** (5 cr, §old 1-2; prereq soph or fr with △)
—1, I MTWThF, FolH 103, Smith, Fletcher, others
—2, II MTWThF, FolH 307
—3, III MTWThF, FolH 307
—4, IV MTWThF, FolH 213
—5, V MTWThF, FolH 409
—6, VI MTWThF, FolH 409
—7, VII MTWThF, FolH 409

6 **Fundamentals** (3 cr, §old 3; prereq 5)
—1, I MWF, FolH 6
—2, II MWF, CW 206

6A **Voice, Articulation** (3 cr, §old 3A; prereq 5, ‡)
VII MWF, FolH 404, Fletcher

31 **Theater Arts** (4 cr)
II MWF, ShH 115, Ballet

32 **Bgn Acting: Creative Approach** (3 cr; prereq soph, 31)
—1, II MWF, ScH 19, Backlin
—2, VI T, VI-VII Th, ScH 19, Adey
—3, IV MWF, ScH 19, Backlin

33 **Bgn Acting: Technique** (3 cr; prereq 32)
II MWF, NH 304, Moulton

34 **Stagecraft: Construction, Painting** (3 cr; prereq soph, 31)
III TThS, IV TS, ShH 110, Adey

51 **Adv Public Speaking** (3 cr; prereq 5)
—1, II MWF, FolH 306, Scott
—2, IV MWF, FolH 307, Shapiro

55 **Speech Writing, Platform Speaking** (3 cr; prereq 5 or ‡)
—1, II MWF, FolH 409, Smith
—2, IV MWF, FolH 306, Jensen

65 **Radio, Television Speech** (3 cr; prereq 5)
II MWF, MurH 302, Bormann

67 **Phonetics** (3 cr; prereq 5)
I MWF, FolH 409, Fletcher

76 **Play Production in Secondary School** (3 cr; prereq 75 or 112 or ‡)
III MWF, NH 304

79 **Adv Acting** (3 cr; prereq 32)
IV MWF, NH 304, Graham

81 **Interpretative Reading** (3 cr; prereq 5)
III-IV T, III Th, WeH 306, Fredricks

82 **Interpretative Reading** (3 cr; prereq 81)
III MWF, WeH 306, Thompson

83 **Interpretative Reading** (3 cr; prereq 81)
IV MWF, WeH 306, Fredricks

92 **Lighting** (3 cr; prereq 5, 31, 34)
III TThS, IV ThS, NH 304, Josal

103 **Argumentation, Persuasion** (3 cr; prereq 5, Psy 2, 10 cr soc sci)
—1, III MWF, FolH 306, Scott
—2, VI-VII T, VI Th, FolH 306, Howell

105 **Theory of Reading, Acting** (3 cr; prereq 5, 82, 83, Psy 2)
II MWF, WeH 306, Thompson

106 **Discussion** (3 cr; prereq 5)
—1, VII MWF, FolH 306, Howell
—2, VII MWF, FolH 307, Bormann

113 **Stage Direction** (3 cr; prereq sr, 5, 90 or 91 or 92, △)
III MWF, ShH 115, Whiting

117 **Writing Radio, Television Drama** (3 cr; prereq 5, 32 or △)
VI MWF, WeH 306, Thompson

126 **History, Criticism of Public Address** (3 cr; prereq 5, Psy 2)
VI MWF, FolH 307, Bormann

132 **Children's Theater** (3 cr; prereq 5, 31 or ‡)
VII MWF, NH 304, Graham

137 **Production of Television Drama** (3 cr; prereq 65, 66, 78, 111, 112, ‡) Ballet

142 **Physical Bases, Instrumentation of Speech** (3 cr; prereq 67, 140 or ‡, Psy 5)
IV MWF, FolH 409, Fletcher

150 Organic Speech Disorders: Aphasia (2 cr; prereq 163 or ‡) Henrikson, Jensen

155 **Lip Reading, Lip Reading Methods** (3 cr; prereq 152 or ‡)
III MWF, Mayo A675, Lassman

157 Clinical Practice in Audiology (3 cr; prereq 153, 155 or ‡) Lassman

163 Speech Pathology (3 cr, †162-163; prereq 61, 67, 161) Henrikson, Starr

166 Clinical Methods, Practice in Speech Pathology (3 cr, §EdCI 176; prereq 165) Henrikson, Starr

170 **Radio, Television Programming** (3 cr; prereq 65 or 66 or ‡)
II MWF, C 315, Goldstein

173 **History of Theater** (3 cr; prereq sr, 5, 31)
VI T, VI-VII Th, NH 304, Graham
178 Theater on Tour (3-6 cr; prereq sr, 12 cr above 50, cons fac comm) Ballet
183 Readings (ar cr; prereq 5, 6 addtl cr, ‡)
192 Technical Stage Probs (3 cr; prereq 111, 112, 113) Josal
201 Seminar (1 cr; prereq ‡) Smith
213 Seminar: Dramatic Theory (3 cr; prereq 171, 172, 173, 9 cr dram lit) Ballet
216 Seminar: Stage Direction (3 cr; prereq 215) Moulton
223 Seminar: Oral Interpretation of Literature (3 cr; prereq 105) Thompson
233 Seminar: Adv Probs (3 cr; prereq undergrad maj spch, ‡) Bormann
243 Seminar: Radio, Television Research (2 cr; prereq ‡) Ziebarth
251 Seminar: Listening Comprehension (2 cr; prereq undergrad maj spch, ‡)
VIII-IX W, AgEng 221 **(StP Campus)**, Nichols
263 Seminar: Speech Pathology (3 cr; prereq 122, 163 or ‡) Henrikson
269 Seminar: Experimental Phonetics (2 cr; prereq 67, 142) Fletcher
273 Seminar: Hearing (3 cr; prereq 272) Lassman
283 Seminar: Organic Disorders (2 cr; prereq 261, 262, 263, ‡) Henrikson
293 Research (ar cr)

STATISTICS (Stat)

181A Topics: Non-Parametric Statistical Analysis (3 cr, §Econ 181A; prereq Econ 121C or ¶ or ‡)
VI MWF, JohH 126, Govindarajulu
181B Topics: Statistical Ranking Probs (3 cr, §Econ 181B; prereq Econ 121C or ¶ or ‡)
1:30-3:00 TTh, JohH 126, Sobel
181C Topics: Theory of Sample Surveys (3 cr, §Econ 181C; prereq Econ 121C or ¶ or ‡)
2:00-3:30 TTh, VH 112, Neter
221C Statistical Theory III (3 cr; prereq 221B or ‡)
8:30-10:00 TTh, JohH 126, Olkin
231C Linear Models (3 cr; prereq ¶221C)
10:30-12:00 MW, JohH 126, Sobel
281B Adv Topics (3 cr; prereq ‡)
301 Seminar, Workshop (1-3 cr; prereq ‡)
10:30-12:30 F, JohH 126, Olkin

ZOOLOGY (Zool)

50 **Gen Physiology** (5 cr; prereq 3 or Biol 3 or 15 cr bot, 10 cr chem or ‡)
Lect IV MWF, Z 313, Brokaw
—1, Lab I-III TTh, Z 18
—2, Lab VII-IX TTh, Z 18
—3, Lab VI-VIII WF, Z 18
53 **Fauna of Central United States** (5 cr; prereq 3 or Biol 3)
Lect VII MWF, Z 313, Eddy
—1, Lab V-VI MWF, Z S3
—2, Lab VIII-IX MWF, Z S3
—3, Lab VI-VIII TTh, Z S3
58 **Ornithology** (3 cr, †57-58; prereq 57)
Lect III TTh, MNH 307, Warner
Lab I-II TTh, MNH 307
83 Genetics, Eugenics (3 cr; prereq 3 or Bot 3 or Biol 3)
II MWF, Z 313, Merrell
84 **Genetics Lab** (1 cr; prereq 83 or ¶ or ‡)
—1, VII-VIII T, Z 202
—2, VII-VIII W, Z 202
102 Zoological Techniques (ar cr; prereq grad)
107 **Protozoology** (4 cr; prereq 15 cr incl 3 or Biol 3 or Bot 3 or ‡)
Lect VI TTh, Z 2, 323, Kerr
Lab VII-VIII TTh, Z 201
110 Animal Behavior (3 cr; prereq 15 cr incl 3 or Biol 3, ‡) Stephens
117 **Field Ecology** (3 cr, §Ent 117; prereq 65, ‡...Bot 50 or 130 rec)
Lect II TTh, Z 323, Underhill, lab ar
127 **Adv Entomology** (4 cr, §Ent 127; prereq 126)
Lect I MWF, Z 402
Lab II-V M, Z 402
138 Seminar: Biophysics (2 cr; prereq grad)
3:00-5:00 T, Z 323, Schmitt, Benolken
146 **Helminthology** (3 cr, §Ent 146; prereq 15 cr incl 3 or Biol 3, ‡)
Lect VI TTh, Z 211, Wallace
Lab VII-VIII TTh, Z 208
157 Biophysics (3 cr; prereq 28 cr betw phys, biol, ‡...phys chem, physiol rec) Schmitt, Benolken
161 **Cytology** (3 cr; prereq 160)
Lect II MF, Z 211, Miller
Lab III-IV MF, Z 204
175 **Human Genetics** (3 cr; prereq 83, ‡)
VIII MWF, Z 313, Reed
182 **Experimental Embryology** (5 cr; prereq sr, 50, 59, ‡)
Lect III-IV TTh, Z 323, Spratt, lab ar
199 Problems (ar cr; prereq 198)
203 Research: Entomology (ar cr; prereq 202)
213 Research: Ecology (ar cr; prereq 212)
219 Research: Physiology (ar cr; prereq 218)
223 Research: Biophysics (ar cr; prereq 222)
231 Research: Histology (ar cr; prereq 230)
235 Research: Embryology (ar cr; prereq 234)
236 Gen Ecology of Insects (3 cr; prereq 15 cr zool or ent)
Lect VI TTh, CofH 307 **(StP Campus)**, Hodson
Lab VII-VIII TTh, CofH 15
239 Research: Cytology (ar cr; prereq 238)
246 Research: Protozoology (ar cr; prereq 245)
253 Research: Genetics (ar cr; prereq 252)
263 Research: Parasitology (ar cr; prereq 262)

293 Seminar (no cr; prereq 292)
298 Seminar: Research Fields (ar cr; prereq 297)

UNATTACHED COURSES

Biology (Biol)

3 Gen Biol (4 cr, †1-2-3, ¶Bot 3 or 5 or Zool 3, §old Zool 15 or NSci 9; prereq 2)
—1, Lect II TTh, Bo B6, Kerr
—2, Lect III TTh, MNH Aud, Martin
—3, Lect IV TTh, NH 45, Stephens
—4, Lect VI TTh, C 100, Olson
—5, Lect IV WF, Bo B6, Brown
—1, Lab I-II MF, Z 101
—2, Lab III-IV MF, Z 101
—3, Lab V-VI MF, Z 101
—4, Lab VII-VIII MF, Z 101
—5, Lab I-II TTh, Z 101
—6, Lab III-IV TTh, Z 101
—7, Lab V-VI TTh, Z 101
—8, Lab VII-VIII TTh, Z 101

3A Gen Biol (3 cr, †1A-2A-3A, §Bot 3 or 5 or Zool 3, §old Zool 15 or NSci 9; prereq 2A)
—1, Lect II TTh, Bo B6
—2, Lect III TTh, MNH Aud
—3, Lect IV TTh, NH 45
—4, Lect VI TTh, C 100
—5, Lect IV WF, Bo B6
—1, Dem I W, Z 101
—2, Dem II W, Z 101
—3, Dem III W, Z 101
—4, Dem IV W, Z 101
—5, Dem V W, Z 101
—6, Dem VI W, Z 101
—7, Dem VII W, Z 101
—8, Dem VIII W, Z 101

Linguistics and Comparative Philology (Ling)

153H Honors Course (1-3 cr; prereq 152H) (for maj only)

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING

Aeronautical Engineering (Aero)

6 Aero-Space Survey, Laboratory (1 cr; prereq 5)
VIII M, AE 209

20 Flying: Theory, Practice (2 cr)
V Th, AE 209

21 Flying: Theory, Practice (2 cr; prereq 20)
VI Th, AE 209

22 Flying: Theory, Practice (2 cr; prereq 21)
VI Th, AE 209

46 Link Instrument Flying (no cr; prereq ♯)

100A Theoretical Aerodynamics I (3 cr; prereq ITM 26A, Hydr 101)
II MWF, AE 9

101A Theoretical Aerodynamics II (3 cr; prereq 100A)
III MWF, AE 209

107A Applied Aerodynamics II (3 cr; prereq 106A)
III MWF, AE 215

114 Analysis of Structural Components (3 cr; prereq MM 41, 150)
II MWF, AE 209

117A Analysis of Load-Carrying Surfaces (3 cr; prereq 115A)
II MWF, Ex 22

132A Aero-Space System Design (4 cr; prereq 131A)
—1, VI-VIII MW, AE 305
—2, VI-VIII T, III-V Th, AE 305

141 Experimental Aerodynamics (3 cr; prereq 102A)
—1, VII-IX MW, AE 211
—2, VII-IX TW, AE 211

150 Aeroelasticity I (3 cr; prereq 107...or 102, MM 193)
3:30-5:00 MW, AE 227

185 Rarefied Gas Dynamics (3 cr; prereq 110 or ♯)
IV MWF, AE 9

195 Probs: Aero-Space Engineering (2-6 cr; prereq 194)

203 Aerodynamics of Compressible Fluid (3 cr; prereq 202)
I T, I-II Th, AE 211

207 Boundary Layer Theory (3 cr; prereq 206)

252 Magneto-Fluid Dynamics (3 cr; prereq 203 or Phys 104 or ITM 234 or ♯)
8:00-9:30 MW, AE 327

274 Research (3-6 cr; prereq 273)

Mechanics and Materials (MM)

27 Rigid-Body Mechanics I (3 cr; prereq ITM 25A, Phys 14)
—1, II MWF, AE 327
—2, II MWF, AE 321
—3, II MWF, AE 319
—4, II MWF, AE 317
—5, II MWF, AE 309
—6, II MWF, AE 211
—7, IV MWF, AE 327
—8, IV MWF, AE 321
—9, IV MWF, AE 319
—10, IV MWF, AE 317
—11, IV MWF, AE 309
—12, IV MWF, AE 211

28 Rigid-Body Mechanics II (3 cr; prereq 27, ITM 26A)
VI MWF, AE 215

29 Rigid-Body Mechanics III (3 cr, §Phys 100; prereq 23)
—1, III MWF, AE 309
—2, III MWF, AE 317
—3, III MWF, AE 319

40 Deformable-Body Mechanics I (3 cr; prereq 27)
—1, II MWF, AE 215
—2, IV MWF, AE 209

41 Deformable-Body Mechanics II (3 cr; prereq 40)
VII MWF, AE 209

93 Solid Mechanics for Architects (4 cr; prereq 92)
Lect I MTTh, AE 215
—1, Lab I W, Ex 130
—2, Lab II W, Ex 130
—3, Lab I F, Ex 130
—4, Lab II F, Ex 130

142 Experimental Mechanics (2 cr; prereq 40)
—1, Lect V TTh, AE 327
Lab VI-VII M, Ex 130
—2, Lect V TTh, AE 327
Lab VIII-IX M, Ex 130
—3, Lect V TTh, AE 321
Lab III-IV T, Ex 130
—4, Lect V TTh, AE 321
Lab VI-VII T, Ex 130
—5, Lect V TTh, AE 319
Lab VIII-IX T, Ex 130
—6, Lect V TTh, AE 319
Lab VI-VII W, Ex 130
—7, Lect V TTh, AE 317
Lab I-II Th, Ex 130
—8, Lect V TTh, AE 317
Lab VI-VII Th, Ex 130
—9, Lect V TTh, AE 211
Lab VI-VII F, Ex 130

166 Problems (3 cr; prereq ‡)

182 Deformable-Body Mechanics IV (3 cr; prereq 41 or 180)
V MWF, AE 21

193 Introd to Theory of Mechanical Vibrations (3 cr; prereq 29, ITM 26 or 26A or 80)
—1, VI MWF, AE 209
—2, IV MWF, AE 215

