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# *The Bulletin of the University of Minnesota*

## *Combined Class Schedule for 1938-1939*

One copy of this schedule is issued without charge to each student in the Colleges of Science, Literature, and the Arts; Education; Agriculture, Forestry, and Home Economics; and the School of Business Administration. Additional copies are obtainable at the Engineers Book Store—17, 18 Engineering Building.

Price: 35 cents



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*Vol. XLI*

*No. 18*

*March 21 1938*

*Entered at the post office in Minneapolis as second-class matter  
Minneapolis, Minnesota*

*Accepted for mailing at special rate of postage provided for in section 1103,  
Act of October 3, 1917, authorized July 12, 1918*

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*of the University of*  
**Minnesota**

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# UNIVERSITY CALENDAR

1938-39

## *Fall Quarter*

1938			
September	12	Monday	Extension registration first semester begins
September	15	Thursday	Payment of fees closes, except for new students <sup>1</sup>
September	19	Monday	Entrance tests
September	19-20		Registration for Freshman Week for all new students entering the freshman class
September	19-23		Examinations for removal of conditions Physical examinations
September	20-23		Registration period, <sup>2</sup> College of Science, Literature, and the Arts
September	21-24		Freshman Week
September	22-23		Registration days <sup>2</sup> for all colleges not included above
September	23	Friday	Payment of fees for new students closes <sup>1</sup> at 4:30 p.m.
September	26	Monday	Fall quarter classes begin 8:30 a.m. <sup>3</sup> First semester extension classes begin <sup>4</sup>
October	1	Saturday	Last day for extension registration without penalty
October	15	Saturday	Homecoming Day
October	20	Thursday	Senate meeting, 4:30 p.m.
November	5	Saturday	Dad's Day
November	8	Tuesday	Election Day; a holiday
November	11	Friday	Armistice Day Convocation
November	24	Thursday	Thanksgiving Day; a holiday
December	1	Thursday	State Day Convocation
December	15	Thursday	Senate meeting, 4:30 p.m.
December	12-17		Final examination period
December	15	Thursday	Commencement Convocation
December	17	Saturday	Fall quarter ends, 6:00 p.m.

## *Winter Quarter*

December	22	Thursday	Payment of fees closes for all students in residence fall quarter <sup>1</sup>
1939			
January	3	Tuesday	Entrance tests

See footnotes on page 5.

## PROGRAM

January	3-4		Registration <sup>2</sup> and payment of fees <sup>1</sup> for new students in all colleges Registration and payment of fees close at 4:30 p.m., January 4
January	5	Thursday	Winter quarter classes begin 8:30 a.m. <sup>3</sup>
January	23	Monday	Extension registration second semester begins
February	4	Saturday	First semester extension classes close
February	6	Monday	Second semester extension classes begin <sup>4</sup>
February	10	Friday	Last day for extension registration without penalty
February	13	Monday	(Sunday, February 12, Lincoln's Birthday); a holiday (except for extension)
February	16	Thursday	Charter Day Convocation Senate meeting, 4:30 p.m.
February	22	Wednesday	Washington's Birthday; a holiday (except for extension)
March	20-25		Final examination period
March	23	Thursday	Commencement Convocation Payment of fees closes for all students <sup>1</sup> in residence winter quarter
March	25	Saturday	Winter quarter ends, 6:00 p.m.

*Spring Quarter*

March	31	Friday	Entrance tests
Mar. 31, Apr. 1			Registration <sup>2</sup> and payment of fees <sup>1</sup> for new students in all colleges. Registration and payment of fees close at 12 m. on April 1
April	3	Monday	Spring quarter classes begin, 8:30 a.m. <sup>3</sup>
April	7	Friday	Good Friday; a holiday (except for extension)
May	6	Saturday	Mother's Day
May	11	Thursday	Cap and Gown Day Convocation
May	18	Thursday	Senate meeting, 4:30 p.m.
May	30	Tuesday	Memorial Day; a holiday
June	2	Friday	Second semester extension classes close
June 9-10 and 12-16			Final examination period
June	11	Sunday	Baccalaureate service
June	16	Friday	Spring quarter ends, 6:00 p.m.
June	17	Saturday	Sixty-seventh annual commencement

*Summer Session*

June	19-20		Registration, first term
June	21	Wednesday	First term Summer Session classes begin 8:00 a.m.

July	4	Tuesday	Independence Day; a holiday
July	27	Thursday	Commencement Convocation
July	28	Friday	First term closes
July	31	Monday	Registration and payment of fees for second term close at 4:30 p.m.
			Second term classes begin 8:00 a.m.
September	1	Friday	Second term closes

<sup>1</sup> New students must pay fees on dates announced for registration. Fees of graduate students are due one week after their registration is approved by the dean of the Graduate School.

<sup>2</sup> Registration subsequent to the date specified will necessitate the approval of the college concerned. See also late fees for late registration, page 55 Bulletin of General Information. No student will be allowed to register in the University after one week from the beginning of the quarter excepting in unusual cases wherein special circumstances shall justify the appropriate committee of the college concerned permitting registration at a later date.

<sup>3</sup> First hour classes begin at 8:15 a.m. at University Farm.

<sup>4</sup> This date does not refer to correspondence study courses, which may be started at any time during the year.

## DIRECTORY OF ADMINISTRATIVE OFFICES

### ADMINISTRATION

Lotus D. Coffman, Ph.D., LL.D., President .....	Adm202
Anne Dudley Blitz, M.A., LL.D., Dean of Women .....	ShH
Edward E. Nicholson, M.A., Dean of Student Affairs .....	Adm213
Rodney M. West, B.A., Registrar .....	Adm105

### COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

John T. Tate, Ph.D., Dean and Professor of Physics .....	Adm219
Joseph M. Thomas, Ph.D., Assistant Dean for the Senior College and Professor of English .....	F219
William H. Bussey, Ph.D., Assistant Dean for the Junior College and Professor of Mathematics .....	F106
Royal R. Shumway, B.A., Assistant Dean for Students' Work and Asso- ciate Professor of Mathematics .....	Adm219

### COLLEGE OF EDUCATION

Wesley E. Peik, Ph.D., Acting Dean and Professor of Education .....	Bu204
William S. Carlson, Ph.D., Principal of the High School, Assistant Pro- fessor of Education, and Director of Student Teaching .....	Ed105
Charles W. Boardman, Ph.D., Chairman of the Students' Work Committee and Professor of Education .....	Ed103
Horace T. Morse, M.A., Director of Bureau of Recommendations and Instructor in Education .....	Bu208

### COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

Walter C. Coffey, M.S., LL.D., Dean and Director of the Department of Agriculture .....	Ad(UF)201
Edward M. Freeman, Ph.D., Dean of the College of Agriculture, For- estry, and Home Economics .....	PP(UF)200

### SCHOOL OF BUSINESS ADMINISTRATION

Russell A. Stevenson, Ph.D., Dean .....	V124
John J. Reighard, M.A., C.P.A., Assistant Dean and Associate Professor of Accounting .....	V
Frederic B. Garver, Ph.D., Chairman of the Curriculum Committee and Professor of Economics .....	V
Bruce D. Mudgett, Ph.D., Chairman of the Graduate Committee and Pro- fessor of Economics .....	V
Harry J. Ostlund, B.A., Chairman of the Students' Work Committee and Assistant Professor of Accounting .....	V

## DIRECTORY OF DEPARTMENTAL OFFICES

Administration (Educational) 202,224Bu	Latin ..... 118F
Agricultural Biochemistry 214SnH(UF)	Library Methods ..... 107Lib
Agricultural Economics .....303aHH(UF)	Mathematics ..... 119F
Agricultural Education .....209Ad(UF)	Methods and Directed Teaching ..... 105Ed, 220,206Bu
Agricultural Engineering .....201En(UF)	Military Science and Tactics..... 105A
Agronomy and Plant Genetics 102Ag(UF)	Music ..... 106Mu
Animal and Poultry Husbandry ..... 8LsPav(UF)	Music Education ..... 106Mu
Anthropology ..... 108WeH	Natural Science (College of Education) ..... 15Ed
Architecture ..... 315E	Nursery School and Kindergarten Education ..... 100CWI
Art Education ..... 209J	Nursing Education ..... 125MeS
Astronomy ..... 359Ph	Orientation ..... 26F
Bacteriology ..... 228MH	Philosophy ..... 323F
Botany ..... 209Bo	Physical Education for Men.... 208CH
Business Administration ..... 124V	Physical Education for Women 101WGm
Center for Continuation Study CCS	Physics ..... 147Ph
Chemistry ..... 127C	Physiology ..... 306MH
Child Welfare ..... 101bPt	Plant Pathology and Botany..... 200PP(UF)
Classics ..... 118F	Political Science ..... 205Bu
Clinical Psychology ..... 112Psy	Preventive Medicine and Public Health ..... HS
Commercial Education ..... 102Ed	Professional Education of Teachers ..... 216,220Bu
Dairy Husbandry .....207HH(UF)	Psychology ..... 112Psy
Drawing and Descriptive Geometry ..... 208E	Public Health Nursing..... HS
Economics ..... 124V	Publications and Rural Journalism ..... 113Ad(UF)
Educational Administration ..... 224Bu	Registrar's Office, University Farm .....203dAd(UF)
Educational Psychology ..... 113Psy	Rhetoric ..... 309En(UF)
Educational Sociology ..... 222Bu	Romance Languages ..... 200F
Elementary Education .....216,220Bu	Scandinavian ..... 122F
English ..... 219F	School Health Work ..... HS
Entomology and Economic Zoology .....300Ad(UF)	Secondary Education ..... 218Bu
Fine Arts ..... 101J	Social Studies (College of Education) ..... 226Bu
Forestry .....205GH(UF)	Sociology and Social Work..... 108J
Geography ..... 101aBu	Soils .....100aSo(UF)
Geology and Mineralogy..... 108P	Speech ..... 309F
German ..... 216F	Supervision (College of Education) .....218,220Bu, 105Ed
Greek ..... 118F	Teachers of Subnormal Children 358Psy
History ..... 102Bu	University Testing Bureau..... 310NMA
History of Education .....206,226Bu	Veterinary Medicine .....119Ve(UF)
Home Economics .....215HE(UF)	Zoology ..... 308Z
Home Economics Education 215HE(UF)	
Horticulture .....111Hr(UF)	
How To Study..... 108Psy	
Human Anatomy ..... 201 IA	
Industrial Education ..... 222Bu	
Journalism ..... 13P	



## EXPLANATIONS

*Course numbering.*—A course is designated by a department name, a number, and a letter. It has the same number in whatever quarter it is offered. The quarter is indicated by letter (f, fall; w, winter; s, spring; su, summer).

**Examples:**

- 1f-2w, a two-quarter course given in the fall and winter.
- 1w-2s, the same course given in the winter and spring.
- 3f,w,s, a one-quarter course given each quarter.

Junior College courses in the College of Science, Literature, and the Arts (primarily for freshmen and sophomores) are numbered from 1 to 49. Senior College courses in the College of Science, Literature, and the Arts are numbered as follows: courses primarily for juniors and seniors, from 50 to 99; for juniors, seniors, and graduates, from 100 to 199; for graduates only, from 200 up. This system is not uniformly followed by departments in other colleges than Science, Literature, and the Arts.

Certain courses numbered under 50 are restricted to juniors and seniors. They are not technically Senior College courses and cannot be used in major or minor sequences in the College of Science, Literature, and the Arts.

*Statement of credits.*—The number of credits stated for two- and three-quarter courses is the number for the entire course, not the number for each quarter.

### OTHER ABBREVIATIONS AND SYMBOLS

I, II, III, etc.	Main campus, first hour (8:30 to 9:20), second hour (9:30 to 10:20), third hour (10:30 to 11:20), fourth hour (11:30 to 12:20), fifth hour (12:30 to 1:20), sixth hour (1:30 to 2:20), seventh hour (2:30 to 3:20), eighth hour (3:30 to 4:20), ninth hour (4:30 to 5:20). University Farm, first hour (8:15 to 9:05), second hour (9:15 to 10:05), etc., to 1:05; sixth hour (1:30 to 2:20), etc.
Ar.	To be arranged or assigned.
Aud.	Auditorium.
Cred.	Credits.
Lab.	Laboratory.
Lect.	Lecture.
MTWThFS	Monday, Tuesday, etc.
Prereq.	Prerequisite.
Rec.	Recitation.
Sec.	Section.

† To receive credit for any part of this course, a student must complete the parts preceding the dagger.

‡ There is a fee (amount to be specified) for this course.

A parenthetical statement after the title of each course gives the following information: the number of credits the course carries, the classes to whom it is open, and the courses prerequisite to it. *Abbreviated statement:* (5 cred.; jr., sr.; prereq. 6). *Expanded statement:* This course carries five credits, is open to juniors and seniors only, and has for a prerequisite, Course 6 in the same department.

### *Buildings*

A, Armory	Ag, Agronomy Bldg., University Farm
Ad, Administration, University Farm	BB, Bull Barn, University Farm
Adm, Administration	BCB, Beef Cattle Barn, University Farm

- BFH, Botany Field House, University Farm  
 Bo, Botany  
 BoG, Botany Greenhouse  
 Bot, Botany, University Farm  
 Bu, Burton Hall  
 C, Chemistry Bldg.  
 CCS, Center for Continuation Study  
 CGD, College Girls' Dormitory, University Farm  
 CH, Cooke Hall  
 CS, Carpenter Shop, University Farm  
 CSP, Cold Storage Plant, University Farm  
 CWI, Child Welfare Institute  
 DB, Dairy Barn, University Farm  
 DeH, Dexter Hall, University Farm  
 DH, Dining Hall, University Farm  
 DHD, Dining Hall Dormitory, University Farm  
 E, Main Engineering  
 Ed, University High School  
 EE, Electrical Engineering  
 EH, Eddy Hall  
 En, Engineering Bldg., University Farm  
 Ex, Experimental Engineering  
 F, Folwell Hall  
 FCFH, Farm Crops Field House, University Farm  
 FdH, Field House  
 G, Greenhouse (13th and University Ave. S.E.)  
 GH, Green Hall, University Farm  
 Gy, Gymnasium, University Farm  
 H, Hospitals  
   CI, Cancer Institute  
   EH, Eustis Hospital  
   EMH, Elliot Memorial Hospital  
   HS, Health Service  
   PW, Psychiatric Ward  
   TM, Todd Memorial Hospital  
   UD, University Dispensary  
 HB, Horse Barn, University Farm  
 HE, Home Economics, University Farm  
 HH, Haecker Hall, University Farm  
 HL, Hydraulics Laboratory, Hennepin Island  
 HMH, Home Management Houses, University Farm  
 HP, Heating Plant  
 Hr, Horticulture, University Farm  
 HS, Health Service, University Farm  
 IA, Institute of Anatomy  
 J, Jones Hall  
 L, Law Bldg.  
 Lib, Library Bldg.  
 LsPav, Livestock Pavilion, University Farm  
 M, Mines Bldg.  
 MB, Music Bldg., University Farm  
 ME, Mechanical Engineering  
 MeS, Medical Sciences  
 MEx, Mines Experiment Station  
 MH, Millard Hall  
 MiU, Minnesota Union  
 MS, Machinery Shop, University Farm  
 MtH, Meat House, University Farm  
 Mu, Music Bldg.  
 NH, Nurses' Hall  
 NMA, Northrop Memorial Auditorium  
 O, Observatory  
 OD, Old Dairy, University Farm  
 P, Pillsbury Hall  
 Pe, Pendergast Hall, University Farm  
 PG, Poultry Group, University Farm  
 Ph, Physics  
 PH, Power House, University Farm  
 Phm, Pharmacy  
 PiH, Pioneer Hall  
 Psy, Psychology  
 Pt, Pattee Hall  
 S, Stadium  
 SaH, Sanford Hall  
 SB, Swine Barn, University Farm  
 SBH, State Board of Health  
 SGD, School Girls' Dormitory, University Farm  
 SH, Seed House, University Farm  
 ShH, Shevlin Hall  
 SnH, Snyder Hall  
 So, Soils, University Farm  
 SpB, Sheep Barn, University Farm  
 SS, Storehouse and Shops  
 TRL, Technological Research Laboratory  
 V, Vincent Hall  
 VB, Veterinary Barn, University Farm  
 Ve, Veterinary, University Farm  
 WeH, Wesbrook Hall  
 Wgm, Women's Gymnasium  
 Z, Zoology Bldg.

## LIBRARY INSTRUCTION

Library Methods 1 is not a part of the professional curriculum of the Division of Library Instruction. Library Methods 51 to 126 are professional courses open only to senior students or graduates (except for a minor in the College of Education). A full four-year course of preparation instead of three is advised wherever practicable but Library Methods 126 is the only one carrying graduate credit. The completion of a full year in Library Methods is accepted for graduation in the College of Science, Literature, and the Arts, the College of Education, and the University College. Senior students from other colleges may be admitted on approval by the dean of the college concerned and the director of the Division of Library Instruction.

The fees for Library Methods (51-126) are \$3 per credit hour or \$40 per quarter (\$3.50 per credit hour or \$50 per quarter for nonresidents). Students with programs in other colleges or divisions (except those registered in Library Methods 1), must pay the special fee for all library instruction courses taken.

A course for hospital library training will also be given in the spring quarter. It will include 12 credit hours of class work, followed by six weeks of practice, or internship, in an approved hospital library. Requirements for admission are the satisfactory completion of at least two quarters of work in an approved library school and courses in Essentials of Medicine for Social Workers (Soc. 136f, 6 cred.) and Abnormal Psychology (Psy. 144f-145w, 6 cred.) or equivalent approved courses. Candidates for admission to this course should apply for a bulletin giving more detailed information regarding the course.

No. 1f,w,s*	Title	Hour	Day	Bldg.	Instructor
	Use of Books and Libraries (2 cred.; fr., soph. only; no prereq.)				
	Sec. 1	II	MW	3Lib	Mr. Russell, Miss Moen
	2	IV	MW	3Lib	Mr. Shove, Miss Thornton
	3	VI	MW	5Lib	Miss Davenport

### *Professional Courses*

51f	Bibliography (3 cred.; no prereq.)	III	MWF	5Lib	Mr. Shove
52f§	Cataloging (3 cred.; no prereq.)				
	Sec. 1 (Ed. students)	I	MWF	5Lib	Miss Hutchinson
	2	IV	MWF	5Lib	Miss Hutchinson
53w	Advanced Cataloging (3 cred.; prereq. 52)				
		IV	MWF	5Lib	Miss Hutchinson
54f§	Classification (3 cred.; no prereq.)	II	TThS	5Lib	Miss Hutchinson
55w	Advanced Classification (3 cred.; prereq. 54)				
		II	TThS	5Lib	Miss Hutchinson
57s	Secondary School Libraries (3 cred.; prereq. 9 cred. in library methods)				
		I	TThS	5Lib	Miss Greer
58s	Public Library Administration (3 cred.; prereq. 9 cred. in library methods)				
		I	TThS	5Lib	Mr. Vitz
60f	Library Binding (1 cred.; no prereq.)				
		III	T	5Lib	Mr. Walter
61f,w,s§	Library Practice (3 to 4½ cred; prereq. 15 cred. in library methods)				
		Ar	Ar		Mr. Walter
62w§	Reference (3 cred.; no prereq.)	III	MWF	5Lib	Miss Hutchinson

\* For students in the College of Science, Literature, and the Arts. Others may obtain a special card from the Junior College office.

§ Required of all candidates for a degree in library methods.

No.	Title	Hour	Day	Bldg.	Instructor
63s	Advanced Reference (3 cred.; prereq. 62)	III	MWF	5Lib	Miss Hutchinson
64s	Selection of Books for Adolescents (3 cred.; prereq. 9 cred. in library methods)	II	MWF	5Lib	Miss McGregor
67w	Library Printing (1 cred.; no prereq.)	III	T	5Lib	Mr. Walter
68s	Circulation Work (1 cred.; prereq. 9 cred. in library methods)	III	T	5Lib	Mr. Walter
69f	Current Library Problems (3 cred.; prereq. 9 cred. in library methods or with Lib. Meth. 51, 52, 54)	II	MWF	5Lib	Mr. Walter
70w	Current Library Problems (3 cred.; prereq. 69)	II	MWF	5Lib	Mr. Walter
71w	Library Work with Children (3 cred.; prereq. 9 cred. in library methods or 6 cred. and one 3-cred. course in library training with 71)	I	MWF	5Lib	Miss McGregor
72s	Library Work with Children (3 cred.; prereq. 71)	I	MWF	5Lib	Miss McGregor
73f	Selection of Books for Adults (2 cred.; no prereq.)	III	ThS	5Lib	Miss Hutchinson
74w	Selection of Books for Adults (2 cred.; prereq. 73)	III	ThS	5Lib	Miss Hutchinson
75s	Selection of Books for Adults (2 cred.; prereq. 73, 74)	III	ThS	5Lib	Miss Hutchinson
76s	Library Service in Hospitals. (3 cred.)	I	TThS	3Lib	Miss Jones and others
77s	Book Selection for Hospital Patients (3 cred.)	IV	MWF	3Lib	Miss Methven and others
78s	Reading and the Mental Patient (2 cred.)	III	TS	3Lib	Miss Jones and others
79s	Medical Reference Work (3 cred.)	II	MWF	314Lib	Mr. Walter and others
80s	Hospital Library Practice—A six-week internship in approved hospitals (4 cred.)				Miss Methven
<p>This practice will be a six-week internship in approved hospitals. The specific arrangements will be made by Miss Methven after the close of the class work early in June. This internship is required of all candidates for degrees or certificates.</p>					
126s	Subject Bibliography (Prereq. sr. or grad. standing and bibliographical or research training or experience)	I	MWF	3Lib	Mr. Russell

# MILITARY SCIENCE AND TACTICS

(Coast Artillery Unit *Only*)

No.	Title	Hour	Day	Bldg.	Instructor
<i>Basic Courses</i>					
1f*	First Year Basic Course (1 cred.; no prereq.)				
	Sec. 1	III	MWF	A	Ar
	2	VI	MWF	A	Ar
	3	VIII	MWTh	A	Ar
2w*	First Year Basic Course (1 cred.; no prereq.)				
	Sec. 1	III	MWF	A	Ar
	2	VI	MWF	A	Ar
	3	IX	MWF	A	Ar
3s*	First Year Basic Course (1 cred.; no prereq.)				
	Sec. 1	I	M	A	Ar
		V, IX	T	A	Ar
	2	I, V, IX	T	A	Ar
	3	V, VII, IX	T	A	Ar
4f*	Second Year Basic Course (1 cred.; soph.; prereq. 1, 2, 3, higher algebra and plane trigonometry)				
	Sec. 1	II	TThS	A	Ar
	2	IV	MWF	A	Ar
	3	VIII	MWTh	A	Ar
5w*	Second Year Basic Course (1 cred.; soph.; prereq. same as for 4f)				
	Sec. 1	II	TThS	A	Ar
	2	IV	MWF	A	Ar
	3	IX	MWF	A	Ar
6s*	Second Year Basic Course (1 cred.; soph.; prereq. same as for 4f)				
	Sec. 1	I, V, IX	T	A	Ar
	2	I	M	A	Ar
		V, IX	T	A	Ar
	3	V, VII, IX	T	A	Ar

NOTE.—Students may register for Courses 1 to 6 and substitute playing in the band for regular military work, with the understanding that this choice renders them ineligible for the Advanced Courses. Premedical students should take First Year Basic Course in C.A.C. unit; Second Year Basic Course and Advanced Courses in Medical Unit are given in the Medical School.

## *Advanced Courses*

151f-152w*	First Year Advanced Course (3 cred. per qtr.; prereq. 4, 5, 6) Total of five hours to be taken as follows:				
		One of the two-hour sections:			
	Sec. 1	VI-VII	M	A	Ar
	2	VI-VII	W	A	Ar
		One of the three-hour sections:			
	Sec. 1	II	MWF	A	Ar
	2	IV	MWF	A	Ar
	3	VI	MWF	A	Ar
153s*	First Year Advanced Course (3 cred.; prereq. 4, 5, 6) Total of five hours to be taken as follows:				
	Sec. 1	V, IX	T	A	Ar
		One of the three-hour sections:			
	Sec. 1	II	MWF	A	Ar
	2	IV	MWF	A	Ar
	3	VI	MWF	A	Ar

\* Offered on the Main campus.

No.	Title	Hour	Day	Bldg.	Instructor
154f*	Second Year Advanced Course (3 cred.; prereq. 151-152, 153)	Total of five hours to be taken as follows:			
		One of the two-hour sections:			
Sec. 1		VIII-IX	W	A	Ar
2		VIII-IX	F	A	Ar
		One of the three-hour sections:			
Sec. 1		I	MWF	A	Ar
2		IV	MWF	A	Ar
3		VI	MWF	A	Ar
155w*	Second Year Advanced Course (3 cred.; prereq. 54)	Total of five hours to be taken as follows:			
		One of the two-hour sections:			
Sec. 1		VIII-IX	W	A	Ar
2		VIII-IX	F	A	Ar
		One of the three-hour sections:			
Sec. 1		III	MWF	A	Ar
2		IV	MWF	A	Ar
3		IV	TTh	A	Ar
		II	S	A	Ar
156s*	Second Year Advanced Course (3 cred.; prereq. 54-55)	Total of five hours to be taken as follows:			
Sec. 1		V, IX	T	A	Ar
		One of the three-hour sections:			
Sec. 1		I	MWF	A	Ar
2		IV	MWF	A	Ar
3		VI	MWF	A	Ar

NOTE.—The general rule regarding credit for the Advanced Courses is: "Three credits per quarter will be allowed for work in the advanced R.O.T.C. courses with a maximum of 18 quarter credits for the two-year course.

\* Offered on the Main campus.

## PHYSICAL EDUCATION FOR MEN

*Major advisers.*—L. F. Keller, C. L. Nordly, R. A. Piper, E. L. Haislet.

The courses in sports education are offered by the Department of Physical Education to men students of the University for the purpose of providing instruction and practice in sports of a recreational nature in which men may participate in future years as a means of obtaining recreation, regular exercise, and social intercourse. The status of these courses in the various colleges for which these courses are offered is as follows:

1. College of Education—(all except majors and minors in physical education) required with credit.
2. General College—required.
3. The Institute of Technology—elective with credit if taken for three quarters.
4. College of Agriculture, Forestry, and Home Economics—elective with credit if all three quarters are taken.
5. University College—elective with credit.
6. All other colleges—elective without credit.

A towel and locker fee of \$1.25 per quarter is charged all students taking exercise courses.

The University furnishes uniforms to students for class work or recreational play for \$1 per quarter.

The facilities of the Department of Physical Education, including the golf course, tennis courts, gymnasiums, swimming pools, handball and squash courts, golf gymnasium, ping-pong room, and playing fields, are available for use by the general student body. All men are invited to participate in some form of physical activity. For information regarding the intramural and intercollegiate athletic programs see the physical education handbook published by the Department of Physical Education for Men or inquire at the offices in the Athletic Building.

## SPORTS EDUCATION

*Supervisor of Sports Education.*—R. A. Piper.

No.	Title	Hour	Day	Bldg.	Instructor	
1f,2w,3s	Sports Education (3 cred.) All freshmen in General College and College of Education:	III	MWF		Mr. Bartelma	
		IV	MWF		Mr. Beise,	
		Fall: Touchball, Swimming, Volleyball				Mr. Boyce,
		Winter: Boxing, Wrestling, Basketball, and Squash Rackets				Mr. Brain,
		Spring: Soft Ball, Tennis, Golf				Mr. Otterness
1f,2w,3s	Sports Education. Elective for sophomores in the General College and any men in all other colleges:	II	MWF		Mr. Thorpe,	
		II	TThS		Mr. Boyce	
		III	MWF	(w,s)		
		III	TThS			
		VI	MWF			
		VIII	MWF	(f,w)	Mr. Haislet	
		IX	MWF			
		VII	MWF	(s)	Mr. Brain	
		III	MWF	246S	Mr. Osell	
		IV	MWF			
		VIII	MWF	(f,w)		
		VII	MWF	(s)		

Substitution of athletic team practice may be allowed by the department to men who rank sufficiently high on the introductory test.

*Courses in Major and Minor Curricula in Physical Education for Men*

No.	Title	Hour	Day	Bldg.	Instructor
4Af,4Bw,4Cs	Fundamentals of Athletic Sports (3 cred.; no prereq.) (Formerly Courses 37, 38)	VII-VIII	TTh	215Ath	Mr. MacMillan Mr. Beise, Mr. Otterness
5Af-5Bw-5Cs	Physical Education Activities (3 cred.; no prereq.) (Formerly Course A-B-C)	III-IV III	T Th	AthGym	Mr. Piper Mr. Bartelma, Mr. Beise
6Af,6Bw,6Cs	Intramural Sports (3 cred.; all; no prereq.) (Formerly Courses 10, 11, 12)	VII(f,w) I(s)	MWF MWF	215Ath 215Ath	Mr. Keller Mr. Beise, Mr. Thorpe
7Af-7Bw-7Cs	Physical Education Activities (3 cred.; soph., jr., sr.) (Formerly Course 19-20-21)	II-III	TTh	AthGym	Mr. Piper, Mr. Bartelma, Mr. Beise
8s	Dual Spring Sports (1 cred.; all; no prereq.)	VII	MWF	215Ath	Mr. Smith, Mr. Brain
9f	Rhythms (1 cred.; jr., sr.)	II	TThS	Ar	Mr. Piper
50s	Human Anatomy (4 cred.; soph.; prereq. Zool. 1-2-3 or 6A,B,C; and 7A-B-C, 8, 9)	III-IV	MWF	G.C. 101, 102-103 Ar	Mr. Keys and others
51f	Mechanics of Movement (3 cred.; jr.; prereq. 50) (Formerly Course 22-23)	II	MWF	206Ath	Mr. Osell
53f,54w,55s‡	Methods and Materials in Physical Education (6 cred.; jr.; prereq. 4 cred. from 5A-B-C, 6A,B,C; and 7A-B-C, 8, 9) (Formerly Course 7-8-9 and 54-55)	V(f,w)	Th	206Ath	Mr. Keller, Mr. Bartelma
	Lect.	Ar			
	Lab.	I(s)	M		
	Lect.	Ar			
	Lab.	Ar			
56w	Nature and Function of Play (2 cred.; sr., grad.)	IX-X	M		Mr. Haislet
60s	Prevention and Care of Injuries (2 cred.; jr.) (Formerly Athletic Training)	III	TThS	206Ath	Mr. Stein
61f	History of Physical Education (2 cred.; sr.)	I	MWF	206Ath	Mr. Keller
63s	Organization and Administration of Physical Education (3 cred.; sr.; prereq. 53, 54, 55)	III	MWF	206Ath	Mr. Piper
66Af,66Bw	Methods and Techniques of Officiating (2 cred.; sr.; prereq. 4A,B,C, and 6A,B,C)	VIII	M	206Ath	Mr. Nordly, Mr. Piper, Mr. Smith
	Lect.	Ar			
	Lab.	Ar			
67s	Coaching of Athletic Sports (Football) (2 cred.; sr.; prereq. 4B and one year experience on Minnesota squad)	II	MWF	214Ath	Mr. Bierman
68f	Coaching of Athletic Sports (Basketball) (2 cred.; sr.; prereq. 4A)	VI	MWF	214Ath	Mr. MacMillan

‡ A fee of \$1 per credit is charged for this course.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
69s	Coaching of Athletic Sports (Track) (2 cred.; sr.; prereq. 4C)	VI	MW and 2 hrs ar	214Ath	Mr. Kelly, Mr. Otterness
72w	Coaching of Athletic Sports (Baseball) (2 cred.; sr.; prereq. permission of instructor)	VI	MWF	214Ath	Mr. McCormick
73f,74w,75s‡	Practice Teaching (6 cred. prereq. 4A,B,C; 5A,B,C; 6A,B,C; 7A,B,C; 53, 54, 55 and qualifying examination)	V	M and 5 hrs ar	214Ath	Mr. Keller, Mr. Curtis
78w	Elements of Scout Leadership (2 cred.; no prereq.)	VI	TTh	206Ath	Mr. Osell
79s	Camp Craft and Camp Administration (2 cred.; no prereq.)	VI	T	206Ath	Mr. Osell
	Lect.	VI	T	206Ath	Mr. Osell
	Lab.	VI-VII	Th		
101Ew§	Principles of Physical Education (3 cred.; sr., grad.; prereq. 53, 54, 55) (Formerly Course 62)	I	MWF	206Ath	Mr. Keller, Mr. Haislet
103Es§	Physiological Hygiene (3 cred.; sr., grad.; prereq. 50, 51, Physiol. 50, 51) (Formerly Courses 58 and 59)	IV	MWF	206Ath	Dr. Hauser, Mr. Keys, Mr. Osell
133Ef§	Special Administrative Problems in Physical Education (3 cred.; sr., grad.; prereq. 63 or equiv.)	I-II-III	S	206Ath	Mr. Nordly
134Ew§	The Curriculum in Physical Education (3 cred.; sr., grad.; prereq. 63, 133 or equiv.)	I-II-III	S	206Ath	Mr. Nordly
135Es§	Tests and Measurements in Physical Education (3 cred.; sr., grad.; prereq. 10 hrs. in phys. ed. and Ed. Psy. 60 or equiv.)	I-II-III	S	206Ath	Mr. Keller
136Ef§	Leadership in Recreation (3 cred.; sr., grad.; prereq. 63 or equiv.)	IX-X	T	206Ath	Mr. Haislet
		IX	Th		
137Es§	Recent Literature and Research in Physical Education (3 cred.; grad. permission of instructor)	IX-X	T	206Ath	Mr. Nordly
		X	Th		

‡ A fee of \$1 per credit is charged for this course.

§ The designation "E" after a course number over 100 signifies that the course is of graduate level in the College of Education but does not carry credit for Plans A and B in the Graduate School.

## PHYSICAL EDUCATION FOR WOMEN

*Major adviser.*—Professor J. Anna Norris.

The General Course in Physical Education offered by the Department of Physical Education for Women provides a wide program of sports and other activities to meet the varying interests and needs of all the women students. The program offers an opportunity to take courses for the purpose of body building and conditioning and for the acquisition of personal and recreational skills.

The status of these courses in the various colleges for which these courses are offered is as follows:

1. *College of Education.*—Requirement: 6 quarters, including Phys. Ed. 7, Lectures in Physical Education and Health, a total of five credits, i.e., 1 credit each for three freshman quarters and  $\frac{2}{3}$  credit each for three sophomore quarters. For the specific activity requirement call at the main office, Women's Gymnasium.
2. *General College.*—Requirement: 6 quarters, including Phys. Ed. 7, Lectures in Physical Education and Health, which should be taken the first quarter in residence. For the specific activity requirement call at the main office, Women's Gymnasium.
3. *College of Agriculture, Forestry, and Home Economics.*—Requirement: 3 quarters Phys. Ed. 1, 2, 3, 4, 5, 6, and 8, one credit each per quarter; Phys. Ed. 7, two credits per quarter. For the specific activity requirement call at the main office, Women's Gymnasium. This requirement may be completed any time during the period of residence.
4. *School of Dentistry; Dental Hygienists.*—Requirement: 3 quarters of activity plus Phys. Ed. 7, Lectures in Physical Education and Health. For the specific activity requirement call at the main office, Women's Gymnasium.
5. *All other colleges.*—Elective without credit.

*Statement of fees.*—A physical education fee of \$1.75 per quarter is charged for all starred courses. Maximum fee per student, \$3.50 per quarter. For methods and practice teaching courses a fee of \$1 per credit is charged as indicated in the footnote.

The facilities of the Department of Physical Education for Women, including an 18-hole golf course, tennis courts, three gymnasias, two swimming pools, squash court, large indoor sports room, outdoor playing fields, are available for use by all women students.

No.	Title	Hour	Day	Bldg.	Instructor
1f,2w,3s, 4f,5w,6s	General Course in Physical Education				
	<i>Aquatics*</i>				
	Canoe Paddling (spring) Class limited to 15	II	TTh	58WGm	Miss Starr
	Swimming, Beginning§ (fall, winter, spring)				
	Sec. 1	II	TTh	51WGm	Ar
	2	IV	MW	51WGm	Ar
	3	VII	WF	51WGm	Ar
	4	VIII	TTh	51WGm	Ar
	Swimming, Elementary¶ (fall, winter, spring)				
	Sec. 1	III	TTh	51WGm	Ar
	2	VI	MW	51WGm	Ar

\* A physical education fee of \$1.75 per quarter is charged for any activity under this unit.