202 Gyroscopic Instruments, Other Applications of Adv Dynamics (3 cr; prereq 196)
III MWF, AE 327

212 Theory of Vibrations II (3 cr; prereq 193, ITM 148 or 150A)
VI MWF, AE 15

296 Theory of Elasticity with Applications (3 cr; prereq 295)
V MWF, AE 227

299 Seminar (0-3 cr)
VII-IX Th, AE 215

AGRICULTURAL ENGINEERING (AgEn)

10 Laboratory: Applications (1 cr)
VIII-IX T, Schwantes

72 Principles of Farm Machinery (3 cr; prereq ME 24 or ¶)
Lect VI TTh, AgEng 101, Flikke
Lab VII-IX Th, AgEng 49, Flikke

125 Topics: Agricultural Physics (3 cr; prereq Phys 50 or inte calc, 25) Hustrulid

143 Irrigation (3 cr; prereq 82, Hydr 103, Soil 19)
I MWF, AgEng 105, Allred

159 Instrumentation (3 cr; prereq EE 37)
Lect VII MW, AgEng 103, Hustrulid
Lab VIII-X W, AgEng 6, Hustrulid

172 Agricultural Machine Analysis (3 cr; prereq 171, MM 142)
Lect VI T, AgEng 105, Strait
Lab VII-IX T, VI-VIII Th, AgEng 305, Strait

176 Mgt of Power, Machinery (3 cr; prereq 147)
Lect IV MW, AgEng 105, Schwantes, lab ar

181 Field Probs in Soil-Water Mgt (3 cr; prereq 141, 142, 143 or ¶143)
Lect I T, AgEng 105, Allred, Larson
Lab II-IV TTh, AgEng 305, Allred, Larson

193F Probs: Farmstead Equipment, Operations (2-6 cr; prereq ‡)

193P Probs: Power, Machinery (2-6 cr; prereq ‡)

193S Probs: Soil Moisture (2-6 cr; prereq ‡)

200 Seminar (1 cr; prereq ‡)

213 Adv Probs, Research (2-6 cr; prereq 191 or 192 or 193)

ARCHITECTURE (Arch)

1 Introduction (1 cr)
VI T, Arch 130

53 History (4 cr; prereq 52)
II MTWF, Arch 130

73 Building Technology (4 cr; prereq 72)
III-IV TTh, Arch 130

76 Building Technology (4 cr; prereq 75)
III-IV TTh, Arch 135

83 **Architectural Design I** (6 cr, †81-82-83; prereq 82)
VI W, VI-IX MThF, VII-IX W, Arch 210, VI W, Arch 130

91 **Architectural Design II** (6 cr, †91-92-93; prereq 83)
VI-IX MWThF, Arch 220, VI M, Arch 130

92 **Architectural Design II** (6 cr, †91-92-93; prereq 91)
VI-IX MWThF, Arch 220, VI M, Arch 130

93 **Architectural Design II** (6 cr, †91-92-93; prereq 92)
VI-IX MWThF, Arch 220, VI M, Arch 130

103 **Tutorial Work in History** (2 cr; prereq 102)

106 **Planning** (3 cr; prereq 104 or Econ 110 or Pol 123 or Soc 106)

110 **Planning** (ar cr; prereq 105)

111 **Architectural Design III** (8 cr, †111-112-113; prereq 93, MM 93)
VI-IX MTWThF, Arch 230, VI Th, Arch 130, 4 hrs ar

112 **Architectural Design III** (8 cr, †111-112-113; prereq 111)
VI-IX MTWThF, Arch 230, VI Th, Arch 130, 4 hrs ar

113 **Architectural Design III** (8 cr, †111-112-113; prereq 112)
VI-IX MTWThF, Arch 230, VI Th, Arch 130, 4 hrs ar

121 **Architectural Design IV** (9 cr, †121-122; prereq 113, CE 41)
VI-IX MTWThF, Arch 240, VI F, Arch 130, 7 hrs ar

122 **Architectural Design IV** (9 cr, †121-122; prereq 121)
VI-IX MTWThF, Arch 240, VI F, Arch 130, 7 hrs ar

123 **Thesis** (12 cr; prereq 122)
VI F, Arch 130, 36 hrs ar, Arch 240

CHEMICAL ENGINEERING (ChEn)

103 **Principles** (3 cr; prereq 102)
Lect II TTh, ChE 240, Isbin
—1, Rec I MW, ChE 153, Ranz
—2, Rec II MW, ChE 154, Scriven
—3, Rec II MW, ChE 150, Wilder
—4, Rec III MW, ChE 154, Isbin

113 **Laboratory** (2 cr; prereq 103)
Conf II T, E 205, Fredrickson
—1, Lab VI-IX M, ChE 3 fl, Fredrickson
—2, Lab VI-IX W, ChE 3 fl, Wilder
—3, Lab VI-IX Th, ChE 3 fl, Schmitz
—4, Lab VI-IX F, ChE 3 fl, Madden

118 **Process Evaluation, Design** (3 cr; prereq 117)
VII-VIII TTh, ChE 50, Preckshot

120 **Thermodynamics** (3 cr; prereq 119)
Lect I TTh, ChE 240, Dahler
—1, Rec II MW, ChE 40, Madden
—2, Rec VII W, ChE 150, II F, ChE 40, Dahler
—3, Rec VII WF, ChE 50, Schmitz
—4, Rec VIII MW, ChE 50, Wilder

123 **Biochemical Engineering Lab** (3 cr; prereq 122)
VI-IX TTh, ChE 260, Tsuchiya

132 **Chemical Reactor Analysis** (3 cr; prereq 131)
I MTWF, MinMet 116, Aris

154 **Problems** (ar cr)

155 **Problems** (ar cr)

163 **Nuclear Reactor Design** (3 cr; prereq 162)
I MWF, ChE 150, Isbin

173 **Adv Process Control** (3 cr; prereq 172)
IV MWF, ChE 150, Ceaglske

203 Seminar (1 cr)
VI T, ChE 240, Dahler

207 Physical Rate Processes, Transfer Operations (3 cr; prereq 103, ♯) Madden

210 Physical Rate Processes, Transfer Operations (3 cr; prereq 209)
VI MWF, ChE 40, Ranz

213 Molecular Theory of Transport Processes (3 cr; prereq 212) Dahler, Prager

216 Adv Mathematics for Chemical Engineers, Chemists (3 cr; prereq 215)
VIII-IX TTh, ChE 240, Amundson

218 Adv Topics (3 cr)
V MWF, ChE 150, Fredrickson

227 Fluid Mechanics, Related Topics (3 cr; prereq 226)
I-II TTh, ChE 154, Aris

264 Survey (1 cr; prereq ♯)

301 Research (ar cr)

303 Research (ar cr; prereq 302)

CHEMISTRY

Analytical Chemistry (AnCh)

57 **Quantitative Analysis** (4 cr; prereq InCh 11 or 26)
Lect VI MWF, C 325, Herr
—1, Lab VII-IX MW, VIII-IX F, C 310
—2, Lab VI-IX TTh, C 310

98 **Senior Thesis** (ar cr; prereq 4th yr)

102 **Gravimetric, Volumetric Analysis Lab** (4 cr; prereq 101)
VI-IX MWF, C 310, Meehan

102A **Gravimetric, Volumetric Analysis Lab** (3 cr; prereq 101, chem engr)
VI-IX TTh, C 310, Meehan

103 **Quantitative Inorganic Microanalysis** (3 cr; prereq 102 or 102A)
Lect VI F, C 315, Sandell, lab ar

108 **Technical Analysis** (2 or 3 cr; prereq 102 or 102A) Sandell

122 **Adv Analytical Chemistry** (2 cr; prereq 102 or 102A)
III TTh, C 315, Meehan

133 **Electrochemical Methods of Analysis** (2 cr; prereq 132)
II TTh, C 315, Bruckenstein

135 **Electrochemical Methods of Analysis Lab** (1-2 cr; prereq 133 or ¶) Bruckenstein
138 **Adv Volumetric Analysis** (3 cr; prereq 131) Kolthoff
143 **Seminar: Modern Probs** (1 cr; prereq 102 or 102A, PCh 103 or 103H)
IV T, C 325
203 Topics (ar cr; prereq 102 or 102A)
237 Seminar: Research (ar cr)
VIII-IX Th, C 315
262 Survey (1 cr)
303 Research: Quantitative Analysis (ar cr)

Inorganic Chemistry (InCh)

5 **Gen Inorganic Chemistry** (5 cr, †4-5; prereq 4)
Lect III MWThF, C 325, Hugus
—1, Lab VI-IX M
—2, Lab VI-IX T
Lect V MWThF, C 100, Reynolds
—3, Lab VI-IX W
—4, Lab VI-IX Th
—5, Lab VI-IX F
11 **Semimicro Qualitative Analysis** (4 cr; prereq 5 or 15 or 25)
—1, Lect VI MWF, C 100, Britton
Lab VI-IX T
—2, Lect VII MWF, C 100, Johnson
Lab VI-IX Th
—3, Lect IV MWF, C 325, Winter
Lab VI-IX M
26 **Chemical Principles** (5 cr; prereq 25)
Lect II MWF, C 100, O'Connor
Lab I-III TTh
26H **Honors Course: Chemical Prineiples** (5 cr; prereq 25 or 25H, △)
Lect II MWF, C 225, Bent
Lab I-III TTh
98 **Senior Thesis** (ar cr; prereq 4th yr)
107 **Oxidation-Reduction Systematics** (3 cr; prereq PCh 101 or 101H)
VII MWF, C 225, Hugus
122 **Adv Inorganic Chemistry. Lab** (2 cr; prereq AnCh 102 or 102A, PCh 103 or 103H)
Lect V Th, C 215, Britton, Conroy
—1, Lab VII-IX TTh, C 290B
—2, Lab VII-IX WF, C 290B
136 **Seminar: Modern Probs** (1 cr; prereq PCh 103 or 103H)
IV Th, C 325
205 Adv Inorganic Chemistry (4 cr; prereq 204 or ‡)
III MWF, C 215, Tobias
213 Topics (ar cr; prereq △)
260 General Survey (1 cr)
303 Research (ar cr)

Organic Chemistry (OrCh)

16 **Carbon Compounds** (4 cr; prereq InCh 15)
I MTWF, C 100, Leete
17 **Carbon Compounds Lab** (1 cr; prereq 16 or ¶)
Lab Conf I Th, C 100, Leete
—1, Lab VI-VII M, C 390
—2, Lab VIII-IX M, C 390
—3, Lab III-IV T, C 390
41 **Organic Chemistry** (4 cr; prereq InCh 5)
Lect IV MTWThF, Owre 15, Lauer
—1, Lab VI-IX Th, C 390
—2, Lab VI-IX F, C 390
62 **Organic Chemistry** (4 cr, †61-62; prereq 61)
Lect IV MTWF, C 100, Koelsch
Lab Conf IV Th, C 100
—1, Lab VI-IX M, C 390
—2, Lab VI-IX T, C 390
—3, Lab VI-IX W, C 390
—4, Lab VI-IX Th, C 390
—5, Lab I-IV Th, C 390
63 **Organic Chemistry** (3 cr; prereq 42 or 62)
III MWThF, C 100, Parham
64 **Laboratory** (3 cr; prereq 63 or ¶)
Lab Conf VII M, C 325, Dodson
—1, Lab II-IV, VI-VIII T, C 390
—2, Lab VI-VIII TTh, C 390
—3, Lab VII-IX WF, C 390
98 **Senior Thesis** (ar cr; prereq 4th yr)
130 **Quantitative Analysis** (3 cr; prereq 63, 64, AnCh 101, 102 or 102A, ‡) Lauer
143 **Chemistry of Natural Products** (3 cr; prereq 63, 64)
II TThS, C 325, Dodson
203 Seminar (1 cr; prereq grad)
7:30-8:30 pm W, C 325
222 Theoretical Organic Chemistry (3 cr; prereq 220, PCh 103 or 103H, calc or ‡)
I MWF, C 315, Noland
240 Research (4 cr; prereq 239)
246 Organic Instrumental Analysis (3 cr; prereq ‡)
VI-IX F, Fenton, Kreevoy
250 Theoretical Organic Chemistry (3 cr; prereq 222 or ‡, inte calc)
III TThS, C 215, Kreevoy
261 General Survey (1 cr)
303 Research (ar cr; prereq 102, △)

Physical Chemistry (PCh)

98 **Senior Thesis** (ar cr; prereq 4th yr)
103 **Physical Chemistry** (4 cr; prereq 102)
IV MWFS, Arch 35, Moscowitz
103H **Physical Chemistry** (4 cr; prereq 102H)
IV MWFS, AH 150, Prager
106 **Laboratory** (1-2 cr; prereq 103 or 103H or ¶)
Lect V M, C 325, Lipsky
—1, Lab VII-VIII M, VI-VIII W, C 190
—2, Lab VI-VIII T, VII-VIII Th, C 190
—3, Lab III-IV T, II-IV Th, C 190
117 **Fundamentals of Reaction Kinetics** (3 cr; prereq 103 or 103H)
IV MWF, C 225, Overend
130 **Colloids in Industry** (3 cr; prereq 128)
II MWF, C 111, Reyerson

134 **Colloid Chemistry Lab** (1-2 cr; prereq 128 or ¶) Reyerson
175 **Photochemistry** (3 cr; prereq 103 or 103H, Phys 9)
IV TThS, C 225, Livingston
206 Atomistics (4 cr; prereq 205)
III TThS, C 115, Mead
214 Kinetics, Mechanism of Enzymic Reactions (3 cr, §PhCh 214; prereq 103 or 103H, ‡) Lumry
223 Seminar: Radiation Chemistry (ar cr) Lipsky
252 Seminar: Physical Chemistry (1 cr)
7:30 pm W, C 225, Overend
255 Seminar: Molecular Spectroscopy (ar cr) Crawford
258 Seminar: Theoretical Chemistry (ar cr) Moscowitz
261 Seminar: Chemical Kinetics (ar cr) Livingston
263 General Survey (1 cr)
267 Seminar: Magnetochemistry (ar cr) Wertz
270 Seminar: Statistical Mechanics (ar cr) Prager
273 Seminar: Biological Systems (ar cr) Lumry
276 Seminar: Quantum Mechanics (ar cr) Mead
292 Topics (ar cr)
303 Research (ar cr)

CIVIL ENGINEERING

Civil Engineering (CE)