§ For students with no experience in swimming.

¶ For students with some experience in swimming.

No. 1f,2w,3s, 4f,5w,6s	Title	Hour	Day	Bldg.	Instructor
General Course in Physical Education— <i>Continued</i>					
<i>Aquatics*—Continued</i>					
Swimming, Intermediate					
	Sec. 1 (fall, winter)	II	TTh	58WGm	Ar
	2 (spring)	III	TTh	58WGm	Ar
	3 (fall, winter, spring)	IV	WF	58WGm	Ar
	4 (fall, winter, spring)	VIII	MW	51WGm	Ar
Swimming, Advanced (fall, winter, spring)					
	Sec. 1	VI	MW	58WGm	Ar
	2	VIII	MW	58WGm	Ar
	3	VIII	TTh	58WGm	Ar
Diving, Advanced (fall, spring) Class limited to 15					
		III	MW	58WGm	Ar
Lifesaving					
	Sec. 1 (winter)	III	MW	58WGm	Ar
	2 (spring)	VI	TTh	58WGm	Ar
	3 (spring)	IX	TTh	58WGm	Ar
Recreational Swimming and Water Games (spring)					
		VII	TTh	58WGm	Ar
<i>The Dance*</i>					
Folk Dancing (fall, winter)					
		II	MW	151WGm	Ar
Recreational Rhythms (winter, spring)					
		VI	MW	151WGm	Ar
Basic rhythmic training through recreational rhythmic activities.					
Modern Dance, Elementary					
	Sec. 1 (fall, winter, spring)	VII	TTh	151WGm	Miss Gardner
	2 (fall)	VI	MW	151WGm	Miss Gardner
Modern Dance, Advanced (fall, winter, spring)					
		IV	WF	151WGm	Miss Gardner
Tap Dancing, Elementary					
	Sec. 1 (fall)	III	MW	151WGm	Ar
	2 (fall, winter)	III	TTh	151WGm	Ar
Tap Dancing, Intermediate (fall, winter)					
		VIII	TTh	151WGm	Ar
<i>Individual Sports and Activities*</i>					
Archery, Elementary					
	Sec. 1 (spring)	I	MW	60WGm	Ar
	2 (fall, winter)	II	MW	60WGm	Ar
	3 (fall, winter, spring)	VI	TTh	60WGm	Ar
	4 (fall)	VI	MW	60WGm	Ar
	5 (winter)	VIII	MW	60WGm	Ar
	6 (spring)	III	TTh	60WGm	Ar
	7 (spring)	IV	WF	60WGm	Ar
Archery, Intermediate					
	Sec. 1 (fall, winter)	III	MW	60WGm	Ar
	2 (fall)	VII	TTh	60WGm	Ar
	3 (spring)	II	MW	60WGm	Ar
Badminton (winter)					
	Sec. 1	I	MF	153WGm	Ar
	2	VI	MW	153WGm	Ar
Golf, Elementary§					
	Sec. 1 (winter)	VII	MW	60WGm	Ar
	2 (spring)	I	TTh	60WGm	Ar
	3 (spring)	III	MW	60WGm	Ar
	4 (spring)	VII	TTh	60WGm	Ar

\* A physical education fee of \$1.75 per quarter is charged for any activity under this unit.

§ Students must supply their own equipment.

No.	Title	Hour	Day	Bldg.	Instructor
1f,2w,3s, 4f,5w,6s	General Course in Physical Education— <i>Continued</i>				
	Individual Sports and Activities*— <i>Continued</i>				
	Golf, Intermediate§				
	Sec. 1 (fall)	VII	MW	60WGm	Ar
	2 (spring)	II	TTh	60WGm	Ar
	3 (spring)	VI	MW	60WGm	Ar
	Horseback Riding (See non-fee courses)				
	Individual Body Building (Formerly Orthopedics)				
	Sec. 1 (fall, winter)	II	TTh	153AWGm	Miss Mee
	2 (fall, spring)	III	TTh	153AWGm	Miss Mee
	3 (fall, winter)	VI	MW	153AWGm	Miss Mee
	Skating (winter)				
	Plain, figure, and racing. Classes meet in Hippodrome.				
	Sec. 1	VII	WF	151WGm	Ar
	2	VIII	WF	151WGm	Ar
	Tennis, Elementary‡ (spring)				
	Sec. 1	I	MW	151WGm	Ar
	2	I	TTh	151WGm	Ar
	3	III	TTh	151WGm	Ar
	4	IV	WF	151WGm	Ar
	5	VI	MW	151WGm	Ar
	Tennis, Intermediate‡ (spring)				
	Sec. 1	II	TTh	151WGm	Ar
	2	III	MW	151WGm	Ar
	3	VII	WF	151WGm	Ar
	Tournament Tennis‡ (spring)				
		VIII	TTh	151WGm	Ar
	<i>Team Sports and Activities*</i>				
	Baseball (spring)				
		III	TTh	151WGm	Ar
	Basketball, Elementary (winter)				
	Sec. 1	III	TTh	151WGm	Ar
	2	VII	TTh	60WGm	Ar
	3	IV	WF	151WGm	Ar
	Basketball, Intermediate (winter)				
	Sec. 1	VI	MW	60WGm	Ar
	2	VIII	TTh	151WGm	Ar
	Field Hockey (fall)				
		VI	MW	151WGm	Ar
	Group Body Building (winter)				
		VII	TTh	153WGm	Ar
	Exercises for flexibility and grace and ease of movement.				
	Posture and Daily Life Skills				
	Sec. 1 (fall)	I	TTh	153WGm	Ar
	2 (fall)	III	TTh	153WGm	Ar
	3 (fall)	IV	WF	153WGm	Ar
	4 (winter)	II	MW	153WGm	Ar
	Introductory Course in Sport Skills				
	Sec. 1 (fall)	III	TTh	60WGm	Ar
	2 (winter)	IV	WF	60WGm	Ar
	3 (winter)	I	MW	60WGm	Ar
	Speed Ball (fall)				
		IV	WF	151WGm	Ar
	Sports and Dance Appreciation				
	Courses¶ (winter)	IV	MW	201WGm	Ar
	Movies, demonstrations, talks by experts on sports and dance.				
	Volleyball				
	Sec. 1 (fall)	II	MW	153WGm	Ar
	2 (winter, spring)	III	MW	151WGm	Ar

\* A physical education fee of \$1.75 per quarter is charged for any activity under this unit.

‡ Students taking tennis must pay \$1 for tennis permit.

§ Students must supply their own equipment.

¶ Open only to sophomores with permission of department.

*General Courses for Which No Physical Education Fee Is Charged*

No.	Title	Hour	Day	Bldg.	Instructor
7f,w,s	Lectures in Physical Education and Health§				
	Sec. 1 (fall, winter, spring)	I	MW	201WGm	Miss Starr
	2 (fall)	II	TTh	201WGm	Miss Starr
	3 (fall, winter)	VI	MW	201WGm	Miss Starr
8s	Horseback Riding‡‡				
	Sec. 1	VIII	TTh	151WGm	Miss Starr
	2	IX	TTh	151WGm	Miss Starr
54s*	Camp Leadership (See Course in Major Curriculum)				

*Recreational Activities for Which No Registration Is Required*

Elective Sports	IX	MTWThF	151WGm
Fall: Field Hockey		Spring: Baseball	
Horseback Riding		Track	
Volleyball		Horseback Riding	
Swimming		Tennis	
Archery		Golf	
Tap Dancing		Swimming	
Rifle Marksmanship		Archery	
Winter: Basketball		Badminton	
Swimming			
Winter Sports			
Tap Dancing			
Tumbling and Stunts			
Rifle Marksmanship			

*Courses in Major and Minor Curricula in Physical Education for Women*

Open only to students in the College of Education, with the exception of Courses 23A-B, 46A-B-C, 54, 60, and 66A-B-C.

21Af-Bw-Cs*	Freshman Team Sports (1½ cred.; no prereq.) (Formerly Course 36-37-38)	I(fall) IV(winter) VII(spring)	TTh TS TTh	151WGm 151WGm 151WGm	Ar Ar Ar
22Af-Bw-Cs*‡	Individual Sports and Fundamentals of Movement (3 cred.; no prereq.) (Formerly Course 40-41-42)	VIII(fall) III(fall) I(winter) VIII(spring)	TTh S TThS MWF	60WGm 153WGm 153WGm 151WGm	Ar Ar Ar Ar
23Aw-Bs*	Elementary Folk Dances and Games (1 cred.; no prereq.) (Formerly Course 43-44)	II	TTh	151WGm	Miss Kissock
24Af-Bw*	Danish Gymnastics (1 cred.; no prereq.) (Formerly Course 54-55)	VIII	MW	153WGm	Ar
25s	First Aid (1 cred.; no prereq.) (Formerly Course 39)	II	TTh	153AWGm	Miss Mee
41Af-Bw-Cs*	Sophomore Team Sports (1½ cred.; prereq. 21A-B-C) (Formerly Course 46,47,48)	VIII	MW	151WGm	Ar
42Af-Bs*‡	Sophomore Individual Sports (1 cred.; prereq. 22A-B) (Formerly Course 50,51)	II(fall) I(spring)	TThS TThS	60WGm 151WGm	Ar Ar
43s*	Advanced Folk Dancing (1 cred.; soph.; prereq. 23A-B) (Formerly Course 77)	II	TThS	151WGm	Ar
44Af-Bw*	Modern Swedish Gymnastics (1 cred.; soph.; prereq. 32B, 24A-B) (Formerly Course 64-65)	I	MW	153WGm	Ar

\* A physical education fee of \$1.75 per quarter is charged for this course.

‡ Students must supply their own golf equipment, and must pay \$1 for tennis permit.

§ This course must be taken during the first year in residence, preferably during the fall quarter. If exempt, College of Education students must substitute an activity course.

‡‡ For horseback riding students will pay about \$1 per lesson. Attendance at class hours is required for credit. Class meetings are one hour. Groups will be arranged according to riding ability.

No.	Title	Hour	Day	Bldg.	Instructor	
45Af-Bw*	Sophomore Major Swimming (1 cred.; prereq. elem. swim. test) (Formerly Course 59-60)	II	MW	58WGm	Miss Starr	
46Af-Bw-Cs*	Modern Dance, Elementary (1½ cred.; soph.; no prereq.) (Formerly Course 61-62-63)	VII	MF	151WGm	Miss Gardner	
47Af-Bw*	Tumbling and Stunts (1 cred.; soph.; no prereq.)	I	TTh	151WGm	Ar	
50s††	General Anatomy (4 cred.; soph.; prereq. Zool. 1-2-3) (Formerly Course 49A)	II,III,IV	MWF	312IA	Miss Braun	
51s††	Special Anatomy and Mechanics of Movement (4 cred.; soph.; prereq. 50 and high school physics) (Formerly Course 49B)	VI,VII,VIII,IX	TTh	312IA	Miss Braun	
60s	Principles of Play (3 cred.; jr.; prereq. 23A-B and Psy. 1-2) (Formerly Course 80)	III	MWF	201WGm	Miss Kissock	
61Af-Bw-Cs*†	Technique of Teaching Sports (3 cred.; jr.; prereq. 41A-B-C, 42A-B-C) (Formerly Course 56-57-58)	III(fall) VII(winter) VII(spring) VIII(spring)	MWF MWF TTh M	151WGm 151WGm 151WGm 201WGm	Miss Snell Miss Snell Miss Snell Miss Snell	
62s	Physical Examination (2 cred.; jr.; prereq. 51) (Formerly Course 67)	IV,V IV	M F	201WGm 153AWGm	Miss Mee Miss Mee	
63w*†	Technique of Teaching Folk Dancing (1 cred.; jr.; prereq. 43) (Formerly Course 78)	II	TThS	153WGm	Miss Baker	
64w*†	Technique of Teaching Group Gymnastics (1 cred.; jr.; prereq. 24A-B, 44A-B, 51) (Formerly Course 74)	IV	TS	153WGm	Miss Baker	
65s*†	Integration of Special Methods (2 cred.; jr.; prereq. minimum of 2 courses in special techniques) (Formerly Course 75)	III IV,VI	TTh W	153WGm 153WGm	Miss Baker and others	
66Af-Bw-Cs*	Modern Dance, Intermediate (1½ cred.; jr.; prereq. 46A-B-C) (Formerly Course 71-72-73)	I (begins at 8:00)	W	151WGm	Miss Baker	
67Af-Bw*†	Technique of Teaching Swimming (2 cred.; jr.; prereq. 45A-B) (Formerly Course 69-70)	III	TThS	58WGm	Miss Starr	
68s*	Lifesaving and Water Front Safety (1 cred.; jr.; prereq. 67A-B) (Formerly Course 86)	Lect. Lab.	IV II	T MW	201WGm 58WGm	Miss Starr Miss Starr
71f*	Applied Physiology (3 cred.; sr.; prereq. Phys. Ed. 51 and Physiol. 51)	Lect. Lab.	I I,II,III	TTh S	201WGm Ar	Miss Braun Miss Braun
73f†	Technique of Teaching Rhythm (1 cred.; sr.; prereq. 66A-B-C) (Formerly Course 82)	IV II	T F	151WGm 151WGm	Miss Baker Miss Baker	
74Af-Bw	Advanced Fundamentals of Movement (1 cred.; sr.; prereq. 64) (Formerly Course 84-85)	II(fall) III(winter)	TTh MW	153WGm 153WGm	Miss Baker Miss Baker	
76w*	Modern Dance, Advanced (½ cred.; prereq. 66A-B-C) (Formerly Course 81)	IV III	T F	151WGm 151WGm	Miss Baker Miss Baker	
80w	Principles of Rhythm (2 cred.; sr.; prereq. 66A-B-C) (Formerly Course 83)	II	WF	201WGm	Miss Baker	
81f	Trends in Physical Education (2 cred.; sr.) (Formerly Course 87)	IV	WF	201WGm	Miss Kissock	
82f	Principles of Physical Education (2 cred.; sr.; prereq. 65) (Formerly Course 88)	II	MW	201WGm	Miss Baker	
83f	Health Education, Method and Content (3 cred.; sr.; prereq. 65, P.M.&P.H. 50) (Formerly Course 89)	III	MWF	201WGm	Miss Starr	
84s	Problems in Physical Education (2 cred.; sr.; prereq. 82) (Formerly Course 90)	II	MW	201WGm	Miss Baker	

\* A physical education fee of \$1.75 per quarter is charged for this course.

† A fee of \$1 per credit is charged for this course.

†† A fee of \$2 is charged for Phys. Ed. 50 and 51 whether taken as a whole or as a part.

|| A lifesaving certificate is a prerequisite for practice teaching in swimming.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
85Af-Bw	Orthopedic and Remedial Gymnastics (3 cred.; sr.; prereq. 62) (Formerly Course 76A-B)				
	Lect.	I(fall)	T	3WGm	Miss Mee
	Lab.	I(fall)	Th	153AWGm	Miss Mee
		VIII(fall)	M	153AWGm	Miss Mee
	Lect.	II(winter)	M	201WGm	Miss Mee
	Lab.	I(winter)	M	153AWGm	Miss Mee
		and 1 hr. ar.			
90Af-Bw-Cs‡	Student Teaching (4 to 7 cred.; sr.; prereq. 60, 61A-B-C, 63, 64, 65, 67A-B, 73) (Formerly Course 92-93-94)	Ar	Ar	Ar	Miss Baker
95Aw-Bs	Administration of Physical Education (3 cred.; sr.; prereq. 60, 81, 82, 83) (Formerly Course 97A-B)	III(winter)	TTh	201WGm	Dr. Norris
		III(spring)	T	201WGm	Dr. Norris
111Ef§	An Advanced Course in Methods of Teaching in Physical Education (3 cred.; sr., grad.; prereq. undergraduate methods courses, 60 and 82 or equiv.)	Ar	Ar	WGm	Dr. Norris and others
112Es§	Supervision of Physical Education (3 cred.; sr., grad.; prereq. teaching experience)	Ar	Ar	WGm	Miss Baker
113Es§	Physical Education in the Elementary Schools (3 cred.; sr., grad.; prereq. 60 and 82 or equiv., and experience teaching elementary grade children)	Ar	Ar	WGm	Miss Baker
114Ew§	The Administration of the Health Education Program (3 cred.; sr., grad.; prereq. Phys. Ed. 83, P.M.&P.H. 50 or equiv.)	Ar	Ar	WGm	Miss Starr
115Ef§	Recent Literature and Research in Mechanics of Movement (3 cred.; sr., grad.; prereq. Physiol. 51, Phys. Ed. 71 or equiv.)	Ar	Ar	WGm	Miss Braun

*Elective Courses*

54s	Camp Leadership (2 cred.; no prereq.) (Formerly Course 98)	IX	TWTh	201WGm	Miss Starr and others
55s	Introduction to Physical Education (3 cred.; no prereq.)	II,III	S	201WGm	Dr. Norris, Miss Baker
79s	Massage and Therapeutic Exercises (2 cred.; prereq. 85A-B) (Formerly Course 79)	I	TThS	153AWGm	Miss Mee

‡ A fee of \$1 per credit is charged for this course.

§ The designation "E" after a course number over 100 signifies that the course is of graduate level in the College of Education but does not carry credit for Plans A and B in the Graduate School.

## COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

The College of Science, Literature, and the Arts distinguishes between Junior College courses, intended primarily for freshmen and sophomores, and Senior College courses, intended primarily for juniors and seniors.

Senior College courses appear in the announcement as open to "juniors and seniors" or to "juniors, seniors, and graduates."

Some Senior College courses are regularly open to Junior College students who have an average grade of at least C in the prerequisite courses. They are listed beneath the heading *Senior College Courses* in departmental statements in the Science, Literature, and the Arts section of this Combined Class Schedule Bulletin. Other Senior College courses are open to Junior College students only by special permission of the Students' Work Committee. The committee will usually grant such permission to students who have an average grade of at least C in all their work and in the prerequisite courses. Requests for the special permission should be presented to Assistant Dean Bussey in 106 Folwell Hall. Courses which carry graduate credit may not be taken earlier than the third quarter of the student's sophomore year.

### ANATOMY

See Human Anatomy, page 59.

### ANTHROPOLOGY

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Wallis.

*Major sequence in the College of Science, Literature, and the Arts.*—At least twenty-seven credits selected from courses numbered above 100.

(Prerequisites: Course 41, with fifteen additional credits from either the social or biological sciences.)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
41f	Introduction to Anthropology.—Physical characteristics of types of men; fossil men; prehistoric European archeology; primitive economic and industrial activities; religious life and social organization (5 cred.; soph., jr., sr.; prereq. 10 cred. in sci. or soc. sci.)	IV	MTWFS	301F	Ar
41w	Introduction to Anthropology (See 41f)	VI	MTWThF	206Pt	Ar
41s	Introduction to Anthropology (See 41f)	VI	MTWThF	166Ph	Mr. Wallis

#### *Senior College Courses*

Courses 53, 54, 56, 62 are open to Junior College students who have a grade of at least C in Course 41. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement at the top of this page.

53w	Cultural Anthropology: Technology—The arts and industries of primitive man (3 cred.; jr., sr.; prereq. 41)	III	MWF	6WeH	Ar
54w	Cultural Anthropology: Social Organization (3 cred.; jr., sr.; prereq. 41)	II	MWF	6WeH	Mr. Wallis
56f	Primitive Science—The beliefs and knowledge of primitive man (3 cred.; jr., sr.; prereq. 41)	I	MWF	6WeH	Mr. Wallis



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
62w	Ethnology of Polynesia (3 cred.; jr., sr.; prereq. 41)	II	TThS	6WeH	Ar
106f	European Prehistory (3 cred.; jr., sr., grad.; prereq. 41)	II	TThS	6WeH	Ar
110f	Physical Anthropology—Man's place in the animal kingdom. Comparison of man's structure with that of the anthropoid apes; types of prehistoric men; anthropometry (3 cred.; jr., sr., grad.; prereq. 41 or one course in human anat. or zool.)	III	MWF	6WeH	Mr. Wallis
111w	Advanced Physical Anthropology (3 cred.; jr., sr., grad.; prereq. 110 or 112)	I	TThS	6WeH	Mr. Wallis
112s	Growth and Biological Techniques (3 cred.; jr., sr., grad.; prereq. 110 or permission of instructor)	Ar	Ar	Ar	Ar
115w	The American Indian (3 cred.; jr., sr., grad.; prereq. 41)	IV	MWF	6WeH	Mr. Wallis
116s	Indians of the Southwest (3 cred.; jr., sr., grad.; prereq. 41)	I	MWF	6WeH	Ar
117f	Culture and Culture Areas (3 cred.; jr., sr., grad.; prereq. 41)	IV	MWF	6WeH	Mr. Wallis
122f-123w-124s	Problems in Anthropology (Cred. ar.; jr., sr., grad.; prereq. three courses and permission of instructor; for honors course students)	Ar	Ar	Ar	Mr. Wallis and others
161s	Primitive Religion (3 cred.; jr., sr., grad.; prereq. 41)	II	MWF	6WeH	Mr. Wallis
162w	Ethnology of Africa (3 cred.; jr., sr., grad.; prereq. 41)	III	TThS	6WeH	Ar
163s	Ethnology of India (3 cred.; jr., sr., grad.; prereq. 41)	II	TThS	6WeH	Ar
164s	Ethnology of Australia (3 cred.; jr., sr., grad.; prereq. 41)	III	MWF	6WeH	Ar
165f	Psychological Phases of Culture (3 cred.; jr., sr., grad.; prereq. 41)	I	TThS	6WeH	Ar
166f	History of Anthropological Theory and Method (3 cred.; jr., sr., grad.; prereq. 41)	II	MWF	6WeH	Ar
167f	Primitive Mythology (3 cred.; jr., sr., grad.; prereq. 41)	III	TThS	6WeH	Ar
168w	Prehistoric and Primitive Metal Cultures (3 cred.; jr., sr., grad.; prereq. 41)	I	MWF	6WeH	Ar
169s	Primitive Languages (3 cred.; jr., sr., grad.; prereq. 41)	I	TThS	6WeH	Ar
170s	Primitive Art (3 cred.; jr., sr., grad.; prereq. 41)	IV	MWF	6WeH	Ar
171s	The Primitive Family and Kinship (3 cred.; jr., sr., grad.; prereq. 41)	III	TThS	6WeH	Ar
204f-205w-206s	Seminar in Anthropology (3 cred. per qtr.; grad.)	Ar	Ar	Ar	Mr. Wallis and others

## ARCHITECTURE

## INSTITUTE OF TECHNOLOGY

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Roy Jones.

*Major sequence in the College of Science, Literature, and the Arts.*—Courses AD-II, 51-52-53, 54-55-56, 57-58-59.

(Prerequisites: Courses 1-2-3, 4-5-6, AD-I, DP-I, DP-II§)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

§ This course, DP-II, may be postponed until the student's junior year, if necessary.

*Junior College Courses*

*Note.*—Consult the Bulletin of the Institute of Technology for program of hours, days, buildings, and instructors.

1f-2w-3s	Introduction to Architecture (3 cred.; open only to students whose major subject is architecture or interior architecture; no prereq.)
4f-5w-6s	Graphic Representation (6 cred.; soph.; no prereq.)
DP-If,w,s†§	Drawing and Painting, Grade I (6 cred., normally 2 cred. per qtr.; all; no prereq.)
DP-IIf,w,s†§	Drawing and Painting, Grade II (6 cred., normally 2 cred. per qtr.; soph., jr., sr.; prereq. DP-I)
M-If,w,s†§	Modeling, Grade I (6 cred., normally 2 cred. per qtr.; all; no prereq.)
M-Iaf,w,s§	Modeling for Architects (2 cred., normally 2 cred. per qtr.; open only to students whose major subject is architecture or interior architecture; prereq. registration in Architectural Design)
AD-If,w,s§††	Architectural Design, Grade I (15 cred., normally 5 cred. per qtr.; soph., jr.; prereq. registration in 4-5-6)

*Senior College Courses*

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

*Note.*—Consult the Bulletin of the Institute of Technology for program of hours, days, buildings, and instructors, and for additional courses.

51f-52w-53s†	History of Architecture (6 cred.; jr., sr.; prereq. consent of instructor)
54f-55w-56s†	History of Architecture (6 cred.; jr., sr.; prereq. 53)
57f-58w-59s	Building Materials and Methods (6 cred.; jr., sr.; no prereq.)
105f	Housing (3 cred.; sr.; no prereq.)
107f-108w-109s	Furniture and Decoration (6 cred.; jr., sr.; prereq. consent of instructor)
DP-III f,w,s†§	Drawing and Painting, Grade III (6 cred., normally 2 cred. per qtr.; jr., sr.; prereq. DP-II or equiv.)
DP-IV f,w,s†§	Drawing and Painting, Grade IV (6 cred., normally 2 cred. per qtr.; jr., sr.; prereq. DP-III or equiv.)
IHP-If§	Illustration (2 cred., normally 2 cred. per qtr.; jr., sr.; prereq. DP-I or equiv.)
IHP-II w,s§	Hand Print Processes (4 cred., normally 2 cred. per qtr.; jr., sr.; prereq. DP-I or equiv.)
M-II f,w,s†§	Modeling, Grade II (6 cred., normally 2 cred. per qtr.; jr., sr.; prereq. M-I)
SD-If,w§	Stage Design (4 cred., normally 2 cred. per qtr.; jr., sr.; no prereq.)
AD-III f,w,s††§	Architectural Design, Grade II (18 cred., normally 6 cred. per qtr.; jr., sr.; prereq. AD-I)
ID-If,w,s††§	Interior Architectural Design (24 cred., normally 8 cred. per qtr.; sr.; prereq. AD-II)

## ASTRONOMY

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Luyten.

*Major sequence in the College of Science, Literature, and the Arts.*—Courses 51-52-53, 101, and Mathematics 50, 51, 52.

(Prerequisites: Mathematics 1, 6-7, or physical science and Mathematics 6.)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per quarter is charged for this course.

†† A fee of \$2 per quarter is charged for this course.

§ Completion of this course is dependent on achievement rather than time. Students will continue their registration until the course is completed and a mark reported. The number of credits earned per quarter may be larger or smaller than the amount indicated as normal.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
11f*	Descriptive Astronomy (5 cred.; all; no prereq.)	IV	MTWFS§	150Ph	Ar
11s*	Descriptive Astronomy (5 cred.; all; no prereq.)	IV	MTWFS§	133Ph	Ar

*Senior College Courses*

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

51w*	Astronomy (3 cred.; jr., sr.; prereq. Math. 6)	IV	MWF	145Ph	Ar
52w	Astrophysics (4 cred.; prereq. 51 or 11 and Math. 6)	II	MTWF	359Ph	Ar
53s	Stellar Astronomy (3 cred.; prereq. 51 or 11 and Math. 6)	II	MWF	359Ph	Ar
101f	Celestial Mechanics (3 cred.; jr., sr., grad.; prereq. Math. 51)	II	MWF	359Ph	Ar
140f	Least Squares (3 cred.; prereq. 51 or 11 and at least Math. 51)	II	MWF	359Ph	Ar

NOTE.—Courses 101 and 140 are usually offered in alternate years, and only one will be given in each year, depending largely on the demand.

## BACTERIOLOGY

## MEDICAL SCHOOL

*Major adviser in the College of Science, Literature, and the Arts.*—Mrs. Green.

*Major sequence in the College of Science, Literature, and the Arts.*—Sequence A. For work in medical or public health bacteriology. Courses 101-102, 114, 116, 117, 120, 124, and Zoology 144-145-146.

(Prerequisites: Zoology 1-2-3 and 10 credits in chemistry.)

Sequence B. For work in industrial bacteriology. Courses 103, 114, 121-122, 123, 150-151.

(Prerequisites: Bacteriology 41; 4 credits in botany or zoology; 15 credits in chemistry; and 8 credits in biochemistry or organic chemistry.)

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
41f,w,s†‡	General Bacteriology (5 cred.; soph., jr., sr.; prereq. 10 cred. in chemistry and 4 cred. in botany or zoology)		VII,VIII,IX	MWF MH	Ar

*Senior College Courses*

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

101w**†‡	Medical Bacteriology (5 cred.; jr., sr., grad.; prereq. Zool. 1-2-3 and 10 cred. in chem.)				
	Lect.	IV	MWF	MH	Dr. Larson
	Lab. Sec. 1	I, II	MWF	MH	Dr. Henrici
	2	I, II	TThS	MH	Dr. Green

\* No student may receive credit for both Course 11 and Course 51.

† Microscope required. Students (except medical) may obtain use of microscope by purchasing \$1.50 microscope card from bursar.

‡ The Saturday lecture will be replaced by an evening's observation with the telescope when the weather permits.

‡ No student may receive credit for both Course 41 and Course 101.

\*\* Both Courses 101 and 102 must be completed before credit will be given for either.

No.	Title	Hour	Day	Bldg.	Instructor
102s*‡	Medical Bacteriology (4 cred.; jr., sr., grad.; prereq. 101)				
	Lect.	I	MWF	MH	Dr. Larson
	Lab. Sec. 1	II, III	M	MH	Dr. Henrici
		II	WF	MH	Dr. Green
	2	I, II	T	MH	
		I	ThS	MH	
103w	Soil Microbiology (5 cred.; jr., sr., grad.; prereq. 41, and 15 cred. in chem.)	I, II, III	TThS	MH	Dr. Skinner
114s	Molds, Yeasts, and Actinomycetes (4 cred.; jr., sr., grad.; prereq. 41 or 101)	VII, VIII	TTh	MH	Dr. Henrici
		III, IV	S	MH	
116w	Immunity (3 cred.; jr., sr., grad.; prereq. 101, 102)	VI, VII, VIII	TTh	MH	Dr. Larson
117s	Pathogenic Protozoa (3 cred.; jr., sr., grad.; prereq. 101, 102)	VII, VIII	TTh	MH	Mrs. Green
120s	Diseases of Animals Transmissible to Man (3 cred.; jr., sr., grad.; prereq. 101, 102)	VI	MWF	MH	Dr. Green
121f-122w†	Physiology of Bacteria (6 cred.; jr., sr., grad.; prereq. Bact. 41 and 8 cred. in org. chem. or biochem.)	III	TThS	MH	Dr. Halvorson, Dr. Green
123s	Applied Bacteriology (3 cred.; jr., sr., grad.; prereq. 121-122)	III	TThS	MH	Dr. Halvorson
124f	Filterable Viruses (4 cred.; jr., sr., grad.; prereq. 102)	VI	MF	MH	Dr. Green
	Lect.	VI, VII	W	MH	
	Lab.	VII	MF	MH	
150f-151w†	Advanced Bacteriology (6 cred.; jr., sr., grad.; prereq. 101-102 or 41, 103, 114)	VI, VII, VIII, IX	TTh	MH	Dr. Henrici, Dr. Halvorson
153f,w,s	Problems in Bacteriology (Cred. ar.; prereq. permission of chairman of dept.)	Ar	Ar	Ar	Staff

## BOTANY

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Burr.

*Major sequences in the College of Science, Literature, and the Arts.*—

A. In Botany, Courses 61, 62, 63, 113, 118, 119, 131, 140, and additional credits in approved courses to make a total of 30 credits in Senior College courses.

B. In special fields, such as morphology, taxonomy, physiology, or ecology, a major will consist of the respective courses with numbers over 100 and additional credits in approved courses to make a total of 30 credits in Senior College courses.

(Prerequisites: *For sequences A and B:* Courses 1, 2, 5, 7, 21, 22. If possible, beginning chemistry and at least one year of French or German should be completed as part of the Junior College work.)

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Professor Butters.

*Requirements for a teacher's certificate.*—Major recommendation, 30 credits in botany including Courses 1, 2, 5, 7, 21, 22, 61, 62 and 5 credits of electives.

Minor recommendation, 19 credits in botany including Courses 1, 2, 7, 21, 22 and three additional credits.

\* Both Courses 101 and 102 must be completed before credit will be given for either.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ Microscope required. Students (except medical) may obtain use of microscope by purchasing \$1.50 microscope card from bursar.

For a specialized curriculum in natural science see the Bulletin of the College of Education.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f	General Botany—A survey lecture course on plants and their human interest, contributing to liberal culture; characteristics of living matter; fundamental facts of structure, growth, and reproduction; relation of plants to their environment and to each other; principles underlying inheritance, variation, plant breeding, and organic evolution (4 cred.; all; no prereq.)				
	Lect. Sec. 1	III	TThS	BoAud	Mr. Huff
		{ VI	W	BoAud	Mr. Huff
	2	{ VI, VII	F	BoAud	Mr. Huff
		{ VI	T	BoAud	Mr. Huff
	3 (Agr. stud. only)	{ VI, VII	Th	BoAud	Mr. Huff
	Quiz Sec. 1	I	T		
	2	II	T		
	3	II	Th		
	4	III	M		
	5	III	W		
	6	IV	T		
	7	V	T		
	8	V	Th		
	9	VI	M		
	10 (Agr. stud. only)	VII	T		
	11 (Agr. stud. only)	VIII	Th		
1w,s	General Botany (See 1f)				
	Lect.	III	TThS	BoAud	Mr. Huff
	Quiz Sec. 1	I	T		
	2	II	T		
	3	II	Th		
	4	III	M		
	5	IV	M		
	6	IV	T		
2w,s†	Elementary General Morphology of Plants (3 cred.; all; prereq. 1)				
	Lect.	III, IV	M	BoAud	Mr. Huff
	Lab.	III, IV	WF	1,4,5,8Bo	
3su	Forest Botany (1 cred.; students in agriculture and forestry; no prereq. Given at Itasca Park)				Mr. Rosendahl
5w†	Elementary Plant Histology (3 cred.; all; prereq. 1)	VI, VII, VIII	WF	1,4,5,8Bo	Mr. Butters
7f†	Taxonomy of Flowering Plants (3 cred.; all; prereq. 1)	I, II	MWF	1,4,5,8Bo	Mr. Butters
7s†	Taxonomy of Flowering Plants (See 7f)				
	Sec. 1	I, II	MWF	1,4,5,8Bo	Mr. Abbe
	2	VI, VII, VIII	TTh	1,4,5,8Bo	Mr. Butters
21f†	Elementary Ecology (3 cred.; all; prereq. 1)	III, IV	MWF	1,4,5,8Bo	Mr. Cooper, Mr. Lawrence
21w†	Elementary Ecology (See 21f) (Laboratory sections in 21w are limited to 90 each)				
	Lect.	VII	TTh	BoAud	Mr. Cooper, Mr. Lawrence
	Lab. Sec. 1 (Agr. stud. only)	V, VI	TTh	1,4,5,8Bo	
	2 (Agr. stud. only)	VIII, IX	TTh	1,4,5,8Bo	
	3	I, II	ThS	1,4,5,8Bo	
21s†	Elementary Ecology (See 21f)				
	Lect.	VII	TTh	BoAud	Mr. Cooper, Mr. Lawrence
	Lab. Sec. 1	V, VI	TTh	1,4,5,8Bo	
	2	VIII, IX	TTh	1,4,5,8Bo	

† A fee of \$1 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
22f,w,s‡	Elementary Plant Physiology (3 cred.; all; prereq. 1 and high school or college chem. or registration in college chem.) (Laboratory sections are limited to 56 each)				
	Lect.	VII	TTh	4Bo	Mr. Burr
	Lab. Sec. 1	V, VI	TTh	104Bo	
	2	VIII, IX	TTh	104Bo	

### Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

61f‡	Thallophytes (3 cred.; jr., sr.; prereq. 10 cred., incl. 2)				
		VI, VII	MWF	8Bo	Mr. Moyer
62w‡	Bryophytes and Pteridophytes (3 cred.; jr., sr.; prereq. 10 cred. incl. 2)				
		VI, VII, VIII	MW	8Bo	Mr. Huff
63s‡	Gymnosperms and Angiosperms (3 cred.; jr., sr.; prereq. 7 and either 2 or 62)				
		III, IV	MWF	215Bo	Mr. Butters
108	<i>Pteridophytes</i> (5 cred.; sr., grad.; prereq. 18 cred. incl. 7 and 62) ( <i>Not offered</i> )				
110w	Gymnosperms (5 cred.; sr., grad.; prereq. 18 cred. incl. 7 and 63)				
		Ar	Ar	Ar	Mr. Butters
113f-114w-115s*	Advanced Taxonomy of Flowering Plants (9 cred.; jr., sr., grad.; prereq. 10 cred. incl. 7)				
		VI, VII, VIII	TTh	215Bo	Mr. Rosendahl
118f‡	Cytology I—Cytoplasmic Phenomena (3 cred.; jr., sr., grad.; prereq. 15 cred. in biol. including Bot. 5 and an elem. course in chem.)				
		III-IV	MWF	202Bo	Mr. Moyer
119w‡	Cytology II—Nuclear Phenomena (3 cred.; jr., sr., grad.; prereq. 15 cred. in biol. including Bot. 5 and an elem. course in chem.)				
		III-IV	MWF	202Bo	Mr. Abbe
120s‡	Research Methods in Histology and Cytology (3 or 5 cred.; prereq. 118 and 119)				
		Ar	Ar	202Bo	Mr. Abbe
127f	Anatomy of Vascular Plants (5 cred.; jr., sr., grad.; prereq. 18 cred. incl. 5)				
	Lect.	II	TThS	215Bo	Mr. Butters
	Lab.	Ar	Ar		
131f	Field Ecology (5 cred.; jr., sr., grad.; prereq. 10 cred. incl. 21)				
		VI, VII, VIII	MWF	214Bo	Mr. Cooper, Mr. Lawrence
132w‡	Ecological Anatomy (5 cred.; jr., sr., grad.; prereq. 10 cred. incl. 5 and 21)				
		VI, VII, VIII	MWF	214Bo	Mr. Cooper
133s	Plant Geography of North America (5 cred.; jr., sr., grad.; prereq. 10 cred. incl. 21)				
		VI, VII, VIII	MWF	214Bo	Mr. Cooper
134‡	<i>Research Methods in Ecology</i> (5 cred.; jr., sr., grad.; prereq. 18 cred. incl. 21) ( <i>Not offered</i> )				
136s	Physiology of the Cell (3 cred.; jr., sr., grad.; prereq. 20 cred. in physics, chem., or biochem., and permission of instructor)				
		II	TThS	215Bo	Mr. Moyer
140w	General Plant Physiology (3 cred.; jr., sr., grad.; prereq. 22, elem. inorg. chem.)				
		III	MWF	5Bo	Mr. Burr
141f‡	Physico-chemical Principles and Measurements in Plant Physiology (3 or 5 cred.; jr., sr., grad.; prereq. 20 cred. in chem. or biochem.)				
	Lect.	7:55	MWF	5Bo	Mr. Burr
	Lab.	Ar	Ar	104Bo	Mr. Miller
142w‡	Photosynthesis and Other Effects of Radiation (3 or 5 cred.; jr., sr., grad.; prereq. same as for 141)				
	Lect.	7:55	MWF	5Bo	Mr. Burr
	Lab.	Ar	Ar	104Bo	Mr. Miller

\* Any quarter may be taken separately, except 115s, which requires either 113f or 114w as a prerequisite.