3 **Laboratory** (1 cr; prereq 2)
—1, VII-IX M, E 315
—2, VII-IX W, E 315
17 **Surveying** (3 cr; prereq not open to IT students, ITM 12)
Lect IV TTh, Ex 22
Lab VI-IX F, TSCE 220
20 **Surveying** (3 cr; prereq 18)
—1, Lect I TTh, E 215
—2, Lect I TTh, E 203
—3, Lect VI TTh, E 215
—1, Lab VI-IX M, E 316A
—2, Lab VI-IX T, E 316A
—3, Lab VI-IX W, E 316A
—4, Lab VI-IX Th, E 316A
—5, Lab VI-IX F, E 316A
—6, Lab I-IV Th, E 316A
33 **Structural Design** (3 cr; prereq 32)
—1, Lect II MWF, E 305
—2, Lect VI MWF, E 305
—1, Lab VII-IX M, E 302
—2, Lab II-IV T, E 315
—3, Lab VII-IX W, E 302
—4, Lab VII-IX F, E 315
34 **Drafting Room Practice** (2 cr; prereq ¶33)
—1, Lect IV T, E 305
—2, Lect V F, E 305
—1, Lab VII-IX M, TSCE 220
—2, Lab VII-IX W, TSCE 220
—3, Lab II-IV Th, E 302
—4, Lab VII-IX Th, E 302
41 **Structural Design: Concrete** (3 cr; prereq 39
—1, I MWF, E 305
—2, III MWF, E 305
53 **Soil Mechanics** (3 cr; prereq 52 or none for Min, Geol majors)
—1, Lect III TTh, Ex 22
—2, Lect V MW, Ex 22
—3, Lect V TTh, E 215
—1, Lab VII-IX M, Ex 154
—2, Lab VII-IX W, Ex 154
—3, Lab I-III Th, Ex 154
—4, Lab VII-IX Th, Ex 154
—5, Lab VII-IX F, Ex 154
111 **Land Surveying** (3 cr; prereq 23 or ‡)
III MWF, E 316A
132 **Structural Design** (2 cr; prereq 131)
Lect VI T, Ex 193
—1, Lab VII-IX T, Ex 193
Lect VI Th, Ex 193
—2, Lab VII-IX Th, Ex 193
136 **Adv Structural Analysis** (3 cr; prereq 132)
II MWF, AE 19
143 **Arch Analysis, Design** (3 cr; prereq ‡)
I TTh, II T, AE 19
144 **Prestressed Reinforced Concrete** (3 cr; prereq 142)
IV MWF, Ex 193
146 **Concrete, Concrete Materials** (3 cr; prereq 51 or ¶)
Lect I TTh, Ex 22
Lab VI-IX T, Ex 93
147 **Foundations** (3 cr; prereq 141)
I MWF, AE 19
151 **Adv Highway Lab** (3 cr; prereq 52)
VI-IX MW, Ex 255
152 **Highway Design** (3 cr; prereq 52)
III MWF, Ex 22
153 **Soils in Highway Engineering** (3 cr; prereq 53)
IV MWF, Ex 22
160 **Applied Hydraulics** (3 cr; prereq Hydr 103, 104)
Lect II TTh, Ex 193
—1, Lab VII-IX T, TSCE 220
—2, Lab VII-IX F, TSCE 220
171 **Sewerage, Sewage Treatment** (3 cr; prereq 161, 170)
—1, Lect I MWF, Ex 22
—2, Lect VI MWF, Ex 22
—1, Lab VII-IX T, E 315
—2, Lab VII-IX Th, E 315
175 **Industrial Waste Disposal** (3 cr; prereq 174)
II MWF, Ex 250
178 **Seminar: Sanitary Engineering** (1 cr; prereq 5th yr)
236 Shell Structures (3 cr; prereq 132)
VI MWF, Ex 193
251 Adv Soil Mechanics Lab (3 cr; prereq 159 or ¶)
VI-IX TF, Ex 180

252 Adv Soil Mechanics Lab (3 cr; prereq 251) VI-IX TF, Ex 180
262 Sewage Plant Design (3-5 cr; prereq 174)
277 Adv Sanitary Engineering: Sewage, Industrial Waste (3-5 cr; prereq 174)
280 Research (3-5 cr; prereq ‡)
281 Research (3-5 cr; prereq 280)
282 Research (3-5 cr; prereq 281)

Hydromechanics (Hydr)

101 **Fluid Mechanics for Aeronautical, Electrical Engineering Students** (3 cr; prereq MM 27)
—1, I MWF, AE 21
—2, III MWF, AE 211
—3, IV MWF, E 305
—4, IV MWF, AE 21
—5, VI MWF, AE 21
103 **Fluid Mechanics** (5 cr; prereq MM 27)
—1, I MTWThF, Ex 193
—2, II MTWThF, AE 21
—3, III MTWThF, Ex 193
—4, V MTWThF, AE 19
104 **Fluid Mechanics Lab** (1 cr; prereq 101 or 103 or ChEn 101 or ¶)
—1, III-IV M, Ex 138
—2, VI-VII M, Ex 138
—3, VIII-IX M, Ex 138
—4, III-IV T, Ex 138
—5, VI-VII T, Ex 138
—6, VI-VII W, Ex 138
—7, III-IV Th, Ex 138
—8, VI-VII Th, Ex 138
186 **Adv Hydraulic Probs** (2 cr; prereq 185)
187 **Interm Fluid Mechanics** (3 cr; prereq 101 or 103, 104)
II MWF, Ex 193
192 **Natural, Artificial Waterways** (3 cr; prereq 183 or ‡)
3:00-4:30 WF, HL 307
193 **Hydraulic Measurements** (3 cr; prereq 187 or ‡)
1:15-2:45 WF, HL 307
295 Hydrodynamics (3 cr; prereq 294 or ‡)
8:00-9:30 TTh, HL 307

ELECTRICAL ENGINEERING (EE)

16 **Laboratory** (1 cr; prereq 14)
—1, VIII-IX M, EE 237
—2, VIII-IX T, EE 237
—3, VIII-IX W, EE 237
36 **Elements** (3 cr; prereq ITM 26A or 80)
Lect V MWF, Arch 35
—1, Lab VIII-IX M, ME 208
—2, Lab I-II T, ME 208
—3, Lab VI-VII T, ME 208
—4, Lab V-VI Th, ME 214
38 **Elements** (3 cr; prereq 37)
—1, I MWF, Arch 55
—2, 10:30-11:45 TTh, Arch 55
38A **Laboratory** (1 cr; prereq 37A, ¶38)
—1, V-VI M, EE 118
—2, VIII-IX M, EE 118
—3, I-II T, EE 118
—4, III-IV T, EE 118
—5, VI-VII T, EE 118
—6, VIII-IX W, EE 118
—7, I-II Th, EE 118
—8, V-VI Th, EE 118
—9, VII-VIII Th, EE 118
55 **Electrical Engineering** (5 cr; prereq 53)
—1, I MTWThF, Arch 50
—2, VI MTWThF, Arch 35
55H **Honors Course: Electrical Engineering and Prob Solving Lab** (6 cr; prereq 53H, △)
II MTWThF, EE 137, VIII-IX M, ME 102
56 **Laboratory** (1 cr; prereq 54, ¶55)
—1, IV-V M, EE 216
—2, VIII-IX M, EE 216
—3, I-II T, EE 216
—4, III-IV T, EE 216
—5, VIII-IX T, EE 216
—6, VI-VII W, EE 216
—7, VIII-IX W, EE 216
—8, I-II Th, EE 216
—9, III-IV Th, EE 216
—10, VII-VIII Th, EE 216
—11, VI-VII F, EE 216
56H **Honors Course: Laboratory** (1 cr; prereq 54H, ¶55H, △)
—1, V-VI T, EE 216
—2, V-VI Th, EE 216
56A **Prob Solving Lab** (1 cr; prereq 54A, ¶55)
For EE 55, Lect 1 students only
—1, VI-VII M, EE 137
—2, IV-V T, EE 137
—3, VI-VII T, EE 137
—4, V-VI Th, EE 137
For EE 55, Lect 2 students only
—5, I-II T, ME 214
—6, VIII-IX W, ME 214
—7, I-II Th, ME 208
—8, VII-VIII Th, ME 102
59 **Engineering Electronics** (3 cr; prereq 57)
—1, II MWF, Arch 35
—2, VII MWF, Arch 35
59H **Honors Course: Engineering Electronics** (3 cr; prereq 57H, △)
V MWF, EE 137
60 **Engineering Electronics Lab** (1 cr; prereq 58, ¶59)
—1, I-II M, EE 205
—2, VI-VII M, EE 205
—3, VIII-IX M, EE 205
—4, I-II T, EE 205
—5, III-IV T, EE 205
—6, VI-VII T, EE 205
—7, VIII-IX T, EE 205
—8, VI-VII W, EE 205
—9, I-II Th, EE 205
—10, III-IV Th, EE 205
—11, VI-VII Th, EE 205
—12, III-IV F, EE 205

60H Honors Course: Engineering Electronics Lab (1 cr; prereq 58H, ¶59H, △)
—1, VIII-IX W, EE 205
—2, VII-VIII F, EE 205

125 Analysis of Electromagnetic Devices (3 cr; prereq 123)
—1, V MWF, Arch 50
—2, VI MWF, Arch 50

125H Honors Course: Analysis of Electromagnetic Devices (3 cr; prereq 123H, △)
II MWF, EE 237

126 Experimental Study of Electromagnetic Devices (1 cr; prereq 124, ¶125)
—1, VII-IX M, VII W, EE 107 (¶sec 1, EE 163A)
—2, I-III T, VII T, EE 107 (¶sec 2, EE 163A)
—3, VII-IX T, VIII W, EE 107 (¶sec 3, EE 163A)
—4, VII-IX W, VII M, EE 107 (¶sec 4, EE 163A)
—5, I-III Th, VII Th, EE 107 (¶sec 5, EE 163A)

126H Honors Course: Experimental Study of Electromagnetic Devices (1 cr; prereq 124H, ¶125H, △)
VII-IX F, VI Th, EE 121

135 Electronic Circuit Design (3 cr; prereq 133)
Lect II TTh, Arch 50
—1, Lab I-II M, EE 35
—2, Lab VIII-IX M, EE 35
—3, Lab III-IV T, EE 35
—4, Lab VI-VII T, EE 35
—5, Lab I-II W, EE 35
—6, Lab VI-VII W, EE 35
—7, Lab VIII-IX W, EE 35
—8, Lab III-IV Th, EE 35
—9, Lab V-VI Th, EE 35
—10, Lab I-II F, EE 35

136 Electric Machines (3 cr; prereq 134)
Lect III TTh, EE 137
Lab II-III F, EE 116

140 Electric Power Control (3 cr; prereq 139)
Lect IV TTh, EE 237
—1, Lab I-II W, EE 107
—2, Lab VI-VII W, EE 107

141 Materials (3 cr; prereq 109)
—1, I MWF, Arch 35
—2, VII MWF, Arch 50

141A Materials Lab (1 cr; prereq ¶141)
—1, I-II T, ME 302
—2, III-IV T, ME 302
—3, VI-VII T, ME 102
—4, III-IV Th, ME 302
—5, V-VI Th, ME 302

145 Engineering Acoustics (3 cr; prereq 144)
VIII MWF, ME 321

152 Statistical-Mechanical Methods (3 cr; prereq 150, 151, ♯)
3:30-4:45 T, 2:30-3:45 Th, AE 309

155 Properties of Solids (3 cr; prereq 154)
4:00-5:15 MF, EE 137

159 Electronics Control (3 cr; prereq 158)
Lect I TTh, Arch 35
—1, Lab I-II M, EE 21
—2, Lab VI-VII M, EE 21
—3, Lab III-IV T, EE 21
—4, Lab VI-VII T, EE 21
—5, Lab VI-VII W, EE 21
—6, Lab III-IV Th, EE 21
—7, Lab V-VI Th, EE 21
—8, Lab VII-VIII Th, EE 21
—9, Lab VI-VII F, EE 21

163 Networks (3 cr; prereq 162)
—1, II MWF, Arch 50
—2, III MWF, Arch 50

163H Honors Course: Networks and Labs (4 cr; prereq 162H, △)
Lect 9:00-10:20 TTh, EE 237
Lab VII-IX F, VI Th, EE 121

163A Networks Lab (1 cr; prereq 162A, ¶163)
—1, VII-IX M, VII W, EE 208 (¶sec 1, EE 126)
—2, I-III T, VII T, EE 208 (¶sec 2, EE 126)
—3, VII-IX T, VIII W, EE 208 (¶sec 3, EE 126)
—4, VII-IX W, VII M, EE 208 (¶sec 4, EE 126)
—5, I-III Th, VII Th, EE 208 (¶sec 5, EE 126)

166 Communication Circuits (3 cr; prereq 165)
Lect III TTh, EE 237
—1, Lab VI-VII M, EE 204
—2, Lab VIII-IX M, EE 204
—3, Lab VI-VII W, EE 204
—4, Lab IV-V Th, EE 204

169 Electromagnetic Theory, Application (3 cr; prereq 168)
Lect IV TTh, ME 102
—1, Lab VIII-IX T, EE 218
—2, Lab VI-VII W, EE 218

175 Physical Electronics (3 cr; prereq 174)
Lect I MW, EE 137
Lab VIII-IX F, EE 204

180 Nonlinear Active Circuits (3 cr; prereq 179)
VI-VII TTh, EE 237

182C High-Frequency Transistor Circuits (3 cr; prereq 182A, ♯)
7:00-8:15 TTh, EE 237

185 Electrical Lab (1-3 cr; prereq ♯)

189 Problems (3 cr; prereq 188)
Lect IV MWF, Arch 50
—1, Rec VIII M, ME 106
—2, Rec V T, EE 237
—3, Rec VIII T, ME 106
—4, Rec VIII W, ME 106

193 Active Network Theory (3 cr; prereq 192)
VII MWF, EE 237

196 Servomechanisms (3 cr; prereq 195)
V MWF, EE 237

199 Electrical Design of Machines I (3 cr; prereq 198)

213 Network Analysis, Synthesis (3 cr; prereq 212)
V-VI TTh

229 Stability of AC Power Systems (3 cr; prereq 228)
244 Gaseous Electronics (3 cr; prereq 243)
257 Analysis of AC Power-Systems Circuits (3 cr; prereq 256)
265 Probs: Electromagnetism (3 cr; prereq 263)
266 Seminar: Communication (1-3 cr; prereq 264)
269 Theory of Communication (3 cr; prereq 268)
283 Seminar: Energy Conversion (ar cr; prereq 282)
296 Adv Control Theory (3 cr; prereq 295)

MATHEMATICS (ITM)

8 Solid Geometry (no cr; prereq plane geom)
V MWF, E 227

11 College Algebra, Trigonometry I (5 cr; prereq 9)
VI MTWThF, E 227

12 College Algebra, Trigonometry II (5 cr; prereq 11)
—1, II MTWThF, AE 227
—2, II MTWThF, ChE 158
—3, III MTWThF, ChE 50
—4, IV MTWThF, ChE 50
—5, V MTWThF, ChE 50
—6, V MTWThF, Ex 25
—7, VI MTWThF, ChE 50

13A Calculus I: Analytic Geometry, Calculus (5 cr; prereq 8, 12)
—1, I MTWThF, AE 9
—2, I MTWThF, ChE 50
—3, I MTWThF, E 227
—4, II MTWThF, E 106
—5, II MTWThF, ChE 50
—6, II MTWThF, MinMet 124
—7, II MTWThF, Ex 25
—8, III MTWThF, AE 21
—9, III MTWThF, AE 19
—10, III MTWThF, AE 15
—11, III MTWThF, Ex 25
—12, IV MTWThF, E 217
—13, IV MTWThF, AE 15
—14, IV MTWThF, ChE 154
—15, V MTWThF, E 203
—16, V MTWThF, MinMet 116
—17, VI MTWThF, E 229
—18, VI MTWThF, AE 9
—19, VI MTWThF, Ex 25

14 Laboratory (1 cr; prereq 2nd yr)
VI-VII T, E 104

24A Calculus II: Analytic Geometry, Calculus (5 cr; prereq 13A)
—1, IV MTWThF, AE 227
—2, IV MTWThF, AE 19
—3, V MTWThF, ChE 158

25A Calculus III: Analytic Geometry, Calculus (5 cr; prereq 24A)
—1, I MTWThF, ChE 162
—2, III MTWThF, AE 9
—3, IV MTWThF, Ex 25
—4, IV MTWThF, E 227
—5, VI MTWThF, E 106

26A Calculus IV: Differential Equations, Calculus (5 cr, §80; prereq 25A)
—1, I MTWThF, Ex 25
—2, I MTWThF, AE 15
—3, II MTWThF, E 203
—4, II MTWThF, AE 15
—5, II MTWThF, E 217
—6, III MTWThF, ChE 150
—7, III MTWThF, ChE 158
—8, III MTWThF, AE 227
—9, IV MTWThF, E 106
—10, IV MTWThF, E 229
—11, V MTWThF, E 106
—12, VI MTWThF, E 203

26H Honors Course: Differential Equations, Calculus (5 cr; prereq 25A, △)
IV MTWThF, ChE 162

90 Engineering Statistics (3 cr; prereq 25 or 25A or ¶25A)
—1, II MWF, E 227
—2, II MWF, E 229
—3, V MWF, E 229

99 Mathematical Probs Seminar (3 cr; prereq 25 or 25A)
I-II TTh, E 104

134 Statistical Theory with Applications (3 cr; prereq 133)
V MWF, E 217

134B Probability with Technological Applications (3 cr; prereq 133B)
VI MWF, E 217

147 Vector Analysis (3 cr, §152, §old 154; prereq 25 or 25A)
I MWF, E 205

149 Determinants, Matrices (3 cr, §142; prereq 25 or 25A)
—1, I MWF, E 104
—2, III MWF, E 205
—3, V MWF, E 205

150A Ordinary Differential Equations (3 cr, §148; prereq 26 or 26A or 80)
—1, I MWF, E 217
—2, I MWF, E 229

152 Calculus VI: Adv (3 cr, §147; prereq 151)
IV MWF, E 205

153 Calculus VII: Adv (3 cr; prereq 151)
—1, I MWF, E 203
—2, I MWF, E 106
—3, III MWF, E 104
—4, III MWF, E 106
—5, IV MWF, E 203

153H Honors Course: Calculus VII—Adv (3 cr; prereq 151, △)
III MWF, E 229

163 Analytical Dynamics (3 cr; prereq 162)
IV MWF, E 206

165A Programming Modern Digital Calculators (3 cr, §165; prereq 25 or 25A)
VI MWF, E 205

168B Applications of Complex Variables (3 cr; prereq 168A or 174 or ♯)
I MWF, E 206

169 Mathematical Theory of Fluid Flow (3 cr; prereq 152, 168A or 152, 174 or 147, 168A or 147, 174 or ♯)
VII MWF, E 206

175 Integral Transforms (3 cr; prereq 168A or 174)
—1, II MWF, E 104
—2, II MWF, E 205
—3, III MWF, E 227
—4, III MWF, E 217

180 Finite Groups (3 cr; prereq 143 or ♯)
III-IV TTh, E 203

183 Topics: Theory of Numbers (3 cr; prereq 182)
II MWF, ChE 162

186 Numerical Analysis (3 cr; prereq 185)
III MWF, E 203

190C Combinatorial Topology (3 cr; prereq 190B)
VI MWF, E 206

193C Higher Geometry (3 cr; prereq 193B)
VI MWF, ChE 162

199C Prob Course (3 cr; prereq ♯)
III-IV TTh, E 206

229 Computers, Control Devices (3 cr; prereq 228)
V MWF, E 206

250 Reading, Research (1-3 cr; prereq 249)

263 Functions of a Complex Variable (3 cr; prereq 262)
IV MWF, E 104

269 Topics: Theory of Analytic Functions (3 cr; prereq 268)
III-IV TTh, E 104

270B Adv Numerical Analysis of Linear Systems (3 cr, §old 270C; prereq 186, 142 or 149 or ♯)
V MWF, E 104

276 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 275)
II MWF, E 206

280C Algebraic Numbers (3 cr; prereq 180 or ♯)
III MWF, E 206

289 Hilbert Space, Functional Analysis (3 cr; prereq 288)
VI MWF, E 104

294C Theory of Local Rings (3 cr; prereq 294B)
V MWF, ChE 162

309 Probs: Theoretical Physics (3 cr; prereq 308)
VII MWF, E 104

MECHANICAL ENGINEERING

Engineering Graphics (EG)

14 Engineering Graphics (3 cr; prereq solid geom)
Lect IV MW, Arch 10
Rec IV Th, E 201
Lab open hrs, E 18

15 Engineering Graphics (3 cr; prereq 14)
Lect II MW, Arch 10
—1, Rec II F, E 201
—2, Rec II Th, E 201
Lab open hrs, E 18
Lect VI MW, Arch 10
—3, Rec VI F, E 201
—4, Rec VI Th, E 201
Lab open hrs, E 18

16 Engineering Graphics (3 cr; prereq 15)
Lect I MW, Arch 10
—1, Rec I F, Arch 10
—2, Rec I Th, Arch 10
Lab open hrs, E 101
Lect III MW, Arch 10
—3, Rec III F, Arch 10
—4, Rec III Th, E 201
Lab open hrs, E 306
Lect V MW, Arch 10
—5, Rec V F, Arch 10
—6, Rec V Th, E 201
Lab open hrs, E 101
Lect VII MW, Arch 10
—7, Rec VII F, Arch 10
—8, Rec VII Th, E 201
Lab open hrs, E 306
Lect II TTh, Arch 10
—9, Rec III Th, Arch 10
—10, Rec II F, Arch 10
Lab open hrs, E 101
Lect IV TTh, Arch 10
—11, Rec V Th, Arch 10
—12, Rec IV F, Arch 10
Lab open hrs, E 411
Lect VI TTh, Arch 10
—13, Rec VIII Th, E 201
—14, Rec VI F, Arch 10
Lab open hrs, E 411
Lect-Lab
—15, VII-IX TTh, E 411 (Arch students only)

50 Diagrams, Charts (2 cr; prereq 14)
I TTh, E 201

52 Alignment Charts (3 cr; prereq 15, ITM 12)
V MWF, E 201

55 Production Illustration (2 cr; prereq 16)
III-IV MWF, E 201

118 Curve Fitting (3 cr; prereq 16, ITM 25A, or ♯)
I MWF, E 201

154 Nomography (3 cr; prereq 153)
VII MWF, E 201

Industrial Engineering (IE)

50 Elements, Mgt (3 cr, §old 150; prereq 3rd yr)
—1, I MWF, ME 302
—2, VI MWF, ME 214

153 Methods Engineering, Work Measurement (3 cr; prereq 50 or ¶)
Lect II TTh, ME 102
—1, Lab VII-IX M, ME 180
—2, Lab VII-IX T, ME 180

155 Industrial Wage Admin (3 cr; prereq 153)
III MWF, ME 106

163 Process Planning, Development (3 cr; prereq 50, ME 15, 16)
Lect V TTh, ME 106
Lab VII-IX Th, ME 180

170 Production Planning, Control (3 cr; prereq 50)
—1, I MWF, AE 321
—2, IV MWF, ME 106

171 Quality Control (3 cr; prereq ITM 90 or 132 or ‡)
IV MWF, ME 102

173 Engineering Economic Analysis (3 cr; prereq 50)
VI MWF, AE 321

174 Analysis for Prod Mgt (3 cr; prereq 50, 171 or ‡)
V MWF, ME 106

180 Supervision (3 cr; prereq 50)
I MWF, ME 106

190 Seminar (1 cr; prereq 12 cr)
II-III T, ME 106

194 Applied Industrial Engineering (3 cr; prereq 15 cr)
II MWF, ME 106

196 Applied Industrial Engineering (3 cr; prereq 195)

199 Design of Industrial Experiments (3 cr; prereq ITM 133 or ‡)
VI MWF, ME 102

253 Adv Industrial Engineering (3 cr; prereq ‡)

263 Probs: Production Engineering (3-5 cr; prereq ‡)

273 Research (3-5 cr; prereq ‡)

Mechanical Engineering (ME)

15 Casting, Working, Welding Engineering Materials (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 18
—1, Lab VII-IX M, ME 50
—2, Lab VII-IX T, ME 50
—3, Lab VII-IX W, ME 50
—4, Lab VII-IX Th, ME 50

16 Cold Processing Materials (3 cr; prereq IE 50, Met 56, MM 142)
Lect VI TTh, ME 110
—1, Lab VII-IX T, ME 171
—2, Lab VII-IX W, ME 171
—3, Lab VII-IX Th, ME 171

21 Kinematics, Mechanisms (3 cr; prereq ITM 26A or ¶, EG 16)
—1, Lect III TTh, Arch 40
—2, Lect IV TTh, Arch 40
—1, Lab VI-VII M, ME 325
—2, Lab VI-VII T, ME 325
—3, Lab VIII-IX T, ME 325
—4, Lab VI-VII W, ME 325
—5, Lab VIII-IX W, ME 325
—6, Lab VI-VII Th, ME 325

23 Dynamics of Machinery (3 cr; prereq 22, MM 29)
Lect V TTh, ME 321
—1, Lab VII-IX W, ME 314
—2, Lab VII-IX F, ME 314

24 Machine Design (3 cr; prereq MM 41)
Lect I TTh, ME 321
—1, Lab VII-IX M, ME 314
—2, Lab VII-IX F, ME 325

31 Thermodynamics (3 cr, §old 131; prereq 30)
V MWF, Arch 40

32 Thermodynamics (3 cr, §old 132; prereq 31)
—1, I MWF, Arch 40
—2, II MWF, Arch 40
—3, III MWF, Arch 40
—4, IV MWF, Arch 40

34 Laboratory II (2 cr; prereq 33)
—1, Lect I T, Arch 40
—2, Lect II T, Arch 40
—1, Lab VII-IX M, ME 370
—2, Lab VII-IX M, ME 370
—3, Lab VII-IX T, ME 370
—4, Lab VII-IX T, ME 370
—5, Lab VII-IX W, ME 370
—6, Lab VII-IX Th, ME 370
—7, Lab VII-IX Th, ME 370
—8, Lab VII-IX F, ME 370

90 Industrial Assignment (4 cr, †90-91-92-93; prereq regis coop work-study program)

91 Industrial Assignment (4 cr, †90-91-92-93; prereq 90)

92 Industrial Assignment (4 cr, †90-91-92-93; prereq 91)

93 Industrial Assignment (4 cr, †90-91-92-93; prereq 92)

121 Machine Design (3 cr; prereq 24)
Lect II TTh, ME 110
—1, Lab VII-IX M, ME 302
—2, Lab VII-IX W, ME 302
—3, Lab VII-IX F, ME 302

122 Design (3 cr; prereq 121)
Lect VI T, ME 302
Lab VII-IX TTh, ME 302

125 Machine Design Lab (2 cr; prereq 24)
—1, Lect VI M, ME 321
Lab VII-IX M, ME 357
—2, Lect VI W, ME 321
Lab VII-IX W, ME 357

127 Lubrication (3 cr; prereq 121)
V MWF, ME 302

133 Heat Transmission (3 cr; prereq 32, Hydr 101 or 103 or ¶...or Hydr 101 or 103, ♯)
—1, I MWF, ME 102
—2, VI MWF, ME 106

134 Thermodynamics of Fluid Flow (3 cr; prereq 32, Hydr 103)
—1, II MWF, ME 102
—2, IV MWF, EE 137

136 Reactor Heat Transfer (3 cr; prereq 133)
III MWF, AE 321

142 Adv Heat Power Engineering (3 cr; prereq 141)
IV MWF, ME 321

143 Turbomachinery (3 cr; prereq 134 or ¶)
—1, I MWF, ME 321
—2, II MWF, ME 321

146 Combustion (3 cr; prereq 133 or ¶)
—1, V MWF, ME 321
—2, VI MWF, ME 302

149 Chemistry of Combustion (3 cr; prereq 148)
V MWF, ME 208

150 Internal Combustion Engines (3 cr; prereq 32)
III MWF, ME 321

151 Adv Internal Combustion Engines (3 cr; prereq 150)
III MWF, ME 302

154 Internal Combustion Engines (3 cr; prereq 121, 150)
II MWF, ME 302

159 Heat Power Lab (2 cr; prereq 143, 146)
—1, VI-IX M, ME 480
—2, VI-IX W, ME 480
—3, VI-IX F, ME 480

160 Psychrometrics, Air Conditioning (3 cr; prereq 133 or ¶)
—1, II MWF, ME 214
—2, III MWF, ME 214
—3, IV MWF, ME 214

166 Industrial Ventilation, Exhaust System (3 cr; prereq 160)
II MWF, Arch 135

169 Air Conditioning, Refrigeration Lab (2 cr; prereq 34, 160, 180)
—1, VI-IX M, ME 362
—2, VI-IX W, ME 362
—3, VI-IX F, ME 362

180 Mechanical Refrigeration (3 cr; prereq 32)
I MWF, ME 214

194 Adv Problems (2-4 cr; prereq 5th yr, ME maj, 2.5 GPA, △)

198 Industrial Instrumentation, Automatic Control (3 cr; prereq EE 38 or ¶)
Lect I TTh, ME 110
—1, Lab VII-IX M, ME 359
—2, Lab VII-IX T, ME 359
—3, Lab VII-IX W, ME 359
—4, Lab VII-IX Th, ME 359

226 Adv Applied Dynamics (3 cr; prereq 225)

232 Adv Thermodynamics of Fluid Flow (3 cr; prereq 134, 230 or ♯)
IV MWF, ME 302

235 Radiation (3 cr; prereq 234)
II MWF, ME 208

248 Atomization, Vaporization, Mixing (3 cr; prereq 32)
III MWF, ME 208

255 Adv Rocket Propulsion (3 cr; prereq 155)
VI MWF, ME 208

267 Adv Air Conditioning (3 cr; prereq 266 or ♯)
IV MWF, ME 208

282 Reverse Applications of Refrigeration: Heat Pump (3 cr; prereq 180)
III MWF, ME 102

290 Research (ar cr; prereq △)

291 Research (ar cr; prereq 290)

292 Research (ar cr; prereq 291)

297 Adv Servomechanisms (3 cr; prereq 296)

298 Adv Instrumentation, Automatic Control (3 cr; prereq 198)

METALLURGY (Met)

1 Metallurgy Lab (1 cr)
VII-IX Th, MinMet 120

56 Physical Metallurgy (3 cr; prereq 3rd yr)
VII MWF, ChE 240, Nicholson

60 Physical Metallurgy for Chemical Engineering Students (3 cr; prereq 3rd yr)
VII MWF, ChE 240, Nicholson

90 Industrial Employment (2 cr; prereq ♯)

91 Industrial Employment (2 cr; prereq ♯)

92 Industrial Employment (2 cr; prereq ♯)

155 Physical Metallurgy III (3 cr; prereq 154 or ♯)
I MWF, MinMet 124, Jerabek

155A Physical Metallurgy Lab (2 cr; prereq 154 or ¶155)
—1, VI-IX Th, MinMet 410, Jerabek
—2, VI-IX F, MinMet 410

161 Corrosion of Metals (2 cr; prereq PCh 101 or 101H)
II TTh, MinMet 116, Nicholson

169 Analysis of Metallurgical Probs (3 cr, ‡old 165; prereq 155, 182 or ♯)
Lect I TTh, MinMet 120, Jerabek
Lab VI-VIII T, MinMet 120, Jerabek

172 Probs: Physical Metallurgy (1-3 cr)

175 Imperfections in Metals (3 cr; prereq 174 or ♯)
10:30-11:50 TTh, MinMet 116, Sivertsen

182 Thermodynamics, Kinetics of Solid State (3 cr; prereq 181)
II MWF, MinMet 120, Swalin

209 Physical Metallurgy (ar cr)

215 Seminar: Physical Metallurgy (ar cr)

252 Kinetics of Solid State Reactions (3 cr; prereq 251 or ♯) Swalin

263 Adv X-ray Diffraction of Metals (3 cr; prereq 155 or ♯) Sivertsen

MINES AND METALLURGY

Metallurgical Engineering (MetE)

1 **Laboratory** (1 cr)
VII Th, MinMet 124, Cooke

92 **Industrial Employment** (2 cr; prereq ‡) Cooke

108 **Prin Process Metallurgy** (3-4 cr; prereq 107)
Lect III MWF, VI W, MinMet 124, Bitsianes
Lab VII-IX W, MinMet 12

112 **Mineral Dressing** (4 cr; prereq 111)
Lect III TTh, I S, MinMet 124, Cooke
—1, Lab VI, VIII M, MinMet 16, 22, VII M, MinMet 120
—2, Lab VI, VIII W, MinMet 16, 22, VII W, MinMet 120
—3, Lab VI, VIII F, MinMet 16, 22, VII F, MinMet 120

123 **Hydrometallurgy** (3 cr; prereq 122)
I MWF, MinMet 104, Cooke

126 **Probs: Mineral Dressing** (ar cr; prereq 112) Cooke

136 **Unit Processes** (3 cr; prereq 108)
III MWF, MinMet 104, Joseph

138 **Adv Process Metallurgy** (2 cr; prereq 134)
III TTh, MinMet 120, Bitsianes

143 **Probs: Process Metallurgy** (ar cr; prereq 108) Joseph, Bitsianes

144 **Metallurgical Unit Operations** (2 cr; prereq 111 or ‡)
IV TTh, MinMet 120, Schulz