‡ A fee of \$1 is charged for this course. No fee is charged for Botany 141, 142, or 143, 3 credits, lectures only.

No.	Title	Hour	Day	Bldg.	Instructor
143s†	Plant Metabolism (3 or 5 cred.; jr., sr., grad.; prereq. same as for 141)				
	Lect.	7:55	MWF	5Bo	Mr. Burr
	Lab.	Ar	Ar	104Bo	Mr. Miller
144f‡	Applied Spectroscopy in Biology (3 to 5 cred.; jr., sr., grad.; prereq. 20 cred. in chem. or biochem.)				
	Lect.	Ar	MWF	1Bo	Mr. Miller
	Lab.	Ar	MWF		
145w‡	Advanced Spectroscopy in Biology (3 cred.; jr., sr., grad.; prereq. 144)				
		Ar	Ar	Ar	Mr. Miller
197f-198w- 199s	Problems (3 to 5 cred. per qtr.; jr., sr., grad.; prereq. 20 cred. and permission of instructor)				
		Ar	Ar	Ar	Ar

For graduate courses given during 1938-39 consult the department.

### PLANT PATHOLOGY AND BOTANY

Students in this college may elect courses in Plant Pathology and Botany by arrangement with the department. But before registering for any courses they should get the approval of Assistant Dean Shumway in 219 Administration Building. See the program of the College of Agriculture, Forestry, and Home Economics in this bulletin.

### CHEMISTRY

#### INSTITUTE OF TECHNOLOGY

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Sneed.

*Major sequence in the College of Science, Literature, and the Arts.*—Analytical Chemistry 1-2; Organic Chemistry 51-52-153; Physical Chemistry 101-102-103.

(Prerequisites: Inorganic Chemistry 13 with its prerequisites; physics, with the prerequisite mathematics.)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Professor Palmer O. Johnson.

*Requirements for a teacher's certificate.*—Major recommendation: Inorganic Chemistry 9-10, 12; Analytical Chemistry 7; Organic Chemistry 51-52 and 10 additional credits in chemistry.

Minor recommendation: Inorganic Chemistry 9-10, 12; Analytical Chemistry 7 and 6 additional credits in chemistry.

For a specialized curriculum in natural science see the Bulletin of the College of Education.

*Note.*—Analytical Chemistry 1-2 and all courses numbered above 50 count as Senior College courses.

#### INORGANIC CHEMISTRY

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†-3s	General Inorganic Chemistry (12 cred.; primarily for premedical and pre dental students; no prereq.)				
	Lect.	VI	MWF	225C	Mr. Pervier
	Lab.	VII, VIII, IX	T	290C	
	Quiz	VI	T	ArC	

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 is charged for this course. No fee is charged for Botany 141, 142, or 143, 3 credits, lectures only.

No.	Title	Hour	Day	Bldg.	Instructor
1Af-2Aw-3As	General Inorganic and Qualitative Chemistry (12 cred.; open only to Agriculture, Forestry, and Home Economics students; no prereq.)				
	Lect. (fall, winter, spring)	VII	MWF	225C	Mr. Barber
	and (fall, winter)	VIII	F	100C	
	Lab. (fall, winter)	VIII, IX	MW	210C	
	(spring)	VIII, IX	MF	210C	
4f-5w†	General Inorganic Chemistry (8 cred.; for premedical students only; prereq. entrance cred. in chem.)				
	Lect.	VI	MWF	100C	Mr. Reyerson
	Lab.	VII, VIII, IX	T	210C	
	Quiz	VI	T	100C	
4f-5w†	General Inorganic Chemistry (8 cred.; primarily for premedical and medical technology students; prereq. entrance cred. in chem.)				
	Lect.	VII	MWF	325C	Mr. Maynard
	Lab.	VII, VIII, IX	Th	210C	
	Quiz	VI	Th	100C	
6f-7w†	General Inorganic Chemistry (10 cred.; all; no prereq. A continuation of this course is 8s)				
	Lect.	II	MWF	225C	Miss Cohen
	Quiz	I	Th	410C	
	Lab. Sec. 1	I, II	TS	210C	
		II	Th	210C	
	2	I, II, III	T	210C	
		II, III	Th	210C	
8s*	Qualitative Chemical Analysis (5 cred.; all; prereq. 7)				
	Lect.	II	MWF	225C	Miss Cohen
	Lab. Sec. 1	I, II	TThS	210C	
	2	I, II, III	TTh	210C	
9f-10w†	General Inorganic Chemistry (10 cred.; all; prereq. entrance cred. in chem.)				
	Lect.	II	MWF	100C	Mr. Sneed
	Lab. Sec. 1	I, II	TThS	290C	
	2	I, II, III	ThS	290C	
9f-10w†	General Inorganic Chemistry (10 cred.; open only to Agriculture, Forestry, and Home Economics students; prereq. entrance cred. in chem.)				
	Lect.	VII	MWF	100C	Mr. Klug
	Lab.	VIII, IX	MWF	110C	
9w-10s†	General Inorganic Chemistry (10 cred.; all; prereq. entrance cred. in chem.)				
	Lect. Sec. 1	III	MWF	225C	Miss Cohen
	2	III	MWF	410C	Ar
	Lab.	VI, VII	MWF	Ar	
11f	Qualitative Chemical Analysis (4 cred.; primarily for premedical and premedical students; prereq. 3 or 5)				
	Lect.	IV	MWF	325C	Miss Cohen
	Lab.	VI, VII, VIII, IX	F	210C	
11s	Qualitative Chemical Analysis (4 cred.; for premedical students only; prereq. 3 or 5)				
	Lect.	VI	MWF	100C	Mr. Reyerson
	Lab.	VI, VII, VIII, IX	T	210C	
11s	Qualitative Chemical Analysis (4 cred.; primarily for premedical and medical technology students; prereq. 3 or 5)				
	Lect.	VII	MWF	100C	Mr. Maynard
	Lab.	VI, VII, VIII, IX	Th	210C	
12f-13w	Qualitative Chemical Analysis (10 cred.; all; prereq. 10)				
	Fall Lect.	I	TThS	225C	Ar
	Lab.	I, II, III	MW	290C	
	Winter Lect.	VI	WF	325C	Mr. Heisig
	Quiz	VI	M	410C	
	Lab.	VII, VIII, IX	WF	290C	
		VII, VIII	M	290C	

\* Course 8 may be taken as a substitute for Course 11 by premedical and premedical students who have completed Course 6-7. No student may receive credit for both Course 8 and Course 11. Also Course 8 is substantially equivalent to Course 12. See the footnote for Course 12-13.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

|| Students who have completed Course 8 should omit Course 12 and take Course 13.

|| Students who have failed in 1f, 4f, 6f, or 9f may register in section 2 for this course without further prerequisite.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
12s¶	Qualitative Chemical Analysis (See 12f-13w)	II	MWF	100C	Mr. Sneed
	Lect.				
	Lab.	I, II, III	ThS	290C	
13f¶	Qualitative Chemical Analysis (See 12f-13w; prereq. 12 or 8)	VI	WF	325C	Mr. Heisig
	Lect.				
	Quiz	VI	M	335EE	
	Lab.	VII, VIII, IX	WF	290C	
101s	History of Chemistry (2 cred.; sr., grad.; prereq. Org. Chem. 52 or consent of instructor)	VII, VIII	M	290C	
102s	Semi-micro Qualitative Analysis (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)	Ar	Ar	Ar	Miss Cohen
103f-104w-105s	Advanced Inorganic Chemistry (3 to 9 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2, Org. Chem. 52)	Ar	Ar	290C	Mr. Barber
109w-110s	Synthetic Inorganic Chemistry (3 to 5 cred. per qtr.; jr., sr., grad.; prereq. 13)	I	TThS	215C	Mr. Sneed
117s§	Glass Blowing (1 cred.; all; no prereq.)	Ar	Ar	Ar	Mr. Heisig
		VII, VIII, IX	W	10C	Ar

For other courses in Inorganic Chemistry see the Bulletin of the Institute of Technology.

## ANALYTICAL CHEMISTRY

1w-2s*	Quantitative Analysis (10 cred.; soph., jr., sr.; prereq. Inorg. Chem. 13)				
	Lect.	VI	M	325C	Mr. Geiger
	Quiz	VI	F	410C	
	Rec.	VI or VII	W	111C	
	Lab. Sec. 1 Any 9 hrs. selected from	VI-IX	MWF	310C	
	2 (winter)	I-IV	T	310C	
		I-III	Th	310C	
		I-II	S	310C	
	2 (spring)	I-IV	T	310C	
		VII-IX	T	310C	
		I-II	Th	310C	
7f	Quantitative Analysis (4 cred.; primarily for premedical students; prereq. any course in qualitative chemistry)				
	Sec. 1 and 2				
	Lect.	VI	M	325C	Mr. Geiger
	Rec. (Limit 35 in each sec.)	VI or VII	W	111C	
	Quiz	VI	F	410C	
	Lab. Any other 8 hrs. selected from	VI-IX	MWF	310C	
	Sec. 3				
	Lect.	VI	T	325C	Mr. Sarver
	Rec.	VI	Th	325C	
	Lab.	VII, VIII, IX	TTh	310C	
		I, II, III	S	310C	
		or			
		II, III, IV	S	310C	
7s	Quantitative Analysis (4 cred.; primarily for premedical students; prereq. any course in qualitative chemistry)				
	Lect.	VI	T	325C	Mr. Sarver
	Rec.	VI	Th	325C	
	Lab.	VII, VIII, IX	TTh	310C	
		I, II, III	S	310C	
		or			
		II, III, IV	S	310C	

\* Course 2s may precede 1w, if desired.

§ Carries credit only for juniors and seniors majoring in natural science.

¶ Students who have completed Course 8 should omit Course 12 and take Course 13.

No.	Title	Hour	Day	Bldg.	Instructor
103f	Quantitative Inorganic Microanalysis (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)	Ar	Ar	Ar	Mr. Sandell
104s	Microchemistry (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)	Ar	Ar	Ar	Mr. Sandell
123f	Advanced Analytical Chemistry (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2 or permission of instructor)	Ar	Ar	Ar	Mr. Sarver
	Lect.	Ar	Ar	Ar	Mr. Sarver
	Lab.	Ar	Ar	310C	
127w	Use of Organic Reagents in Analytical Chemistry (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2 and Org. Chem. 52)	Ar	Ar	Ar	Mr. Sarver
131f	Application of Indicators (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2 and Phys. Chem. 101-102-103)	VI	MW	315C	Mr. Kolthoff
	Lect.	VI	MW	315C	Mr. Kolthoff
	Lab.	Ar	Ar	Ar	
132w	Electrometric Titrations (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2 and Phys. Chem. 101-102-103)	VI	MW	315C	Mr. Kolthoff
	Lect.	VI	MW	315C	Mr. Kolthoff
	Lab.	Ar	Ar	Ar	
140w	Water Analysis (2 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)	Ar	Ar	Ar	Mr. Sandell

## ORGANIC CHEMISTRY

1f-2w†	Elementary Organic Chemistry (8 cred.; primarily for premedical and pre dental students; prereq. Inorg. Chem. 11)				
	Lect. (all secs.)	I	MWF	100C	Mr. Arnold
	Lab. conference (all secs.)	II	T	225C	Mr. Arnold
	Quiz (all secs.)	I	T	Ar	Ar
	Lab. Sec. 1	VI-IX	T	390C	
	2	VI-IX	W	390C	
	3	I-IV	S	390C	
1w-2s†	Elementary Organic Chemistry (See 1f-2w)				
	Lect. (all secs.)	IV	MWF	100C	Mr. Koelsch
	Lab. conference (all secs.)	V	T	100C	Mr. Koelsch
	Quiz (all secs.)	IV	T	Ar	Ar
	Lab. Sec. 1	VI-IX	W	390C	
	2	VI-IX	Th	390C	
	3	I-IV	S	390C	
51f-52wf-153s	Elementary Organic Chemistry (5 cred. per qtr.; open to all except premedical, pre dental, and pharmacy students; required of all chemical engineers, chemists, and S. L. and A. majors; prereq. 15 cred. in college chemistry. Course 153 is prerequisite to all other advanced courses in organic chemistry)				
	Lect.	III	MWF	100C	Mr. Lauer (f,w), Mr. Smith (s)
	Lab. conference (fall, winter)	III	ThS	325C	Mr. Arnold
	Lab. conference (spring)	III	Th	100C	Mr. Arnold
		I	S	100C	
	Lab. Sec. 1	II, III, IV	T	390C	
		VI, VII, VIII	T	390C	
	2	VI, VII, VIII	TTh	390C	
	3	VI, VII, VIII	WF	390C	
54f-55wf-156s	Elementary Organic Chemistry—Lectures only. The lectures are the same as those in Course 51f-52w-153s, together with general discussions of organic laboratory practice. (3 cred. per qtr.; open to all except premedical, pre dental, and pharmacy students and students majoring in chemistry; prereq. 15 cred. in college chemistry)				
		III	MWThF	100C	Mr. Lauer (f,w), Mr. Smith (s)
105f-106w-107s	Advanced Organic Chemistry (3 cred. per qtr.; jr., sr., grad.; prereq. 153)				
		I	MWF	225C	Mr. Smith

For advanced courses in Organic Chemistry see the Bulletin of the Institute of Technology.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

## PHYSICAL CHEMISTRY

No.	Title	Hour	Day	Bldg.	Instructor
101f-102w-103s	Physical Chemistry (9, 12, or 15 cred.; jr., sr., grad.; prereq. two yrs. college chemistry, one yr. college physics. A knowledge of calculus is advisable)				
	Lect.	IV	MWF	225C	Mr. MacDougall
	Lab.	VII, VIII	T	190C	
	Rec.	VI, VII, VIII	Th		
	Lab. conference	IV	S	325C, 410C	
		VI	T	410C	
107f-108w	Elementary Physical Chemistry (4 cred. per qtr.; for premedical students only; prereq. two yrs. college chemistry, one yr. college physics)				
	Lect.	III	MWF	325C	Mr. Glockler
	Rec.	VIII	T	ArC	
	Lab. Sec. 1	I-III	T	190C	
	2	I-III	Th	190C	
116f-117w-118s	Advanced Physical Chemistry (9 or 12 cred.; jr., sr., grad.; prereq. 103 and calculus)				
		Ar	Ar	Ar	Mr. Glockler
128f-129w-130s	Colloid Chemistry (2 cred. per qtr.; sr., grad.; prereq. 103)				
		Ar	Ar	ArC	Mr. Reyerson
131f-132w-133s	Colloid Chemistry Laboratory (Cred. ar.; sr., grad.; prereq. 129 or 130)				
		Ar	Ar	Ar	Mr. Reyerson
161f-162w	Radioactivity (3 cred. per qtr.; jr., sr., grad.; prereq. Phys. Chem. 103)				
		IV	MWF	215C	Mr. Hull
180f,181w,182s	General Survey of Colloid Chemistry, Colloids in Industry, Colloids in Biology and Medicine (See the Bulletin of the Institute of Technology)				Mr. Freundlich

## AGRICULTURAL BIOCHEMISTRY

Students in this college may elect courses in Agricultural Biochemistry by arrangement with the division. But before registering for any courses they should get the approval of Assistant Dean Shumway in 219 Administration Building. See the program of the College of Agriculture, Forestry, and Home Economics in this bulletin.

## CHILD WELFARE

*Adviser in the College of Science, Literature, and the Arts.*—Professor Anderson.

*Major advisers in the College of Education.*—Professors Anderson and Foster.

For a specialized curriculum in Nursery School and Kindergarten Education, see the Bulletin of the College of Education.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
10s	Introduction to Child Study (2 cred.; 3rd qtr. fr., soph.; no prereq.)				
		VI	TTh	100Pt	Mrs. Faegre
40w§	Child Training (3 cred.; soph., jr., sr.; prereq. Psy. 1-2)				
		IV	MW	106Pt	Mrs. Foster
		and one hr. ar			

*Senior College Courses*

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

80f,s	Child Psychology (3 cred.; jr., sr.; prereq. Psy. 1-2)				
		IV	MWF	202Pt	Ar
82s	Later Childhood and Adolescence (3 cred.; prereq. 40 or 80 or equiv.)				
		II	MWF	202Pt	Mrs. Faegre

§ Offered fall and spring as Home Economics Education 90. See the program of the College of Education in another part of this bulletin.

No.	Title	Hour	Day	Bldg.	Instructor
130f	Motor, Linguistic, and Intellectual Development of the Child (3 cred.; sr., grad.; prereq. 12 cred. in psy. or equiv.)	I	MWF	202Pt	Mr. Anderson
131w	Personality, Emotional, and Social Development of the Child (3 cred.; sr., grad.; prereq. 12 cred. in psy. or equiv.)	I	MWF	202Pt	Mr. Anderson
133w-134s†	Measurement of Child Personality (4 cred.; sr., grad.; prereq. 10 cred. in psy. or ed. psy. and Ed. Psy. 60, or Biometry 101, and permission of instructor)	III	TTh	202Pt	Miss Goodenough
140f	Behavior Problems (2 cred.; sr., grad.; prereq. 12 cred. in psy., ed. psy., or soc.)	I, II	S	202Pt	Miss Goodenough
141w-142s	Practicum in Behavior Problems (Cred. ar.; sr., grad.; prereq. 140, and permission of instructor)	Ar	Ar	201Pt	Miss Goodenough
170s	Parent Education (2 cred.; sr., grad.; prereq. 15 cred. in child welfare or home economics or education or psychology or sociology or preventive medicine)	VI	TTh	202Pt	Ar
190s	Principles of Mental Measurement of Young Children (2 cred.; sr., grad.; prereq. 12 cred. in psy., ed. psy., or soc.)	II	TTh	202Pt	Miss Goodenough

*For Graduate Students Only*

230f-231w-232s	Seminar in Recent Literature	Ar	Ar	202Pt	Mr. Anderson
233f-234w-235s	Research in Child Development	Ar	Ar	Ar	Mr. Anderson and others
236f-237w-238s	Seminar in Human Development—Fall: Infant; Winter: Child; Spring: Adolescent	VI, VII	F	204EPt	Mr. Anderson, Miss Good- enough
250f-251w-252s	Seminar in Nursery Education	VII	TTh	202Pt	Mrs. Foster
260w	Seminar in Physical Growth	Ar	Ar	226IA	Miss Boyd
261f-262w-263s	Statistical and Laboratory Work in Physical Growth	Ar	Ar	226IA	Miss Boyd
270f-271w-272s	Readings in Child Development	Ar	Ar	101Pt	Mr. Anderson and others
273f	Techniques of Parent Education	VI	MWF	202Pt	Ar
274w	Field Work in Parent Education	Ar	Ar	204EPt	Ar
275s	Seminar in Parent-Child Relations	VI, VII	W	204EPt	Ar
290f-291w†	Mental Examination of Preschool Children	III	MWF	202Pt	Miss Goodenough

NOTE.—See also Courses Ed. T. 55-59, 75, 76A-76B-76C, 77A-77B-77C, and Ed. C. I. 130, offered by the Institute of Child Welfare, and listed under Methods and Directed Teaching and Curriculum and Instruction in the program of the College of Education.

CLASSICS

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Ogle.

*Major sequences in the College of Science, Literature, and the Arts.*—

GREEK

The elementary course 1f-2w-3s and twenty-seven credits in courses numbered above 50.

LATIN

Any three of the courses with numbers between 50 and 100; and one of the following combinations: (a) Any six courses numbered above 100; (b) any three courses numbered above 100; and Greek 51, 52, 53 or History 50-51-52.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Professor Ogle.

*Requirements for a teacher's certificate in Latin.*—Major recommendation: Course 73f-74w-75s and any two of the courses with numbers between 50 and 100, and three courses with numbers over 100, including 111f-112w-113s.

Minor recommendation: Course 73f-74w-75s and any two of the courses with numbers between 50 and 100.

To secure a recommendation from the department to take Special Methods and Directed Teaching in Latin a student must make a grade of C or better in Course 73f-74w-75s.

#### GREEK

NOTE.—Students may receive credit for Greek 1-2 in addition to one other beginning language.

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†	Beginning Greek (10 cred.; all; no prereq.)	IV	MTWFS	114F	Mr. Heller
3s	Selections from Attic Prose (5 cred.; all; prereq. 1-2)	IV	MTWFS	114F	Mr. Heller

#### *Senior College Courses*

Courses 51, 52, 53, 71, 72, 73 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

51f	Lucian (3 cred.; jr., sr.; prereq. 1-2-3)	III	MWF	112F	Mr. Heller
52w	Homer (3 cred.; jr., sr.; prereq. 1-2-3)	III	MWF	112F	Mr. Heller
53s	Plato, Apology and Selections (3 cred.; jr., sr.; prereq. 1-2-3)	III	MWF	112F	Mr. Heller
71f	Tragedy (3 cred.; jr., sr.; prereq. any two of 51,52,53)	Ar	Ar	112F	Mr. Heller
72w	Comedy (3 cred.; jr., sr.; prereq. any two of 51,52,53)	Ar	Ar	112F	Mr. Heller
73s	Hellenistic Literature (3 cred.; jr., sr.; prereq. any two of 51,52,53)	Ar	Ar	112F	Mr. Heller
101f	Philosophy: Plato (3 cred.; jr., sr., grad.; prereq. any two of 71,72,73 or 51,52,53 with consent of instructor)	Ar	Ar	112F	Mr. Heller
102w	Philosophy: Aristotle's Ethics (3 cred.; jr., sr., grad.; prereq. 101 or any two of 71,72,73)	Ar	Ar	112F	Mr. Heller
103s	Lyric Poetry (3 cred.; jr., sr., grad.; prereq. any two of 71,72,73)	Ar	Ar	112F	Mr. Heller
111f	History: Herodotus (3 cred.; jr., sr., grad.; prereq. any two of 71,72,73 or 51,52,53 with consent of instructor)	Ar	Ar	112F	Mr. Heller
112w	History: Thucydides (3 cred.; jr., sr., grad.; prereq. 101 or 111 or any two of 71,72,73)	Ar	Ar	112F	Mr. Heller

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

No.	Title	Hour	Day	Bldg.	Instructor
113s	New Testament (3 cred.; jr., sr.; prereq. any one course numbered above 70 or 51,52,53 with consent of instructor)	Ar	Ar	112F	Mr. Ogle
121f-122w-123s†	Advanced Composition (9 cred.; jr., sr., grad.; prereq. 24 credits in Greek)	Ar	Ar	112F	Mr. Heller

*For Graduate Students Only*

201f-202w-203s	Graduate Seminar: Greek Literary Bibliography and Criticism (9 cred.)	Ar	Ar	Ar	Mr. Heller
211f-212w-213s	Graduate Seminar: Greek Epic (9 cred.)	Ar	Ar	Ar	Mr. Heller
221-222-223	<i>Graduate Seminar: Greek Drama and Lyric Poetry (9 cred.) (Not offered)</i>				
231-232-233	<i>Graduate Seminar: Greek Philosophy (9 cred.) (Not offered)</i>				

*Courses for Which No Knowledge of Greek Is Required*

(See page 38)

LATIN

*Junior College Courses*

1f-2w†§	Beginning Latin (10 cred.; all; no prereq.)	IV	MTWFS	110F	Ar
3s	Caesar (5 cred.; all; prereq. 1-2, or 1 yr. of high school Latin)	IV	MTWFS	110F	Ar
11f	Vergil I (5 cred.; all; prereq. 1-2, 3, or 2 yrs. of high school Latin)	III	MTWThF	110F	Ar
12w	Vergil II (5 cred.; all; prereq. 11, or 3 yrs. of high school Latin)	III	MTWThF	110F	Ar

*Senior College Courses*

Courses 51, 52, 53, 63, 73-74-75, 81-82-83 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

51f	Pliny's Letters (3 cred.; jr., sr.; prereq. 12, or 3 or 4 yrs. of high school Latin)	II	TThS	109F	Mr. Ogle
52w	Horace (3 cred.; jr., sr.; prereq. 51 or 63)	II	TThS	109F	Mr. Ogle
53	<i>Suetonius, Selected Lives (3 cred.; jr., sr.; prereq. 51 or 52 or 63) (Not offered)</i>				
63s	Plautus and Terence (3 cred.; all; prereq. ¶ 12, or 4 yrs. of high school Latin)	II	TThS	109F	Mr. Ogle
73f-74w-75s†	Prose Composition (3 cred.; all; prereq. 12, or 4 yrs. of high school Latin)	I	T	114F	Ar
81-82-83	<i>Survey of Roman Literature (9 cred.; jr., sr.; prereq. any one of Courses 51,52,53, 63) (Not offered)</i>				
111f-112w-113s†	Advanced Prose Composition (3 cred.; jr., sr., grad.; prereq. 73-74-75)	I	T	109F	Mr. Ogle

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ A student may not receive credit for beginning courses (two quarters, 10 credits) in more than one of the foreign languages, exclusive of Greek and Italian, except by special permission of the Students' Work Committee.

¶ A student who enters in the spring quarter with three years of high school Latin may, by special permission, take Course 63s.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
121	<i>Advanced Vergil</i> (3 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				
131	<i>Juvenal</i> (3 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				
133s	Vulgar Latin (Development of Latin into Romance) (3 cred.; jr., sr., grad.; open to advanced students of Latin or a Romance language with the consent of the instructor)				
		II	MWF	109F	Mr. Ogle
142w	Tacitus (3 cred.; jr., sr., grad.; prereq.*)	II	MWF	109F	Mr. Ogle
151f	Advanced Cicero (3 cred.; jr., sr., grad.; prereq.*)	II	MWF	109F	Mr. Ogle
152	<i>Lucretius</i> (3 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				
171f,172w,173s	Independent Reading Course (3 cred. per qtr.; prereq.*; open to students of exceptional ability with the consent of the department)				
		Ar		Ar 118F	Ar

## For Graduate Students Only

201-202-203	<i>Graduate Seminar: Cicero</i> (9 cred.) ( <i>Not offered</i> )				
211-212-213	<i>Graduate Seminar: The Latin Epic</i> (9 cred.) ( <i>Not offered</i> )				
221f-222w-223s	<i>Graduate Seminar: Lyric Poetry</i> (9 cred.)				
		VIII, IX	T	108F	Mr. Ogle
231-232-233	<i>Graduate Seminar: Latin Historiography</i> (9 cred.) ( <i>Not offered</i> )				
241f-242w-243s	<i>Graduate Seminar: Introduction to Classical Philology</i> (9 cred.)				
		VIII, IX	Th	110F	Ar

## Courses for Which No Knowledge of Greek or Latin Is Required§

61f,62w	Greek and Latin Drama (2 cred. per qtr.; jr., sr.; no prereq.)	III	TTh	114F	Mr. Ogle
81w	Greek Mythology—The origin and development of myths (2 cred.; jr., sr.; no prereq.)	I	WF	114F	Mr. Heller
82s	Ancient Mythology in Relation to Literature and Art (2 cred.; jr., sr.; no prereq.)	I	WF	114F	Mr. Heller
92-93†	<i>Classical Literary Tradition</i> (4 cred.; jr., sr.; no prereq.) ( <i>Not offered</i> )				

## DRAWING AND DESCRIPTIVE GEOMETRY

## INSTITUTE OF TECHNOLOGY

## Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
41-42-43f,w,s	Technical Drawing—(a) General course in the theory and practice of freehand drawing. Principles of perspective, sketching, rendering, conventions, lettering, and industrial drawing. (b) Modification of the above course of particular interest to dental, medical, and scientific students. (6 cred.; all; no prereq.)				
	Sec. 1	I, II	MWF	411C	Mr. Doseff
	2	VI, VII	MWF		
	3	VIII, IX	MWF		
44f,w,s	Lettering—A practical course in plain lettering. (1 cred.; all; no prereq.)				
	Sec. 1	IV	T	21E(fall) 21E(winter) 203E(spring)	Mr. Potter
	2	II	Th	215E(fall) 205E(winter) 138EE(spring)	Mr. Quaid

\* Any two of the courses with numbers between 50 and 100.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ These courses can be used as a minor only by students who are majoring in Classics.

|| Students may enter either quarter.

No.	Title	Hour	Day	Bldg.	Instructor
45f,w,s	Alphabets—Construction and analysis of various types of letters and their arrangement. Exercises and reference work. (2 cred.; soph., jr., sr.; no prereq.)	III	TTh	*	Mr. Levens

### Senior College Courses

64w	Graphic Arts—Field, development, and application in art and industry. Design and composition. Discussion of materials, style, and technique. (3 cred.; jr., sr.; prereq. consent of instructor)	IV	MWF	206E	Mr. Doseff
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Course 64w is one of three courses related in general subject-matter of special interest to students of journalism and advertising. The other two, listed elsewhere in this bulletin, are Journalism 65f, "Graphic Arts: Processes," and Business Administration 194s, "Advanced Advertising Procedure."

81-82-83f,w,s	Advanced Drawing—Principles of design—traditional and modern. Layouts, composition, and illustration. Black and white and color. Scientific modeling. (3 cred. per qtr.; prereq. 43 or equiv.)	Ar	Ar	Ar	Mr. Doseff
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86-87f,w,s†	Anatomical Drawing (3 cred. per qtr.; prereq. 43 or equiv.)	Ar	Ar	Ar	Mr. Doseff
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Other courses offered by the Department of Drawing and Descriptive Geometry and listed in the Bulletin of the Institute of Technology are open to students of this college only by special permission of the Students' Work Committee.

### ECONOMICS

For courses, major advisers, and major sequences in Economics, see the program of the School of Business Administration, in another part of this bulletin.

### EDUCATION

Some of the courses in Education, which are listed in another part of this bulletin, may be taken by students in this college by special permission of the Students' Work Committee and the consent of the College of Education. Requests for the special permission should be submitted by Junior College students to Assistant Dean Bussey in 106 Folwell Hall and by Senior College students to Assistant Dean Thomas in 219 Folwell Hall.

### ENGLISH

*Major advisers in the College of Science, Literature, and the Arts.*—Associate Professors Hillhouse and McDowell; Assistant Professor Jackson.

*Major sequences in the College of Science, Literature, and the Arts.*—

A. Courses 55-56, 62, and 75.

B. Twelve credits from the following list: 100 and 102 or 103, 105-106, 107-108, 109-110, 111-112, 126-127, 146-147, 148-149, 154-155, 157-158.

C. Six additional credits in courses numbered 50 or above. These credits may be taken in courses listed under B.

(Prerequisites: Courses 21-22 or 22-23.‡)

\* Room schedule for 45f,w,s: 206E(fall); 206E on Tues., 203E on Thurs. (winter); 205E on Tues., 206E on Thurs. (spring).

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ Course 22-23 is required for a teacher's certificate.



The Independent Reading Course (171-172-173) may be substituted for any part of the major sequence except the three required courses.

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major advisers in the College of Education.*—Professor Dora Smith; Associate Professor Nichols

*Requirements for a teacher's certificate.*—

		Credits
a. English as a major subject:		
English 22-23.	Introduction to Literature .....	10
English 55-56.	Shakespeare .....	6
English 73-74.	American Literature .....	6
Composition 27-28.	Advanced Writing .....	6
Speech .....		6
Additional credits, all of which must be secured in courses numbered 100 or above .....		6
Total credits .....		40
b. English as a minor subject:		
English 22-23.	Introduction to Literature .....	10
English 55-56.	Shakespeare .....	6
English 73-74.	American Literature .....	6
Composition 27-28.	Advanced Writing .....	6
Total credits .....		28

### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
Af-Bw-Cs	Freshman English	See Composition, page 43.			
21f-22w-23s§	Introduction to Literature—21f: Marlowe, Spenser, Bacon, Browne, Milton, and Bunyan; 22w: Dryden, Pope, Swift, Addison and Steele, Johnson, Boswell, Fielding, and Sheridan; 23s: Wordsworth, Byron, Shelley, Keats, Lamb, Carlyle, Brown- ing, and Arnold (15 cred.; all; prereq.*)				
	Sec. 1	III	MTWThF	301F	Mr. Thomas
	2	VI	MTWThF	301F	Miss Jackson
31f-32w†	The English Novel—31f: The reading of novels by Defoe, Fielding, Fanny Burney, Jane Austen, Scott, Thackeray; 32w: The reading of novels by Dickens, Charlotte and Emily Brontë, George Eliot, Trollope, Meredith (6 cred.; all; prereq.*)				
		VII	MWF	301F	Mr. Hillhouse
33s	The Later English Novel—The reading of novels by Hardy, Butler, Conrad, Bennett, Galsworthy, Wells (3 cred.; all; prereq.*)				
		VII	MWF	166Ph	Mr. Beach
40w-41s	The Bible As Literature (6 cred.; all; prereq.*)				
		IV	MWF	11F	Mr. Powell

### *Senior College Courses*

Courses 55-56, 58-59, 62, 73-74, 75, 76 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

\* English A-B-C or Composition 4-5-6 or exemption from requirement.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ Students may enter any quarter. Students must take either 21 and 22 or 22 and 23 to receive credit. Two quarters are required as prerequisite for a major sequence; the second and third quarters are required for a teacher's certificate. Three quarters are recommended.

|| Students may enter either quarter.