203 Research: Process Metallurgy (ar cr) Joseph, Bitsianes

206 Research: Mineral Dressing (ar cr) Cooke

212 Seminar (ar cr)
IV T, MinMet 124, Cooke

Mining Engineering (MinE)

1 **Mineral Engineering Lab** (1 cr)
VII TTh, MinMet 124

13 **Mine Surveying** (3 cr; prereq CE 18 or ‡)
II MWThF, MinMet 104, Yardley

16 **Mine Maps** (1-2 cr; prereq 15A or 15B)
VII-VIII T, MinMet 321, Yardley

90 **Industrial Employment** (2 cr; prereq ‡)

91 **Industrial Employment** (2 cr; prereq 90)

113 **Exploitation of Mineral Deposits** (3 cr; prereq 112 or ‡)
I MWF, MinMet 120, II T, MinMet 104, Pfleider

122 **Mine, Petroleum Plant Engineering** (3 cr; prereq EE 37, Hydr 103, ME 30 or ‡)
V-VI TTh, MinMet 104, 1 hr ar, Dorenfeld

133 **Rock Mechanics III** (3 cr; prereq 132)
IV MWF, MinMet 104, Fairhurst

145 **Adv Mining Engineering** (4 cr; prereq 144)
VI-IX M, VI-VIII WF, MinMet 321, Pfleider

153 **Problems** (ar cr; prereq 113)

160 **Mining, Processing Industrial Minerals** (ar cr; prereq 112 or ‡) Yardley

203 Seminar: Mineral Engineering (ar cr)

214 Research Probs (ar cr)

230 Adv Geochemical Exploration (ar cr; prereq ‡) Yardley

252 Adv Rock Mechanics II (3 cr; prereq 251) Fairhurst

Petroleum Engineering (PetE)

92 **Industrial Employment** (2 cr; prereq 91) Lacabanne

131 **Reservoir Mechanics** (3 cr; prereq 134, Hydr 103 or ‡)
10:30-11:45 TTh, MinMet 104, Lacabanne

145 **Adv Petroleum Engineering** (4 cr; prereq 144)
VI-IX M, VI-VIII WF, MinMet 321, Pfleider

154 **Petroleum Production Technology** (3 cr; prereq 153)
Lect I Th, MinMet 216, Lacabanne
—1, Lab VI-VIII TTh, MinMet 216, 220
—2, Lab ar

203 Seminar: Petroleum, Natural Gas Engineering (ar cr; prereq 202)
IV T, MinMet 216, Lacabanne

PHYSICS (Phys)

3 Physical Science (3 cr; prereq 1)
III MWF, Ph 150, Wall

3A Physical Science Lab (1 cr; prereq 3 or ¶)
Lab sec assigned during first 2 days of class

6 **Gen Physics: Sound, Light** (5 cr; prereq 5)
I MTWThF, Ph 166, Buchta
Lab sec assigned during first 2 days of class

9 **Gen Physics** (5 cr; prereq 8, ¶ITM 25A or Math 54)
II MTWThF, Ph 166, Freier
Lab sec assigned during first 2 days of class

12 **Gen Physics** (5 cr; prereq 11, ¶ITM 12 or ¶Math 10)
V MTWThF, Ph 166, Nestvold
Lab sec assigned during first 2 days of class

13 **Gen Physics** (5 cr; prereq 12, ¶ITM 13A or ¶Math 40)
—1, I MTWThF, Ph 150, Likely
—2, IV MTWThF, Ph 166
—3, VI MTWThF, Ph 150, Mantis
Lab sec assigned during first 2 days of class

50 **Interm Physics** (4 cr; prereq 6, 9 or 14, ¶ITM 25A or Math 54)
V MTWThF, Ph 150

50A Physics Lab (1 cr; prereq ¶50)
Lab sec assigned during first 2 days of class

51 **Interm Physics** (4 cr; prereq 50, ITM 25A or Math 54)
—1, I MTWThF, Ph 133, Stokes
—2, III MTWThF, Ph 133, Winckler
—3, VI MTWThF, Ph 133, Earl

51A Physics Lab (1 cr; prereq ¶51)
Lab sec assigned during first 2 days of class

51H **Honors Course: Interm Physics** (4 cr; prereq 50, ITM 25A or Math 54, △)
II MTWThF, Ph 170, Ney

53H **Honors Course: Physics Lab** (1 cr; prereq ¶51H, △) Likely

104 **Mechanics, Electromagnetism** (4 cr; prereq 102)
—1, I MTWF, Ph 170, Werntz
—2, I MTWF, Ph 145, Zimmermann

111 Modern Physics (3 cr; prereq 109 or ♯)
VI MWF, Ph 145, Johnston

112 Atomic, Nuclear Physics (3 cr; prereq 110)
VI MWF, ME 110, Geffen

118 Physical Investigation (3 cr; prereq △)

122 **Experimental Nuclear Physics II** (3 cr; prereq 50 or 107 or 108, ♯)
—1, VI-IX TTh, Ph 250, Johnson
—2, VII-X MF, Ph 250, Benson

125 Thermodynamics, Statistical Mechanics, Theories of Structure of Matter (3 cr; prereq 124 or ♯)
IV MWF, Arch 145, Hwang

133 Physical Optics (3 cr; prereq 15 cr, ITM 25A or Math 54)
II TThS, Ph 143, Valasek

133A **Physical Optics Lab** (1 cr; prereq ¶133)
Lect VII T, Ph 143, Valasek
—1, Lab VIII-X T, Ph 348
—2, Lab VIII-X Th, Ph 348

136 Spectrum Analysis (3 cr; prereq 15 cr, ITM 25A or Math 54)
Lect VII T, Ph 143, Valasek
Lab VIII-X TTh, Ph 348

148 Application of Electronic Circuits (4 cr; prereq 146 or ♯)
Lect II MWF, Ph 133, Blair
—1, Lab VII-IX M, Ph 256
—2, Lab VI-VIII T, Ph 256
—3, Lab VI-VIII W, Ph 256
—4, Lab VI-VIII Th, Ph 256
—5, Lab VII-IX F, Ph 256
—6, Lab II-IV S, Ph 256

167 Meteorology II (3 cr; prereq 166, vec anal or ♯) Mantis

173 Theoretical Physics (3 cr; prereq 172)
II MWF, Ph 145, Cheston

185 Atomistics, Quantum Mechanics (3 cr; prereq 183)
IV MWF, Ph 145, Sanders

206 Statistical Thermodynamics (3 cr; prereq 205)
III TThS, Ph 145, Wall

212 Quantum Mechanics (3 cr; prereq 211)
VI MWF, Ph 143, Bolsterli

215 Seminar: Contemporary Experimental Physics (ar cr)

218 Seminar: Contemporary Theoretical Physics (ar cr)
II TTh, Ph 145, Cheston, Bolsterli

224 Prin of Mathematical Physics (3 cr; prereq 223, ¶Math 208 or 263)
III MWF, Ph 145, Hill

230 Nuclear Physics (3 cr; prereq 229)
III MWF, Ph 143, Hintz

239 Seminar: Radiofrequency Spectroscopy (ar cr)

242 Seminar: Solid State, Low Temperature Physics (ar cr)
2:30-4:00 WF, Ph 236a, Sanders, Werntz

251 Solid State Physics (3 cr per qtr; prereq 173, 185 or ♯) Lowe

254 Seminar: Nuclear Physics (ar cr)
VIII-IX F, Ph 145, Johnston, Lee

257 Seminar: Mass Spectroscopy (ar cr)
2:30-4:00 W, Ph 145, Nier, Johnson

260 Seminar: Cosmic Rays (ar cr)
V Th, Ph 145, Ney, Winckler

263 Mathematical Foundations of Quantum Mechanics (ar cr; prereq 262)
VII MWF, Ph 143

266 Elem Particle Physics (3 cr; prereq 265)
VI-VII TTh, Ph 145, Gasiorowicz

275 Plasma Physics (3 cr; prereq 274)
II MWF, Ph 143, Kellogg

303 Research (ar cr)

UNATTACHED COURSES

General Engineering (GE)

70 **Slide Rule** (1 cr; prereq ITM 11 or ¶)
—1, III T, Arch 10
—2, V T, Arch 10
—3, I T, Arch 10

101 **Contracts, Specifications** (3 cr; prereq 5th yr)
IV MWF, Arch 130

105 **Engineering Library Techniques** (1 cr)
VI T, E 206

Geophysics (GPhy)

92 **Industrial Employment** (2 cr; prereq 91) Mooney

110 **Exploration Geophysics** (3 cr; prereq Phys 9 or 14, Geol 2)
III MWF, MinMet 120, Mooney

125 **Prin of Gravity, Magnetic Exploration** (3 cr; prereq Phys 9 or 14, Geol 1, ITM 25A)
III TTh, MinMet 219, Thiel

137 **Research Probs** (ar cr; prereq 136) Mooney, Thiel

175 **Gravity, Geodesy** (3 cr; prereq Phys 14, ITM 25A) Thiel

233 Theoretical Seismology (3 cr; prereq 232)
VIII MWF, MinMet 120, Mooney

COLLEGE OF VETERINARY MEDICINE

Veterinary Anatomy (VAna)

130 Neuroanatomy (3 cr; prereq 101, 151, ‡)
Lect VII TTh, VetS 257, Kitchell
Lab VIII-IX TTh, VetS 141, Kitchell

153 Microscopic Anatomy of Domestic Animals (5 cr; prereq 152, ‡)
Lect VI MW, I F, VetS 257, Weber
Lab VII-IX MW, VetS 247, Weber

160 Histological, Microscopic Techniques (3 cr; prereq 151, ‡) Weber

191 Special Studies (1-5 cr; prereq 151, ‡) Kitchell, Weber

Veterinary Bacteriology and Public Health (VBac)

101 Gen Bacteriology, Immunology (6 cr; prereq 10 cr zool, 13 cr chem, ‡)
Lect I MW, II MF, VetS 257, Lindorfer, Loken
Lab III-IV MWF, II W, VetS 325, Lindorfer, Loken

127 Public Health (2 cr; prereq 126, ‡)
VII-VIII W, VetS 229, Anderson

128 Probs: Bacteriology, Public Health (ar cr; prereq 103, ‡) Anderson, Pomeroy, Lindorfer, Loken

201 Adv Poultry Diseases (ar cr; prereq 131, ‡) Pomeroy

205 Adv Bacteriology (ar cr; prereq ‡) Pomeroy, Fenstermacher, Lindorfer

211 Seminar: Veterinary Bacteriology (1 cr; prereq ‡)
V F, VetS 257, Lindorfer

Veterinary Medicine and Clinics (VMC)

52 Animal Hygiene (5 cr)
I MTWTh, Meat Shop, I F, TSH 220, Sorensen

101 Physical Diagnosis (4 cr; prereq ‡)
Lect VI MWF, VetS 229, Low
—1, VII-IX M, VetC 70, Low
—2, VII-IX W, VetC 70, Sorensen, Wass

104 Large Animal Medicine (5 cr; prereq 103, ‡)
I MTWThF, VetA 103, Wass

112 Clinics (5 cr; prereq 111)
II-IV MTWThF, I-III S, VetC 125, 70, Hoyt, others

116 Clinics (5 cr; prereq 115, ‡)
II-IV MTWThF, I-III S, VetC 125, 55, Hoyt, others

117C Clinical Conference (⅓ cr, †117A-117B-117C; prereq 117B, ‡)
IX W, VetC 125, Campbell

118C Clinical Conference (⅓ cr, †118A-118B-118C; prereq 118B, ‡)
IX W, VetC 125, Campbell

121 Small Animal Medicine (4 cr; prereq ‡)
VII MWThF, VetC 125, Mather

132 Infectious Diseases of Large Animals (5 cr; prereq 131, ‡)
I MTWThF, VetC 125, Hoyt

137 Animal Diseases, Poisonous Plants (3 cr, §old 141, §PlPa 137; prereq ‡)
VI MW, VetC 125, VII-IX M, AgBot 106, Johnson

201 Adv Veterinary Medicine (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen, Low

202 Adv Diagnosis, Therapeutics of Animal Diseases (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen, Low

203 Seminar (ar cr; prereq ‡) Hoyt, Mather, Sorensen, Low

204 Medical Conference (ar cr; prereq 104, 131, ‡) Hoyt, Mather, Sorensen, Low

Veterinary Obstetrics (VObs)

101 Veterinary Obstetrics (4 cr; prereq VMC 101, ‡)
Lect VI M, VetA 103, VI F, VIII W, VetC 125, Cates, Zemjanis
Lab VIII-IX MThF, VetC 55

201 Adv Diagnostic Methods (3 cr; prereq 102) Zemjanis

Veterinary Pathology and Parasitology (VPaP)

102 Parasitology (5 cr; prereq ‡)
Lect I MWThF, VetS 229, Griffiths
—1, VII-IX W, VetS 225, Griffiths, Bemrick
—2, VII-IX M, VetS 225, Griffiths, Bemrick

153 Special Pathology, Infectious Diseases of Animals (5 cr; prereq 152, ‡)
Lect II MWF, VetS 229, Sautter
Lab VI-VIII TTh, VetS 225, 229, Perman, Dennis

157 Veterinary Necropsies (1-3 cr; prereq 153, ‡) Sautter

158 Surgical Pathology (1-3 cr; prereq 153, ‡) Sautter

201 Adv Veterinary, Poultry Pathology (ar cr; prereq ‡) Fenstermacher

202 Seminar: Pathology (1 cr; prereq 153, ‡) Sautter

203 Neoplasms of Domestic Animals (ar cr; prereq ‡) Sautter

240 Adv Parasitology (ar cr; prereq 102, ‡) Griffiths

241 Probs: Parasitology (ar cr; prereq 102, ‡) Griffiths

Veterinary Physiology and Pharmacology (VPP)

42 Systemic Mammalian Physiology II (2 cr; prereq 41, AgBi 6 or ¶)
VI-VII T, TEH 105, Sullivan, Burger

109 Physiology of Endocrine, Reproductive Systems (3 cr; prereq 108, ‡)
III MWF, VetS 229, Good, Bergman, Sullivan

130 Probs: Physiology (ar cr; prereq 109 or Phsl 106-107, ‡) Good, Bergman

151 Pharmacology (4 cr; prereq 108, ‡)
Lect IV MW, II Th, VetA 103, Stowe, Hammond

n Lab VII-IX F, TEH 103, Stowe, Hammond

161 Seminar: Pharmacology (ar cr; prereq 152, ‡) Hammond, Stowe

171 Probs: Pharmacology (ar cr; prereq 152, ‡) Stowe, Hammond

Veterinary Surgery and Radiology (VSR)

103 Special Surgery (4 cr; prereq 101, ‡)
Lect VI TWTh, VetA 103, Usenik
Lab VII-IX T, VetA 102, Kurtz

210 Adv Radiology (2 cr; prereq 121, ‡) Spurrell

219 Fundamentals of Nuclear Medicine (3 cr; prereq ‡) Spurrell

220 Anesthesia (ar cr; prereq 103, ‡) Arnold, Usenik, Clifford

225 Adv Small Animal Surgery (ar cr; prereq 103, ‡) Arnold, Usenik, Clifford

230 Adv Large Animal Surgery (ar cr; prereq 103, ‡) Usenik, Arnold

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE (Air)

33 Air Science I (2 cr)
Leadership Laboratory I M or V M or VI M, Thompson
—1, I TTh, A 12
—2, III TTh, A 12
—3, V TTh, A 12
—4, VI TTh, A 12

36 Air Science II (no cr; prereq 35)
Leadership Laboratory I M or V M or VI M, Bauer

133 Air Science III (3 cr)
—1, I TWThF, A 11, Roseen, Kramer
—2, V TWThF, A 11

136 Air Science IV (3 cr)
Leadership Laboratory I M or V M or VI M, Stockdale
—1, II TWThF, A 11
—2, IV TWThF, A 11

MILITARY SCIENCE (Mil)

3 Military Science I (1 cr; prereq 2)
Leadership Laboratory VI and VII Th, Rutledge
—1, II M, A 116A, Edwards
—2, III M, A 116A, Edwards
—3, VI M, A 116A, Edwards
—4, II T, A 116A, Edwards
—5, III T, A 116A, Edwards

6 Military Science II (1 cr; prereq 5)
Leadership Laboratory VI and VII Th, Rutledge
—1, II T, A 201, Rutledge
—2, III T, A 201, Rutledge
—3, V T, A 201, Rutledge
—4, VI T, A 201, Rutledge

153 Military Science III (3 cr; prereq 152)
Leadership Laboratory VI and VII Th, Rutledge
—1, I MTW, A 105, Elliott
—2, IV MTW, A 105, Elliott
—3, VI MTW, A 105, Elliott

156 Military Science IV (3 cr; prereq 155)
Leadership Laboratory VI and VII Th, Rutledge
—1, II MTW, A 116, Carlton
—2, V MTW, A 116, Carlton

MORTUARY SCIENCE (Mort)

3 Introd Restorative Art (1 cr)
I Th, NH 100, Gates

6 Restorative Art (1 cr, †4-5-6; prereq 5)
—1, VIII-IX T, NH 100, Gates, Koschig
—2, VIII-IX Th, NH 100, Gates, Koschig

8 Orientation in Funeral Service (1 cr)
I T, WeH 301, Koschig

9 Orientation in Funeral Service (1 cr)
I Th, Owre 12, Thorsell

10 Orientation in Funeral Service (1 cr)
VIII M, NH 122, Slater

11 Mortuary Mgt (2 cr; prereq 10)
II TTh, JacH 104, Thorsell

12 **Embalming** (3 cr; prereq 10)
II MWF, JacH 304, Thorsell

13 **Mortuary Law** (3 cr)
I MWF, ForH 185, Grayson

52 **Anatomy** (3 cr, †51-52; prereq 51)
Lect V TTh, JacH 304, Buckman
Lab VI-VII TTh, JacH 301, 302, 303

55 **Medical Science Survey** (3 cr; prereq 52, 54)
I MWF, MH 213, Swallen

58 **Embalming Theory, Practice** (3 cr, †56-57-58; prereq 57)
VI MWF, P 218, Slater

59 **Public Health, Minnesota Law, Regulations** (2 cr; prereq △)
IV TTh, JacH 104, Larson

62 **Funeral Mgt** (2 cr; prereq 11)
I TTh, P 110, Slater, Koschig

63 **Business Methods** (2 cr; prereq Econ 24)
III TTh, NH 213, Lund

71 **Chemistry for Embalmers** (3 cr, †70-71; prereq 70)
IV MTTh, NH 213, King

72 **Bacteriology** (4 cr; prereq Zool 3 or 15, Phsl 4)
Lect II MWF, Owre 111, Freundlich
Lab III M, III-IV F

NAVAL SCIENCE (Nav)

13 **Sea Power** (3 cr)
Drill 7:30-8:20 am T
—1, Lect III MWF, A 205, McCabe
—2, Lect IV MWF, A 205
—1, Lab III T, A 205
—2, Lab IV T, A 205

23 **Naval Weapons** (3 cr)
Drill 7:30-8:20 am T
—1, Lect III MWF, A 202, Laing
—2, Lect IV MWF, A 202
—1, Lab III T, A202
—2, Lab IV T, A 202

53 **Celestial Navigation** (3 cr)
Drill 7:30-8:20 am T
—1, VII-VIII MW, A 12A, Loberger
—2, I-II TTh, A 12A

56 **Modern Basic Strategy, Tactics** (3 cr)
Drill 7:30-8:20 am T
Lect IV MWF, A 12A, Meyer
Lab IV T, A 12A

59 **Advanced Supply Afloat** (3 cr)
Drill 7:30-8:20 am T
Lect V MWF, A 202, Donnelly
Lab V T, A 202

63 **Leadership** (3 cr)
Drill 7:30-8:20 am T
—1, Lect III MWF, A 12A, Simmering
—2, Lect V MWF, A 12A
—1, Lab III T, A 12A
—2, Lab V T, A 12A

66 **Leadership** (3 cr)
Drill 7:30-8:20 am T
Lect II MWF, A 205, Meyer
Lab II T, A 205

PHYSICAL EDUCATION FOR MEN (PEM)

Nonprofessional

1C **Sports Education** (1 cr)

Adapted Activities
—1, III MWF, StadS, Osell
—2, IV MWF, StadS, Osell
—3, VIII MWF, StadS, Osell

Archery
—4, II MWF, FieldHse, Gostick
—5, 10:00-10:50 MWF, Gy 100 (StP Campus), McDonnell

Bowling, Bgn
—6, I MWF, CMU, Kulbitski
—7, II MWF, CMU, Lewis
—8, 10:00-10:50 TTh, StCen (StP Campus), 1 hr ar, McDonnell

Golf
—9, II MWF, StadS, Bolstad
—10, III MWF, StadS, Bolstad
—11, II TTh, StadS, 1 hr ar, Bolstad
—12, III TTh, StadS, 1 hr ar, Bolstad
—13, 12:00-12:50 MWF, Gy 100 (StP Campus), McDonnell
—14, 1:00-2:50 TTh, Gy 100 (StP Campus), McDonnell

Handball
—15, 1:00-1:50 MWF, Gy 100 (StP Campus), Chopp

Handball-Paddleball
—16, IV MWF, StadN, MacLeod

Softball
—17, III MWF, Northrop Field, Gostick
—18, IV MWF, Northrop Field, Daly

Swimming, Bgn
—19, II MWF, CH Pool, Boyce
—20, VII MWF, CH Pool, Thorpe
—21, III T, II-III Th, CH Pool, Thorpe

Tennis, Bgn
—22, 9:00-9:50 MWF, Gy 100 (StP Campus), McDonnell
—23, 8:00-8:50 TTh, Gy 100 (StP Campus), 1 hr ar, McDonnell
—24, V MWF, CH Gym, Novak

Weight Lifting
—25, III T, III-IV Th, CH Wt Rm, Daly
—26, VI MWF, CH Wt Rm, Novak

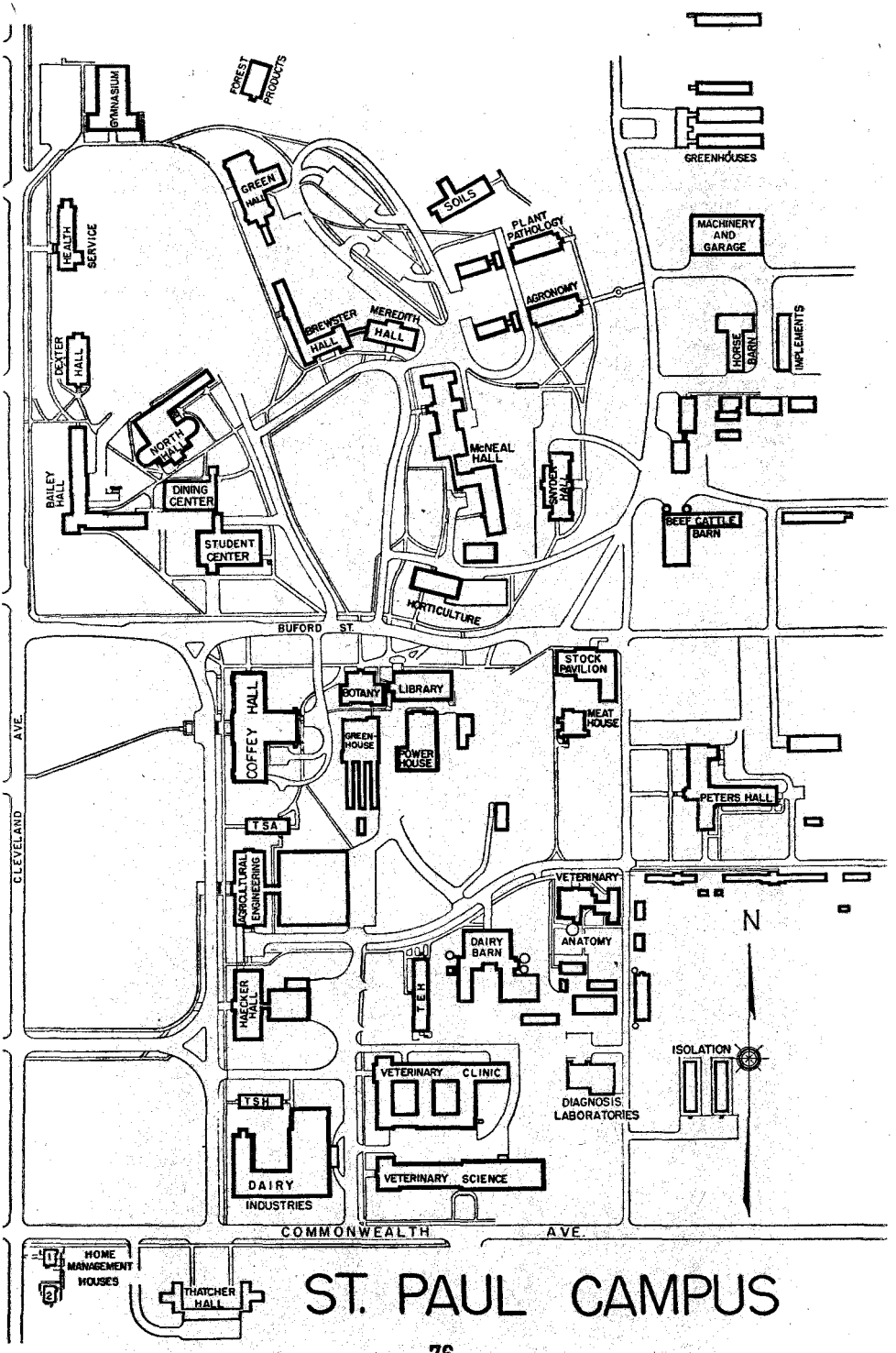
Freshman Baseball
—27, Ar, Gostick

Freshman Golf
—28, Ar, Bolstad

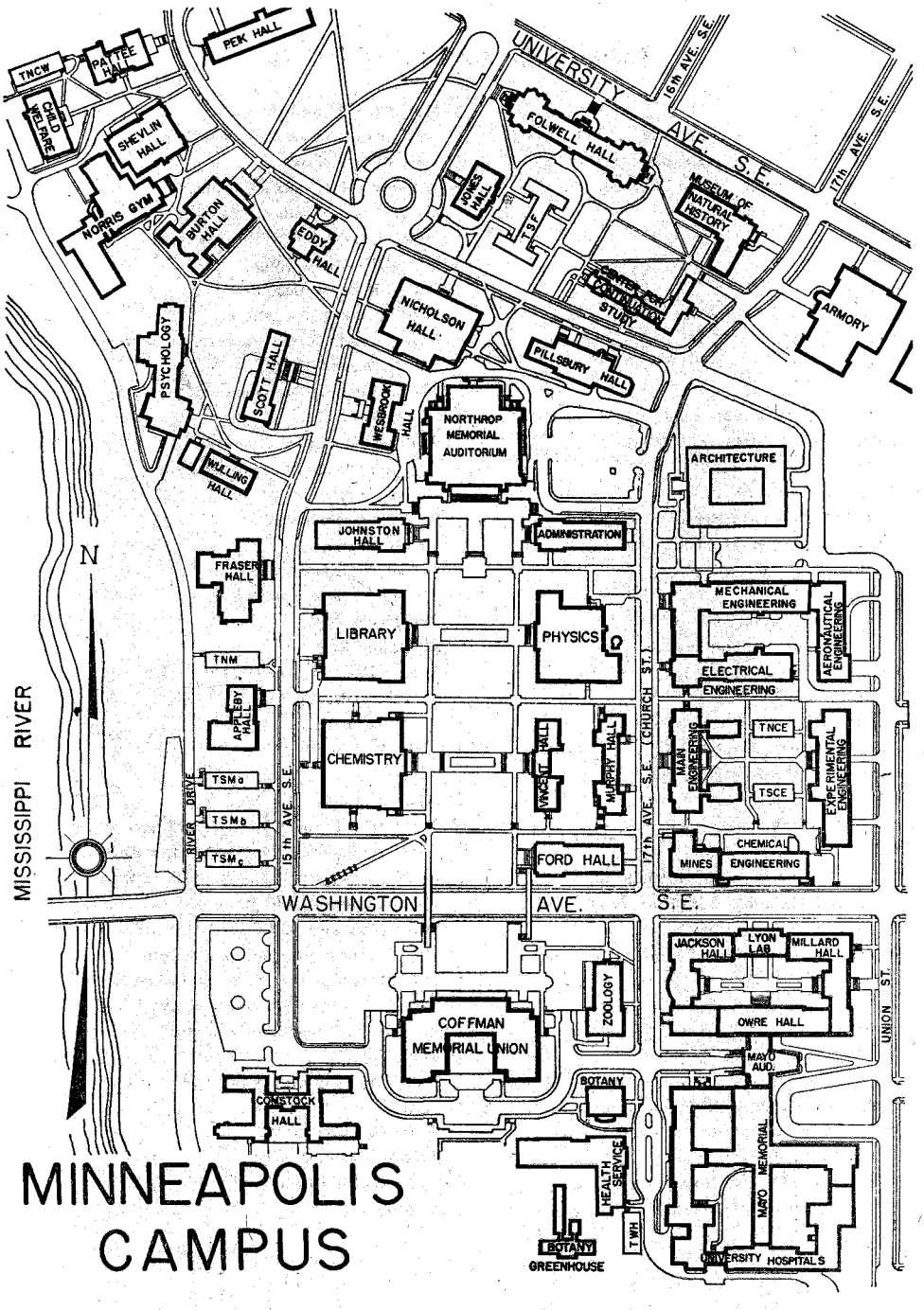
Freshman Tennis
—29, Ar, Lewis

Freshman Track
—30, Ar, Kelly

2C Sports Education (1 cr)
Body Building
—1, VIII MWF, StadS, Osell
Ballroom Dancing
—2, I TTh, NGW
—3, VII TTh, NGW
Folk, Square Dancing
—4, VIII TTh, NGW
Life Saving
—5, III MWF, CH Pool, Boyce
Squash Racquets
—6, V MWF, StadN, MacLeod
Swimming, Bgn, Interm
—7, VII MWF, Gy Pool **(StP Campus)**, Chopp
—8, VIII MWF, Gy Pool **(StP Campus)**, Chopp
Swimming, Interm
—9, II T, II-III Th, CH Pool, Boyce
—10, VI MWF, CH Pool, Thorpe
—11, VI T, VI-VII Th, CH Pool, Thorpe
—12, VI-VII T, VI Th, CH Pool, Thorpe
Tennis, Interm
—13, III MWF, CH Gym, Daly
—14, IV MWF, CH Gym, Lewis
Trampoline
—15, VII MWF, App Gym, Novak
Varsity Baseball
—16, Ar, Siebert
Varsity Golf
—17, Ar, Bolstad
Varsity Tennis
—18, Ar, Lewis
Varsity Track
—19, Ar, Kelly



ST. PAUL CAMPUS


THCW
PATTEE HALL
CHILD WELFARE
PEK HALL
SHEVLIN HALL
NORRIS GYM
BURTON HALL
EDDY HALL
UNIVERSITY AVE. S.E.
16th AVE. S.E.
17th AVE. S.E.
FOLWELL HALL
JONES HALL
T.S.F.
MUSEUM OF NATURAL HISTORY
CENTER FOR CONTINUATION STUDY
ARMORY
NICHOLSON HALL
PILLSBURY HALL
PSYCHOLOGY
SCOTT HALL
WESBROOK HALL
NORTHROP MEMORIAL AUDITORIUM
MULLING HALL
ARCHITECTURE
JOHNSTON HALL
ADMINISTRATION
FRASER HALL
LIBRARY
PHYSICS
MECHANICAL ENGINEERING
AERONAUTICAL ENGINEERING
ELECTRICAL ENGINEERING
TNM
APPLEBY HALL
CHEMISTRY
VINCENT HALL
MURPHY HALL
MAIN ENGINEERING
TNCE
TSCE
EXPERIMENTAL ENGINEERING
TSMa
TSMb
TSMc
RIVER DRIVE
15th AVE. S.E.
FORD HALL
CHEMICAL
MINES
ENGINEERING
17th AVE. S.E. (CHURCH ST.)
N
MISSISSIPPI RIVER
WASHINGTON AVE. S.E.
JACKSON HALL
LYON LAB
MILLARD HALL
OWRE HALL
UNION ST.
ZOOLOGY
COFFMAN MEMORIAL UNION
MAYO AUD.
BOTANY
COMSTOCK HALL
HEALTH SERVICE
MAYO MEMORIAL
T.W.H.
BOTANY GREENHOUSE
UNIVERSITY HOSPITALS
MINNEAPOLIS CAMPUS