No.	Title	Hour	Day	Bldg.	Instructor
55f-56w†	Shakespeare—Course 55: The reading of <i>The Comedy of Errors</i> , <i>The Two Gentlemen of Verona</i> , <i>The Taming of the Shrew</i> , <i>The Merchant of Venice</i> , <i>Much Ado About Nothing</i> , <i>Twelfth Night</i> , with collateral reading. <i>Midsummer Night's Dream</i> , <i>The Tempest</i> , to be read independently. Course 56: The reading of <i>Richard II</i> , <i>Henry IV 1 and 2</i> , <i>Henry V</i> , <i>Richard III</i> , <i>Julius Caesar</i> , <i>Hamlet</i> , <i>Macbeth</i> , with collateral reading (6 cred.; jr., sr.; prereq.§)				
	Sec. 1	I	TThS	204F	Mr. Hessler
	2	II	TThS	9F	Mr. Brown(f), Miss Atkins(w)
	3	VI	MWF	209½F	Miss Atkins
	4	VI	MWF	204F	Miss Carr(f), Mr. Hessler(w)
	5	VII	MWF	205F	Mr. Dunn
55w-56s†	Shakespeare—(See 55f-56w)				
	Sec. 1	III	TThS	205F	Mr. Hill- house(w), Miss Carr(s)
	2	VI	MWF	205F	Mr. Dunn(w), Mr. Hessler(s)
55s	Shakespeare (1st qtr. of 55-56. See 55f-56w)				
	Sec. 1	I	TThS	213F	Mr. Brown
	2	II	MWF	114F	Miss Atkins
58f-59w†	Nineteenth-Century Prose (6 cred.; jr., sr.; prereq. A-B-C or 23, or 31-32)				
		II	TThS	204F	Mr. Nichols
61	<i>American Pronunciation</i> (3 cred.; jr., sr.; prereq.§) ( <i>Not offered</i> )				
62f	Milton (4 cred.; jr., sr.; prereq. 21-22 or 55-56)				
		I	MTThF	205F	Mr. Dunn
62s	Milton (See 62f)	II	MTThF	205F	Mr. Dunn
63	<i>American Usage</i> (3 cred.; jr., sr.; prereq.§) ( <i>Not offered</i> )				
73f-74w†	American Literature (6 cred.; jr., sr.; prereq.§)				
		II	MWF	301F	Mr. McDowell
75f	Chaucer (4 cred.; jr., sr.; prereq.§)	III	MTThF	205F	Miss Carr
75w	Chaucer (See 75f)	VI	MTWF	303F	Miss Carr
75s	Chaucer (See 75f)	III	MTThF	305F	Mr. Dunn
76s	American Literature since 1885 (3 cred.; jr., sr.; prereq. 73-74)				
		II	MWF	305F	Mr. McDowell
77-78	<i>Classic Myths and the Classic Tradition in English Poetry</i> (6 cred.; jr., sr.; prereq.§) ( <i>Not offered</i> )				
81-82†	<i>Survey of Middle English</i> (6 cred.; jr., sr.; prereq.§) ( <i>Not offered</i> )				
86s	Forms of English Verse (3 cred.; jr., sr.; prereq.§)				
		VII	MWF	303F	Miss Jackson
100f	Old English (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50)				
		II	TWThF	302F	Mr. Ruud
102w	Old English Poetry (3 cred.; jr., sr., grad.; prereq. 100)				
		II	MWF	302F	Mr. Ruud
103s	Beowulf (3 cred.; jr., sr., grad.; prereq. 100)				
		II	MWF	302F	Mr. Ruud
105-106†	<i>Eighteenth-Century Poetry</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50) ( <i>Not offered</i> )				
107w-108s†	Eighteenth-Century Prose (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)				
		VII	MWF	204F	Mr. Moore
109f-110w†	Romantic Poets (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)				
		III	TThS	204F	Mr. Beach
111-112†	<i>Seventeenth-Century Prose</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50) ( <i>Not offered</i> )				
113f	American Short Story (3 cred.; jr., sr., grad.; prereq. 73-74)				
		III	MWF	305F	Mr. McDowell
123f-124w- 125s†	Technique of the Novel (9 cred.; sr., grad.; prereq. 6 cred. above 50 and permission of instructor)				
		4:00-6:00	T	205F	Mr. Beach

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ Composition 4-5-6 and 6 additional credits, or English A-B-C, or 10 credits in 21-22-23.

No.	Title	Hour	Day	Bldg.	Instructor
126f-127w†	Drama, 1660-1880 (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VI	MWF	306F	Mr. Hillhouse(f), Mr. Nichols(w)
129s	Modern Drama: 1880 to Present (4 cred.; jr., sr., grad.; prereq. 55-56 or 126-127)	II	MTThF	204F	Mr. Hillhouse
133f	Ballads (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	III	MWF	204F	Mr. Ruud
135	<i>Spenser</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50) ( <i>Not offered</i> )				
136	<i>Advanced Shakespeare</i> (4 cred.; jr., sr., grad.; prereq. 55-56) ( <i>Not offered</i> )				
140s	Advanced Chaucer (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 75)	IV	MTWF	205F	Mr. Ruud
141-142-143	<i>Historical Grammar</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 75 or 81-82) ( <i>Not offered</i> )				
146w-147s†	Medieval Romances: Stories of Thebes and Troy, of Alexander, of Charlemagne, and of English Heroes (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 75 or 81-82)	VII	MWF	206F	Miss Carr
148-149	<i>Arthurian Romances</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50) ( <i>Not offered</i> )				
150s	Victorian Poetry (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	II	MTThF	303F	Mr. Nichols
151s	Recent Poetry (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	III	TWThF	204F	Miss Jackson
152	<i>Pre-Elizabethan Drama</i> (3 cred.; jr., sr., grad.; prereq. 55-56) ( <i>Not offered</i> )				
153f	Seventeenth-Century Lyricists (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VII	MWF	204F	Mr. Moore
154w-155s†	American Novel (6 cred.; jr., sr., grad.; prereq. 73-74; or 31-32 and 6 cred. above 50)	III	MWF	205F	Mr. McDowell
156f	The American Drama to 1880 (3 cred.; jr., sr., grad.; prereq. 73-74)	II	MWF	303F	Mr. Nichols
157f-158w†	Elizabethan Non-Dramatic Literature (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 55-56 or 170)	I	TThS	303F	Mr. Brown
159	<i>Colonial Literature in America</i> (3 cred.; jr., sr., grad.; prereq. 73-74) ( <i>Not offered</i> )				
160	<i>History of the English Language</i> (2 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 100) ( <i>Not offered</i> )				
162f	Restoration Non-Dramatic Literature (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	IV	MWF	204F	Mr. Moore
163w-164s†	Restoration Drama (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	IV	MWF	204F	Mr. Moore
165w	The Historical Study of Modern English (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	III	MWF	204F	Mr. Ruud
167w-168s†	English Literary Criticism (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	II	TThS	306F	Mr. Brown
169	<i>Browning and Tennyson</i> (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50) ( <i>Not offered</i> )				
170	<i>Elizabethan Drama</i> (4 cred.; jr., sr., grad.; prereq. 55-56) ( <i>Not offered</i> )				
171f-172w-173s	Independent Reading Course (9 cred.; jr., sr.; not open to graduate students; prereq. permission of department)				Mr. Dunn(f), Mr. Hillhouse(w), Mr. Nichols(s)
220f-221w-222s	Medieval Drama	4:00 to 6:00	M	312Lib	Mr. Ruud
228f-229w-230s	Eighteenth-Century Novel	4:00 to 6:00	Th	312Lib	Mr. Moore
253f-254w-255s	American Romanticism I: New England	4:00 to 6:00	F	312Lib	Mr. McDowell
256f-257w-258s	Spenser and Milton	4:00 to 6:00	W	312Lib	Mr. Brown

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

## COMPOSITION

*Major advisers in the College of Science, Literature, and the Arts.*—Associate Professor Nichols; Assistant Professor Phelan.

*Major sequence in the College of Science, Literature, and the Arts.*—Either 67-68 or 69-70-71; and 81-82-83; and 91-92-93; and 15 credits in Senior College courses in English to be chosen under the direction of a major adviser from a list of recommended courses. (Prerequisites: Courses 27-28 and either 29 or 65; English 21-22 or 22-23.)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Important note.*—No student may register for any course in Freshman English without having taken a placement test.

On the basis of placement tests in English, students are:

Exempt from any requirement in English,

Permitted to choose between English A-B-C and Composition 4-5-6,

Assigned to Composition 4-5-6,

Required to make up minimum essentials as a preliminary to Composition 4-5-6.

Students who are exempt from Freshman English may register, if they wish, for English A-B-C or Composition 4-5-6, or for any Junior College courses in English, composition, or speech for which English A-B-C is the prerequisite.

Assignments to all sections in Freshman English and composition are contingent upon the student's presence in class at the first scheduled meeting. A student who is absent from the first meeting of the course forfeits his place in the section.

Freshman English is a 15-credit course consisting of 9 credits of literature and 6 credits of composition. Composition 4-5-6 is a 9-credit course in composition. Either course satisfies the requirement in English for graduation or for admission to the Senior College. Students who have already completed one or more quarters of Freshman English in another college should consult Mr. Thomas, 219 Folwell, before registering.

Any student who receives an A in composition in Course A or B or 4 or 5 is exempted from any further requirement in English.

Any student who receives an A or B in Course 4 or 5 may at his option elect the following quarter of A-B-C.

*Junior College Courses*

## Without Writing Laboratory

No.	Title	Hour	Day	Bldg.	Instructor	
Af-Bw-Cs	Freshman English (15 cred.; all; prereq. placement test)			Ar	Ar	
		I	MTWThF			
		II	MTWThF			
		III	MTWThF			
		IV	MTWFS			
		VI	MTWThF			
		VII	MTWThF			
Aw-Bs	Freshman English (2 qtrs. of A-B-C.	See Af-Bw-Cs)	I	MTWThF	Ar	Ar
Cf	Freshman English (3rd qtr. of A-B-C.	See Af-Bw-Cs)	VI	MTWThF	Ar	Ar

## With Writing Laboratory

All students who as a result of the placement tests in English are assigned to Composition 4f-5w-6s are required to register for the sections of this course with writing laboratory.

No.	Title	Hour	Day	Bldg.	Instructor
4f-5w-6s	Freshman Composition (9 cred.; all; prereq. placement test)			Ar	Ar
	Sec. 1 Rec.	I	WF		
	Lab.	I, II	M		
	Sec. 1a Rec.	I	MW		
	Lab.	I, II	F		
	Sec. 2 Rec.	II	MF		
	Lab.	I, II	W		
	Sec. 2a Rec.	II	WF		
	Lab.	I, II	T		
	Sec. 2b Rec.	II	MW		
	Lab.	I, II	Th		
	Sec. 3 Rec.	III	WF		
	Lab.	III, IV	M		
	Sec. 3a Rec.	III	MW		
	Lab.	III, IV	F		
	Sec. 3b Rec.	III	TTh		
	Lab.	II, III	S		
	Sec. 4 Rec.	IV	MF		
	Lab.	III, IV	W		
	Sec. 4a Rec.	IV	WF		
	Lab.	III, IV	T		
	Sec. 5 Rec.	V	WF		
	Lab.	V, VI	M		
	Sec. 6 Rec.	VI	MW		
	Lab.	V, VI	F		
	Sec. 6a Rec.	VI	MF		
	Lab.	V, VI	W		
	Sec. 6b Rec.	VI	WF		
	Lab.	V, VI	T		
	Sec. 6c Rec.	VI	MW		
	Lab.	VI, VII	Th		
	Sec. 7 Rec.	VII	WF		
	Lab.	VII, VIII	M		
	Sec. 7a Rec.	VII	MW		
	Lab.	VII, VIII	F		
	Sec. 7b Rec.	VII	MF		
	Lab.	VII, VIII	W		
	Sec. 7c Rec.	VII	WF		
	Lab.	VII, VIII	T		

## Without Writing Laboratory

Course 4f-5w-6s, without writing laboratory, is open only to students who are eligible for Course A-B-C.

4f-5w-6s	Freshman Composition (9 cred.; all; prereq. placement test)			Ar	Ar
	Sec. 1	II	MWF		
	2	II	TThS		
	3	VI	MWF		
	4	VII	MWF		
4w-5s	Freshman Composition (2 qtrs. of 4-5-6. See 4f-5w-6s)			Ar	Ar
	Sec. 1	II	TThS		
	2	V	MWF		
4s	Freshman Composition (1st qtr. of 4-5-6. See 4f-5w-6s)			Ar	Ar
	Sec. 1	III	TThS		
	2	V	MWF		
6f	Freshman Composition (3rd qtr. of 4-5-6. See 4f-5w-6s)				
		II	MWF	306F	Ar

No.	Title	Hour	Day	Bldg.	Instructor
27f-28w†-29s	Advanced Writing—Course 27-28: In the first half of this course the writing is exposition, with stress on logical organization; in the second it consists of description and narration. Course 29: The nature of the writing is left as far as possible to the choice of the students. The instructor will divide the class into several groups according to the types of writing students wish to do (6 or 9 cred.; all; prereq. A-B-C or 4-5-6 or exemption from requirement)			Ar	Ar
	Sec. 1 (fall, winter)	I	TThS		
	2 (fall, winter, spring)	II	MWF		
	3 (fall, winter)	II	TThS		
	4 (fall, winter)	III	MWF		
	5 (fall, winter, spring)	IV	MWF		
	6 (fall, winter)	VI	MWF		
27w-28s†	Advanced Writing (2 qtrs. of 27-28-29. See 27f-28w-29s)			Ar	Ar
	Sec. 1	I	MWF		
	2	II	MWF		
27s	Advanced Writing (1st qtr. of 27-28-29. See 27f-28w-29s)			Ar	Ar
	Sec. 1	I	MWF		
	2	II	MWF		
28f	Advanced Writing (2nd qtr. of 27-28-29. See 27f-28w-29s)			Ar	Ar
		II	MWF	Ar	Ar
36s	Technical Writing. Consult the Bulletin of the Institute of Technology.				

### Senior College Courses

Course 65 is open to Junior College students who have an average grade of at least C in the prerequisite courses.

Courses 67-68, 69-70-71, 81-82-83 are open to Junior College students who have an average of at least B in two quarters of Courses 27-28, 29, 65.

Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

65s¶	The Writing of Term Papers and Theses (3 cred.; jr., sr.; prereq. A-B-C or 4-5-6 and 6 additional cred. in English, or 10 cred. in Eng. 21-22-23)	Ar	Ar	Ar	Mr. Hillhouse
67f-68w†¶	Problems of Style (6 cred.; jr., sr.; prereq. average of B in two qtrs. of 27-28, 29, 65)	IV	MWF	304F	Mrs. Phelan
69f-70w-71s†¶	Short-Story Writing (6 cred.; jr., sr.; prereq. average of B in two qtrs. of 27-28, 29, 65)	VIII, IX	W	304F	Mrs. Phelan
81f-82w-83s¶	Essay Writing (6 cred.; jr., sr.; prereq. average of B in two qtrs. of 27-28, 29, 65)	III	TTh	304F	Mr. Nichols
91f-92w-93s¶	Seminar in Writing (9 cred.; sr.; prereq. 9 cred. in Senior College courses and permission of instructor)	VII, VIII	Th	304F	Mrs. Phelan

### FINE ARTS

*Major sequences in the College of Science, Literature, and the Arts.—*

A. History of Fine Arts. Courses 51 through 56; two of the three Courses 57, 58, 59; Architecture 51-52-53, 54-55-56; and a comprehensive examination in the history of art.

B. Drawing and Painting. Architecture DP-III; M-II or DP-IV; 9 credits from Courses 51 through 56, and 5 credits chosen from Philosophy 103, History 50-51-52, 53-54-55, 56-57-58, 59-60-61.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

¶ Students may not elect for credit two Senior College courses to be taken simultaneously. This rule does not apply to Course 69-70-71.

(Prerequisites to both sequences: Courses 1, 2, 3; Architecture DP-I for sequence A; Architecture DP-I and DP-II for sequence B; and either History 1-2 or History 11-12-13.)

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

### Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f	History of Architecture to 1870 (3 cred.; all; no prereq.)	III	TThS	JAud	Mr. Robb, Mr. Burke
2w	History of Modern Architecture and of Sculpture (3 cred.; all; no prereq.)	III	TThS	JAud	Mr. Robb, Mr. Burke
3s	History of Painting (3 cred.; all; no prereq.)	III	TThS	JAud	Mr. Robb, Mr. Burke
40	Travel and Study in Europe—To be undertaken only by arrangement with the instructor before the student goes to Europe (3 cred.; all; prereq. permission of chairman)				

### Senior College Courses

Courses 51, 52, 53, 54, 55, 56, 57, 58, 59 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

51f	Ancient Art (3 cred.; jr., sr.; prereq. 1 and 2 and 10 cred. in approved courses in history or literature, or permission of instructor)	II	MWF	2J	Mr. Burke
52w	Medieval Art (3 cred.; jr., sr.; prereq. as for 51)	II	MWF	2J	Mr. Burke
53s	The Art of the Fourteenth and Fifteenth Centuries (3 cred.; jr., sr.; prereq. 1, 2, and 3, and 10 cred. in history or literature or permission of instructor)	II	MWF	2J	Mr. Burke
54	<i>The Art of the Sixteenth Century</i> (3 cred.; jr., sr.; prereq. as for 53) ( <i>Not offered</i> )				
55	<i>The Art of the Seventeenth Century</i> (3 cred.; jr., sr.; prereq. as for 53) ( <i>Not offered</i> )				
56	<i>Modern Art</i> (3 cred.; jr., sr.; prereq. as for 53) ( <i>Not offered</i> )				
57	<i>American Architecture</i> (3 cred.; jr., sr.; prereq. 1 and 2 and Hist. 7-8-9, or permission of instructor) ( <i>Not offered</i> )				
58	<i>American Sculpture and Painting</i> (3 cred.; jr., sr.; prereq. 2 and 3 and Hist. 7-8-9, or permission of instructor) ( <i>Not offered</i> )				
59	<i>History of the Graphic Arts</i> (3 cred.; jr., sr.; prereq. 3 and 10 cred. in approved courses in history or literature, or permission of instructor) ( <i>Not offered</i> )				
60f-61w-62s	Tutorial Work (2 cred. per qtr.; students majoring in the department in sequence A only; prereq. permission of instructor)	Ar	Ar	Ar	Mr. Robb, Mr. Burke

See also Architecture 51-52-53, 54-55-56, History of Architecture.

### GEOGRAPHY

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Davis.

*Major sequence in the College of Science, Literature, and the Arts.*—Twenty-seven credits from Geography 53, 71, 101, 102, 110, 111, 120, 133, 241, 251, 252, 253; Economics 172, 176; Geology 110; History 80-81-82; Botany 131. At least 20 credits must be in Geography.

(Prerequisites: Courses 11 and 41; Geology 1-2 and A-B, or 1-3 and A-C, or 8; Economics 6-7.)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Professor Davis.

*Requirements for a teacher's certificate.*—Major recommendation: a minimum of 28 credits from the following courses in Geography: 11, 41, 43, 47, 53, 71, 101, 102, 110, 111, 120, 133, 241, 251, 252, 253.

An additional 5 credits from the following courses in Geology: 1-2, 1-3, or 8.

Minor recommendation: 18 credits from the following courses in Geography: 11 or 41, 53, 71, 101, 102, 110, 120.

For a specialized curriculum in social studies, see the Bulletin of the College of Education.

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
11f*	Human Geography—A study of environmental factors as they limit human activities. Current problems in the use of our natural resources are used as illustrative material (5 cred.; 3rd qtr. fr., soph., jr., sr.; no prereq.)				
	Sec. 1	II	MTWThF	103Bu	Mr. Davis
	2	III	MTWThF	103Bu	Mr. Brown
11w*	Human Geography (See 11f)				
	Sec. 1	I	MTWThF	103Bu	Mr. Davis
	2	II	MTWThF	103Bu	Mr. Davis
	3	III	MTWThF	103Bu	Mr. Brown
11s*	Human Geography (See 11f)				
	Sec. 1	II	MTWThF	103Bu	Mr. Davis
	2	III	MTWThF	103Bu	Mr. Brown
	3	IV	MTWFS	103Bu	Mr. Dicken
41f	Geography of Commercial Production—Types of production and their geographic basis. Emphasis on the production of commodities of commercial significance. (5 cred.; soph., jr., sr.; no prereq.; Course 11 recommended)				
		VII	MTWThF	133Ph	Mr. Dicken
41w	Geography of Commercial Production (See 41f)				
		II	MTWThF	133Ph	Mr. Dicken
41s	Geography of Commercial Production (See 41f)				
		II	MTWThF	133Ph	Mr. Dicken
43	<i>Political Geography</i> (5 cred.; soph., jr., sr.; no prereq.) ( <i>Not offered</i> )				
47f	Geography of Minnesota (3 cred.; soph., jr., sr.; prereq. 11 or 41)				
		IV	MWF	103Bu	Mr. Dicken

#### *Senior College Courses*

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

53s	Historical Geography of North America (3 cred.; jr., sr.; prereq. 11, or 15 cred in history)				
		I	TThS.	103Bu	Mr. Brown
71f	Geography of North America (3 cred.; jr., sr.; prereq. 11)				
		I	MWF	103Bu	Mr. Davis
101w	Geography of Europe (3 cred.; jr., sr., grad.; prereq. 8 cred.)				
		VI	MWF	103Bu	Mr. Dicken
102s	Trade Routes and Trade Centers (3 cred.; jr., sr., grad.; prereq. 41)				
		VII	MWF	103Bu	Mr. Brightman

\* Registration is limited. Written permission from the Junior College office, 106 Folwell Hall, is necessary for admission.



No.	Title	Hour	Day	Bldg.	Instructor
110f	Geography of South America (3 cred.; jr., sr., grad.; prereq. 8 cred.)	I	TThS	103Bu	Mr. Brown
111	<i>Cartography and Graphic Representation</i> (3 cred.; jr., sr., grad.; prereq. 10 cred.) ( <i>Not offered</i> )				
120s	Geography of Asia (3 cred.; jr., sr., grad.; prereq. 10 cred.)	I	MWF	103Bu	Mr. Davis
133w	Climatology (3 cred.; jr., sr., grad.; prereq. 10 cred. incl. 11)	IV	MWF	103Bu	Mr. Brown

*Primarily for Graduate Students*

241	<i>Field Course (Not offered)</i>				
251f	Seminar	Ar	Ar	Ar	Mr. Davis
252w	Seminar	Ar	Ar	Ar	Mr. Davis
253s	Seminar	Ar	Ar	Ar	Ar
301f,w,s	Research Problems	Ar	Ar	Ar	Mr. Davis, Mr. Hartshorne, Mr. Brown

## GEOLOGY AND MINERALOGY

*Major adviser in the College of Science, Literature, and the Arts.*—Associate Professor Thiel.

*Major sequences in the College of Science, Literature, and the Arts.*—No major sequence in geology should be undertaken without at least two quarters of chemistry. A course in surveying is required, preferably Civil Engineering 17. (See the Bulletin of the Institute of Technology.) Course 23 should be taken as early as possible. One field trip is required of all students majoring in geology.¶

Sequence A. For general geology, federal and state surveys, etc. Courses 91-92-93, 101, 111, 112, 121, (124 and 125) or (144 and 145), 151-152-153. (College physics is required.)

Sequence B. For petroleum geologist. Courses 91-92-93, 101, 105, 112, 137, (144 and 145) or (124 and 125), 151-152-153. (Trigonometry is required.)

Sequence C. For mining geologist and mineralographer. Courses 111, 112, 113, 121, 124, 125, 137, 144, 145, 166-167. (College physics is required.)

Sequence D. For paleontologist. Courses 91-92-93, 101, 103-104, 105, 106, 151-152-153. (Should include general zoology.)

Sequence E. For mineralogist. Courses 61, 105, 106, 111, 121, 131-132, 137, 166-167. (College physics is required.)

Sequence F. For petrographer. Courses 105, 106, (111 and 112) or (124 and 125), 131-132, 140-141. (Trigonometry is required.)

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Associate Professor Thiel.

For a specialized curriculum in natural science see the Bulletin of the College of Education.

### *Junior College Courses*

There are three beginning courses in geology: Course 1-2 (with or without the laboratory course A-B); Course 1-3 (with or without the laboratory course A-C); Course 8, which is a one-quarter course, without laboratory, for those who do not take geology to meet a laboratory science requirement.

¶ Girls may take trip only when there are enough for a separate section. They should consult the major adviser.

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w*†	General Geology (Dynamic and Historical)—A synoptical treatment of the materials of the earth and of geologic processes, together with a study of the history of the earth and its inhabitants as recorded in the rocks (6 cred.; all; no prereq.)				
	Lect.	II	TThS	210P	Mr. Thiel
	Rec.	II	F	210P	Mr. Thiel
Af†-Bw†§	General Geology Laboratory (Dynamic and Historical) (4 cred.; all; with or after 1-2)				
	Schedule for Af Sec. 1	I, II	MW	220P	Ar
	2	VI, VII	MW	220P	Ar
	Schedule for Bw Sec. 1	I, II	MW	220P	Ar
	2	VI, VII	TTh	220P	Ar
1f-3w*†	General Geology (Dynamic and Economic)—A synoptical treatment of the materials of the earth and the origin, distribution, and occurrence of metals, nonmetals, coal, and petroleum (6 cred.; all; no prereq.)				
	Lect.	III	TThS	110P	Mr. Emmons
	Rec.	III	F	110P	Mr. Emmons
Af†-Cw†§	General Geology Laboratory (Dynamic and Economic) (4 cred.; all; with or after 1-3)				
		III, IV	MW	220P	Ar
1w-2s*†	General Geology (Dynamic and Historical) (See 1f-2w)				
	Lect.	IV	MWF	110P	Mr. Hanley
	Rec.	IV	T	110P	Mr. Hanley
Aw†-Bs†§	General Geology Laboratory (Dynamic and Historical) (See Af-Bw)				
		VI, VII	WF	220P	Ar
1w-3s*†	General Geology (Dynamic and Economic) (See 1f-3w)				
	Lect.	II	MWF	110P	Ar
	Rec.	II	S	110P	Ar
Aw†-Cs†§	General Geology Laboratory (Dynamic and Economic) (See Af-Cw)				
		I, II	TTh	216P	Ar
1s*	General Geology (Dynamic) (1st qtr. of 1-2 or 1-3. See 1f-2w or 1f-3w)				
	Sec. 1 Lect.	III	MWF	110P	Mr. Thiel
	Rec.	III	Th	110P	Ar
	2 Lect.	VII	MWF	110P	Ar
	Rec.	VIII	M	110P	Ar
As†§	General Geology Laboratory (Dynamic) (1st qtr. of A-B or A-C. See Af-Bw or Af-Cw)				
	Sec. 1	III, IV	TS	220P	Ar
	2	VIII, IX	WF	220P	Ar
2f*	General Geology (Historical) (2nd qtr. of 1-2. See 1f-2w)				
	Lect.	III	MWF	208P	Mr. Hanley
	Rec.	III	Th	208P	Ar
Bf†§	General Geology Laboratory (Historical) (2nd qtr. of A-B. See Af-Bw)				
	Lab.	III, IV	TS	216P	Ar
4s	Geology of Minnesota (5 cred.; all; prereq. 1 or 8 and consent of instructor)				
		IV	MTWFS	210P	Mr. Thiel
8f	Introductory Geology—A short introductory course as an elective. Principles of earth sculpture; topographic changes and their causative agents; dynamic, structural, and historic geology (5 cred.; all; no prereq.)				
		I	MTWThF	210P	Mr. Thiel
8w	Introductory Geology (See 8f)				
		IV	MTWFS	210P	Mr. Thiel
8s	Introductory Geology (See 8f)				
	Sec. 1	II	MTWThF	210P	Mr. Thiel
	2	VI	MTWThF	210P	Ar

\* For a three-quarter sequence, Course 2 may be followed by Course 3 or 4 and Course 3 by Course 2 or 4.

† To receive credit for any part of this course a student must complete the parts preceding the dagger, except that students in Forestry may take 1 and A for 5 credits without completing 2 and B.

‡ A fee of \$1 is charged for this course.

§ Course A-B or Course A-C must be completed if geology is offered as the required laboratory science.

|| Not open to students who have had Course 1. Does not satisfy the Junior College requirement for science. Cannot be followed by Course 1 for credit. May be followed by Course 2 with instructor's permission.

No.	Title	Hour	Day	Bldg.	Instructor
23ff-24w†‡	Elements of Mineralogy (8 cred.; soph., jr., sr.; prereq. a course in chemistry)				
	Schedule for 23f Lect.	I	TThS	208P	Mr. Gruner
	Rec.	IV	W	208P	
	Lab. Sec. A	III, IV	T	100P	
		VI, VII	Th	100P	
	Sec. B	VI, VII	T	100P	
		III, IV	S	100P	
	Schedule for 24w Lect.	I	TThS	208P	Mr. Gruner
	Rec.	VIII	M	208P	
	Lab. Sec. A	III, IV	T	100P	
	VI, VII	W	100P		
Sec. B	VI, VII	M	100P		
	III, IV	S	100P		

### Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

51f	Elements of Paleontology (5 cred.; jr., sr.; prereq. 1 and Zool. 1-2-3)				
	Lect.	II	MWF	208P	Mr. Stauffer
	Lab.	I, II	ThS	105P	
61f	Blowpipe Analysis (3 cred.; jr., sr.; prereq. 24)				Mr. Gruner
		Consult the Bulletin of the Institute of Technology			
85	Field Work in Northern Minnesota—July 15-30, approximately. Students interested in this field trip should consult the department (4 cred.; jr., sr.; prereq. 2, 3, or 51)				
		Ar	Ar	Ar	Mr. Gruner, Mr. Thiel
91f-92w-93s	Index Fossils of North America (9 cred.; jr., sr.; prereq. 2, 3, or 51)				
	Lect.	I	F	208P	Mr. Stauffer
	Lab.	VI, VII	MW	105P	
101f-102w	Sedimentation (6 cred.; jr., sr., grad.; prereq. 24)				
	Schedule for 101f Lect.	IV	MWF	210P	Mr. Thiel
	Schedule for 102w Lect.	VI	Th	210P	
	Lab.	VII, VIII	TTh	216P	
103w-104s	Micropaleontology (6 cred.; jr., sr., grad.; prereq. 51 or 91)				
		II, III	TThS	103P	Mr. Stauffer
105s	Rock Study (3 cred.; jr., sr., grad.; prereq. 24)				
	Lect.	I	TS	110P	Mr. Grout
	Lab. Sec. 1	III-IV	T	200P	
	2	III-IV	S	200P	
106f	Petrography (3 cred.; jr., sr., grad.; prereq. 105)				
		I, II	Th	200P	Mr. Grout
		VI, VII	M	200P	
107f-108w-109s	Paleontologic Practice (9 cred.; jr., sr., grad.; prereq. 91-92-93)				
		Ar	Ar	105P	Mr. Stauffer
110	<i>Economic Geology</i> (3 cred.; jr., sr., grad.; prereq. 24) ( <i>Not offered</i> )				
111f	Ore Deposits (3 cred.; sr., grad.; prereq. 2, 3, or 51, and 105)				
		I	TThS	110P	Mr. Emmons
112w	Geology of Petroleum (3 cred.; sr., grad.; prereq. 111)				
		I	TThS	110P	Mr. Emmons
113s	Problems in Ore Deposits (3 cred.; sr., grad.; prereq. 112)				
		VI-IX	Th	Ar	Mr. Emmons
118w	Principles of Geomorphology—Principles of physiography of the lands, or geomorphology. A study of the form and structure of plains-plateaus, volcanoes, and the different types of mountains. The normal or fluvial, glacial, marine, and arid cycles of erosion and the resulting land forms. (3 cred.; jr., sr., grad.; prereq. 2 or 3 or 13. Geol. 145w is recommended as a desirable companion course)				
		III	TThS	206P	Mr. Hanley

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
119s	Geomorphology of the United States—A regional study of the United States by geomorphic or physiographic units. The development of the surface features as affected by rock structure and geologic history. Discussion of the principal problems presented by each area. (3 cred.; jr., sr., grad.; prereq. 2 or 3 or 13)	III	TThS	206P	Mr. Hanley
120s	Glacial Geology—Nature and process of glacial action. Land forms resulting from alpine and continental glaciers. Character and distribution of Pleistocene and earlier glacial deposits. (3 cred.; jr., sr., grad.; prereq. 2 or 3 or 13)	I	TThS	206P	Mr. Hanley
121f	Crystallography (3 cred.; jr., sr.; prereq. Math. 7 and Inorg. Chem. 6-7-8 or 9-10)	Ar	Ar	100P	Mr. Gruner
124w	Metamorphic Geology (3 cred.; jr., sr., grad.; prereq. 2, 3, or 51, and 105)	III	TThS	210P	Mr. Schwartz
125s	Structural Geology (3 cred.; jr., sr., grad.; prereq. 2, 3, or 51, and 105)	III	TThS	210P	Mr. Schwartz
131w-132s	Advanced Petrology (8 cred.; jr., sr., grad.; prereq. 106)	III	TThS	200P	Mr. Grout
	Schedule for 131w Lect.	III	TThS	200P	
	Rec.	VI	M	200P	
	Lab.	VI,VII,VIII,IX	Th	200P	
	Schedule for 132s Lect.	II	MTWF	200P	Mr. Grout
	Lab.	VI,VII,VIII,IX	Th	200P	
137f	Testing Economic Minerals (3 cred.; jr., sr., grad.; prereq. 2, 3, or 51, and 105)	Ar	Ar	200P	Mr. Gruner
	Lab.	Ar	Ar	200P	
140w-141s	Applied Petrography (6 cred.; jr., sr., grad.; prereq. 131)	II	F	200P	Mr. Grout
	Schedule for 140w Lect.	II	F	200P	
	Lab.	I, II	MW	Ar	
	Schedule for 141s Lect.	III	F	200P	
	Lab.	III, IV	MW	Ar	
144f	Interpretation of Geologic Maps—Study and problems in construction and interpretation of various types of geologic maps. Recognition of structural and stratigraphic relations. (4 cred.; jr., sr., grad.; prereq. 105)	VI,VII,VIII,IX	WF	206P	Mr. Hanley
145w	Interpretation of Topographic Maps—Application of the principles of geomorphology to the interpretation of topographic maps. Practice in the recognition of land forms. Determination of underground structures and evolution of topography from surface contours. (2 cred.; jr., sr., grad.; prereq. 2 or 3 or 13. Geol. 118w is a desirable companion course)	VI,VII,VIII,IX	W	206P	Mr. Hanley
149s	Methods of Field Geology (No cred.; jr., sr., grad.; to be taken with 150; prereq. 2, 23-24, 106, 124-125)	Ar	Ar	Ar	Mr. Gruner
150s*	Field Geology (Black Hills)—September 1-28, approximately (Jr., sr., grad.)	Ar	Ar	Ar	Mr. Gruner
151f-152w-153s	Advanced General Geology (9 cred.; jr., sr., grad.; prereq. 2, 3, or 51)	III	MWF	210P	Mr. Stauffer
161w	Crystal Structure (3 cred.; jr., sr., grad.; prereq. 121, elem. phys. and anal. geom.)	Ar	Ar	Ar	Mr. Gruner
166f,w-167w,s	Mineralography (6 cred.; sr., grad.; prereq. 111, 131)	Ar	Ar	207P	Mr. Schwartz
170f,w,s	Geologic Problems (3 cred.; jr., sr., grad.; prereq. permission of major adviser)	Ar	Ar	Ar	Ar

## GERMAN

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Kroesch.

*Major sequence in the College of Science, Literature, and the Arts.*—The aim of the major in German is the attainment of (1) a fair ability to speak and understand the spoken language; (2) a knowledge of German grammar and syntax, and the ability to

\* A maximum of 8 credits will be granted after field report is completed. The course will not be given for fewer than six students.

write themes in German on cultural or literary subjects; (3) the ability to read with ease German literature of the classical and modern periods together with critical literary prose in this field; (4) a survey knowledge of the whole field of German literature, as well as some acquaintance with German history and customs, especially of the modern period. 36 credits in Senior College courses should satisfy these requirements.

The Senior College courses 50 to 60 are offered for the purpose of linguistic, grammatical, and syntactic preparation, whereas Courses 61 to 80 are intended to serve the development of the literary and cultural aspects of the major work. Major students preparing for graduate work should include in their sequence Course 120-121-122.

Before entering courses in the Senior College the student must have completed Course 4, or 31, or four years of high school German, or the equivalent.

*Major adviser in the College of Education.*—Professor Burkhard.

*Requirements for a teacher's certificate.*—Major recommendation: Courses 50-51-52, 53-54-55, 56-57, 68, 108, and 15 additional credits in courses numbered above 40.

Minor recommendations.—Courses 50-51-52, 108, and 8 additional credits in courses numbered above 40.

*Sequences of courses for academic students.*—Without entrance German: Courses 1, 2, 3, 4, other courses numbered 40 or above. With one year of entrance German: Courses 2, 3, 4, other courses numbered 40 or above. With two years of entrance German: Courses 3, 4, other courses numbered 40 or above. With three years of entrance German: Course 4 and other courses numbered 40 or above. With four years of German, courses numbered 40 or above.