BUILDING ABBREVIATIONS

A, Armory
AE, Aeronautical Engineering
AgBot(StP), Agricultural Botany
AgEng(StP), Agricultural Engineering
Agr(StP), Agronomy
AH, Appleby Hall
Arch, Architecture
Bo, Botany
BoG, Botany Greenhouse
Bu, Burton Hall
C, Chemistry
CH, Cooke Hall
ChE, Chemical Engineering
CMU, Coffman Memorial Union
CofH(StP), Coffey Hall
CW, Child Welfare
DCB(StP), Dairy Cattle Barn
DI(StP), Dairy Industries
E, Main Engineering
EdH, Eddy Hall
EE, Electrical Engineering
Ex, Experimental Engineering
FieldHse, Fieldhouse
FolH, Folwell Hall
ForH, Ford Hall
FP(StP), Forest Products
FraH, Fraser Hall
GH(StP), Green Hall
Gy(StP), Gymnasium
HH(StP), Haecker Hall
HL, Hydraulic Lab (Hennepin Island)
HolB, Holman Bldg (2035 Univ Ave)
Hosp, University Hospitals
Hr(StP), Horticulture
HS, Health Service
J, Jones Hall
JacH, Jackson Hall
JohH, Johnston Hall
Lib, Walter Library
LsPav(StP), Livestock Pavilion
LyonL, Lyon Laboratories
Mayo, Mayo Memorial
McNH(StP), McNeal Hall
ME, Mechanical Engineering
MeH(StP), Meredith Hall
MEx, Mines Experiment Station
MH, Millard Hall
MinMet, Mines and Metallurgy
MMA, Mayo Memorial Auditorium
MNH, Museum of Natural History
MSh(StP), Meat Shop
MurH, Murphy Hall
MusEd, Music Education
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
Owre, Owre Hall
P, Pillsbury Hall
PeikG, Peik Hall Gymnasium
PeikH, Peik Hall
PetH(StP), Peters Hall
Ph, Physics
PoH, Powell Hall
PP(StP), Plant Pathology
Psy, Psychology
Pt, Pattee Hall
SBH, State Board of Health
ScH, Scott Hall
ShH, Shevlin Hall
SnH(StP), Snyder Hall
So(StP), Soils
Stad, Stadium
TEH(StP), Temporary, East of Haecker Hall
TNCE, Temporary, North Court of Engineering
TNCW, Temporary, North of Child Welfare
TNM, Temporary, North of Mines (Appleby Hall)
TSCE, Temporary, South Court of Engineering
TSF, Temporary, South of Folwell
TSH(StP), Temporary, South of Haecker Hall
VCHH, Variety Club Heart Hospital
VetA(StP), Veterinary Anatomy
VetC(StP), Veterinary Clinic
VetS(StP), Veterinary Science
VH, Vincent Hall
WeH, Wesbrook Hall
WmsA, Williams Arena
WuH, Wulling Hall
Z, Zoology

DIRECTORY OF DEPARTMENTAL OFFICES

Admissions and Records, Office of:	
Minneapolis Campus	105Adm
St. Paul Campus	220CofH
Aeronautical Engineering	107AE
Agricultural Biochemistry	214SnH
Agricultural Economics	303HH
Agricultural Education	205Hr
Agricultural Engineering	200AgEng
Agricultural Journalism	107CofH
Agronomy and Plant Genetics	303Agr
Air Science	3A
American Studies	101TSF
Anatomy	201JacH
Anesthesiology	C596Mayo
Animal Husbandry	122PetH
Anthropology	325ForH
Architecture	110Arch
Art	108J
Art Education	106J
Astronomy	358Ph
Bacteriology	1060Mayo
Biology	104Z
Biophysics	48Ph
Botany	8Bo
Business Administration	109VH
Cancer Biology	274LyonL
Chemical Engineering	151ChE
Chemistry	139C
Child Development and Welfare	103CW
Civil Engineering	123E
Classics	311FolH
Dairy Husbandry	202HH
Dairy Industries	225DI
Dental Assisting	360A Owre
Dental Hygiene	360B Owre
Dentistry	136 Owre
Economics	221VH
Electrical Engineering	139EE
Engineering Graphics	142ME
English	219FolH
Entomology and Economic Zoology	300CofH
Family Study Center	400eForH
Food Technology	214SnH
Forestry	110GH
General College	106NH
General Education	204Bu
Geography	290aForH
Geology and Mineralogy	108P
Geophysics	207MinMet
German	210FolH
History	200ForH
Home Economics	200McNH
Home Economics Education	117McNH
Horticulture	111Hr
Industrial Education	103TNCW
Interdisciplinary Programs	225JohH
Journalism	111MurH
Laboratory Medicine	C205Mayo
Law	125FraH
Library	3Lib
Linguistics and Philology	311FolH
Mathematics (IT)	114E
Mathematics (SLA)	119FolH
Mechanical Engineering	125ME
Medicine	C309Mayo
Metallurgy	403MinMet
Military Science	108A
Mines and Metallurgy	112MinMet
Mortuary Science	155NH
Music	107ScH
Music Education	214ScH
Naval Science	203A
Nursing	125 Owre
Obstetrics and Gynecology	A616Mayo
Ophthalmology	A684Mayo
Otolaryngology	A605Mayo
Pathology	110JacH
Pediatrics	1403Mayo
Pharmacology	105MH
Pharmacy	115AH
Philosophy	100WeH
Physical Education for Men	111CH
Physical Education for Women	101NGW
Physical Medicine	860Mayo
Physics	148Ph
Physiological Chemistry	227MH
Physiology	424MH
Plant Pathology and Agricultural Botany	304PP
Political Science	395ForH
Poultry Husbandry	205PetH
Psychiatry and Neurology	B692Mayo
Psychology	112Psy
Public Health	1325Mayo
Radiology	B238Mayo
Rhetoric	230AgEng
Romance Languages	200FolH
Scandinavian	13FolH
Slavic and Oriental Languages	322FolH
Social Work	400ForH
Sociology	400ForH
Soils	125So
Speech	309FolH
Student Counseling Bureau	101EdH
Surgery	B518Mayo
Veterinary Medicine	301VetS
Zoology	108Z

FINAL EXAMINATIONS

Hours and days—The time of your examination is based on the hours and days the class is regularly scheduled, and the college under which the course is listed in the *Class Schedule*. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine . . . or to courses numbered over 200 which have no regularly scheduled classrooms.

In determining your proper final examination time from this schedule:

- Go by the lecture hours rather than the laboratory or recitation hours.
- Follow the MWF sequence if your class meets four or more days a week.
- Use the first full class hour if your class meets for more than one continuous hour.
- Use the common examination hour if your course is listed on the following page.

Classes meeting I-II Hour Saturday only will be examined 8:00-10:00 S June 3.

Classes meeting III-IV Hour Saturday only will be examined 10:30-12:30 S June 3.

Courses Listed Under Business Administration, General College, and Institute of Technology

Class Hours					Class Hours				
I	MWF	1:30- 3:30	T	June 6*	VI	MWF	1:30- 3:30	M	June 5*
I	TThS	10:45-12:45	F	June 9	VI	TTh	4:00- 6:00	M	June 5
II	MWF	3:45- 5:45	Th	June 8*	VII	MWF	8:00-10:00	Th	June 8*
II	TThS	1:30- 3:30	S	June 3	VII	TTh	10:30-12:30	Th	June 8
III	MWF	10:15-12:15	S	June 3*	VIII	MWF	7:00- 9:00 **pm**	W	June 7*
III	TThS	10:45-12:45	W	June 7	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:00-10:00	T	June 6*	IX				
IV	TThS	1:30- 3:30	F	June 9	X				
V	MWF	1:30- 3:30	W	June 7*					
V	TTh	4:00- 6:00	W	June 7					

Courses Listed Under Science, Literature, and the Arts, Education, Medical Sciences‡, Dentistry‡, and Unattached Departments**

Class Hours					Class Hours				
I	MWF	3:45- 5:45	T	June 6*	VI	MWF	1:30- 3:30	M	June 5*
I	TThS	10:45-12:45	F	June 9	VI	TTh	4:00- 6:00	M	June 5
II	MWF	1:30- 3:30	Th	June 8*	VII	MWF	8:00-10:00	Th	June 8*
II	TThS	1:30- 3:30	S	June 3	VII	TTh	10:30-12:30	Th	June 8
III	MWF	8:00-10:00	S	June 3*	VIII	MWF	7:00- 9:00 **pm**	W	June 7*
III	TThS	10:45-12:45	W	June 7	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	10:15-12:15	T	June 6*	IX				
IV	TThS	1:30- 3:30	F	June 9	X				
V	MWF	1:30- 3:30	W	June 7*					
V	TTh	4:00- 6:00	W	June 7					

Courses Listed Under Agriculture, Forestry, and Home Economics

Class Hours					Class Hours				
I	MWF	1:30- 3:30	T	June 6*	VI	MWF	1:30- 3:30	M	June 5*
I	TThS	10:45-12:45	F	June 9	VI	TTh	4:00- 6:00	M	June 5
II	MWF	1:30- 3:30	Th	June 8*	VII	MWF	8:00-10:00	Th	June 8*
II	TThS	1:30- 3:30	S	June 3	VII	TTh	10:30-12:30	Th	June 8
III	MWF	8:30-10:30	S	June 3*	VIII	MWF	7:00- 9:00 **pm**	W	June 7*
III	TThS	10:45-12:45	W	June 7	VIII	TTh	Instructor will arrange examination time and room with Room Scheduling Office.		
IV	MWF	8:30-10:30	T	June 6*	IX				
IV	TThS	1:30- 3:30	F	June 9	X				
V	MWF	1:30- 3:30	W	June 7*					
V	TTh	4:00- 6:00	W	June 7					

* Classes meeting four or more hours per week may give three-hour examinations provided the instructor notifies the Room Scheduling Office of his intention to do this. Three-hour examinations will be scheduled from 8:30-11:30 or 1:30-4:30 on the respective morning or afternoon the examination would otherwise be given (6:30-9:30 p.m. for VIII Hour classes).

‡ Courses offered primarily to students other than medical and dental students.

** Courses listed under Air Science, Military Science, Mortuary Science, Naval Science, and nonprofessional Physical Education for Men.

Common Examinations—All sections of the following courses are examined together at time indicated.

BA 5—4:00-6:00 F	June 9
BA 24, 25, 26—10:45-12:45 M	June 5
Biol 3, 3A—7:00-9:00 pm T	June 6
Comm 1, 2, 3—4:00-6:00 S	June 3
Comp X—4:00-6:00 S	June 3
Econ 1, 1H, 2—7:00-9:00 pm M	June 5
EG 14—10:45-12:45 F	June 9
EG 15—1:30-3:30 S	June 3
EG 16—10:45-12:45 W	June 7
Engl B, C, 3A*	
Engl 2B, 3B—4:00-6:00 S	June 3
Fren 2C, 3B, 3C—7:30-10:30 W	June 7
GC 32A—10:45-12:45 M	June 5
Ger 1C, 2C, 3C—8:15-10:15 W	June 7
ITM 11, 26A—7:30-10:30 W	June 7
ITM 12, 24A—7:30-10:30 F	June 9
ITM 13A, 25A, 25H—7:30-10:30 M	June 5
Math X, T, 55—8:15-10:15 M	June 5
Math H, 10, 10H, 40, 40H, 53, 54—7:30-10:30 F	June 9
ME 32—10:45-12:45 M	June 5
MM 27, 29—7:30-10:30 M	June 5
MM 40, 41—7:30-10:30 F	June 9
Span 2C, 3C—7:30-10:30 W	June 7

Rooms—Examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Instructors note: Requests for special final examination rooms are submitted to the Office of Room Assignments and Scheduling by your department office on Form A123. These rooms will be scheduled beginning May 9.

Conflicts and Three Examinations in One Day—Report conflicts with examinations in other courses and situations involving three examinations in one day to your college office.

Changes in Final Examination Hours—All requests for adjustment of final examination hours should be made by May 26 to permit publication and orderly consideration of hardships. Additional common examinations may be requested on Form A163, which is available in department offices. The same form is used to request exceptions to official examination hours. Please note Regulations Regarding Examinations below.

University Schedule Committee Regulations Regarding Examinations

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the chairman of the University Scheduling Committee. This prohibition precludes also moving a final examination from a scheduled time to the last or earlier meetings of the class, except laboratory final examinations which cannot be held in accordance with the regular final examination schedule.

2. Instructors requesting any variation from the official final examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one day because of the change in hours being requested.

3. No variations from the University final examination schedule will be considered official until published in the Official Daily Bulletin.

4. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.

Recommended: In order to give students an opportunity for thorough review prior to final examinations, instructors are requested not to schedule quizzes or term papers to be due during the last week of class.

GRADES

Academic Staff—Grades are due in the Office of Admissions and Records within 90 hours after the examination. Spring quarter grades are due beginning June 7 with last day examination grades due by noon, Tuesday, June 13. Messenger service is provided. Please call Extension 6658 when grades are ready. Do not put reports in campus mail.

Students—Your Spring quarter report will be a blueprint of your current record which will be mailed with registration instructions for Fall quarter about July 1 to your home address.

* Follow regular final examination schedule using sectional rather than lecture hours.

GRADING SYSTEM

1. There shall be four permanent grades, A (highest), B, C, and D (lowest), which shall be acceptable for the completion of a single course.

2. There shall be a permanent grade of F (failure) given when a student does not complete successfully the work of a course.

3. There shall be a temporary grade of I (incomplete) which may be assigned when there is not sufficient information immediately available to permit the assignment of a permanent grade. This would be the case if the student has not done all the work of the course or if the instructor does not know why a student, officially registered for his course, has not appeared or has left. If the instructor is able to ascertain that the student has no adequate excuse or if the student attended beyond the sixth week and was failing, F is the appropriate grade.

   An I which is not turned into a permanent grade or into a W (official cancellation with approval of the student's college) by the end of the sixth week of the next regular quarter of attendance shall become an F. (This does not apply to students in the Graduate School or to students in a Master's degree program in undergraduate colleges; their I grades remain until changed by the instructors to some other grade.) Permission to complete the work must be obtained from the instructor. He may set a makeup deadline of less than 6 weeks.

   An extension of time may be permitted for removal of I grades upon recommendation of the instructor concerned and with approval of the Scholastic Committee of the college in which the student is registered. If the petition is presented after the end of the sixth week of the next quarter of residence, a restoration of the mark of I and the completion of the required work would be considered in the nature of a special examination for which the special examination fee would be required.

4. There shall be a symbol W to indicate official cancellation from a course without grade. This shall be assigned in all cases of official cancellation during the first 6 weeks of classes irrespective of the student's standing. Whether cancellation is permitted is within the authority of the student's college to determine. After 6 weeks, W shall be posted only if the student is not failing at the time of official cancellation. W is a registration symbol, not a grade, and shall be posted by the Recorder on the basis of the student's registration activity as approved by the student's college.

5. A student who cancels officially or otherwise leaves a class after the sixth week of classes and is failing at the time shall receive an F.

6. There shall be a symbol X which may be reported in continuation courses in which a student is permitted to continue but in which a grade cannot usually be determined until the sequence is completed. The instructor shall submit a grade for each X when the student has completed the entire sequence.