*Sequence of courses for premedical students.*—Without entrance German: Courses 1, 2, 3, and 30-31-32 or 33-34. With one year of entrance German: Courses 2, 3, and 30-31-32 or 33-34. With two years of entrance German: Courses 3, and 30-31-32 or 33-34. With three years of entrance German, Courses 30-31-32 or 33-34.

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f*	Beginning A (5 cred.; all; no prereq.)	I	MTWThF	212F	Ar
		II	MTWThF	213F	Ar
		III	MTWThF	213F	Ar
		IV	MTWFS	212F	Ar
		VI	MTWThF	207F	Ar
		1w*	Beginning A (See 1f)	I	MTWThF
II	MTWThF			209F	Ar
1s*	Beginning A (See 1f)	II	MTWThF	101F	Ar
		VI	MTWThF	209½F	Ar
2f*	Beginning B (5 cred.; all; prereq. 1 or one year of high school German)	III	MTWThF	113F	Ar
		VI	MTWThF	110F	Ar
		I	MTWThF	212F	Ar
2w*	Beginning B (See 2f)	II	MTWThF	213F	Ar
		III	MTWThF	213F	Ar
		IV	MTWFS	212F	Ar
		VI	MTWThF	207F	Ar
		I	MTWThF	205F	Ar
2s*	Beginning B (See 2f)	II	MTWThF	209F	Ar

\* A student may not receive credit for beginning courses (two quarters, 10 credits) in more than one of the foreign languages, exclusive of Greek and Italian, except by special permission of the Students' Work Committee.

No.	Title	Hour	Day	Bldg.	Instructor
3f§	Beginning C (5 cred.; all; prereq. 2 or two years of high school German)	I	MTWThF	213F	Ar
		VII	MTWThF	209F	Ar
	(Premed. students only)§	II	MTWThF	209½F	Ar
	(Premed. students only)§	IV	MTWFS	209½F	Ar
3w	Beginning C (See 3f)	III	MTWThF	113F	Ar
		VI	MTWThF	110F	Ar
3s	Beginning C (See 3f)	I	MTWThF	212F	Ar
		II	MTWThF	213F	Ar
		III	MTWThF	213F	Ar
		IV	MTWFS	212F	Ar
		VI	MTWThF	207F	Ar
4f	Intermediate German (5 cred.; all; prereq. 3 or three years of high school German)	II	MTWThF	212F	Ar
		III	MTWThF	212F	Ar
4w	Intermediate German (See 4f)	I	MTWThF	213F	Ar
		VII	MTWThF	209F	Ar
4s	Intermediate German (See 4f)	III	MTWThF	113F	Ar
		VI	MTWThF	110F	Ar
24f-25w-26s†	Chemical German (12 cred.; chemists, pharmacists, miners; no prereq.)	IV	MTWF	113F	Ar
		V	MTWF	207F	Ar
27f-28w-29s†	Chemical Prose (9 cred.; chemists, pharmacists, miners; prereq. two years of high school German or one year of college German)	IV	MWF	209F	Ar
30f-31w-32s	Medical German (9 cred.; premed.; prereq. 3)	II	MWF	207F	Ar
		IV	MWF	213F	Ar
32f	Medical German (3 cred.; premed.; prereq. 31)	II	MWF	209F	Ar
33w-34s	Medical German (10 cred.; premed.; prereq. 3)	II	MTWThF	209½F	Ar
		IV	MTWFS	209½F	Ar
40f	Rapid Reading (3 cred.; all; prereq. 4, or four years of high school German)	II	MWF	227F	Mr. Downs
40w	Rapid Reading (See 40f)	II	MWF	212F	Mr. Downs
40s	Rapid Reading (See 40f)	VII	MWF	209½F	Mr. Downs

### Senior College Courses

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

50f-51w-52s†	Composition (6 cred.; jr., sr.; prereq. 4 or 40)	IV	TS	209F	Mr. Lussky
53f-54w-55s†	Conversation (3 cred.; jr., sr.; prereq. 52)	I	TS	207F	Mr. Lussky
56f-57w†	Essay Writing (6 cred.; jr., sr.; prereq. 52)	III	TThS	207F	Mr. Pfeiffer

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ For premedical students the winter quarter continuation of 3f is 33w.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
61s	Epics and Ballads (3 cred.; jr., sr.; prereq. 40 or 3 cred. above 60)	III	TThS	209F	Mr. Lussky
62s	Nineteenth-Century Prose (3 cred.; jr., sr.; prereq. 40 or 3 cred. above 60)	II	MWF	212F	Mr. Pfeiffer
63f	Modern Drama (3 cred.; jr., sr.; prereq. 4)	IV	MWF	207F	Mr. Kroesch
64w	Classic Drama (3 cred.; jr., sr.; prereq. 40, or 4 with a grade of B)	IV	MWF	207F	Mr. Kroesch
68w	Survey of German Literature (3 cred.; jr., sr.; prereq. 6 cred. above 40)	III	MWF	209½F	Mr. Burkhard
77s	Faust I (3 cred.; jr., sr.; prereq. 64 and 3 additional cred. above 60)	III	MWF	209½F	Mr. Burkhard
108s	Phonetics (3 cred.; sr., grad.; prereq. 9 Senior College cred. in modern language)	III	TThS	207F	Mr. Kroesch
115-116-117†	<i>Middle High German Literature</i> (9 cred.; sr., grad.; prereq. 120 and 11 cred. above 60) ( <i>Not offered</i> )				
120f-121w- 122s†	Proseminar. History of German Literature (9 cred.; sr., grad.; prereq. 68 and 9 cred. above 60)	II	TThS	207F	Mr. Kroesch, Mr. Lussky, Mr. Pfeiffer
140-141-142	<i>Early High German Literature, 1500-1700</i> (9 cred.; sr., grad.; prereq. 121 and 11 cred. above 60) ( <i>Not offered</i> )				
143f-144w- 145s†	The Classical Period: Goethe (9 cred.; sr., grad.; prereq. 121 and 11 cred. above 60)	Ar	Ar	Ar	Mr. Lussky
150-151-152†	<i>Die Novelle</i> (9 cred.; sr., grad.; prereq. 122 and 11 cred. above 60) ( <i>Not offered</i> )				
153f-154w- 155s	Nineteenth-Century Drama: Kleist, Grillparzer, Hebbel (9 cred.; sr., grad.; prereq. 122 and 11 cred. above 60)	VIII, IX, X	T	301Lib	Mr. Burkhard
160-161-162	<i>Lyric Poetry</i> (9 cred.; sr., grad.; prereq. 68 and 11 cred. above 60) ( <i>Not offered</i> )				
163f-164w-165s	German and English Literary Relations, 16th, 17th, 18th Centuries (9 cred.; sr., grad.; prereq. 68 and 11 cred. above 60)	III, IV	S	Ar	Mr. Davies
173f-174w-175s	The Modern Novel, 1890-1930 (9 cred.; sr., grad.; prereq. 122 and 11 cred. above 60)	VIII, IX, X	W	301Lib	Mr. Pfeiffer
180-181-182	<i>The Romantic School in Germany</i> (9 cred.; sr., grad.; prereq. 122 and 11 cred. above 60) ( <i>Not offered</i> )				
202-203-204	<i>Gothic, Old Saxon</i> (9 cred.; sr., with completed major sequence, grad.) ( <i>Not offered</i> )				
209-210-211	<i>Old High German</i> (9 cred.; sr., with completed major sequence, grad.) ( <i>Not offered</i> )				
215f-216w-217s	Middle High German—Phonology, morphology, and syntax (9 cred.; sr., with completed major sequence, grad.)	VII	MWF	207F	Mr. Kroesch

## GREEK

See Classics, page 35.

## HISTORY

*Major advisers in the College of Science, Literature, and the Arts.*—Professor Shippee; Assistant Professor Osgood.

*Major sequence in the College of Science, Literature, and the Arts.*—Students will take the equivalent of at least two nine-credit courses numbered from 50 to 100. These will normally come in the junior year. In the senior year students, if they have maintained to the end of the junior year an honor point average of 1.5 in all work, will take at least

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

one course numbered 150 or above; all other majors in history will take an additional number of courses with numbers 50 to 100 in the senior year, but will not take courses numbered 150 or above.

Normally a history major will consist of Senior College courses aggregating at least 27 credits. Any student of Senior College rank, however, may, with the approval of a major adviser, present himself for examination in three of the following broad fields: American history, ancient history including the old Orient, European history to 1789, European history since 1789, economic history, English history, and Canadian history. In one of these fields or a part thereof the examination will be of a more detailed nature. Successful completion of these comprehensive examinations will be considered as satisfying the major requirement, irrespective of credit hours.

(Prerequisites: Either Course 1-2 or 4-5-6, and 7-8-9. For students who have had an acceptable course in American history elsewhere, the requirement of 7-8-9 may be waived upon recommendation of the major adviser.)

*Major adviser in the College of Education.*—Professor Krey.

*Requirements for a teacher's certificate.*—Major recommendation: a minimum of 45 credits; at least 18 credits must be in Senior College courses.

Minor recommendation: a minimum of 18 credits of which at least 9 credits must be in Senior College courses.

No major recommendation to teach history will be given unless the candidate has taken at least the general course in American history, History 7-8-9, or equivalent.

(Prerequisites: Either Course 1-2 or 4-5-6, and 7-8-9. For students who have had an acceptable course in American history elsewhere, the requirement of 7-8-9 may be waived upon recommendation of the major adviser.)

Students will take at least two of the courses numbered from 50 to 100. These will normally come in the junior year. In the senior year students, if they have maintained to the end of the junior year an honor point average of 1.5 in all work, will take at least one course numbered above 150; all other majors in history will take an additional number of survey courses in the senior year, but will not take courses numbered above 150.

For a specialized curriculum in social studies see the Bulletin of the College of Education.

*Students planning to do advanced work in history should get a reading knowledge of French and German in their early undergraduate years.*

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†	European Civilization (Formerly called "Modern World")				
	Lect. Sec. 1	II	TThS	BuAud	Mrs. Tyler
	Reserved for examination purposes	VIII	TTh	(See special footnote§)	
	Rec. Secs.*	I	MW	2F	
		II	MW	2F	
	These recitation sections	III	MW	2F	
	are for students who take	III	TTh	2F	
	Lecture Section 1.	IV	MW	5F	
		VI	TTh	2F	
		VII	MW	2F	

\* Recitations sections in Courses 1f, 1w, 3s, and 4f will not meet until after the first lecture.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ *Special note.*—The class will not meet at VIII TTh but the final examination at the end of each quarter will be given at the time regularly scheduled for VIII TTh classes. Therefore students who take History 1f-2w must not register for any other class which meets at VIII TTh.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†	European Civilization— <i>Continued</i>				
	Lect. Sec. 2	VII	MWF	BuAud	Mr. Deutsch
	Reserved for examination purposes	VIII	TTh	(See special footnote§)	
	Rec. Secs.*	I	TTh	2F	
		II	TTh	5F	
	These recitation sections are for students who take Lecture Section 2.	III	TTh	9F	
		VI	TTh	5F	
		VII	TTh	2F	
1w-2s†	European Civilization (Formerly called "Modern World") (See 1f-2w)				
	Lect.	II	MWF	206Pt	Mr. Steefel
	Rec. Secs.*	I	TTh	5F	
		II	TTh	25F	
		III	TTh	15F	
		VI	TTh	114F	
3s	Social and Economic History of Modern Europe—Since 1500 (5 cred.; all; prereq. 10 cred. if taken by fr. Not open to students who have taken Econ. 1)				
	Lect.	II	TThS	BuAud	Mr. Heaton
	Rec. Secs.*	I	MW	2F	
		II	MW	2F	
		III	MW	2F	
		IV	MW	5F	
		VII	TTh	2F	
4f-5w-6s†	English History—England since prehistoric times (9 cred.; all; no prereq.)				
	Lect.	II	MW	BuAud	Mr. Burt
	Rec. Secs.*	I	F	2F	
		II	F	2F	
		II	Th	2F	
		III	F	2F	
		IV	W	2F	
		VI	F	2F	
7f-8w-9s†	American History (9 cred.; soph., jr., sr.; no prereq.)				
	Sec. 1	I	MWF	209Bu	Mrs. Tyler
	2	I	MWF	111Bu	Mr. Stephenson
	3	VII	MWF	211Bu	Mr. Osgood
11f-12w-13s†	Medieval History—300-1560 (9 cred.; for music and architecture students only; no prereq.)				
	Lect.	IV	MWF	221Bu	Mr. Krey

## Senior College Courses

Except where otherwise stated, there are no prerequisites for the courses numbered 50 to 100. The examination at the end of the course will cover the work of the three terms, and no final grade will be assigned until the whole course is completed. In exceptional cases students may enter the winter quarter, but in that event must read to cover the work of the first quarter.

Courses 50-51-52 and 50a-51a-52a are open to sophomores who have earned at least 9 credits in history with an average grade of at least C.

Course 70-71-72 is open to prelegal sophomores who have completed Course 4-5-6 or Course 1-2 with a grade of at least C, and also to prelegal sophomores who have an average grade of C in all their work, even if that work includes no course in history. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

\* Recitation sections in Courses 1f, 1w, 3s, and 4f will not meet until after the first lecture.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ *Special note.*—The class will not meet at VIII TTh but the final examination at the end of each quarter will be given at the time regularly scheduled for VIII TTh classes. Therefore students who take History 1f-2w must not register for any other class which meets at VIII TTh.

No.	Title	Hour	Day	Bldg.	Instructor
50f-51w-52s†	Ancient Orient and Greece to 200 B.C. (9 cred.; jr., sr.)	I	TThS	112Bu	Mr. Jones
50a-51a-52a†	<i>History of Rome and the Byzantine Empire</i> (9 cred.; jr., sr.) (Not offered)				
53f-54w-55s†	Medieval European History—300-1300 (9 cred.; jr., sr.)	III	MWF	112Bu	Mr. Krey
53a-54a-55a†	<i>Renaissance and Reformation—1300-1648</i> (9 cred.; jr., sr.) (Not offered)				
56f-57w-58s†	Early Modern European History—1648-1815 (9 cred.; jr., sr.)	IV	MWF	111Bu	Mr. Steefel
59-60-61†	<i>Europe in the Nineteenth Century</i> (9 cred.; jr., sr.) (Not offered)				
62f-63w-64s†	European Expansion (9 cred.; jr., sr.)	II	MWF	111Bu	Mr. Willson
65w-66s†	Europe in the Twentieth Century (6 cred.; jr., sr.)	I	MWF	6F	Mr. Deutsch
67w-68s†	United States since Reconstruction (6 cred.; jr., sr.)	VII	MWF	221Bu	Mr. Stephenson
70f-71w-72s†	English Constitutional History (9 cred.; open to prelegal soph. with at least a C average in Courses 4-5-6, 1-2, or in all their college work, and to all jrs. and srs.)	I	MWF	211Bu	Mr. White
73-74-75†	<i>England since 1485</i> (9 cred.; jr., sr.) (Not offered)				
76f-77w-78s†	Canadian History (9 cred.; jr., sr.)	III	TThS	221Bu	Mr. Burt
80-81-82†	<i>Introduction to Economic History</i> (9 cred.; jr., sr.) (Not offered)				
83f-84w-85s†	American Economic History (9 cred.; jr., sr.)	I	TThS	111Bu	Ar
86-87†	<i>English Backgrounds and American Colonies</i> (6 cred.; jr., sr.) (Not offered)				
88w-89s†	American Colonies in the Seventeenth Century (6 cred.; jr., sr.)	II	MWF	112Bu	Mr. White
90f-91w-92s†	West in American History (9 cred.; jr., sr.)	III	TThS	111Bu	Mr. Osgood
90a-91a-92a†	<i>Minnesota and the Northwest</i> (9 cred.; jr., sr.) (Not offered)				
93f-94w-95s†	American Diplomatic History (9 cred.; jr., sr.)	III	MWF	221Bu	Mr. Shippee
93af-94aw-95as†	Survey of Latin American History (9 cred.; jr., sr.)	II	TThS	112Bu	Mr. Jones

Courses numbered 150 to 200 are open to seniors, and to graduate students upon recommendation of advisers; prerequisites are appropriate lecture courses and consent of the department.

150f-151w-152s†	Selected Readings in Ancient History—History of the Ancient Near East (9 cred.; sr., grad.)		Ar	Ar	Ar	Mr. Jones
153f-154w-155s†	Selected Readings in Medieval and Renaissance History (9 cred.; jr., sr., grad.)	VIII, IX		W	328Lib	Mr. Krey
156f-157w-158s†	Selected Readings in Modern European History (9 cred.; sr., grad.)					
	French Revolution and Napoleon	VIII, IX		T	328Lib	Mr. Deutsch
	Nineteenth-Century Europe	VI, VII		Th	315Lib	Mr. Steefel
170f-171w-172s†	Selected Readings in English History (9 cred.; sr., grad.)					
	Topic arranged	VIII, IX		Th	328Lib	Mr. White
	Tudor and Stuart England	VIII, IX		Th	315Lib	Mr. Willson
176f-177w-178s†	Selected Readings in Canadian History (9 cred.; sr., grad.)					
		I, II		Th	219Bu	Mr. Burt

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

No.	Title	Hour	Day	Bldg.	Instructor
180f-181w-182s†	Selected Readings in Economic History—European economic development since 1700 (9 cred.; sr., grad.)	VI, VII	T	111Bu	Mr. Heaton
190f-191w-192s†	Selected Readings in American History (9 cred.; sr., grad.)				
	The Slavery Controversy	VI, VII	T	328Lib	Mr. Stephenson
	Social Ferment, 1820-1850	VI, VII	Th	339Lib	Mrs. Tyler
	The Colonial Frontier	VIII, IX	W	339Lib	Mr. Osgood
	The Later Nineteenth Century and After	VIII, IX	F	339Lib	Mr. Shippee
	Minnesota and the Northwest	VIII, IX	T	Ar	Mr. Blegen

## HOME ECONOMICS

### COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

The courses in Home Economics which are listed below are open to students of the College of Science, Literature, and the Arts. Other courses may be taken by arrangement with the department; but before registering for them students should get the approval of Assistant Dean Shumway in 219 Administration Building. The hours and days at which the classes meet are announced in the College of Agriculture, Forestry, and Home Economics section of this bulletin.

#### *Course Numbers, Titles, and Descriptions*

2f,s	Introduction to Textiles—Textile fibers and their properties as related to fabric properties; yarn and fabric structure and design; problems in selection of textile materials for clothing and household furnishings. Laboratory work with representative fabrics.
3f,w,s	Clothing Construction A—Laboratory practice in designing and planning, cutting, fitting, and applying suitable techniques in making garments of cotton and silk or rayon fabrics; care and use of sewing machines; interpretation and adaptation of commercial patterns. Construction problems include a child's garment.
4f,w,s	Clothing Construction B—Laboratory practice in costume modeling; preparation of dress form; application of tailored technique to silk, rayon, or wool fabrics; garments constructed include a remodeling problem.
21f,w,s-22f,w,s	Color and Design I, II—The principles of color and design related to selecting and designing costumes and selecting, arranging, and designing house furnishings.
30s	Introduction to Nutrition—Designed for students wishing a discussion of the application of principles of nutrition to selection of food.
34f	Nutrition Problems—Consideration of nutrition problems most commonly met by adults and children in typical families.
40f,w,s	Food Preparation—Development of technique and application of fundamental science principles to cookery processes. Establishment of good standards for food products.
55f,w,s	Related Art Problems—Problems worked out relating to costume and house furnishing design.
56Af-56Bs	Applications of Color and Design—Principles of design and color applied to selection, cost, and arrangement in fields of costume, dress, and household fabrics and household furnishings.
89s	Home Management with Special Reference to Low Income Families—Management of the home in relation to economic and social status of the family, with special consideration given to the dependent family.
120f,w,s	Art History and Appreciation—Historical development of painting, sculpture, architecture, decoration, furniture, and costumes, with special emphasis on design and influence upon modern styles.
180w,s	Home Planning and Furnishing—A study for the homemaker who aims at more intelligent planning and furnishing of the home. House plans, selection and arrangement of equipment and furnishings from the point of view of beauty and good home management.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

## HOW TO STUDY

No.	Title	Hour	Day	Bldg.	Instructor
1f§	How To Study (2 cred.; no prereq.)				
	Sec. 1	I	MWF	104J	Mr. Baker
	2	II	MWF	104J	and others
	3	VII	MWF	104J	
1w§	How To Study (See 1f)				
	Sec. 1	I	MWF	104J	Mr. Baker
	2	II	MWF	104J	and others
1s§	How To Study (See 1f)				
	Sec. 1	I	MWF	104J	Mr. Baker
	2	II	MWF	104J	and others

## HUMAN ANATOMY

## MEDICAL SCHOOL

For complete list of courses, see the Bulletin of the Medical School.

Students in this college may elect courses in human anatomy other than Course 3 (see the Bulletin of the Medical School) only by arrangement with the head of the Department of Anatomy.

No.	Title	Hour	Day	Bldg.	Instructor
3f,s	Elementary Anatomy (3 cred.; primarily for nurses; all; no prereq.)				
	Lect.	VI	T	Ar	Mr. Blount
	Lab. and rec.	VI, VII, VIII	Th	Ar	

## HUMAN PHYSIOLOGY

See Physiology, page 77.

## JOURNALISM

*Major advisers in the College of Science, Literature, and the Arts.*—Professors Casey, Barnhart, and Nafziger; Associate Professor Charnley; Assistant Professor Ford.

*Major sequence in the College of Science, Literature, and the Arts.*—Courses 51, 52 (for men), 55, 69 or 73-74, 101 (for men), 109-110, 140-141-142, and 9 additional credits to be chosen in conference with the adviser. Students of marked ability may substitute for these 9 additional credits in journalism Senior College courses in other departments with the approval of the major adviser in journalism. Women students who do not elect Courses 52 and 101 must substitute other journalism courses of equivalent hours.

The additional credits will be arranged to prepare students for the following types of journalistic work: (1) metropolitan journalism—news, editorial, advertising, or press association work; (2) small daily and weekly journalism—editing and management; (3) journalism-advertising; (4) magazine writing, magazine editing—editorial direction and business management of trade, technical, and professional journals; (5) agricultural journalism—consult the Bulletin of the College of Agriculture, Forestry, and Home Economics; (6) teacher training in journalism—consult the Bulletin of the College of Education.

Freshmen who are interested in journalism or those who think that they may enter the department at a later time are urged to discuss their course programs with members of the journalism staff.

§ Registration is limited. Written permission from the instructor is necessary for admission. For Course 1f, students should inquire at 106 Folwell Hall; for Courses 1w and 1s, at 112 Psychology Building.

(Prerequisites: Courses 13, 14-15, and Composition 27-28.) In addition to these prerequisites, the following Junior College courses are recommended as providing, in most cases, the best foundation for a major in journalism: Political Science 1-2-3, 15 and 25; Sociology 1 and 6; Psychology 1-2 and 4-5; 9 credits in history; 10 credits in economics.

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Adviser for students in all colleges.*—Professor Casey.

*Minor sequence.*—For students in the College of Agriculture, Forestry, and Home Economics, the Institute of Technology, and the School of Business Administration: Courses 13, 41, 69, and 6 additional credits in Senior College journalism courses, to be chosen in conference with the adviser. Courses 111 and 114 or 109-110 are recommended.

*Minor sequence in the College of Education.*—Courses 13, 41, 69, 82, and at least 6 additional credits in Senior College journalism courses. Course 109-110 is recommended.

Course Ed. T. 74 offered by the Department of Journalism and listed under "Methods and Directed Teaching" in the program of the College of Education is also required in this sequence.

*Note.*—Sociology 116 and Agricultural Journalism 50-51-52 and 53 carry credit in the department.

*Fees.*—Students registered for any journalism course, except Course 5, are required to pay a general fee of \$1 a quarter, regardless of the number of courses pursued. Courses 41, 51-52, 55, and 58 require laboratory fees in addition to the general fee of \$1.

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
5s	The American Newspaper—A survey of the history, organization, and methods of contemporary journalism followed by an analysis of the relation of newspapers to their readers (Not open to Journalism majors) (3 cred.; soph. with average of C, jr., sr.; no prereq.)	II	TThS	14P	Mr. Ford
12w¶	Newspaper Reporting (5 cred.; substantially equivalent to 13-14; soph. with average of C, jr., sr.; prereq. permission of chairman of department)	III	MTWThF	14P	Mr. Kildow
13f	Reporting Conferences	Ar	Ar	Ar	
	Introduction to Reporting (3 cred.; soph. with average of C, jr., sr.; prereq. Eng. A-B-C or Comp. 4-5-6, or exemption from English requirement)	I	MWF	14P	Mr. Charnley
	Sec. 1 Journalism majors	I	TThS	10P	Mr. Kildow
	2 Journalism majors	I	MWF	305F	Mr. Ford
	3 Journalism minors	Ar	Ar	Ar	
14w-15s†	Reporting Conferences	Ar	Ar	Ar	
	Newspaper Reporting (6 cred.; soph., jr., sr., with average of C in 13 or 12, or consent of instructor, and Comp. 27-28§)	I	MWF	14P	Mr. Charnley
	Sec. 1	I	TThS	10P	Mr. Charnley (w),
	2	I		14P	Mr. Nafziger (s)
	Reporting Conferences	Ar	Ar	Ar	Mr. Charnley and staff
17¶	<i>Newspaper Reference Methods</i> (2 cred.; soph., with average of C, jr., sr.; prereq. 5, 12, or 13) ( <i>Not offered</i> )				

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ May be taken at the same time.

¶ This course is intended only for winter quarter transfer students and others who for exceptional reasons cannot take 13 and 14. It should be followed by 15.

|| No student may receive credit for both Journalism 17 and Library Methods 1.

No.	Title	Hour	Day	Bldg.	Instructor
41w††	Editing for Nonmajors (Not open to S. L. and A. students) (3 cred.; jr., sr.; prereq. 12 or 13)				
	Lect.	IV	MW	10P	Mr. Ford
	Lab. Sec. 1	VIII, IX	T	19P	
	2	VI, VII	W	19P	
	3	VI, VII	Th	19P	

### Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

51f†-52w†	News Editing (6 cred.; jr., sr.; prereq. 15)				
	Lect. Sec. 1	II	M	14P	Mr. Nafziger
	2	IV	M	14P	Mr. Nafziger
	Lab.	Fall quarter			
	Sec. 1	VI, VII	M	19P	Mr. Nafziger
	2	VIII, IX	M	19P	Mr. Nafziger
	3	II, III	T	19P	Mr. Kildow
	4	VI, VII	T	19P	Mr. Kildow
	5	VIII, IX	T	19P	Mr. Kildow
	6	VI, VII	W	19P	Mr. Kildow
	7	VIII, IX	W	19P	Mr. Kildow
	8	II, III	Th	19P	Mr. Nafziger
	9	VI, VII	Th	19P	Mr. Kildow
	10	VI, VII	F	19P	Mr. Nafziger
	Lab.	Winter quarter			
	Sec. 1	VI, VII	M	19P	Mr. Nafziger
	2	VI, VII	T	19P	Mr. Kildow
	3	VIII, IX	W	19P	Mr. Nafziger
	4	VI, VII	Th	19P	Mr. Kildow
	5	VI, VII	F	19P	Mr. Kildow
	6	III, IV	S	19P	Mr. Kildow
51s†	News Editing (3 cred.; jr., sr.; prereq. 12 or 14)				
	Lect.	IV	M	14P	Mr. Nafziger
	Lab. Sec. 1	VI, VII	M	19P	Mr. Nafziger
	2	II, III	T	19P	Mr. Kildow
	3	VI, VII	Th	19P	Mr. Kildow
55f,w,s††	Advertising and Newspaper Typography (3 cred.; jr., sr.; prereq. 15)				
	Lect.	VII	M	14P	Mr. Barnhart
	Lab. Sec. 1	VIII, IX	MW	20P	
	2	VI, VII	TTh	20P	
	3	I, II	WF	20P	
	4	VI, VII	WF	20P	
58w††	Advanced Typography (2 cred.; jr., sr.; prereq. 55 and consent of instructor)				
		Ar	Ar	20P	Mr. Barnhart
60-61-62	<i>The Weekly Newspaper</i> (9 cred.; jr., sr.; prereq. 15) ( <i>Not offered</i> )				
65f*	Graphic Arts: Processes—Discussion of reproduction processes—letter press, planography, intaglio; also engravings, inks, paper stock, bindings, and miscellaneous printing operations. (3 cred.; jr., sr.; prereq. consent of major adviser in the Department of Journalism or in the School of Business Administration)				
		IV	MWF	110P	Mr. Barnhart
68s	Problems in Radio Writing (3 cred.; jr., sr.; prereq. 52 and consent of department)	II	TThS	10P	Mr. Charnley
69s	Newspaper and Magazine Articles (3 cred.; jr., sr.; prereq. 15 or 41)	I	MWF	210P	Mr. Kildow

\* This course 65f is one of three courses related in general subject-matter of special interest to students of journalism and advertising. The other two, listed elsewhere in this bulletin, are Drawing 64w, "Graphic Arts" and Business Administration 194s, "Advanced Advertising Procedure."

† A fee of \$2 is charged for this course.

†† A fee of \$1 per credit is charged for this course.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
70	<i>Business and Specialized Journalism</i> (3 cred.; jr., sr.; prereq. 15 or 69, or consent of instructor) ( <i>Not offered</i> )				
73f-74w†	Newspaper and Magazine Articles (6 cred.; jr., sr.; prereq. 15)	VI	MWF	10P	Mr. Charnley
75s	Law of the Press (2 cred.; jr., sr.; open only to major students in journalism who have not taken Course 15 here; prereq. 51-52)	IV	MW	19P	Mr. Charnley
76f	Critical Writing (3 cred.; jr., sr.; prereq. 15)	II	TThS	10P	Mr. Ford
78s	Press Relations (3 cred.; jr., sr.; prereq. 69 or 73-74)	VI	MWF	10P	Mr. Charnley
82s	Supervision of School Publications (3 cred.; jr., sr.; prereq. 41 or 51-52)	IV	MWF	9F	Mr. Kildow
93f§	Daily and Weekly Editorial Administration (3 cred.; jr., sr.; prereq. 51-52)	I	TThS	14P	Mr. Barnhart
94w§	Daily and Weekly Newspaper Advertising (3 cred.; jr., sr.; prereq. 51-52)	I	TThS	14P	Mr. Barnhart
95s§	Daily and Weekly Circulation and Newspaper Management (3 cred.; jr., sr.; prereq. 51-52)	I	TThS	10P	Mr. Barnhart
96	<i>The Journalism of Finance and Commerce</i> (3 cred.; jr., sr.; prereq. 15 and 10 cred. in economics or business administration) ( <i>Not offered</i> )				
99f,w,s	Readings in Journalism (Cred. ar., not to exceed 3; jr., sr.; prereq. consent of the chairman of the department)				Mr. Casey, Mr. Nafziger, Mr. Charnley, Mr. Ford
101w	The Reporting of Public Affairs (3 cred.; jr., sr., grad.; prereq. 51-52 and 9 cred. in political science. Required of all men majors)	III	TThS	10P	Mr. Nafziger
103s	Literary Aspects of Journalism (3 cred.; jr., sr., grad.; prereq. Eng. 21-22 or 22-23)	IV	MWF	10P	Mr. Ford
104s	Advanced Newspaper Advertising (2 cred.; jr., sr., grad.; prereq. 52, 94, and consent of instructor)	VIII	TTh	10P	Mr. Barnhart
109w-110s	History of Journalism (6 cred.; jr., sr., grad.; prereq. 15)	III	MWF	166Ph	Mr. Ford
111f	Foreign News Sources (3 cred.; jr., sr., grad.; prereq. 41 or 51 and a history or political science course in international relations, or consent of instructor)	III	MWF	10P	Mr. Nafziger
112w	Current Newspaper Problems (3 cred.; jr., sr., grad.; prereq. 109-110 or 111)	II	TThS	10P	Mr. Ford
114	<i>The Influence of the Newspaper</i> (3 cred.; jr., sr., grad.; prereq. 15 or 41) ( <i>Not offered</i> )				
130f-131w-132s†	The Press and Public Opinion (9 cred.; jr., sr., grad.; prereq. 20 cred. in sociology, psychology, and political science)	II	MWF	10P	Mr. Casey
140f-141w-142s†	Contemporary Affairs (9 cred.; sr., grad.; prereq. 109-110 and 20 cred. in social science)	VI	TTh	14P	Mr. Casey, Mr. Nafziger, Mr. Charnley
	Lect.	IV	T	14P	Mr. Nafziger
	Rec. Sec. 1	VII	T	14P	Mr. Charnley
	2	IV	T	10P	Mr. Casey
	3				

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ Two quarters of Courses 93, 94, 95 must be completed before credit is received for any quarter.

*For Graduate Students Only*

No.	Title	Hour	Day	Bldg.	Instructor
205f,w,s	Topics in International News Communications (3 cred.; seminar for grad. students; prereq. consent of chairman of department)	Ar	Ar	Ar	Mr. Casey, Mr. Nafziger
210f,w,s	Research in Newspaper Problems (2 cred.; seminar course for grad. students; prereq. consent of department)	Ar	Ar	Ar	Mr. Casey, Mr. Nafziger

## LATIN

See Classics, page 35.

## LIBRARY METHODS

*Note.*—For the special course in library training see the Bulletin of the College of Science, Literature, and the Arts. For professional courses in library instruction see the program of the Division of Library Instruction, pages 10-11.

No.	Title	Hour	Day	Bldg.	Instructor
1f,w,s§	Use of Books and Libraries—Use of catalog, reference books, indexes, and bibliographies, for personal and class purposes. Preparation of reference lists. (2 cred.; fr., soph. only; no prereq.)				
	Sec. 1	II	MW	3Lib	Mr. Russell, Miss Moen
	2	IV	MW	3Lib	Mr. Shove, Miss Thornton
	3	VI	MW	5Lib	Miss Davenport

## MATHEMATICS

*Major advisers in the College of Science, Literature, and the Arts.*—Professors Brink, Hart, and Jackson.

*Major sequence in the College of Science, Literature, and the Arts.*—Courses 50, 51, 52, 62; and either 15 additional credits in Senior College courses, other than 70, or 6 additional credits in Senior College courses, other than 70, together with 10 credits of Physics 101-103-105 or 9 credits of Biostatistics (Preventive Medicine and Public Health 110, 120, 130, 140).

(Prerequisites: Mathematics 6, 7, 30.)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Associate Professor Underhill.

*Requirements for a teacher's certificate.*—Major recommendation: entrance credit in solid geometry or its equivalent; Courses 6, 7, 30, 50, 51, and 8 additional credits in courses numbered above 51.

Minor recommendation: entrance credit in solid geometry or its equivalent. Course 50 and 3 additional credits in courses numbered above 50.

Mathematics 20 is strongly recommended as an elective, to be taken preferably in the freshman or sophomore year, in connection with either a major or minor recommendation.

§ For students in the College of Science, Literature, and the Arts. Others must obtain a special card from the Junior College office, 106 Folwell Hall.



*Placement tests.*—In each of Courses 1, 6, and 8, a placement test will be given at some time within the first two weeks of the quarter. Any student who fails in the test in Course 1 may be required to drop the course and to review his elementary mathematics before taking college mathematics. Any student who offers less than one year of high school higher algebra as a substitute for Course 1 and who fails the placement test given in Course 6 or 8, will be required to take Course 1 before taking more advanced mathematics. A student who has had a complete year of elementary algebra, and a corresponding course in higher algebra for one-half year, should be able to pass the placement test in Course 6 or 8.

### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f*	Higher Algebra (5 cred.; all; prereq. one yr. of elementary algebra §; open for credit to any student offering less than one year of high school higher algebra for entrance)				
	Sec. 1	I	MTWThF	JAud	Ar
	2	III	MTWThF	105F	Ar
	3	VI	MTWThF	105F	Ar
	In choosing one of the sections of this course the student should be guided by the schedule of hours for its winter quarter continuation. The fall-winter sequences are: At I hour, 1f-6w and 1f-8w; at III hour, 1f-6w; at VI hour, 1f-6w.				
1w*	Higher Algebra (See 1f)				
	Sec. 1	IV	MTWFS	301F	Ar
	2	VI	MTWThF	105F	Ar
	In choosing one of the sections of this course the student should be guided by the schedule of hours for its spring quarter continuations. The winter-spring sequences are: At IV hour, 1w-6s; at VI hour, 1w-6s and 1w-8s.				
1s*	Higher Algebra (See 1f)				
		I	MTWThF	301F	Ar
6f	Trigonometry (5 cred.; all; prereq. plane geometry and Course 1 or high school higher algebra §; open for credit to students offering high school trigonometry for entrance)				
	Sec. 1	II	MTWThF	105F	Ar
	2	III	MTWThF	104F	Ar
6w	Trigonometry (See 6f)				
	Sec. 1	I	MTWThF	105F	Ar
	2	III	MTWThF	104F	Ar
	3	VI	MTWThF	104F	Ar
6s	Trigonometry (See 6f)				
	Sec. 1	IV	MTWFS	104F	Ar
	2	VI	MTWThF	105F	Ar
7f	College Algebra (5 cred.; all; prereq. 6, or high school trigonometry if approved by the department chairman)				
		I	MTWThF	105F	Miss Gibbens
7w	College Algebra (See 7f)				
	Sec. 1	II	MTWThF	105F	Ar
	2	III	MTWThF	105F	Ar
7s	College Algebra (See 7f)				
	Sec. 1	III	MTWThF	101F	Ar
	2	VI	MTWThF	101F	Ar
8f*	Commerce Algebra (5 cred.; prebus. stud.*; prereq. 1, or high school higher algebra §)				
		VII	MTWThF	JAud	Ar
8w*	Commerce Algebra (See 8f)	I	MTWThF	JAud	Ar
8s*	Commerce Algebra (See 8f)	VI	MTWThF	104F	Ar
20w*	Mathematics of Investment (5 cred.; all; prereq. 8, or 6 and 7)				
		VII	MTWThF	JAud	Ar
20s*	Mathematics of Investment (See 20w)				
		I	MTWThF	JAud	Ar
21s	Introduction to the Mathematics of Life Insurance (3 cred.; all; prereq. 20)				
		VII	MWF	104F	Miss Gibbens

\* Prebusiness students who elect mathematics to meet the requirement of 10 credits in mathematics or laboratory science, should take 1 and 8 if they have not had high school higher algebra, and 8 and 20 if they have had high school higher algebra.

§ Read the announcement about placement tests which precedes the heading Junior College Courses.

|| No student may receive credit for both Courses 7 and 8.

No.	Title	Hour	Day	Bldg.	Instructor
30f	Analytic Geometry (5 cred.; all; prereq. 6 and 7 or 6 and 8)	I	MTWThF	104F	Mr. Underhill
30w	Analytic Geometry (See 30f)	I	MTWThF	104F	Miss Gibbens
30s	Analytic Geometry (See 30f)				
	Sec. 1	II	MTWThF	105F	Ar
	2	III	MTWThF	104F	Ar

### Senior College Courses

Courses 50, 51, 52 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

50f	Calculus I (5 cred.; jr., sr.; prereq. 30)	III	MTWThF	101F	Mr. Brink
50w	Calculus I (See 50f)	I	MTWThF	102F	Mr. Underhill
50s	Calculus I (See 50f)	I	MTWThF	105F	Miss Gibbens
51w	Calculus II (5 cred.; jr., sr.; prereq. 50)	III	MTWThF	101F	Mr. Brink
51s	Calculus II (See 51w)	I	MTWThF	102F	Mr. Underhill
52f	Calculus III (5 cred.; jr., sr.; prereq. 51)	II	MTWThF	101F	Mr. Underhill
52s	Calculus III (See 52f)	III	MTWThF	102F	Mr. Brink
60s	Synthetic Metric Geometry (3 cred.; jr., sr.; prereq. 30)	II	MWF	103F	Miss Gibbens
62w	Theory of Equations I (3 cred.; jr., sr.; prereq. 50)	VII	MWF	104F	Miss Carlson
63s	Theory of Equations II (3 cred.; jr., sr.; prereq. 62)	VII	MWF	105F	Miss Carlson
70	<i>History of Elementary Mathematics</i> (3 cred.; jr., sr.; prereq. 30) ( <i>Not offered</i> )				
71f	Solid Analytic Geometry (3 cred.; jr., sr.; prereq. 50)	VII	MWF	105F	Miss Gibbens
102-103	<i>Advanced Analytic Geometry</i> (6 cred.; jr., sr., grad.; prereq. 51) ( <i>Not offered</i> )				
106f	Differential Equations (3 cred.; jr., sr., grad.; prereq. 51)	IV	MWF	105F	Mr. Underhill
107w-108s	Advanced Calculus (6 cred.; jr., sr., grad.; prereq. 52)	IV	MWF	105F	Mr. Underhill
109	<i>Theory of Numbers</i> (3 cred.; jr., sr., grad.; prereq. 51) ( <i>Not offered</i> )				
115	<i>Differential Geometry</i> (3 cred.; jr., sr., grad.; prereq. 52, 71) ( <i>Not offered</i> )				
118-119-120	<i>Vectors and Matrices</i> (9 cred.; jr., sr., grad.; prereq. 51) ( <i>Not offered</i> )				
121f-122w-123s	Mathematical Theory of Statistics (9 cred.; jr., sr., grad.; prereq. 51)	Ar	Ar	Ar	Mr. Jackson
125w-126s	Theory of Geometrical Constructions (6 cred.; jr., sr., grad.; prereq. 62, and 140 or consent of instructor)	VII	MWF	102F	Mr. Bussey
131	<i>Advanced Algebraic Theory</i> (3 cred.; jr., sr., grad.; prereq. 52 or 62) ( <i>Not offered</i> )				
140f	Projective Geometry (3 cred.; jr., sr., grad.; prereq. 71)	VII	MWF	102F	Mr. Bussey
142	<i>Theory of Invariants</i> (3 cred.; jr., sr., grad.; prereq. 63 or 131) ( <i>Not offered</i> )				
144-145-146	<i>Topics in Analysis</i> (9 cred.; jr., sr., grad.; prereq. 51) ( <i>Not offered</i> )				

### For Graduate Students Only

206f-207w-208s	Theory of Functions (9 cred.; grad.; prereq. 108)	Ar	Ar	Ar	Mr. Hart
271f-272w-273s	Theory of Linear Differential and Integral Equations (9 cred.; grad.; prereq. 208)	Ar	Ar	Ar	Mr. Brink
287f-288w-289s	Advanced Mathematical Analysis (9 cred.; grad.; prereq. 206-207 or registration in 206-207)	VIII	MTF	105F	Mr. Jackson

NOTE.—Some of the courses listed in the Graduate School Bulletin are open to properly qualified juniors and seniors. For further information consult the chairman of the Department of Mathematics.

### MILITARY SCIENCE AND TACTICS

See the program of Military Science and Tactics, page 12.

### MUSIC

To secure the degree of bachelor of arts with major in music, a student must fulfill the requirements of both the Junior and Senior Colleges as stated in the Bulletin of the College of Science, Literature, and the Arts, securing 144 credits in courses other than practical music (piano, voice, etc., Courses 11 to 27). During the first two years he will register for English A-B-C or Composition 4-5-6, unless exempt from the requirement in English; foreign language; History 11-12-13; Psychology 1-2 and 4-5 or 7; and the following courses in music: 1-2-3, 4-5-6, 7-8, 34-35-36.

He must earn thirty credits in practical music selected from Courses 11 to 27, the number of credits in his major instrument to be determined by the department.

*Major advisers in the College of Science, Literature, and the Arts.*—Professor Scott; Associate Professor Hall.

*Major sequences in the College of Science, Literature, and the Arts.*—

- A. Courses 50-51-52, 53-54-55, 56-57-58, 60-61-62 or 63-64-65, 76.
- B. Courses 56-57-58, 60-61-62 or 63-64-65, 73-74-75, 76, 77-78-79.
- C. Courses 56-57-58, 60-61-62 or 63-64-65, 70-71-72, 80-81-82.

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Courses recommended for students who have a minor rather than a major interest in music.*—

#### A. Practical Music

Courses 1, 4-5, 34-35-36, and twelve credits in practical music (Courses 11 to 27) in the Junior College plus ten credits in practical music (Courses 11 to 27) in the Senior College.

#### B. History and Criticism

Courses 1, 4-5, 34-35-36, 76, and 53-54-55 or 50-51-52 or 56-57-58.

#### C. Ensemble

Two years work (12 credits) or equivalent in practical music (Courses 11 to 27), Courses 34-35-36, 76, 60-61-62 or 63-64-65, 40-41-42 or 43-44-45.

For a special curriculum in Music Education see the College of Education Bulletin. For courses in Music Education see the program of the College of Education in this bulletin.

*Entrance requirements, according to the instrument selected.*—

Piano: Any major or minor scale in octaves, thirds, sixths, or tenths, M.M., quarter notes = 108; Bach Invention or dance from one of the suites; a sonata by Haydn or Mozart; a modern composition of equal difficulty with the sonata.

Voice: Sing on pitch with correct phrasing and musical intelligence standard songs in good English (the simpler classics recommended). Demonstrate ability to read a simple song at sight and have a knowledge of the rudiments of music. Have a promising voice. Some knowledge of piano is urgently recommended.

Violin: Major and minor scales, arpeggios; the simple Kreutzer Etudes; a sonata by Handel, Haydn, Mozart, or Schubert; a more modern work displaying special technique peculiar to the violin.

Organ: Same as for piano.

A student wishing to register in the music course must first pass an examination in practical music before a committee of the faculty of the Music Department. This applies also to academic students who wish to elect courses in practical music.

*Fees.*—

Courses 11 to 27 inclusive:

1. One individual lesson per week, 2 credits ..... \$25.00
2. Two individual lessons per week, 4 credits ..... 50.00
3. Class lessons in Courses 11C, 12C, 2 credits ..... 15.00

Courses A-B-C and D-E-F:

1. One individual lesson per week, no credit ..... 25.00

*Practical music.*—Students may enter courses in practical music (private lessons) any quarter.

Courses numbered from 11 to 27, inclusive, carry either 2 or 4 credits a quarter and must be repeated until the requirement in practical music has been met.

No student may count for graduation more than 36 credits in practical music.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
Mu.Ed.1f	Music Orientation (No cred.; freshmen majoring in music; no prereq.)	V	TTh	4Mu	Mrs. Nohavec, Mr. Ferguson, and others
1f	Ear Training (2 cred.; all; there is no prerequisite for this course, but no student should register for it until he has made arrangements for a placement test in the office of the Department of Music)				
	Sec. 1	III	MTWTh	3Mu	Miss Malcolm
	2	VI	MTWTh	3Mu 103Mu	Miss Kendall Miss Malcolm
2w-3s	Ear Training (2 cred.; continuation of 1)				
	Sec. 1	III	MW	3Mu	Miss Malcolm
	2	VI	MW	3Mu 103Mu	Miss Kendall Miss Malcolm
1w	Ear Training (See 1f)	II	MTWTh	3Mu	Miss Kendall
2s	Ear Training (See 2w)	II	TTh	3Mu	Miss Kendall
3f	Ear Training (See 3s)	II	TTh	3Mu	Miss Kendall
4w-5s	Harmony (6 cred.; all; prereq. 1)				
	Sec. 1	II	MWF	103Mu	Mr. Scott
	2	VII	MWF	103Mu	Mr. Scott
4s	Harmony (See 4w)	I	MWF	3Mu	Miss Malcolm
5f	Harmony (See 5s)	I	MWF	3Mu	Miss Malcolm
6f	Harmony (continued) (3 cred.; all; prereq. 4-5)	III	MWF	103Mu	Mr. Scott
7w-8s†	Counterpoint (6 cred.; soph., jr., sr.; prereq. 4-5-6)	III	MWF	103Mu	Mr. Ferguson
29f	The Physical Basis of Music—Consideration of pitch, intensity, and quality of musical tones. Problems of resonance. Influences of amplifying systems on musical sounds. Physiological and psychological factors pertaining to music. Musical scales and their temperament. Study of musical instruments and the voice. Auditorium problems in ensemble playing (3 cred.; all; no prereq.) (Same as Phys. 15f)	VII	MWF	166Ph	Mr. Pepinsky

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

No.	Title	Hour	Day	Bldg.	Instructor
30w	Physics of Tone Color and Tone Production—Differentiation of tone quality of musical instruments and the voice. Variations of timbre with pitch range and intensity. Masking effects of instruments in combination. Mechanics of tone production and influences of interpretive values. Studies in the vibrato (3 cred.; all; prereq. Phys. 15 or 13) (Same as Phys. 17w)				
		VII	MWF	133Ph	Mr. Pepinsky
31f-32w-33s¶	Music Appreciation—Cultivation of better understanding of music heard today. The course is designed for students with a general interest in music rather than for those majoring in music (6 cred.; all; no prereq.)	VII	TTh	MuAud	Mr. Scott and others
34f-35w-36s¶	History of Music (6 cred.; soph., jr., sr.; no prereq.) Lect. Rec. (optional)	II II	MW F	MuAud	Mr. Ferguson
37f-38w-39s	Keyboard Harmony (3 cred.; all; prereq. 4-5)	II	TTh	103Mu	Mr. Poister

### Courses in Practical Music

For a statement about credits and prerequisites for courses in practical music other than Courses 40-41-42 and 43-44-45, see pages 66, 67.

Af-Bw-Cs‡‡	Piano (No cred.; no prereq.)	For students without entrance requirements in piano)	Ar	Ar	Mu	Ar
Df-Ew-Fs‡‡	Voice (No cred.; no prereq.)	For students without entrance requirements in voice)	Ar	Ar	Mu	Ar
11f,w,s‡	Piano—Individual Lessons		Ar	Ar	Mu	Ar
11Cf,w,s†‡	Piano—Class Lessons*		IV	TF	Mu	Ar
12f,w,s‡	Voice—Individual Lessons		Ar	Ar	Mu	Ar
12Cf,w,s†‡	Voice—Class Lessons*					
	Sec. 1		VI	MWF	Mu	Ar
	2		VII	MWF	Mu	Ar
13f,w,s‡	Violin		Ar	Ar	Mu	Ar
14f,w,s‡	Viola		Ar	Ar	Mu	Ar
15f,w,s‡	Cello		Ar	Ar	Mu	Ar
16f,w,s‡	Double Bass		Ar	Ar	Mu	Ar
17f,w,s‡	Flute		Ar	Ar	Mu	Ar
18f,w,s‡	Oboe		Ar	Ar	Mu	Ar
19f,w,s‡	Clarinet		Ar	Ar	Mu	Ar
20f,w,s‡	Bassoon		Ar	Ar	Mu	Ar
21f,w,s‡	Trumpet		Ar	Ar	Mu	Ar
22f,w,s‡	French Horn		Ar	Ar	Mu	Ar
23f,w,s‡	Trombone		Ar	Ar	Mu	Ar
24f,w,s‡	Tuba		Ar	Ar	Mu	Ar
25f,w,s‡	Percussion		Ar	Ar	Mu	Ar
26f,w,s‡	Harp		Ar	Ar	Mu	Ar
27f,w,s‡	Organ		Ar	Ar	Mu	Ar
40f-41w-42s¶§§	Orchestra (6 cred.; all; prereq. consent of director)		7:30 p.m.	TW	NMA	Mr. Pepinsky
43f-44w-45s¶**	University Chorus (3 cred.; all; prereq. consent of director)					
			IX (Men)	MW	5NMA	Mr. Killeen
			IX (Women)	TW	5NMA	Mr. Killeen

\* Science, Literature, and the Arts major students must take individual rather than class lessons in their major instrument. Music Education majors will take individual lessons in their major and class lessons in their minor instrument. No student may take class lessons for more than 6 credits. Classes in piano will be composed of 4 students; classes in voice may be composed of 6 students.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ See statement of fees, page 67.

§ May be taken only with the consent of the director.

¶ Students may enter any quarter.

\*\* Students may receive credit for two years of chorus.

§§ Students majoring in music may earn twelve credits in orchestra.

## Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

No.	Title	Hour	Day	Bldg.	Instructor
50f-51w-52s	Music of the Eighteenth Century (6 cred.; jr., sr.; prereq. 35)	VIII, IX	TTh	104Mu	Mr. Pepinsky
53f-54w-55s	Romantic Movement (6 cred.; jr., sr.; prereq. 35)	VII	WF	104Mu	Miss Kendall
56f-57w-58s†	Bach and Beethoven (9 cred.; sr.; prereq. 34-35-36)	VI, VII	TTh	104Mu	Mr. Ferguson
59s	Technique of Voice (2 cred.; jr., sr.; prereq. 4-5, 29, and 6 cred. in Course 12 or 12C)	VI	TTh	4Mu	Mr. Killeen
60f-61w-62s	Instrumental Ensemble (6 cred.; jr., sr.)	VI	TTh	3Mu	Mr. Pepinsky
		III	S	3Mu	
63f-64w-65s	Vocal Ensemble (6 cred.; jr., sr.; prereq. 6 cred. in Course 12 or 12C)	I	TTh	104Mu	Miss Hull
66f-67w-68s	Advanced Vocal Ensemble (6 cred.; jr., sr.; prereq. consent of instructor)	II	MW	104Mu	Mr. Killeen
69s	Advanced Physical Analysis of Musical Sounds (3 cred.; jr., sr.; prereq. Phys. 17, Math. 51)				
	(Same as Physics 59)	VII	MWF	133Ph	Mr. Pepinsky
70f-71w-72s†	Normal Piano (6 cred.; jr.; prereq. 2 years piano)	I	MWF	103Mu	Miss Kendall
73f-74w-75s	Advanced Harmony (6 cred.; jr.; prereq. 4-5-6)	IV, V	T	103Mu	Mr. Scott
76f	Form and Analysis (3 cred.; jr., sr.; prereq. 4-5 and Psy. 1-2)	II	MWF	103Mu	Mr. Pepinsky
77f-78w-79s	Composition-Orchestration (6 cred.; jr., sr.; prereq. 4-5-6, 7-8)	Ar	Ar	Ar	Mr. Ferguson
80f-81w-82s†	Advanced Normal Piano (6 cred.; sr.; prereq. 70-71-72)	VIII	MWF	103Mu	Miss Kendall
83f-84w-85s	Advanced Composition (6 cred.; sr.; prereq. 77-78-79)	Ar	Ar	Ar	Mr. Ferguson
90f-91w-92s	Advanced Instrumental Ensemble (6 cred.; sr.; prereq. 60-61-62)	VI	MWF	104Mu	Mr. Pepinsky
200f-201w-202s	Basis of Musical Expression (9 cred.; grad.; prereq. 56-57-58)	VII, VIII	W	Ar	Mr. Ferguson
	Conference hour	Ar	Ar	Ar	
	Seminar	VIII, IX	F	104Mu	
205f-206w-207s	Composition in Larger Forms (9 cred.; grad.; prereq. 83-84-85)	Ar	Ar	Ar	Mr. Ferguson
209f-210w-211s	Advanced Topics in Musical Analysis (9 cred.; grad.; prereq. 76)	Ar	Ar	Ar	Mr. Pepinsky
	Seminar	VIII, IX	F	104Mu	

## ORIENTATION

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w-3s†	Man in Nature and Society—An integrated survey course in which the student is introduced to the subject-matter of the natural and social sciences. One of the aims of the course is to aid the student in making an intelligent selection for his college career (9 cred.; entering freshmen; no prereq.)				
	Lect.	I		F BoAud	Mr. Sirich,
	Sec. 1	I		MWF 9F	Miss Shaw,
	2	III		MWF 9F	and others
	3	VII		MWF 9F	
4w-5s†	Man in Nature and Society (Equiv. to 1f-2w-3s.) (10 cred.; entering freshmen; no prereq.)				
		IV		MTWFS 6F	Ar

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

## PHILOSOPHY

*Major adviser in the College of Science, Literature, and the Arts.*—Mr. Castell.

*Major sequence in the College of Science, Literature, and the Arts.*—Courses 1; 50-51-52; 135-136 or 141; and additional courses, to be determined by the student's intellectual needs, to make a total of at least 27 credits in Senior College courses.

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

For a list of recommended related courses in other departments, consult philosophy instructors or see the bulletin board outside 323 Folwell Hall.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
2f-1w-3s	Logic, Problems of Philosophy, Ethics—A special sequence of courses in philosophy for prelegal freshmen. Only by special permission of the instructor will students be admitted to 1w-3s without 2f, or to 3s without 1w (5 cred. per qtr.; prelegal fr.; no prereq.)	VI	MTWThF	101L	Mr. Castell, Mr. Oliver
2f-1w-3s	Logic, Problems of Philosophy, Ethics—A special sequence of courses in philosophy for a limited number of freshmen* who are not prelegal students. (5 cred. per qtr.; fr. only*; no prereq.)	VI	MTWThF	101L	Mr. Everett
Courses 2 (Logic), 1 (Problems of Philosophy), and 3 (Ethics) may be taken singly, but the classes are scheduled so that they may be taken in the order 2f-1w-3s or 2w-1s without change of hour.					
1f	Problems of Philosophy—An elementary survey of certain problems of life and knowledge, constituting an introduction to systematic philosophy (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)	III	MTWThF	322F	Mr. Norborg
	Sec. 1	VI	MTWThF	322F	Mr. Conger
1w	Problems of Philosophy (See 1f)	IV	MTWFS	321F	Mr. Conger
	Sec. 1	VII	MTWThF	322F	Mr. Castell
1s	Problems of Philosophy (See 1f)	I	MTWThF	322F	Mr. Conger
	Sec. 1	II	MTWThF	321F	Mr. Norborg
2f	Logic—A study of inductive and deductive processes of reasoning, together with allied processes of knowledge (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)	IV	MTWFS	321F	Mr. Oliver
	Sec. 1	VII	MTWThF	322F	Mr. Castell
2w	Logic (See 2f)	I	MTWThF	322F	Mr. Oliver
	Sec. 1	II	MTWThF	321F	Mr. Norborg
2s	Logic (See 2f)	III	MTWThF	322F	Mr. Oliver
	Sec. 1	VI	MTWThF	321F	Mr. Norborg
3f	Ethics—A study of the presuppositions, the nature, and the implications of moral judgments (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)	I	MTWThF	321F	Mr. Norborg
	Sec. 1	II	MTWThF	321F	Mr. Everett
3w	Ethics (See 3f)	III	MTWThF	322F	Mr. Everett
	Sec. 1	VI	MTWThF	322F	Mr. Norborg

\* Course 2 (Logic) is open in any quarter to a limited number of freshmen who are, on the basis of placement tests in English, exempt from Freshman English or eligible to take English A-B-C. Course 1 (Problems of Philosophy) is open to freshmen who have completed Course 2 (Logic). Course 3 (Ethics) is open to freshmen who have completed Course 1 (Problems of Philosophy).

No.	Title	Hour	Day	Bldg.	Instructor
3s	Ethics (See 3f) Sec. 1	IV	MTWFS	321F	Mr. Everett
	2	VII	MTWThF	322F	Mr. Castell
10w	Science and Religion (2 cred.; soph., jr., sr.; no prereq.)	II	TTh	322F	Mr. Swenson

### Senior College Courses

Course 70 is open to prelegal sophomores who have an average grade of at least C in all their work and in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

50f-51w-52s*	General History of Philosophy (9 or 15 cred.; jr., sr.; no prereq.)	IV or IV	MWF	322F	Mr. Swenson
53f	Nineteenth-Century Philosophy (3 cred.; sr.; prereq. 8 cred. including Course 52)	III IV	MWF	321F	Mr. Castell
55w	American Philosophy from Puritanism to Pragmatism—A study of Puritanism, the Revolutionary period, transcendentalism, evolutionism, idealism, and pragmatism (3 cred.; jr., sr., grad.; especially for students of American history and literature)	III	MWF	321F	Mr. Castell
61w	Philosophy of Science—The historical development of the logical concepts of science, especially substance, causality, space, time, and magnitude (3 cred.; jr., sr.; prereq. 2)	IV	MWF	305F	Mr. Oliver
62s	Logic of Science—The scope and purpose of modern scientific method; its logical structure; recent developments in logical theory and their effects upon the use of logic in the sciences (3 cred.; jr., sr.; prereq. 61, or 2 and 20 cred. in one natural science)	II	TThS	322F	Mr. Oliver
70s§	Modern Philosophies of Social Reform—Reform ideas since Adam Smith and the industrial revolution, early liberalism, critics of the new social order, early socialism, liberalism revised, Marxian socialism, state socialism, workers' control, fascism, recent criticism (3 cred.; for prelegal students only; prereq. 8 cred.)	III	MWF	321F	Mr. Castell
81w	Business Ethics—Ethical principles by which economic systems and practices may be judged; problems of fair service, fair competition, fair prices, and fair wages; relation of democracy to a system of free enterprise; other systems evaluated (3 cred.; jr., sr. in School of Business Administration and other jr., sr. who have earned nine credits in Senior College courses in Economics)	IV	MWF	306F	Mr. Everett
100f	History of Religions (3 cred.; jr., sr., grad.; prereq. 8 cred.)	II	MWF	322F	Mr. Conger
101w	Psychology of Religion (3 cred.; jr., sr., grad.; prereq. 8 cred.)	II	MWF	322F	Mr. Conger
102s	Philosophy of Religion (3 cred.; jr., sr., grad.; prereq. 8 cred.)	II	MWF	322F	Mr. Conger
103f	Esthetics (3 cred.; sr., grad.; prereq. 8 cred. in phil. or 15 cred. in English)	I	TThS	322F	Mr. Swenson
104	<i>History of Esthetic Theory</i> (3 cred.; jr., sr., grad.; prereq. 8 cred.) ( <i>Not offered</i> )				
105f	Fundamental Philosophies of Life (3 cred.; jr., sr., grad.; prereq. 8 cred.)	VIII	MWF	322F	Mr. Swenson
115w	Contemporary Philosophy (3 cred.; jr., sr., grad.; prereq. 8 cred.)	III	TThS	321F	Mr. Conger
120	<i>Scandinavian Philosophy</i> (3 cred.; jr., sr., grad.; prereq. 10 cred.) ( <i>Not offered</i> )				
124f	Political and Social Ethics (3 cred.; jr., sr., grad.; prereq. 20 cred. in soc. sci. or 8 cred. in phil.)	I	MWF	322F	Mr. Everett
129	<i>Development of Political Thought</i> (5 cred.; jr., sr., grad.; prereq. 18 cred. in soc. sci. or 8 cred. in phil.) ( <i>Not offered</i> )				

\* Students may enter any quarter.

§ No student may receive credit for both Philosophy 70 and Political Science 161-162.



No.	Title	Hour	Day	Bldg.	Instructor
135w-136s	Philosophy of Plato (6 cred.; jr., sr., grad.; prereq. 8 cred. including Course 50)	VIII	MWF	322F	Mr. Swenson
141s	Metaphysics (5 cred.; jr., sr., grad.; prereq. 8 cred.)	IV	MTWFS	304F	Mr. Conger
147-148	<i>Advanced Logic</i> (6 cred.; jr., sr., grad.; prereq. 8 cred. in phil. including Course 2) ( <i>Not offered</i> )				
161f-162w-163s	Seminar in Philosophy (9 cred.; sr., grad.; prereq. 20 cred. in phil. and consent of instructor)	Ar	Ar	Ar	Mr. Swenson, Mr. Conger, Mr. Castell

### PHYSICAL EDUCATION FOR MEN

See the program of Physical Education for Men, page 14.

### PHYSICAL EDUCATION FOR WOMEN

See the program of Physical Education for Women, page 17.

### PHYSICS

*Major adviser in the College of Science, Literature, and the Arts.*—Associate Professor Valasek.

*Major sequence in the College of Science, Literature, and the Arts.*—Courses 101-103-105, plus 6 additional credits in Senior College courses, and Mathematics 50, 51, and 52.

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

The physics included in specialized curriculum leading to the degree "B.S. in physics," offered in the Institute of Technology, will be accepted as a major sequence in this college.

*Major adviser in the College of Education.*—Associate Professor Buchta.

*Requirements for a teacher's certificate.*—Courses 7-8-9. This is a general course in physics extending through three quarters. Students who have completed the old Courses 3, 4 (Mechanics and Mechanics Laboratory) may complete this requirement in general physics by taking Courses 13, 23, 24, 33, 34, 43, 44.

Major recommendation.—The above general course and in addition Courses 52, 107-109-111 and six credits selected from 108-110-112, 124, 134, 144.

Minor recommendation.—The above general course plus Courses 11 and 52.

For a specialized curriculum in natural science see the Bulletin of the College of Education.

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†-3s	Introduction to Physical Science—Lectures and experimental demonstrations of the principles underlying physical phenomena (9 cred.; all; prereq. high school algebra and plane geometry)	IV	MWF	166Ph	Mr. Buchta
1af-2aw†-3as‡	Introduction to Physical Science—with laboratory included. Fulfills the laboratory-science group requirement in Science, Literature, and the Arts (12 cred.; all; prereq. high school algebra and plane geometry)				
	Lect.	IV	MWF	166Ph	Mr. Buchta
	Lab. Sec. 1	I, II	Th	Ar	
	2	VIII, IX	F	Ar	

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$2 per quarter is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
4f-5w-6s‡	General Physics (primarily for premedical students)—Mechanics, heat, sound, light, and electricity. Laboratory work is an integral part of course (15 cred.; all; prereq. higher algebra and trigonometry, the equivalent of Math. 1 and 6)	I	MTWThF	166Ph(f), 133Ph(w,s)	Mr. Buchta
	Lect. and quiz				
	Lab. Sec. 1	VI, VII	M		Mr. Miller
	2	VIII, IX	M		and as-
	3	VIII, IX	T		sistants
	4	VI, VII	Th		
	5	VIII, IX	F		
	6	III, IV	S		
4s-5f-6w‡	General Physics (See 4f-5w-6s) (This sequence begins in the spring term of 1938-39)	III	MTWThF	133Ph	Mr. Rumbaugh
	Lect. and quiz				
	Lab. Sec. 1	VIII, IX	M	Ar	Mr. Miller
	2	VI, VII	Th		and assistants
	3	VIII, IX	Th		
	4	VIII, IX	F		
	5	I, II	S		
	6	III, IV	S		
7f-8w-9s‡	General Physics (primarily for students majoring in physics, mathematics, or chemistry and for students in the Institute of Technology)—Mechanics, heat, sound, light, and electricity. Laboratory work is an integral part of the course (15 cred.; all; prereq. M.&M. 12 or Math. 6 or equiv.)				
	Schedule for 7f				
	Lect. Sec. 1	III	MTWF	150Ph	Ar
	2	II	MWThF	150Ph	Ar
	3	VI	MWThF	150Ph	Ar
	Quiz Sec. 1	VI	W	166Ph	
	2	IX	M	150Ph	
	3	IX	T or Th	150Ph	
	Lab. Sec. 1	I, II	M	Ar	Mr. Miller
	2	III, IV	M		and assistants
	3	VI, VII	M		
	4	VIII, IX	M		
	5	I, II	T		
	6	III, IV	T		
	7	VI, VII	T		
	8	VIII, IX	T		
	9	I, II	W		
	10	III, IV	W		
	11	VI, VII	W		
	12	I, II	Th		
	13	VI, VII	Th		
	14	VIII, IX	Th		
	15	I, II	F		
	16	VI, VII	F		
	17	VIII, IX	F		
	18	I, II	S		
	19	III, IV	S		
	Schedule for 8w				
	Lect. Sec. 1	III	MWFS	150Ph	Ar
	2	II	MWThF	150Ph	Ar
	3	VI	MWThF	150Ph	Ar
	Quiz Sec. 1	IX	T	150Ph	
	2	VII	T	Eng Aud	
		or			
		IX	M	150Ph	
	3	IX	Th	150Ph	
	Lab. See page 74.				

‡ A fee of \$2 per quarter is charged for this course.

No.	Title		Hour	Day	Bldg.	Instructor
7f-8w-9s‡	General Physics— <i>Continued</i>					
	Schedule for 8w— <i>Continued</i>					
	Lab.	Sec. 1	I, II	M	Ar	Mr. Miller and assistants
		2	III, IV	M		
		3	VI, VII	M		
		4	VIII, IX	M		
		5	I, II	T		
		6	III, IV	T		
		7	VI, VII	T		
		8	VIII, IX	T		
		9	I, II	W		
		10	III, IV	W		
		11	VI, VII	W		
		12	I, II	Th		
		13	VI, VII	Th		
		14	VIII, IX	Th		
		15	I, II	F		
		16	III, IV	F		
		17	VI, VII	F		
		18	VIII, IX	F		
		19	I, II	S		
		20	III, IV	S		
	Schedule for 9s					
	Lect.	Sec. 1	III	MTWF	150Ph	Ar
		2	II	MWThF	150Ph	Ar
		3	VI	MWThF	150Ph	Ar
	Quiz	Sec. 1	III	Th	150Ph	
		2	II	S	150Ph	
			or			
		3	VIII	Th	150Ph	
		3	VI	T	150Ph	
	Lab.	Sec. 1	I, II	M	Ar	Mr. Miller and assistants
		2	III, IV	M		
		3	VI, VII	M		
		4	VIII, IX	M		
		5	I, II	T		
		6	III, IV	T		
		7	VI, VII	T		
		8	VIII, IX	T		
		9	I, II	W		
		10	VI, VII	W		
		11	I, II	Th		
		12	VI, VII	Th		
		13	VIII, IX	Th		
		14	I, II	F		
		15	III, IV	F		
		16	VI, VII	F		
		17	VIII, IX	F		
		18	I, II	S		
		19	III, IV	S		
7w-8s-9f‡	General Physics (See 7f-8w-9s) (This sequence begins in the winter quarter of 1938-39)					
	Schedule for 7w					
	Lect.		II	MWThF	166Ph	Ar
	Quiz		II	S	150Ph	
	Schedule for 8s					
	Lect.		II	MWThF	166Ph	Ar
	Quiz		IX	T	150Ph	
	Schedule for 9f					
	Lect.		II	MWThF	166Ph	Ar
	Quiz		II	S	150Ph	
	Lab.	See page 75.				

‡ A fee of \$2 per quarter is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
7w-8s-9f‡	General Physics— <i>Continued</i> Lab. schedule for 7w-8s-9f				
	Sec. 1	VI, VII	M	Ar	Mr. Miller
	2	VI, VII	W		and assistants
	3	VI, VII	F		
	4	VIII, IX	T		
	5	III, IV	S		
11	<i>Survey of Newer Developments in Physics</i> —A study of certain phases of electron physics, atomic structure, radioactivity, "atom smashing," photoelectric effect and X rays. Demonstration lectures (3 cred.; all; prereq. 1-2-3 or registration in 6 or 9, or permission of the instructor) ( <i>Not offered</i> )				
13f§	Acoustics (3 cred.; all; prereq. Elements of Mechanics [formerly Course 3])				
	Lect.	III	TThS	133Ph	Mr. Buchta
	Quiz	IX	M	133Ph	
15f	The Physical Basis of Music (3 cred.; all; no prereq.) (Same as Music 29)				
		VII	MWF	166Ph	Mr. Pepinsky
17w	Physics of Tone Color and Tone Production (3 cred.; all; prereq. Phys. 15 or 13) (Same as Music 30)				
	Lect.	VII	MWF	133Ph	Mr. Pepinsky
23w§	Heat (3 cred.; all; prereq. Elements of Mechanics [formerly Course 3])				
	Lect.	IV	MWF	133Ph	Mr. Miller
	Quiz	IX	F	166Ph	
24w‡§	Heat Laboratory (1 cred.; all; prereq. Elements of Mechanics Laboratory [formerly Course 4], 23 or registration in 23)				
		Ar	Ar	Ar	Mr. Miller
29f	Introduction to Meteorology—A presentation of the fundamental physical principles underlying meteorological phenomena, accompanied by instrumental observations and weather map study (3 cred.; all; prereq. high school physics or equiv.)				
		VI	MWF	133Ph	Mr. Miller
33f§	Optics (3 cred.; all; prereq. Elements of Mechanics [formerly Course 3])				
	Lect.	II	MWF	133Ph	Mr. Valasek
	Quiz	IX	F	166Ph	
33s§	Optics (See 33f)				
	Lect.	III	TThS	166Ph	Mr. Valasek
	Quiz	IX	F	166Ph	
34f‡§	Optics Laboratory (1 cred.; all; prereq. Elements of Mechanics Laboratory [formerly Course 4], 33 or registration in 33)				
	Sec. 1	VI, VII	M	352Ph	Mr. Valasek
	2	VIII, IX	M	352Ph	
	3	VI, VII	Th	352Ph	
34s‡§	Optics Laboratory (See 34f)				
		Ar	Ar	Ar	Mr. Valasek
43w§	Electricity (3 cred.; all; prereq. Mechanics formerly Course 3)				
	Lect.	III	TThS	133Ph	Mr. Rumbaugh
	Quiz	IX	T	166Ph	
43s§	Electricity (See 43w)				
	Lect.	VI	MWF	133Ph	Mr. Rumbaugh
	Quiz	IX	T	150Ph	
44w‡§	Electricity Laboratory (1 cred.; all; prereq. Mechanics Laboratory [formerly Course 4], 43 or registration in 43)				
	Sec. 1	VI, VII	Th	231Ph	Mr. Rumbaugh
	2	VIII, IX	Th	231Ph	Mr. Rumbaugh
44s‡§	Electricity Laboratory (See 44w)				
		Ar	Ar	Ar	Mr. Rumbaugh

‡ A fee of \$2 per quarter is charged for this course.