7. In courses numbered 200 and higher, the permanent grade S (satisfactory) may be used to indicate satisfactory work for graduate students. In calculating grade point averages, it counts as a B.

8. In the Doctor of Medicine program, the permanent grade P (pass) may be used to indicate satisfactory work for Doctor of Medicine candidates. The student's standing will be calculated using more detailed evaluations available in the college office.

9. There shall be a registration symbol V (visitor) to indicate registration as an auditor or visitor.

10. There shall be a symbol T (transferred) indicating credits transferred from another institution, or from one college to another within the University when a revaluation is required. It shall be posted as a preceding supplement to the original grade.

11. For purposes of determining scholarship averages, grade points shall be assigned as follows:

Each credit of A	4 grade points
Each credit of B	3 grade points
Each credit of C	2 grade points
Each credit of D	1 grade point
Each credit of F	0 grade points

   A student's scholastic average—or grade point average—shall be the sum of grade points divided by the sum of credits passed and failed. In general, all credits must enter into the grade point average. If a course is repeated, usually both grades should enter into the computation of the grade point average. However, the faculty of a school or college may determine which credits and grade points are to be included in the average.

12. Any college or school may set special scholastic standards or other standards as a condition for registration in particular courses of study, for placing students on probation, for admission to the college or school, for promotion, for honors, for continued residence in the college or school, or for degrees, etc.

13. The official grade point average shall be calculated in accordance with paragraph 11 above regardless of when grades were earned.

COURSE FEES

All fees are per quarter unless otherwise indicated.

Students taking the following courses will pay course fees in addition to tuition as follows:

Civil Engineering (Summer)
$35.00 per term—23

Composition (SLA)
*$21.00—X Preparatory Composition

English (Duluth and Morris)
*$21.00—X Preparatory English

Health Service (Field Trips and Foreign Study)
$12 per quarter, $6 per Summer Term—Required of students on University Field Trips such as Anthropology, Civil Engineering, Geology, Mines, etc.

Students in University sponsored foreign travel groups are required to enroll in the Blue Cross-Blue Shield program or take out other adequate insurance.

Itasca Biological Station (Summer)
$10.00—Laboratory fee
*$25.00—Research Table fee

Mathematics (IT and Morris)
*$21.00—8 solid Geometry

Mathematics (SLA and Morris)
*$35.00—X Preparatory Mathematics

Modern Language Institute (Summer)
$40.00 per term—French (22, 58, 109); or German (22, 66, 107); or Spanish (22, 58, 109)

Music
$35.00 for 1 half-hour individual lesson per week; $70.00 for 2 half-hour lessons or 1 hour lesson per week—A, D (no cr) ¶¶

$35.00 (2 cr) for 1 half-hour individual lesson per week; $70.00 (4 cr) for 2 half-hour lessons or 1 hour lesson per week—11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 100 ¶¶

$50.00—for 2 half-hour individual lessons per week or 1 hour lesson per week—13B (Summer)

$25.00—60B, 61B, 62B (Summer)
$70.00—for 1 hour lesson per week—204 ¶¶
$10.00—Piano for Children, Ages 6-16

Music Education
225E—Same as Music 11-27, 100 ¶¶

Music (Duluth)
$15 (1 cr) for 10 half-hour lessons; $30 (2 cr) for 10 hour lessons—11, 13, 15, 17, 19, 39, 40, 50, 51, 52, 53, 54, 204

Physical Education (men)
Towel and locker fees for students using PE facilities for activity, $2.50 per quarter payable at department

Uniforms (optional for class recreation activity) $2.00 per quarter payable at department

Physical Education (women)
$3.25 (maximum $6.50 per quarter—All nonprofessional courses except Horseback Riding, 20A, 20B, 20C, 21A, 21B, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 40D, 41A, 41B, 42A, 45, 54, 76, 87, 88

Physical Education (Duluth)
$1.25—1 through 49 (except 45), W66, W67
$5.00—9 (Bowling)

Physical Education (Morris)
$2.00—All courses and intramural activities

Public Health
$100.00—169, 190
$185.50—231, 232
*$200.00—230 (September field course)

Rhetoric (AFHE)
*$7.00 per credit for more than 6 credits in Rhet 1

SPECIAL FEES

Supplement to *General Information Bulletin.*

English for foreign students
$15.00 per qtr—required of foreign students needing special instruction in English

Music Practice Room
$1.00 per qtr for one, $2.00 for two, 50 cents for each addtl hr per week—all instruments except organ
.20 per hr—small organ
.40 per hr—large organ

Record Service Fee
$1.00 Required of all new students. This fee provides three certified copies of student records. When more than three copies of records are requested, a charge of $1 will be made for each additional copy.

Speech and Hearing Clinic—Students
$5.00 per qtr—spec clinical treatment

Speech and Hearing Clinic—Nonstudents
Articulatory cases, per 10 weeks—$15.00 for one, $25.00 for two, $30.00 for three, $35.00 for four, $40.00 for five lessons per week.

Stuttering, per session—$100.00 for full time remediation

DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry cards are $10; Agricultural Biochemistry, Art, Pharmacy, and Physiological Chemistry cards are $5.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be refunded at the end of the course.

You must present your deposit card to be assigned a laboratory desk. Veterans (P.L. 346, 16, 894) will receive information from their instructor concerning deposit cards and laboratory assignments.

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* In lieu of tuition.

¶¶ Number of lessons are doubled per Summer Session term for courses listed in these sections.

COURSES TALLIED IN COLLEGE OFFICES

Aeronautical Engineering
All courses under 200—E 136

Agricultural Biochemistry
1A—CofH 220

Agricultural Economics
2 (lect and lab), 3, 12—CofH 220

Agricultural Engineering
All courses under 200—E 136

Agronomy and Plant Genetics
1—CofH 220

Air Science
All courses—A 1

Analytical Chemistry
57—JohH 210
All other courses under 200—E 136

Animal Husbandry
1—CofH 220

Anthropology
1A, 2A, 165—JohH 210

Architecture
All courses under 200—E 136

Art
25A, 62A—E 136
All other courses under 193 **except** 1, 50, 102, 118, 128, 138, 142, 158, 178—JohH 210

Art Education
17, 18, 19, 54, 84—Bu 206

Astronomy
11—JohH 210

Biology
3 (lect and lab), 3A (lect and lab)—CofH 220 for AFHE, Owre 125 for Nurs, AH 115 for Pharm, NH 150 for Mort Sci, and JohH 210 for other students

Botany
10, 51, 52, 54, 104, 120—JohH 210

Business Administration
1, 5, 24, 26—JohH 210
25—AH 115 for Pharm, and JohH 210 for other students
28—E 136
All other courses under 200 **except** 32, 33, 34, 39, 149—VH 107

Chemical Engineering
All courses under 200—E 136

Child Development and Welfare
80, 81—JohH 210

Civil Engineering
All courses under 200 (lect and lab for 20, 33, 34, 53, 171)—E 136

Communication
All courses—JohH 210

Curriculum and Instruction
60, 61, 62, 63, 64, 65, 66, 101, 109, 110, 125—Bu 206

Dairy Husbandry
9, 149—CofH 220

Economics
1, 1H—JohH 210
2, 2H—AH 115 for Pharm, and JohH 210 for other students
2T—E 136
All other courses under 200 **except** 190—VH for BA, and JohH 210 for other students

Education
55B, 75B—Bu 206

Educational Psychology
142, 150, 151, 218, 218A, 233, 253, 281, 282A—Bu 206

Electrical Engineering
All courses under 200—E 136

Engineering Graphics
All courses—E 136

English
B, C, 2A, 3A—E 136 for IT, and JohH 210 for other students
2B, 3B—E 136 for IT, Owre 106 for DH, and JohH 210 for other students
12H, 22, 23, 39, 55, 56, 73, 74, 139—JohH 210
86—E 136

English Composition
58—VH 107
All other courses—JohH 210

Entomology and Economic Zoology
1, 1A, 127, 128, 146—CofH 220

Family Life
All courses—JohH 210

Forestry
8, 10—CofH 220

French
2C, 3B, 3C, 54, 55—JohH 210

General College
7A, 7C, 10B, 26A—CofH 220 for AFHE, and NH 106 for other students
All other courses—NH 106

General Engineering
All courses—E 136

Geography
1, 4, 41, 139, 140—JohH 210

Geology and Mineralogy
A, 1—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
B, 2, 153—JohH 210

Geophysics
All courses under 200—E 136

German
1C, 2C, 3A, 3B, 3C, 4, 5, 52, 56, 57, 58, 59, 63, 66, 72, 75, 78, 93, 96—JohH 210

History
2, 2H, 3, 3H, 6, 13, 21, 21H, 22, 22H, 55, 58, 72, 88, 92, 99, 111, 127, 130, 139A—JohH 210

History and Philosophy of Education
180—Bu 206

Home Economics
1, 125—CofH 220 for AFHE, and JohH 210 for other students
30—Owre 125 for Nurs, and JohH 210 for other students
All other courses under 200 **except** 122B, 187, 189A, 189B, 189C, 190—CofH 220

Horticulture
10, 22, 40—CofH 220

Humanities
23, 53—E 136 for IT, and JohH 210 for other students
1, 2, 3, 3H, 4, 13, 53H, 54, 63, 73, 133—JohH 210

Hydromechanics
All courses under 200—E 136

Industrial Education
1—Bu 206
6, 9, 15, 16, 22, 50—TNCW 103

Industrial Engineering
All courses under 200—E 136

Inorganic Chemistry
5, 11—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
26, 26H—E 136 for IT, and JohH 210 for other students
All other courses under 200—E 136

Journalism
13—CofH 220 for AFHE, and JohH 210 for other students
14, 15, 18, 41, 51, 54, 58, 66, 69, 79, 101, 122, 142—JohH 210

Mathematics (IT)
All courses under 200—E 136

Mathematics (SLA)
H, T, 10—CofH 220 for AFHE, and JohH 210 for other students
X, 5, 20, 40, 40H, 40A, 53, 54, 55, 59, 100C, 125—JohH 210

Mechanical Engineering
All courses under 200 (lect and lab for 21, 34)—E 136

Mechanics and Materials
All courses under 200—E 136

Mechanized Agriculture
3, 4, 7, 12, 12A, 25, 35, 42, 45, 45A, 130—CofH 220

Metallurgical Engineering
All courses under 200—E 136

Metallurgy
All courses under 200—E 136

Military Science
All courses—A 106

Mining Engineering
All courses under 200—E 136

Mortuary Science
All courses —NH 150

Music
1, 2T, 3T, 5T, 6T, 7C, 11C, 11H, 12C, 36, 43, 76—JohH 210

Music Education
4, 5, 6, 7, 50A, 51, 52, 67, 68, 103—Bu 206

Natural Science
All courses except 173—JohH 210

Naval Science
All courses—A 203

Organic Chemistry
41—CofH 220
62—Mayo C205 for Med Tech, and JohH 210 for other students
63—AH 115 for Pharm, and E 136 for other students
All other courses under 200—E 136

Personal Orientation
All courses—JohH 210

Petroleum Engineering
All courses under 200—E 136

Philosophy
1, 2—E 136 for IT, and JohH 220 for other students
3, 11, 52—JohH 210

Physical Chemistry
All courses under 200—E 136

Physical Education for Men
1C (secs 1, 2, 3, 4, 6, 7, 9, 10, 11, 12, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29, 30)—JohH 210
1C (secs 5, 8, 13, 14, 15, 22, 23)—CofH 220
2C (secs 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 19)—JohH 210
2C (secs 7, 8)—CofH 220
5C, 6C, 8, 9B, 45, 59, 60A—Bu 206

Physical Education for Women
C (nonprofessional) secs 21, 22, 33, 34—CofH 220 for AFHE and JohH 210 for other sections
22B, 22C, 25, 45, 54, 70—Bu 206

Physics
6—JohH 210
9, 12, 13, 50, 51, 51H, 53H, 104, 122, 133A—E 136

Plant Pathology and Botany
1, 3, 120—CofH 220

Political Science
B, 2—E 136 for IT, and JohH 210 for other students
5—JohH 210

Psychology
4-5, 5, 6, 55, 130, 148, 220, 223, 226, 246—JohH 210

Public Health
3, 4, 50, 131—JohH 210
52—CofH 220

Rhetoric
All courses under 200 except 1, 2, 3, 32, 33—CofH 220

Russian
3—JohH 210

Social Science
1, 2, 3—E 136 for IT, and JohH 210 for other students
All other courses—JohH 210

Social Work
267, 270—JohH 210

Sociology
1, 3, 3H—CofH 220 for AFHE, E 136 for IT, and JohH 210 for other students
2—E 136 for IT, and JohH 210 for other students
45, 53—JohH 210

Soils
3B, 19, 119, 127, 131—CofH 220

Spanish
2C, 3A, 3C, 3H, 55—JohH 210

Speech and Theater Arts
All courses under 178 except 150, 157, 163, 166—JohH 210

Zoology
50, 53, 58, 84, 107, 117, 127, 146, 161, 175, 182—JohH 210

CALENDAR

March

23-24 Registration and payment of fees for new students in all undergraduate colleges

27 Spring quarter classes begin

30 Last day for registration and payment of fees for Graduate School, and for teachers in service

31 Holiday (Good Friday)

MARCH

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

April

27 Senate meeting, 3:30 p.m.

May

25 Cap and Gown Day Convocation; 11:30 a.m., IV hour classes excused

30 Holiday (Memorial Day)

MAY

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

June

1 Senate meeting, 3:30 p.m.

3-9 Final examination period

4 Baccalaureate service, 3:00 p.m.

10 Commencement, 8:00 p.m.

10 Spring quarter closes

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REGISTRATION DATES

Students in attendance winter quarter must register during the period set for their college and pay fees by March 16.

Students returning to the University who were not in attendance winter quarter may register during the period set for their college or on March 23-24 with fees due March 24.

Orientation and registration for new students will also be on March 23-24 with fees due March 24.

Agriculture, Forestry, Home Economics (220 Coffey)
Seniors, February 20, 21
Juniors, February 23, 24
Sophomores, February 27, 28, March 1
Freshmen, Special Students, March 2-9

Business Administration (107 Vincent)
Issue of material starts Feb. 16
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Dental Hygiene (106 Owre)
Feb. 20, 21, 23

***Dentistry** (136 Owre)
March 23, 24

Education (206 Burton)
Feb. 20-March 9

General College (106 Nicholson)
Saturday, Feb. 18 (8 a.m.-1 p.m.)
Students registering this day will turn in material to Admissions and Records on Monday, **Feb. 20**
Tues. Feb. 21 (8-11:30 a.m., 1-5 p.m.; classes will not meet)
Feb. 27-March 3 (classes meet as usual)
Returning students: March 6-17

Graduate School (316 Johnston)
Feb. 20-March 30 (Fees due March 30)

***Law** (125 Fraser)
March 23-24

Medical Technology (C-205 Mayo)
Feb. 20-March 3

***Medicine** (1360 Mayo)
March 23-24

Mortuary Science (156 Nicholson)
Feb. 21, 23, 24

Nursing (125 Owre)
Feb. 20-March 3

Occupational Therapy (860 Mayo)
Feb. 20-March 3

Pharmacy (115 Appleby)
Feb. 20-March 3

Physical Therapy (860 Mayo)
Feb. 20-March 3

Public Health (1325 Mayo)
Feb. 20-March 9

Science, Literature, and the Arts
Lower Division (216B Johnston)
Upper Division (223 Johnston)
Special Students (216 or 225 Johnston)
Issue of material starts Feb. 15
Tally starts Feb. 20
Students should complete registration by March 9 because advisers will not be available after that date.

Technology, Institute of
Engineering and Architecture (133 Main Engineering)
Chemistry (127 Chemistry)
Mines and Metallurgy (112 Mines and Metallurgy)
Physics (148 Physics)
Feb. 20-March 1

University College (225 Johnston)
Dates same as for S.L.A.

***Veterinary Medicine** (220 Coffey)
March 23-24

Education and Graduate students taking Saturday Classes only may also register on Saturday April 1 at 206 Burton

*Students in these colleges have normally already registered for the entire year.