§ Not offered after 1938-39.

## Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

No.	Title	Hour	Day	Bldg.	Instructor
52f,w,s‡	Laboratory Arts (3 cred.; jr., sr.; prereq. 15 cred. in physics and approval of dept.)	VI, VII, VIII	TTh	39Ph	Mr. Haliday
59s	Advanced Physical Analysis of Musical Sounds (3 cred.; jr., sr.; prereq. Math. 51 and Phys. 13 or 15)	VII	MWF	133Ph	Mr. Pepinsky
71f-73w-75s	Intermediate Physics—Discussion of selected problems in classical physics. Solution of problems (12 cred.; all; prereq. calculus and 12 cred. in physics)	II	TThFS	145Ph	Mr. Rumbaugh
101f-103w-105s	Theoretical Physics (15 cred.; jr., sr., grad.; prereq. 12 cred. in physics, Math. 51)	III	MTWThF	145Ph	Mr. Williams
107f-109w-111s	Modern Physics (9 cred.; jr., sr., grad.; prereq. 12 cred.)	I	MWF	145Ph	Mr. Williams
108f-110w-112s‡¶	Modern Experimental Physics (3 or 4 cred. per qtr.; jr., sr., grad.; prereq. 144)	VII-IX	TTh	145Ph	Mr. Williams
113	Intermediate Acoustics (3 cred.; jr., sr., grad.; prereq. Math 51, 15 cred. in physics, including Course 13) ( <i>Not offered</i> )				
114f-116w-118s¶	Elementary Physical Investigation (9 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51)	Ar	Ar	Ar	Ar
117-119¶	History of Physics (6 cred.; jr., sr., grad.; prereq. a general course in physics) ( <i>Not offered</i> )				
124w‡	Pyrometry (3 cred.; jr., sr., grad.; prereq. 23 and 24)	VII, VIII, IX	MW	245Ph	Mr. Miller
126s‡	Advanced Heat (3 cred.; jr., sr., grad.; prereq. 23 and 24)	VII, VIII, IX	MW	245Ph	Mr. Miller
131w	Geometrical and Physical Optics (3 cred.; jr., sr., grad.; prereq. 12 cred. in physics, Math. 51)	Ar	Ar	342Ph	Mr. Valasek
134f,w‡	Experimental Optics (3 or 4 cred.; jr., sr., grad.; prereq. 33 and 34)	VII, VIII, IX	MF	348Ph	Mr. Valasek
136w,s‡	Spectrum Analysis (3 or 4 cred.; jr., sr., grad.; prereq. 33 and 34)	VII, VIII, IX	MF	348Ph	Mr. Valasek
137s	Electrical Properties of Crystals (3 cred.; jr., sr., grad.; prereq. 12 cred. in physics, Math. 51)	Ar	Ar	342Ph	Mr. Valasek
144f‡	Electricity Measurements (3 cred.; jr., sr., grad.; prereq. 43 and 44)				
	Lect.	III	S	166Ph	Mr. Rumbaugh
	Quiz	III	Th	166Ph	Mr. Rumbaugh
	Lab. Sec. 1	VIII, IX	TF	231Ph	
	2	VI, VII	TTh	231Ph	
	3	VI, VII	MF	231Ph	
146w‡	Advanced Electricity Measurements (3 cred.; prereq. 144 and permission of instructor)	Ar	Ar	232Ph	Mr. Rumbaugh
152f	X Rays (3 cred.; jr., sr., grad.; prereq. 43)	I	TThS	133Ph	Mr. Valasek
154w‡	X-Ray Spectroscopy (3 cred.; prereq. 44, 152, Math. 51, and permission of instructor)	Ar	Ar	Ar	Mr. Valasek
	Lect. and lab.				

## GEOPHYSICS

61w	Introduction to Geophysical Prospecting—Qualitative discussions of the application of physical measurements to the location of petroleum and mineral deposits together with some discussion of the applications of geophysical methods to problems of near surface geologic structure (3 cred.; jr., sr.; prereq. a general course in physics, Math. 12)	Ar	Ar	342Ph	Mr. Wetzel
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‡ A fee of \$2 per quarter is charged for this course.

¶ Students may enter any quarter.

No.	Title	Hour	Day	Bldg.	Instructor
161f-162w	Principles of Geophysical Prospecting—Quantitative discussions of theory, instruments, field practice, and interpretation of seismic, electric, gravitational, and magnetic geophysical methods. (3 cred. per qtr.; jr., sr., grad.; prereq. a general course in physics, Math. 51)				
		Ar	Ar	342Ph	Mr. Wetzel
164f-165w-166s	Special Problems in Geophysics (Cred. ar.; prereq. permission of instructor)	Ar	Ar	Ar	Mr. Wetzel

## PHYSIOLOGY

## MEDICAL SCHOOL

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Visscher.

*Major sequences in the College of Science, Literature, and the Arts.*—

Sequence A. Physiology. Courses 100-101; 103; 104; 6 credits in courses numbered 113 to 140, or Zoology 109-110.

Sequence B. Physiological Chemistry. Courses 100-101; 103; 104; 6 credits in courses numbered 138 to 164, or suitable courses in agricultural biochemistry approved by the major adviser.

Sequence C. Biophysics. Courses will be arranged by Professor Stenstrom with interested students subject to the approval of the assistant dean for the Senior College.

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f,s*	Elements of Physiological Chemistry (3 cred.; primarily for students of nursing§; no prereq.)				
	Lect.	I	ThS	Ar	Dr. Arnow
	Lab.	I	T		and others
	Quiz	II	S		
2f,s*	Elements of Physiology (5 cred.; primarily for students of nursing§; no prereq.)				
	Lect.	I	MWF	Ar	Dr. Peters
	Lab.	II, III	T		and others
	Quiz	II	Th		
4f,s*	Human Physiology (4 cred.; all; prereq. 1 qtr. zool., 1 qtr. chem.)				
		III, IV	MWF	301MH	Dr. King and others

*Senior College Courses*

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

50f	Physiological Chemistry (5 cred.; primarily for phys. ed. students§; jr., sr.; prereq. general chemistry)				
		VI	MTWThF	Ar	Ar
51w*	Human Physiology (6 cred.; primarily for phys. ed. students§; jr., sr.; prereq. Zool. 1-2-3; Inorg. Chem. 1-2-3, or 4-5, or equiv.)				
		IV	MWF	MH	Dr. Keys
		VI, VII, VIII, IX	T	MH	and others
		VI, VII, VIII	Th	MH	
56w-57s	Physiological Chemistry (Primarily for dental students§; credits and prerequisites to be arranged)				
		Ar	Ar	Ar	Ar

\* Will not count for credit for admission to the Medical School except by permission of the dean of that school.

§ Others may be admitted by special permission.

No.	Title	Hour	Day	Bldg.	Instructor
58-59*	<i>Human Physiology</i> (Primarily for dental students§; credits and prerequisites to be arranged) ( <i>Not offered</i> )				
100f	Physiological Chemistry (7 cred.; jr., sr.; prereq. zool., org. chem., and phys.)				
	Lect.	IV	MTWF		Dr. McClendon,
	Quiz*	I	F		Dr. Armstrong,
	Lab.				Dr. Hemingway,
	Sec. AB	I, II, III	MW		Dr. Samuels,
	CD	I, II, III	ThS		Dr. Arnow
101w	Physiological Chemistry (6 cred.; jr., sr.; prereq. 100)				
	Lect.	IV	TS		Dr. Armstrong
		VI	F		and others
	Quiz	VI	T		
	Lab.				
	Sec. AB	I, II, III	MW		
	CD	I, II, III	ThS		
103f¶	Physiology of Circulation, Respiration, etc. (9 cred.; jr., sr.; prereq. zool. and org. chem.)				
	Lect.	I	MTWThFS		Dr. Visscher,
					Dr. Scott
	Conference and lecture on genetics	III	TS		
	Lab.				
	Div. A	VI, VII, VIII	MW		
	B	II, III, IV	MW		
104w¶	Physiology of Endocrines, Nervous System, etc. (6 cred.; lect. only, 4 cred.; jr., sr.; prereq. 103 or org. chem. and neurology)				
	Lect.	IV	MTWF	301MH	Dr. Visscher,
	Conference	IV	S		Dr. Scott,
	Lab.				Dr. Kabat
	Div. A	9:00-11:20	M		
		1:30-4:00	W		
	B	1:30-4:00	M		
		9:00-11:20	W		

For other courses see the bulletin and programs of the Medical School.

## POLITICAL SCIENCE

*Major advisers.*—Professors Anderson, Quigley, Short, and Starr.

*Preparation for Senior College work.*—Nine credits, including 6 in Course 1-2, and 3 in one of the following: Courses 3, 7, 15, and 25, except as otherwise noted in the prerequisites for particular Senior College courses.

*Preparation for a major sequence and for the major in international relations.*—Fifteen credits in courses numbered from 1 to 26, plus suitable preparation in History (1-2, 4-5-6, or 7-8-9), Economics (6-7 and 5) or Sociology (1 and 45). In addition students are advised to take one or more of the following: Philosophy 2, Geography 43, Psychology 1-2.

*Major sequence.*—The preparatory work noted above is designed to provide a general knowledge of (1) the American system of government, and (2) the principal terms and concepts of political science. To this knowledge the major sequence should add the fol-

\* Will not count for credit for admission to the Medical School except by permission of the dean of that school.

§ Others may be admitted by special permission.

¶ Students may register for lectures without laboratory.

|| Optional for nonmedical students.

lowing: (3) a knowledge of the works of a number of great contributors to political ideas; (4) fairly exact and thoro knowledge of some extensive part of at least three of the following fields of political science: (a) American government, politics, and administration; (b) public law; (c) comparative modern government; (d) political theory; (e) local government and administration; (f) international law, organization, and relations; and (5) development of the ability to study independently in at least one of the three chosen fields.

To these ends the student will be expected to take four courses meeting three times a week throughout the year, or the equivalent, including at least one three-quarter sequence in each of his selected fields. To meet the four-course requirement, a student may, with the approval of his adviser, offer the equivalent of one course selected from closely related offerings in Economics, History, Journalism, Psychology, and Sociology. For a list of such approved offerings see the major advisers.

*Major in international relations (Training for the foreign service).*—A special program taking the place of a major sequence will be arranged for students of good standing who desire a general introduction to this field. Courses are drawn from Political Science, Economics, History, Geography, and related departments. Those intending to take the examinations for the American foreign service are advised to follow this program and to prepare themselves adequately in modern foreign languages. Consult Mr. Quigley.

*Tutorial and honors courses.*—Students who are capable of doing better than average work and who wish to specialize or to study for graduation honors are advised to take some of the special tutorial courses: 4, 5, 6, 17, and 91-92-93. Course 91-92-93 may be elected for independent work in any of the six fields noted above in the description of the major sequence.

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*Major adviser in the College of Education.*—Professor Field.

*Requirements for a teacher's certificate.*—Major recommendation: At least 36 credits in political science including 1-2-3, either 7, 15, or 25, and at least 12 credits in Senior College courses.

Minor recommendation: At least 18 credits in political science, including 1-2-3, either 7, 15, or 25, and 3 credits in Senior College courses.

For a comprehensive curriculum in social studies, see College of Education Bulletin.

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*Note for graduate students.*—Courses in political science that are indicated as being open to juniors, seniors, and graduates may be taken by graduate students for full credit, subject to the requirement of additional work over and above that assigned to undergraduates, or they may be taken by graduate students for reduced credit.

#### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
Af-Bw-Cs†§	Introduction to Government (for prelegal students)—A survey of the development of political institutions and ideas, followed by comparative study of the organization and practice of modern governments, with emphasis upon the American system. (9 cred.; no prereq. This course is for prelegal freshmen only. No student will be given credit for both Courses A-B-C and 1-2-3)				
		I	TThS	206Pt	Mr. McLaughlin

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ No student will be given credit for both courses A-B-C and 1-2-3.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†-3s‡	American Government and Politics—Part 1-2. National, state, and local. Constitutions and fundamental laws; governmental organization; division and separation of powers; legislative, executive, and judicial procedure and problems. Part 3. Principal functions and services of government: defense, law enforcement, regulation of business, public works, and social services (9 cred.; all; no prereq.)	I	MWF	206Pt	Mr. Kirkpatrick
		IV	MWF	BuAud	Mr. Christensen
1w-2s†§	American Government and Politics (6 cred.; all; no prereq.)	III	MWF	206Pt	Mr. McLaughlin
4,5,6f,w,s	Tutorial Work in American Government and Politics (2 cred. per qtr.; open to students registered in 2, 3 with grade of B or better in preceding quarter of 1-2-3, and to students who have completed 1-2 with equally satisfactory standing. Consult instructor)	Fall 4f	III	TTh 15F	Mr. McLaughlin
		Winter 5w	III	TTh 208P	Mr. Anderson
		Spring 6s	I	MW 211Bu	Mr. Christensen
		4s	II	TTh 209F	Mr. Kirkpatrick
7w,s	Comparative European Government—The governments of Great Britain, France, Italy, Germany, and Russia. Constitutions; governmental organization; parties and elections (3 cred.; all; prereq. Course 1. Course 7 may be taken simultaneously with Course 2 or 3)	Winter	VII	MWF 209Bu	Mr. Starr
		Spring	II	TThS 211Bu	Mr. Starr
15f,s	Elements of Political Science—The nature and functions of the state; sovereignty and liberty; constitutions; forms of government (3 cred.; all; prereq. Course 1. Course 15 may be taken simultaneously with Course 2 or 3)	Fall	II	TThS 211Bu	Mr. Lippincott
		Spring	VII	MWF 209Bu	Mr. Lippincott
17w	Tutorial Work in Elements of Political Science (2 cred.; open to students who have had or are registered in 15, with honor point average of 1.5 and grade of C+ in 1-2 or in portion thereof completed, and to advanced students of satisfactory standing. Consult instructor)	VII	MW	112Bu	Mr. Lippincott
25f,w	World Politics—Introduction to contemporary international relations; the policies of the great powers; nationalism; imperialism; internationalism (3 cred.; all; prereq. Course 1 or Hist. 1-2. Course 25 may be taken simultaneously with Course 2 or 3)	Fall	VII	MWF 209Bu	Mr. Mills
		Winter	II	TThS 211Bu	Mr. Mills

*Senior College Courses*

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

61f-62w-63s†	American Constitutional Development (9 cred.; jr., sr.; prereq. 9 cred. or Hist. 7-8-9)	I	TThS	209Bu	Mr. Kirkpatrick
71f	Recent Social Legislation (3 cred.; jr., sr.; prereq. 9 cred.)	III	TThS	112Bu	Mr. Christensen
73w-74s†	Government and the Economic Order (6 cred.; jr., sr.; prereq. 9 cred.)	III	TThS	112Bu	Mr. Christensen
91f-92w-93s	Tutorial and Honors Work in Selected Fields (Cred. ar.; jr., sr.; prereq. 18 cred.; Consult major advisers)	Ar	Ar	Ar	Ar
101f-102w-103s†	Constitutional Law (9 cred.; jr., sr., grad.; prereq. 9 cred.)	VI	MWF	211Bu	Mr. Field
108w	Legislative Organization and Procedure (3 cred.; jr., sr., grad.; prereq. 9 cred.)	IV	MWF	112Bu	Mr. Short

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ No student will be given credit for both Courses 1-2-3 and A-B-C.

No.	Title	Hour	Day	Bldg.	Instructor
116f-117w-† 118s	Local Government (9 cred.; jr., sr., grad.; prereq. 9 cred.)	I	MWF	112Bu	Mr. Anderson
120f	Municipal Functions (3 cred.; jr., sr., grad.; prereq. 9 cred.)	II	TThS	111Bu	Mr. Ludwig
121w	Municipal Administration (3 cred.; jr., sr., grad.; prereq. 120 or consent of instructor)	II	TThS	111Bu	Mr. Ludwig
122s	Municipal Problems (3 cred.; jr., sr., grad.; prereq. 121 or consent of instructor)	II	TThS	111Bu	Mr. Ludwig
131f-132w†	Public Administration I—National and State: Organization and Staff Services (6 cred.; jr., sr., grad.; prereq. 9 cred.)	II	MWF	221Bu	Mr. Short
133s	Public Administration II—Functional Services (3 cred.; jr., sr., grad.; prereq. 131-132 or consent of instructor)	II	MWF	221Bu	Mr. Short
144f	American Political Parties (3 cred.; jr., sr., grad.; prereq. 9 cred.)	II	TThS	209Bu	Mr. Starr
145f-146w†	British Government and Politics (6 cred.; jr., sr., grad.; prereq. 9 cred.)	III	TThS	209Bu	Mr. Starr
147s	French Government and Politics (3 cred.; jr., sr., grad.; prereq. 9 cred.)	III	TThS	209Bu	Mr. Starr
148w	European Dictatorships (3 cred.; jr., sr., grad.; prereq. 9 cred. in pol. sci. or 18 cred. in soc. sci.)	II	TThS	221Bu	Mr. Starr
149f-150w†	Government and Politics of the British Empire (6 cred.; jr., sr., grad.; prereq. 9 cred. in pol. sci. or 18 cred. in soc. sci.)	VI	MWF	209Bu	Mr. Mills
151s	Problems of the British Dominions (3 cred.; jr., sr., grad.; prereq. 149-150 with grade of C+ or better, or consent of instructor)	VI	MWF	209Bu	Mr. Mills
153f	Japanese Government and Politics (3 cred.; jr., sr., grad.; prereq. 9 cred. in pol. sci. or 18 cred. in soc. sci.)	IV	MWF	209Bu	Mr. Quigley
154	<i>Chinese Government and Politics</i> (3 cred.; jr., sr., grad.; prereq. 9 cred. in pol. sci. or 18 cred. in soc. sci.) ( <i>Not offered</i> )				
161w-162s†§	Recent Political Thought (6 cred.; sr., grad.; prereq. 18 cred.)	III	MWF	209Bu	Mr. Anderson
163w	Topics in American Political Thought (3 cred.; jr., sr., grad.; prereq. 15, 161, 164, or consent of instructor)	II	MWF	211Bu	Mr. Lippincott
164f-165w- 166s†	Development of Political Thought (9 cred.; jr., sr., grad.; prereq. 9 cred. in pol. sci. or 18 credit in soc. sci.)	IV	MWF	211Bu	Mr. Lippincott, Mr. Kirkpatrick
167f-168w- 169s†	Readings in the Classics of Politics (6 cred.; jr., sr., grad.; prereq. 15, or 164-165 with which it may be taken simultaneously, or consent of instructor)	VIII	MW	221Bu	Mr. Lippincott, Mr. Kirkpatrick
170s	Problems of Democracy (3 cred.; jr., sr., grad.; prereq. 15, 161, or 164, or consent of instructor)	II	TThS	221Bu	Mr. Lippincott
171s	Political Psychology (Identical with Psy. 141) (3 cred.; jr., sr., grad.; prereq. Psy. 1-2)	III	TThS	206Pt	Mr. Bird
180f-181w- 182s†	International Law (9 cred.; jr., sr., grad.; prereq. 9 cred.)	I	MWF	221Bu	Mr. McLaughlin

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ No student may receive credit for both Political Science 161-162 and Philosophy 70.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
184w	International Organization (3 cred.; jr., sr., grad.; prereq. 9 cred.)	IV	MWF	209Bu	Mr. Quigley
185s	Theories of International Relations (3 cred.; jr., sr., grad.; prereq. 9 cred.)	IV	MWF	209Bu	Mr. Quigley
191f-192w- 193s†	Far Eastern Diplomacy (9 cred.; jr., sr., grad.; prereq. 9 cred. in pol. sci. or 18 cred. in soc. sci.)	II	MWF	209Bu	Mr. Quigley
195-196	<i>Colonial Government and Administration</i> (6 cred.; jr., sr., grad.; prereq. 9 cred. in pol. sci. or 18 cred. in soc. sci.) ( <i>Not offered</i> )				
197	<i>Problems in Colonial Administration</i> (3 cred.; jr., sr., grad.; prereq. 195-196 with grade of C+ or better, or consent of instructor) ( <i>Not offered</i> )				

*Courses Primarily for Graduate Students*

The following courses may be taken by seniors majoring in Political Science with consent of the instructor :

204f-205w- 206s†	Topics in Administrative Law (9 cred.; grad.; prereq. 18 cred. in political science or consent of instructor)	VIII	MWF	211Bu	Mr. Field
231f	Scope and Methods of Political Science (3 cred.; grad.; prereq. admission to graduate major, or consent of instructor)	III	MWF	209Bu	Mr. Anderson
242f-243w- 244s†	Topics in Colonization (9 cred.; grad.; prereq. 195-196 or consent of instructor)	VII	MWF	111Bu	Mr. Mills

## PREVENTIVE MEDICINE AND PUBLIC HEALTH

## MEDICAL SCHOOL

*Advisers in the College of Science, Literature, and the Arts.*—Professor Gaylord W. Anderson; Associate Professor Boynton.

*Major advisers in the College of Education.*—Professor Gaylord W. Anderson; Associate Professor Boynton; Assistant Professor Arnstein.

*Minor sequence in the College of Science, Literature, and the Arts or in the College of Education.*—Courses 50, 57, 61, and Bact. 41 are recommended.

*Major sequence in Public Health Nursing.*—P.M.&P.H. 53, 61, 62, 63, 65, 66, 67; additional P.M.&P.H. courses, 10 credits.

Additional requirements.—Social science (other than sociology), 10 credits; Freshman English or exemption from the requirement; Bact. 41 or 101; Psy. 1, 2; Soc. 1, 49, 129, 130, and 3 additional credits in Sociology or Child Welfare; Education, 9 credits; natural science courses, 15 credits.

*Note.*—The sequence leads to a B.S. degree with a major in public health nursing, the nine months certificate course having been discontinued.

For specialized curricula in School Health Work, Nursing Education, and Public Health Nursing, see the Bulletin of the College of Education.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
2f	First Aid (1 cred.; no prereq.) (Limited to 20 women)	VI, VII	T	Coll. Dorm., UF	Miss Fisher

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

No.	Title	Hour	Day	Bldg.	Instructor
2s	First Aid (See 2f) (Limited to 20 women)				
	Sec. 1	I, II	Th	Coll. Dorm., UF	Miss Fisher
	2	VI, VII	W	Coll. Dorm., UF	Miss Fisher
3f	Personal Health (2 cred.; fr., soph.; no prereq.)	VI	MW	BuAud	Dr. O'Brien
3w	Personal Health (See 3f)	VI	WF	BuAud	Dr. O'Brien
3s	Personal Health (See 3f)	VII	MW	BuAud	Dr. O'Brien
4w,s§	Health Problems of Adult Life (2 cred.; all; prereq. 3)	VI	TTh	Ar*	Dr. Watson

### Senior College Courses

Courses 53 and 57 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

50f§	Public and Personal Health (3 cred.; open to jrs. and srs. who have not taken Course 4 or Course 52; no prereq.)	VII	MWF	*	Dr. Hinckley
50s	Public and Personal Health (See 50f)	IV	MWF	*	Dr. Hinckley
52f,w,s§	Health Care of the Family (3 cred.; jr., sr.; prereq. Bact. 41, Physiol. 4) (Lab. sections limited to 40)	VI	MWF	313HE	Dr. Bullard, Miss Fisher
53f	Elements of Preventive Medicine and Public Health (For public health nurses and students in medical social work only) (5 cred.; prereq. 3 and 4, or 50, or equivalent, and a course in bacteriology)	II	MWF	*	Dr. Anderson, Dr. Cowan
	Lect.	III	TTh	*	
	Rec. Sec. 1	VI	TTh	*	
	2				
54	<i>Communicable Diseases</i> (For public health nurses) ( <i>Not offered</i> )				
55s	Nursing and Social Problems in Gonorrhoea and Syphilis Control (2 cred.; prereq. 53, 62)	Ar	Ar	Ar	Ar
57s	Health of Infant and Preschool Child (2 cred.; jr., sr.; prereq. Psy. 1-2; or P.M.&P.H. 50 or 53)	III	TTh	*	Dr. Boynton
58f	Maternal and Child Hygiene (For public health nurses. Others may be admitted by special permission) (2 cred.; prereq. 50 or 53, and 62 which may be taken concurrently)	III	TTh	*	Dr. Boynton
59w	Health of the School Child (3 cred.; jr., sr.; prereq. 50 or 52 or 53)	II	MWF	*	Dr. Ellis
60f,w	Tuberculosis and Its Control (For public health nurses. Others may be admitted by special permission) (2 cred.; prereq. 50 or 52, or 53 and 62 which may be taken concurrently)	IV	TS	*	Dr. Myers
61w	Mental Hygiene (3 cred.; jr., sr.; prereq. 50 or 52, or 53 and 62 which may be taken concurrently)	III	TThS	*	Dr. deBerry
62f-63w†	Principles of Public Health Nursing (For public health nurses only) (6 cred.; jr., sr.)	III	MWF	*	Miss Arnstein
	Sec. 1	VI	MWF	*	
	2				

\* Classroom schedule will be posted on bulletin board in Millard Hall, and will also be published in the *Official Daily Bulletin* at the beginning of each quarter.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ No student may receive credit for both Course 50 and Course 4; or for 50 and 52.

No.	Title	Hour	Day	Bldg.	Instructor
65,66,67f,w,s	Field Practice in Public Health Nursing† (For public health nurses only) (Cred. ar.; jr., sr.; prereq. 53, 62-63) The credits are to be allowed, according to experience, to these special fields: P.M.&P.H. 65—School Nursing P.M.&P.H. 66—County Nursing P.M.&P.H. 67—Family Health Agency				
69w	School Nursing (2 cred.; prereq. 53, 62-63)	Ar	Ar	Ar	Miss Palmer
103f,w,s	Public Health Bacteriology (3 cred., or more by special arrangement; jr., sr., grad.; prereq. Bact. 101-102, 116 and permission of instructor)	II	TTh	Ar	Miss Palmer
108s	Care of the Handicapped Child (For physicians and nurses) (2 cred.; prereq. 53, 62-63, Psy. 1-2, or permission of instructor)	Ar	Ar	Ar	Dr. Heathman
170s	Supervision of Public Health Nursing (For public health nurses only) (3 cred.; sr.; prereq. 53, 61, 62-63 and experience in public health nursing)	IX	TTh	Ar	Dr. Hilleboe and associates
171f-172w	Advanced Problems in Public Health Nursing (For public health nurses only) (Cred. ar.; sr., grad.; prereq. 170, or permission of instructor)	II	TThS	Ar	Miss Arnstein
173f,w,s	Advanced Field Work in Public Health Nursing (For public health nurses only) (Cred. ar.; sr., grad.; prereq. 171-172 with which it may be taken simultaneously)	Ar	Ar	Ar	Miss Palmer
174w	Seminar in Public Health Nursing (By permission) (Cred. ar.)	Ar	Ar	Ar	Miss Arnstein and staff

*For Graduate Students Only*

200f,w,s	Research	Ar	Ar	Ar	Dr. Anderson
210f,w,s	Seminar in Preventive Medicine and Public Health (By permission)	Ar	Ar	Staff Rm.	Dr. Anderson Health and staff Service

For courses in public health offered to physicians and engineers, see the Bulletin of the Graduate School.

BIOSTATISTICS

110f‡	Biometric Principles (5 cred. Three credits for lectures only may be taken by special arrangement; jr., sr., grad.; prereq. 18 cred. biological science or mathematics through analytic geometry)				
	Lect.	III	TThS	Ar	Mr. Treloar
	Lab.	Ar	Ar	118MH	Miss Gunstad
110s‡	Biometric Principles (See 110f)				
	Lect.	I	TThS	Ar	Mr. Treloar
	Lab.	Ar	Ar	118MH	Miss Gunstad
111	<i>Medical Statistics (Not offered)</i>				
120w‡	Correlational Analysis (5 cred. Three credits for lectures only may be taken by special arrangement; sr., grad.; prereq. 110 or consent of instructor)				
	Lect.	III	TThS	Ar	Mr. Treloar
	Lab.	Ar	Ar	118MH	Miss Gunstad
130s‡	Statistical Interpretation (5 cred. Three credits for lectures only may be taken by special arrangement; sr., grad.; prereq. 110 or consent of instructor)				
	Lect.	III	TThS	Ar	Mr. Treloar
	Lab.	Ar	Ar	118MH	Miss Gunstad
140f,w,s	Topics in Biometry (3 cred.; sr., grad.; prereq. 120 and 130, or consent of instructor)				
		Ar	Ar	Ar	Mr. Treloar

‡ A fee of \$1 is charged for this course.

† Students must maintain a C average in theory completed before they are admitted to field work.

## PSYCHOLOGY

*Major advisers in the College of Science, Literature, and the Arts.*—Professors Bird, Elliott, Paterson, and Tinker.

*Major sequences in the College of Science, Literature, and the Arts.*—

A. Experimental psychology. Courses 101-102-103; 125-126; and 12 additional credits in Senior College courses.

B. Human and animal behavior. Courses 114; 148; 151-152-153; and 12 additional credits in Senior College courses either in psychology or zoology.

C. Differential psychology. Courses 125-126-127; 160; Educational Psychology 141; and 13 additional credits in Senior College courses.

(Prerequisites: For Sequence A, 1-2 and 4-5 or 7. Course 55 is recommended. For Sequence B, 9 credits. For Sequence C, 1-2 and 4-5 or 7. Course 3 is recommended. Courses in mathematics are recommended for students majoring in psychology.)

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Honors course.*—Students interested in the work of an honors course should consult the chairman of the department.

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†	General Psychology—A general introduction to the study of human behavior with emphasis on the development of the individual (6 cred.; 3rd qtr. fr. with C average, soph., jr., sr.; no prereq.)				
	Sec. 1	I	MWF	BuAud	Mr. Elliott
	2	III	MWF	BuAud	and others
1s,2s	General Psychology (6 cred.; soph., jr., sr.; no prereq.)				
	Sec. 1	II	MTWThFS	JAud	Mr. Bird
	2	IX	MTWThF	301F	
		VIII	Th		
3s	Psychology Applied to Daily Life—A course in the uses of psychological methods in solving such problems as come up in the treatment of ill health, in the courtroom, reformatory, and prison, in business offices and factories, in advertising, in education, in social and political life, in artistic creation and esthetic enjoyment, and in everyday life (3 cred.; soph., jr., sr.; prereq. 1-2)				
		III	MWF	BuAud	Mr. Paterson and others
4f†-5w*††	Introductory Laboratory Psychology—Simple experiments illustrating the subject-matter of contemporary psychology. Included are human and animal learning, visual experience, differences in artistic, musical, and other kinds of abilities, measurement of each student's personality traits, and reactions to advertisements. (4 cred.; soph., jr., sr.; may be taken with or after 1-2) (Sections limited to 48)				
	Sec. 1	III, IV	TS	211Psy	Mr. Tinker
	2	VI, VII	MW	211Psy	and others
	3	I, II	TTh	211Psy	
	4	VI, VII	TTh	211Psy	
	5	VIII, IX	TTh	211Psy	
	6	VIII, IX	MW	211Psy	
7s††	Introduction to Laboratory Psychology (Identical with 4-5 combined.				See 4f-5w)
	Sec. 1	I, II	MTThF	211Psy	Mr. Tinker
	2	VI, VII	MTThF	211Psy	and others
	3	VIII, IX	MTThF	211Psy	

\* Students completing projects with distinction may be recommended to receive either one or two additional credits.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per quarter is charged for this course.

†† A fee of \$2 is charged for this course.

## Senior College Courses

Courses 52 and 55 are open to third quarter sophomores who have an average grade of at least C in Course 1-2. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

No.	Title	Hour	Day	Bldg.	Instructor
52s	Genetic Psychology (3 cred.; soph., jr., sr.; prereq. 1-2)	IV	MWF	115Psy	Mr. Heron
55s	Psychology of Sensation (3 cred.; soph., jr., sr.; prereq. 1-2)	IV	MWF	211Psy	Mr. Tinker
56w	Psychology of Advertising (3 cred.; jr., sr.; prereq. 1-2, and Principles of Economics)	VII	MWF	166Ph	Mr. Longstaff
64f	The Higher Mental Processes—Selected aspects of attention, thinking, emotion, motivation, and other higher mental processes will be discussed. Historical experiments and practical applications of principles will be reviewed. (3 cred.; jr., sr.; prereq. 1-2)	II	TThS	115Psy	Mr. Baker
72	<i>The Psychology of the Fine Arts</i> (3 cred.; jr., sr.; prereq. 1-2) ( <i>Not offered</i> )				
74s	The Psychology of Literature—The processes involved in the creation and enjoyment of literature. The descriptive and emotive uses of language, the bases of style, metaphor, word-play, the rôle of unconscious language processes, modern trends toward psychological subject-matter (3 cred.; jr., sr.; prereq. 1-2)	II	MWF	115Psy	Mr. Skinner
84f	Psychology of Learning (3 cred.; jr., sr.; prereq. 1-2)	III	TThS	109Psy	Mr. Heron
86s	Biographical Psychology—Human personalities in relation to their ancestries, their bodies, and their environments, physical and social (3 cred.; jr., sr.; prereq. 9 cred. in psy.)	II	TThS	115Psy	Mr. Elliott
90f,91w,92s	Readings in Psychology—Tutorially directed reading and preparation of reports on special topics (Cred. ar.; jr., sr.; prereq. 1-2; 4-5 or 7, or Zool. 1-2-3; and written permission of instructor)	Ar	Ar	Ar	Mr. Elliott, Mr. Bird, Mr. Paterson, Mr. Heron, Mr. Tinker, Mr. Baker, Mr. Skinner
101f-102w†- 103s	Experimental Psychology (3 cred. per qtr.; cred. ar. for honors students; jr., sr., grad.; prereq. 1-2; and 4-5 or 7, or equiv. in another science)	VII	MWF	116Psy	Mr. Tinker
108f	Systems of Psychology—A reading course (3 cred.; jr., sr., grad.; prereq. 1-2 and consent of instructor)	VIII	WF		
114w§	Human Behavior (3 cred.; sr., grad.; prereq. 1-2; 4-5 or 7, or Zool. 1-2-3, or Phil. 1)	Ar	Ar	Ar	Mr. Elliott
125f-126w†	Psychology of Individual Differences (6 cred.; cred. ar. for honors students; sr., grad.; prereq. 1-2; 4-5 or 7, or 5 cred. in statistics)	II	TThS	115Psy	Mr. Elliott
127s	Projects in the Psychology of Individual Differences (3 cred.; sr., grad.; primarily for majors in Sequence C; prereq. 125-126)	II	MWF	115Psy	Mr. Paterson
130s	Vocational Psychology (2 cred.; jr., sr., grad.; prereq. 9 cred. in psy.)	Ar	Ar	Ar	Mr. Paterson
		IV	TS	115Psy	Mr. Paterson

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ This is part of Course 114w-115s, "Human Behavior." 115s will not be given in 1938-39.

No.	Title	Hour	Day	Bldg.	Instructor
140w	Social Psychology (3 cred.; jr., sr., grad.; prereq. 9 cred. in psy.; or 6 cred. in psy. and either Zool. 1-2-3 or 12 cred. in soc.)	III	TThS	206Pt	Mr. Bird
141s	Political Psychology (3 cred.; jr., sr., grad.; prereq. 9 cred. in psy.)	III	TThS	206Pt	Mr. Bird
144f-145w†	Abnormal Psychology (6 cred.; jr., sr., grad.; prereq. 9 cred. in psy.; or 6 cred. in psy. and either Zool. 1-2-3 or 12 cred. in soc.)	IV	MWF	206Pt	Mr. Bird
148w	Physiological Psychology—The topics treated and illustrated by demonstrations will include the elements of neural anatomy and physiology, tonus, neuromuscular set, integration, and the neural basis of learning. The treatment of these topics will stress their importance for psychology. (3 cred.; sr., grad.; prereq. 1-2; 4-5 or 7, or Zool. 1-2-3, or consent of instructor)	III	MWF	115Psy	Mr. Hathaway
151f-152w†- 153s	Animal Psychology (9 cred.; cred. ar. for honors students; sr., grad.; prereq. 1-2; 4-5 or 7, or equiv. in another science)	Lect. VI Lab. in 153s Ar	MWF	109Psy	Mr. Heron
160f	Psychology in Personnel Work (3 cred.; sr., grad.; prereq. 1-2, and Principles of Economics or 9 cred. in political science)	III	MWF	115Psy	Mr. Longstaff

## ROMANCE LANGUAGES

*Major advisers in the College of Science, Literature, and the Arts.*—Professor Searles; Associate Professor Grismer; Assistant Professor Cleifton.

*Major sequences in the College of Science, Literature, and the Arts.*—

## FRENCH

Courses 70-71-72 or 73-74; five credits in conversation and composition, if the student has not taken French 20; a minimum of 21 additional credits chosen from courses numbered 50 or above, of which at least 9 must be in literary courses.

## ITALIAN

Twenty-four credits in courses numbered 50 or above, and 3 additional credits chosen from the following: English 140, 146-147, 148-149; French 121-122-123, 153; Italian 159-160, 161-162; Latin 121; History 153-154-155.

## SPANISH

Five credits in conversation and composition, if the student has not taken Spanish 20. Nine credits in literary courses, and in addition enough credits chosen from courses numbered 50 or above to make a minimum of 27 Senior College credits in all.

## MIXED (FRENCH, ITALIAN, AND SPANISH)

Five credits in conversation and composition.

One literary course above 50, and in addition enough credits chosen from courses in any of the three languages numbered 50 or above to make a minimum of 27 credits in all.

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Assistant Professor Cleifton.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.



*Requirements for a teacher's certificate.*—Major recommendation: 35 credits in one language numbered above 4, these courses to include in the case of French, Survey of French Literature and one other literary course; 50; 53, 54-55 (or 20); 63; and 103-104-105.

Minor recommendation: 17 credits in one language in courses numbered above 4.

*Admission to advanced courses.*—No student will be allowed to elect courses more advanced than intermediate French or Spanish unless he has received an average grade of C in the intermediate courses.

## FRENCH

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†§	Beginning French (10 cred.; all; no prereq.)	I	MTWThF	227F	Ar
		IV	MTWFS	202F	Ar
		VI	MTWThF	226F	Ar
1w-2s†§	Beginning French (See 1f-2w)	IV	MTWFS	227F	Ar
1s§	Beginning French (1st qtr. of 1-2. See 1f-2w)	IV	MTWFS	303F	Ar
2f§	Beginning French (2nd qtr. of 1-2. See 1f-2w)	I	MTWThF	202F	Ar
		VI	MTWThF	202F	Ar
3f-4w	Intermediate French (10 cred.; all; prereq. 1-2, or two years of high school French. Students who have had three years of high school French will omit Course 3 and take Course 4)	I	MTWThF	201F	Ar
		III	MTWThF	226F	Ar
		VII	MTWThF	202F	Ar
3w-4s	Intermediate French (See 3f-4w)	I	MTWThF	202F	Ar
		VI	MTWThF	202F	Ar
3s	Intermediate French (1st qtr. of 3-4. See 3f-4w)	I	MTWThF	227F	Ar
		IV	MTWFS	202F	Ar
		VI	MTWThF	226F	Ar
4f	Intermediate French (2nd qtr. of 3-4; prereq. 3, or three years of high school French)	II	MTWThF	110F	Ar
		IV	MTWFS	227F	Ar
		VI	MTWThF	101F	Ar
20f	Oral and Written French (5 cred.; all; prereq. 4, or four½ years of high school French)	III	MTWThF	303F	Mr. Jordan
		VII	MTWThF	201F	Mr. Fermaud
20s	Oral and Written French (See 20f)	I	MTWThF	201F	Ar
		III	MTWThF	226F	Ar
		VII	MTWThF	202F	Ar

*Senior College Courses*

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ A student may not receive credit for beginning courses (two quarters, 10 credits) in more than one of the foreign languages, exclusive of Greek and Italian, except by special permission of the Students' Work Committee.

¶ Students who have had three years of high school French may be admitted to Course 20 with the consent of the department.

No.	Title	Hour	Day	Bldg.	Instructor
50f,w,s	French Pronunciation (3 cred.; jr., sr.; prereq. 3-4)	II	TThS	203F	Miss Guinotte
53f	French Composition (3 cred.; jr., sr.; prereq. 3-4)	III	TThS	201F	Mr. Minault
		VI	MWF	212F	Mr. Minault
54w-55s	French Conversation (4 cred.; jr., sr.; prereq. 53 or 20)	III	TThS	201F	Mr. Minault
		VI	MWF	212F	Mr. Minault
62s	Advanced Pronunciation and Diction (3 cred.; jr., sr.; prereq. 50)	I	MWF	203F	Miss Guinotte
63f-64w	Advanced French Composition (6 cred.; jr., sr.; prereq. 53 or 20 with a grade of B)	II	MWF	203F	Miss Guinotte
65s	Advanced French Conversation (3 cred.; jr., sr.; prereq. 54-55 or 20 with a grade of B)	II	MWF	203F	Miss Guinotte
70f-71w-72s†	Survey of French Literature (9 cred.; jr., sr.; prereq. 3-4)	II	TThS	201F	Mr. Searles
		III	MWF	201F	Mr. LeCompte
73w-74s†	Survey of French Literature (10 cred.; jr., sr.; prereq. 3-4)	III	MTWThF	303F	Mr. Brackney
		VII	MTWThF	226F	Mr. Jordan
80f	French Literature: 19th Century—Chateaubriand and Romantic Poets (3 cred.; jr., sr.; prereq.*)	II	MWF	201F	Mr. Cleifton
81w	French Literature: 19th Century—Romantic Drama and Novel (3 cred.; jr., sr.; prereq.*)	II	MWF	201F	Mr. Cleifton
82s	French Literature: 19th Century—Poetry and Drama after 1850 (3 cred.; jr., sr.; prereq.*)	II	MWF	201F	Mr. Cleifton
103f-104w-105s†	French Syntax and Composition (3 cred.; jr., sr., grad.; prereq. 63 or registration in 63)	VI	F	203F	Miss Guinotte
115f	French Literature: 17th Century—Formation of Classic Ideal (4 cred.; jr., sr., grad.; prereq.*)	IV	MTWF	203F	Mr. Searles
116w	French Literature: 17th Century—Molière, Racine, La Fontaine (4 cred.; jr., sr., grad.; prereq.*)	IV	MTWF	203F	Mr. Searles
117s	French Literature: 17th Century—Moral and Didactic Literature (4 cred.; jr., sr., grad.; prereq.*)	IV	MTWF	203F	Mr. Searles
118f-119w-120s	French Literature: 18th Century (9 cred.; jr., sr., grad.; prereq.*)	III	TThS	209½F	Mr. Sirich
121-122-123	<i>French Literature: 16th Century</i> (9 cred.; jr., sr., grad.; prereq. 9 cred. in literature courses above 74) ( <i>Not offered</i> )				
130f	French Romantic Poetry—Victor Hugo (3 cred.; jr., sr., grad.; prereq.*)	II	TThS	227F	Mr. Cleifton
131	<i>Parnassian Poetry</i> (3 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				
132w	Baudelaire, Verlaine, and the Symbolists (3 cred.; jr., sr., grad.; prereq.*)	• II	TThS	202F	Mr. LeCompte
145	<i>French Drama 1890-1915</i> (2 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				
146-147	<i>Contemporary French Dramatic Literature</i> (4 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				
149s	Explication de Textes (3 cred.; jr., sr., grad.; prereq.*)	II	TThS	202F	Mr. LeCompte
153	<i>Contemporary French Lyric Poetry</i> (3 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				
156	<i>French Realistic Novel</i> (3 cred.; jr., sr., grad.; prereq.*) ( <i>Not offered</i> )				

\* Prerequisite is 70-71-72 or 73-74.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
157w	French Novel, 1880-1915 (3 cred.; jr., sr., grad.; prereq.*)	VII	MWF	201F	Mr. Minault
158s	Contemporary French Novel (3 cred.; jr., sr., grad.; prereq.*)	VII	MWF	201F	Mr. Minault
171f-172w-173s†	History of French Language (3 cred.; jr., sr., grad.; prereq. one year of Latin or permission of instructor)	VIII	Th	203F	Mr. LeCompte

*Seminars*

201f-202w-203s	Old French Phonology and Morphology (6 cred.)	Ar	Ar	203F	Mr. LeCompte
204f-205w-206s	Reading in Old French Literature (6 cred.)	Ar	Ar	203F	Mr. LeCompte
207f-208w-209s	Old Provençal (6 cred.)	Ar	Ar	203F	Mr. LeCompte
222f-223w-224s	French Seminar: Classical Period (6 cred.)	VIII, IX	W	203F	Mr. Searles

## ITALIAN

*Note.*—Students may receive credit for Italian 1-2 in addition to one other beginning language.

*Junior College Courses*

1f-2w†¶	Beginning Italian (10 cred.; all; no prereq.)	IV	MTWFS	226F	Miss Nissen
3s	Intermediate Italian (5 cred.; all; prereq. 1-2)	IV	MTWFS	226F	Miss Nissen
4	<i>Intermediate Italian</i> (5 cred.; all; prereq. 1-2) ( <i>Not offered</i> )				
5w¶	Reading Knowledge of Italian (5 cred.; all; prereq. knowledge of French, Latin, or Spanish. No previous knowledge of Italian is necessary)	VI	MTWThF	304F	Miss Nissen

*Senior College Courses*

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

69f	Survey of Italian Literature I (3 cred.; jr., sr.; prereq.§)	III	MWF	302F	Miss Nissen
70	<i>Survey of Italian Literature II</i> (3 cred.; jr., sr.; prereq.§) ( <i>Not offered</i> )				
71w	Modern Poetry (Leopardi, Carducci) (3 cred.; jr., sr.; prereq.§)	III	MWF	302F	Miss Nissen
72	<i>Modern Drama (Giacosa, Bracco, Pirandello)</i> (3 cred.; jr., sr.; prereq.§) ( <i>Not offered</i> )				
73s	Boccaccio (3 cred.; jr., sr.; prereq.§)	III	MWF	302F	Miss Nissen
74	<i>Petrarch</i> (3 cred.; jr., sr.; prereq.§) ( <i>Not offered</i> )				
159f-160w	Dante (6 cred.; jr., sr., grad.; prereq. one course above 50)	II	MWF	108F	Miss Nissen
161-162	<i>The Sixteenth Century</i> (6 cred.; jr., sr., grad.; prereq. one course above 50) ( <i>Not offered</i> )				

\* Prerequisite is 70-71-72 or 73-74.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ The prerequisite is Course 3 or Course 4; but for students beginning Italian in the Senior College it may be Course 1-2 or 5 with permission of the instructor.

¶ Credit will not be given for both Course 1 and Course 5.

No.	Title	Hour	Day	Bldg.	Instructor
<i>Course for Which No Knowledge of Italian Is Required</i>					
164	<i>Dante (in English)</i> (3 cred.; jr., sr., grad.; prereq. French 70-71-72 or 73-74, or 6 cred. in English above 50, or Hist. 53-54, or Spanish 65-66-67 or 68-69) ( <i>Not offered</i> )				

## SPANISH

*Junior College Courses*

1f-2w**†	Beginning Spanish (10 cred.; all; no prereq.)	I	MTWThF	226F	Ar
		IV	MTWFS	201F	Ar
		VI	MTWThF	201F	Ar
		VII	MTWThF	109F	Ar
1w-2s**†	Beginning Spanish (See 1f-2w)	VII	MTWThF	109F	Ar
1s*	Beginning Spanish (1st qtr. of 1-2. See 1f-2w)	II	MTWThF	226F	Ar
2f	Beginning Spanish (2nd qtr. of 1-2. See 1f-2w)	III	MTWThF	202F	Ar
3f-4w	Intermediate Spanish (10 cred.; all; prereq. 1-2 or two years of high school Spanish. Students who have had three years of high school Spanish will omit Course 3 and take Course 4)	II	MTWThF	226F	Ar
		VI	MTWThF	124F	Ar
		III	MTWThF	202F	Ar
3w-4s	Intermediate Spanish (See 3f-4w)	III	MTWThF	202F	Ar
3s	Intermediate Spanish (1st qtr. of 3-4. See 3f-4w)	I	MTWThF	226F	Ar
		IV	MTWFS	201F	Ar
		VI	MTWThF	201F	Ar
		II	MTWThF	202F	Ar
4f	Intermediate Spanish (2nd qtr. of 3-4. Prereq. 3, or three years of high school Spanish)	VI	MTWThF	227F	Ar
20s	Oral and Written Spanish (5 cred.; all; prereq. 4 or four½ years of high school Spanish)	III	MTWThF	227F	Ar
		VI	MTWThF	227F	Ar
30s	Spanish Commercial Correspondence (3 cred.; all; prereq. 3)	VII	MWF	209F	Ar

*Senior College Courses*

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

50w	Spanish Pronunciation (3 cred.; jr., sr.; prereq. 4)	III	TThS	306F	Ar
51	<i>Advanced Spanish Pronunciation and Diction</i> (3 cred.; jr., sr.; prereq. 50) ( <i>Not offered</i> )				
53f	Spanish Composition (3 cred.; jr., sr.; prereq. 3-4)	II	MWF	304F	Ar
		II	MWF	304F	Ar
54w-55s	Spanish Conversation—Based on Spanish-American life (4 cred.; jr., sr.; prereq. 53 or 20)	II	MWF	304F	Ar
60f	Advanced Spanish Composition (3 cred.; jr., sr.; prereq. 53 or 20 with grade of B)	VII	MWF	227F	Ar

\* A student may not receive credit for beginning courses (two quarters, 10 credits) in more than one of the foreign languages, exclusive of Greek and Italian, except by special permission of the Students' Work Committee.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ Students who have had three years of high school Spanish may be admitted to Course 20 with the consent of the department.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
61w-62s	Advanced Spanish Conversation (6 cred.; jr., sr.; prereq. 54-55 or 20 with grade of B)	VII	MWF	227F	Ar
68w-69s†	Survey of Spanish Literature (10 cred.; jr., sr.; prereq. 3-4)	VI	MTWThF	227F	Mr. Pattison
74f-75w-76s†	Survey of Spanish American Literature: Contemporary Prose and Poetry (9 cred.; jr., sr.; prereq. 3-4)	II	TThS	108F	Ar
110f-111w-112s	Spanish Literature: 19th Century (9 cred.; jr., sr., grad.; prereq.*)	IV	MWF	108F	Mr. Pattison
115f-116w-117s	Spanish Literature: 17th Century (9 cred.; jr., sr., grad.; prereq.*)	II	TThS	316F	Mr. Grismer
120w	The Ballad (3 cred.; jr., sr., grad.; prereq.*)	III	MWF	203F	Mr. Grismer
130	<i>Cervantes: Don Quijote</i> (3 cred.; jr., sr., grad.; prereq.*) (Not offered)				
131	<i>The Picaresque Novel</i> (3 cred.; jr., sr., grad.; prereq.*) (Not offered)				
140	<i>Rubén Darío and the Contemporary Movement in Spanish American Literature</i> (3 cred.; jr., sr., grad.; prereq.*) (Not offered)				
155-156-157	<i>Spanish Literature: 16th Century</i> (9 cred.; jr., sr., grad.; prereq.*) (Not offered)				
174-175-176	<i>Contemporary Spanish Literature</i> (9 cred.; jr., sr., grad.; prereq.*) (Not offered)				

## Seminars

244f-245w-246s	Readings in Old Spanish Literature (6 cred.)	VIII, IX	W	204½F	Mr. Grismer
250f-251w-252s	Spanish Seminar. Don Quijote and the Minor Works of Cervantes (6 cred.)	VIII, IX	Th	204½F	Mr. Pattison

## SCANDINAVIAN

## Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w§	Beginning Norwegian (10 cred.; all; no prereq.)	I	MTWThF	206F	Mr. Madsen
3s	Intermediate Norwegian (5 cred.; all; prereq. 1-2 or equiv.)	I	MTWThF	206F	Mr. Madsen
4f	Advanced Norwegian (5 cred.; all; prereq. 1-2-3 or equiv.)	II	MTWThF	206F	Mr. Madsen
5w	Introduction to Norwegian Literature (5 cred.; all; prereq. 4)	III	MTWThF	206F	Mr. Madsen
7f-8w§	Beginning Swedish (10 cred.; all; no prereq.)	II	MTWThF	206F	Mr. Stomberg
9s	Intermediate Swedish (5 cred.; all; prereq. 7-8 or equiv.)	II	MTWThF	206F	Mr. Stomberg
10f-11w	Advanced Swedish (10 cred.; all; prereq. 7-8-9 or equiv.)	I	MTWThF	110F	Mr. Stomberg
12s¶	Ancient and Medieval Scandinavian History (2 cred.; soph., jr., sr.; prereq. 10-11, or 4-5, or Hist. 1-2)	I	TTh	110F	Mr. Stomberg
42w¶	Survey of Scandinavian Literature (2 cred.; soph., jr., sr.; prereq. 1-2-3 or 7-8-9 or 15 cred. in literature)	IV	MW	206F	Mr. Stomberg
45s¶	Scandinavian Mythology (2 cred.; soph., jr., sr.; no prereq.)	IV	MW	206F	Mr. Stomberg

## Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

\* The prerequisite is 68-69 or 74-75-76.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ A student may not receive credit for beginning courses (two quarters, 10 credits) in more than one of the foreign languages, exclusive of Greek and Italian, except by special permission of the Students' Work Committee.

¶ No knowledge of Scandinavian languages is required.

No.	Title	Hour	Day	Bldg.	Instructor
51f-52w-53s	Modern Norwegian Literature (9 cred.; jr., sr.; prereq. 4-5)	Ar	Ar	Ar	Mr. Madsen
61	<i>Earlier Norwegian Literature</i> (3 cred.; jr., sr.; prereq. 4-5) ( <i>Not offered</i> )				
62	<i>Ibsen</i> (3 cred.; jr., sr.; prereq. 4-5) ( <i>Not offered</i> )				
63	<i>Björnson</i> (3 cred.; jr., sr.; prereq. 4-5) ( <i>Not offered</i> )				
64s	Introduction to Swedish Literature (3 cred.; soph., jr., sr.; prereq. 10-11 or three years of high school Swedish)				
		I	MWF	110F	Mr. Stomberg
71-72-73	<i>Danish Literature of the 19th Century</i> (9 cred.; jr., sr.; prereq. 4-5) ( <i>Not offered</i> )				
104f*	Modern Scandinavian History (2 cred.; jr., sr., grad.; prereq. 10-11-12, or 4-5, or 15 cred. in hist.)				
		IV	MW	206F	Mr. Stomberg
107f-108w-109s	Modern Swedish Literature (9 cred.; jr., sr., grad.; prereq. 10-11)				
		VI	MWF	206F	Mr. Stomberg
111-112-113	<i>Old Norse (Icelandic)</i> (6 cred.; sr., grad.; prereq. consent of instructor) ( <i>Not offered</i> )				
114f	Strindberg (3 cred.; sr., grad.; prereq. 107-108-109)				
		Ar	Ar	Ar	Mr. Stomberg
<i>For Graduate Students Only</i>					
201f-202w-203s	Seminar in the History of Scandinavian Languages				Mr. Stomberg
209f-210w-211s	Seminar in Modern Swedish Languages and Literature				Mr. Stomberg
215-216-217	<i>Seminar in Norwegian Literature</i> ( <i>Not offered</i> )				
218-219-220	<i>Seminar in Medieval Scandinavian Literature</i> ( <i>Not offered</i> )				
221f-222w-223s	Modern Scandinavian Drama				Mr. Norborg

## SOCIOLOGY AND SOCIAL WORK

*Major advisers in the College of Science, Literature, and the Arts.*—Professors Chapin, Kirkpatrick, Nelson, and Vold; Associate Professors Fenlason, Shea, and Vaile; Assistant Professors Gardiner, Monachesi, and Sletto; Lecturers Doyle and Phillips.

*Major sequences in the College of Science, Literature, and the Arts.*—

Sequence A. General sociology. Course 53; three of 100, 101, 102, 103; two of 115, 116, 119, 160; 123 or 161; two of 120, 140, 141; 110 or 112 or 114.

Sequence B. Applied sociology. Courses 53, 60, 90; two of 100, 101, 102, 103; three of 115, 116, 119, 160; 120 or 123 or 161; 110 or 112 or 114.

Sequence C. Rural sociology. Courses as follows: two of 53, 60, 90; two of 100, 101, 103; two of 115, 116, 119, 160; 123 or 161; 120 or 140 or 141; 110, 112, 114.

Sequence D (leading to the B.S. degree). Presocial work. (The undergraduate sequence leading to the course in graduate social work—see the Bulletin of the College of Science, Literature, and the Arts); Courses 53, 60, 90, 91, 119; Preventive Medicine 50 or 53, 57, and 61 or Psychology 144-145; Home Economics 30, 89; Economics 82, 83, 84 (unless the student has had Economics 6-7, Principles of Economics, or its equivalent); nine credits from Courses 100, 101, 102, 103, 110, 114, 115, 120, 123, 160.

(Prerequisites: For Sequences A, B, C, Soc. 1 and a total of 20 credits from courses in sociology, anthropology, education, history, philosophy, political science, psychology, and zoology. For Sequence D, see the Junior College part of the presocial work curriculum in the Bulletin of the College of Science, Literature, and the Arts.)

Modification of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major adviser in the College of Education.*—Professor Kirkpatrick.

*Requirements for a teacher's certificate.*—Major recommendation: 36 credits including 1, 6, and 14.

Minor recommendation: 19 or 20 credits including 1, 6, and 14.

\* No knowledge of Scandinavian languages is required.

*Note.*—Students majoring in sociology must complete two teaching minors in addition to the required professional courses. Teachers who already hold a teacher's certificate may be relieved of this requirement upon petition.

For a specialized curriculum in social studies and a curriculum for "Visiting Teachers" see the Bulletin of the College of Education.

*Preparation for professional social work.*—See the presocial work course described in the Bulletin of the College of Science, Literature, and the Arts and the professional social work course described in the Bulletin of the Graduate School; also the special bulletin on graduate social work published by the department.

*Honors course.*—Students interested in the work of an honors course should consult the chairman of the department.

### Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f,w	Introduction to Sociology—The study of the culture of human society. An objective analysis of culture complexes, culture patterns, cultural processes; the influence of culture on the individual's behavior; social change; and social disorganization. (5 cred.; 3rd qtr. fr., soph., jr., sr.; no prereq.)				
	Lect.	I	TThS	BuAud	Mr. Monachesi
	Sec. 1	I	WF	11F	and others
	2	III	MW	110P	
	3	IV	MW	2J	
	4	V (fall only)	MW	109J	
	5	VI	MW	109J	
	6	VII	MW	2J	
	7	III	TTh	11F	
1f,w	Introduction to Sociology (For students of the College of Agriculture, Forestry, and Home Economics only) (3 cred.; no prereq.)				
		III	TThS	107PP	Mr. Nelson
1s	Introduction to Sociology (See 1f)				
	Lect. Sec. 1	I	TThS	BuAud	Mr. Monachesi
	Rec. Secs.	I	WF	11F	and others
	These recitation sections are for students who take	III	MW	208P	
	Lecture Section 1.	IV	MW	109J	
		VI	MW	109J	
		III	TTh	104J	
	Lect. Sec. 2	I	MWF	BuAud	Mr. Monachesi
	Rec. Secs.	I	TTh	208P	and others
	These recitation sections are for students who take	II	TTh	109J	
	Lecture Section 2.	III	TTh	9F	
		VI	TTh	109J	
		IV	MW	2J	
1s	Introduction to Sociology (For students of the College of Agriculture, Forestry, and Home Economics only) (3 cred.; no prereq.)				
		I	TThS	301Ad	Mr. Nelson
6f,w	Social Interaction—Influences affecting group life; forms of interaction and communication; personality and its development in the social situation; attitudes and race prejudice; forms of opposition including warfare, class tensions, coercion and intolerance; present-day problems of co-operation, leadership, and social change in an age of science (3 cred.; soph., jr., sr.; prereq. 1. This course is not open to students who have had Soc. 100 or Psy. 140)				
		II	MWF	JAud	Mr. Kirkpatrick
6s	Social Interaction (See 6f)				
		III	MWF	JAud	Mr. Kirkpatrick
14f,w,s	Rural Sociology—A presentation of factual data necessary to an understanding of the problems of rural social life (3 cred.; soph., jr., sr.; prereq. 1)				
		IV	MWF	JAud	Mr. Nelson

No.	Title	Hour	Day	Bldg.	Instructor
14f,w	Rural Sociology (For students of the College of Agriculture, Forestry, and Home Economics) (3 cred.; soph., jr., sr.; prereq. 1 or jr. class)	I	TThS	116BCh	Mr. Nelson
45f	Social Statistics (5 cred.; soph., jr., sr.; prereq. 1. Not open to students who have received credit in Econ. 5)	IV	MWF	104J	Mr. Sletto
	Lect.	IV	MWF	104J	Mr. Sletto
	Lab.	VI, VII	TTh	104J	
45w	Social Statistics (See 45f)				
	Lect.	VI	MWF	104J	Mr. Sletto
	Lab.	VI, VII	TTh	104J	
45s	Social Statistics (See 45f)				
	Lect.	III	MWF	104J	Mr. Sletto
	Lab.	VI, VII	TTh	104J	
49f,w,s	Social Pathology (3 cred.; 3rd qtr. soph., jr., sr.; prereq. 10 cred. in soc. or Soc. 1 and 10 cred. in soc. sci. or psy.)	I	MWF	301F(f), 166Ph(w,s)	Mr. Sletto
50	<i>Survey of Social Work for Nurses</i> (2 cred.; open only to graduate nurses on advice of the School of Nursing) ( <i>Not offered</i> )				

### Senior College Courses

Course 53 is open to third quarter sophomores who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

### COURSES IN SOCIOLOGY

53f,w,s	Elements of Criminology—A general survey of the field of criminology (3 cred.; jr., sr.; prereq. same as for 49)	III	MWF	104J(f) 109J(w,s)	Mr. Vold
60s	Social Protection of the Child (This course is listed under the heading "Courses in Social Work," on page 96)				
90f,s	Survey of Social Work (This course is listed under the heading "Courses in Social Work," on page 96)				
97f-98w-99s	Tutorial and Honors Work in Selected Fields (9 cred.; jr., sr.; prereq. consent of major adviser in sociology)	Ar	Ar	Ar	Ar
100f	Social Psychology (3 cred.; jr., sr., grad.; prereq. Soc. 1 and 6, or Psy. 1-2, and 9 cred. in soc. sci., ed., phil., or psy.)	II	TThS	109J	Mr. Kirkpatrick
101f	Social Organization (3 cred.; jr., sr., grad.; prereq. 4 courses in soc. or Soc. 1 and 15 cred. in soc. sci., ed., phil., or psy.)	III	MWF	109J	Mr. Chapin
102s	Contemporary Penology (3 cred.; jr., sr., grad.; prereq. same as for 101, but including 53 or consent of the instructor)	II	MWF	14P	Mr. Vold
103w	Sociology of Conflict (3 cred.; jr., sr., grad.; prereq. same as for 101)	II	TThS	109J	Mr. Vold
104f	Principles of Sociology (3 cred.; grad.*; no prereq.)	II	TThS	104J	Mr. Monachesi
105f	Criminological Theories—Historical and Contemporary (3 cred.; jr., sr., grad.; prereq. same as for 101, but including 53 or consent of instructor)	IV	MWF	109J	Mr. Vold
110f	Rural Organization (3 cred.; jr., sr., grad.; prereq. same as for 101)	III	MWF	2J	Mr. Nelson
112s	Methods of Rural Social Research (2 cred.; grad.*; prereq. same as for 101)	I	MW	204OD	Mr. Nelson

\* Primarily for graduates, but mature students who are not graduates may be admitted with the consent of the adviser and instructor.



No.	Title	Hour	Day	Bldg.	Instructor
114w	Rural Social Institutions (3 cred.; jr., sr., grad.; prereq. same as for 101)	II	MWF	110F	Mr. Nelson
115w	Religion As a Social Institution (3 cred.; jr., sr., grad.; prereq. same as for 101)	III	MWF	104J	Mr. Kirkpatrick
116	<i>The Newspaper As a Social Institution</i> (3 cred.; jr., sr., grad.; prereq. same as for 101) ( <i>Not offered</i> )				
119f	The Family (3 cred.; jr., sr., grad.; prereq. same as for 101)	III	TThS	109J	Mr. Kirkpatrick
119s	The Family (See 119f)				
120f	Social Life and Cultural Change (3 cred.; jr., sr., grad.; prereq. same as for 101)	II	MWF	109J	Mr. Schneider
122w	Statistical Methods (3 cred.; grad.*; prereq. 4 courses in soc.)	II	MWF	109J	Mr. Chapin
123s	Methods of Social Investigation (3 cred.; jr., sr., grad.; prereq. same as for 101)	III	TThS	2J	Mr. Sletto
132w	Juvenile Courts and Probation (3 cred.; grad.*; prereq. 53, 102)	II	TThS	104J	Mr. Monachesi
140w	History of Social Theory (3 cred.; jr., sr., grad.; prereq. same as for 101)	II	MWF	200Pt	Mr. Schneider
141s	Communication Agencies and Social Life (3 cred.; jr., sr., grad.; prereq. same as for 101)	III	TThS	109J	Mr. Schneider
160w	Population Problems (3 cred.; jr., sr., grad.; prereq. same as for 101)	I	TThS	109J	Mr. Sletto
161s	Social Aspects of Housing and Standards of Living (3 cred.; sr., grad.; prereq. same as for 101)	II	TThS	104J	Mr. Chapin

## COURSES IN SOCIAL WORK

52	<i>Introduction to Social Case Work</i> (3 cred.; sr. only; prereq. 49) ( <i>Not offered</i> )				
60s	Social Protection of the Child (3 cred.; sr. only; prereq. 49)	I	TThS	104J	Mrs. Shea
90f,s	Survey of Social Work (3 cred.; sr. only; prereq. 49)				
	Fall	II	MWF	200Pt	Miss Phillips
	Spring	IV	MWF	104J	
91f,s	Field Observation of Social Work (2 cred.; sr.; prereq. 90, which may be taken simultaneously)	Ar	Ar	Ar	Miss Phillips
109f,w,s§	The Field of Social Work (3 cred.; grad.*; prereq. 104, which may be taken simultaneously, or equivalent)				
	Fall	IV	T	109J	Mrs. Doyle
		VII, VIII	Th	109J	
	Winter	I	TThS	104J	
	Spring	Ar	Ar	Ar	
125f,w	Principles of Group Work (3 cred.; grad.*; prereq. 109, which may be taken simultaneously, or the equivalent)	I	MWF	2J	Miss Phillips
126s	Problems of Supervision in Group Work (3 cred.; grad.*; prereq. 125, 156)	II	MWF	200Pt	Miss Phillips
127s	Legal Aspects of Social Work (3 cred.; grad.*; prereq. 109, which may be taken simultaneously)				
		I	MWF	109J	Mr. Finke
128s	Principles of Administration, Publicity, and Finance Applied to Social Work (3 cred.; grad.*; prereq. same as for 101, but including 109 or equiv.)	VIII, IX	Th	109J	Mr. Atwater
		and one hr. ar.			
129f-130w†	Principles of Social Case Work (6 cred.; grad.*; prereq. for 129 is 109, which may be taken simultaneously, prereq. for 130 is 129, 153)	III	TThS	2J	Mrs. Fenlason

\* Primarily for graduates, but mature students who are not graduates may be admitted with the consent of the adviser and instructor.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ This course is for mature students who have not had Courses 49 and 90.

No.	Title	Hour	Day	Bldg.	Instructor
129w-130s†	Principles of Social Case Work (See 129f-130w)	II	TThS	2J	Mrs. Fenlason
131s	Rural Social Work (3 cred.; grad.*; prereq. 129, 153, 114 or equiv.)	I	TThS	2J	Miss Vaile
132w	Juvenile Courts and Probation (This course is listed under the heading "Courses in Sociology," on page 96)				
133	<i>Social Case Work in Health Problems</i> (3 cred.; grad.*; prereq. 129, which may be taken simultaneously, and 136) ( <i>Not offered</i> )				
134	<i>Legal Protection of the Child</i> (3 cred.; grad.*; prereq. same as for 101 but incl. 60) ( <i>Not offered</i> )				
135f,w,s‡	Field Practice in Social Work for Children (2 to 5 cred. to be determined by the adviser in social work; grad.*; prereq. 129, 153)	Ar		Ar Ar	Miss Vaile, Mrs. Shea, Mrs. Doyle, and staff
136w	Essentials of Medicine for Social Workers (3 cred.; grad.*; prereq. P.M.&P.H. 53 or equiv.)	VIII, IX	T	Ar	Med. Staff U. H.
137	<i>The History and Theory of Social Work</i> (3 cred.; grad.*; prereq. 109, which may be taken simultaneously) ( <i>Not offered</i> )	IX	Th		Miss Gardiner
138f	Case Work with Children (3 cred.; grad.*; prereq. 129, 153)	II	TThS	2J	Mrs. Shea
139w	Psychiatric Problems in Social Case Work (3 cred.; grad.*; prereq. 129, 153, and Psy. 144-145 or P.M.&P.H. 61, which may be taken simultaneously)	I	TThS	2J	Mrs. Shea
151f-152w†	Public Welfare Administration (6 cred.; grad.*; prereq. 109 or equiv.)	I	TThS	6F	Miss Vaile
151w-152s†	Public Welfare Administration (See 151f-152w)	IV	TS	109J	Miss Vaile
153f,w,s‡-		VIII	Th	109J	
154f,w,s‡-					
155f,w,s‡	Field Training in Case Work (2 to 5 cred. per qtr. to be determined by the adviser in social work; grad.*; prereq. 129, which may be taken simultaneously)	Ar		Ar Ar	Miss Vaile, Mrs. Doyle, and staff
156f,w,s‡-					
157f,w,s‡-					
158f,w,s‡	Field Training in Group Work (2 to 5 cred. per qtr. to be determined by the adviser in social work; grad.*; prereq. 125, which may be taken simultaneously)	Ar		Ar Ar	Miss Vaile, Miss Mead, Miss Phillips
161s	Social Aspects of Housing and Standards of Living (This course is listed under the heading "Courses in Sociology," on page 96)				
197f-198w-199s	Special Topics in Social Work (Cred. ar.; grad.*)	Ar		Ar Ar	Ar

*For Graduate Students Only*

COURSES IN SOCIOLOGY

200f-w-s	Seminar: Topics in Criminology	Mr. Vold
201f-w-s	Seminar: Topics in Social Psychology	Mr. Kirkpatrick
202f-w-s	Seminar: Topics in Urban Sociology	Mr. Sletto
203f-204w-205s	Seminar in Social Theory	Staff

\* Primarily for graduates, but mature students who are not graduates may be admitted with the consent of the adviser and the instructor.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$3.50 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
206f-207w-208s	Seminar: Statistical Theory in Relation to Social Theory and Practice				Mr. Chapin
209f-210w-211s	Seminar: The Theory of Social Evolution				Staff
215f-216w-217s	Seminar in Rural Sociology				Mr. Nelson

## COURSES IN SOCIAL WORK

218f-w-s	Seminar in Family Case Work				Mrs. Fenlason
219f-w-s	Seminar in Case Work with Children				Mrs. Shea
220f-w-s	Seminar in Medical Social Work				Miss Gardiner
221f‡-222w‡- 223s‡	Graduate Field Training				Staff
224f-225w-226s	Advanced Medical Social Work (Open only to full-time students who wish to specialize in medical social work; 3 hrs. a week each qtr.)				Miss Gardiner
227f‡-228w‡- 229s‡	Advanced Field Training				Staff
230f-w-s	Seminar in Public Welfare				Miss Vaile
231f-w-s	Seminar in Group Work				Miss Phillips
232f-w-s	Seminar in Rural Social Work				Miss Vaile
233f-w-s	Seminar in Social Agencies and Social Institutions				Mrs. Doyle
234f-w-s	Seminar in Juvenile Delinquency and Treatment				Mr. Monachesi
235f-w-s	Thesis Preparation				Staff
236f-w-s	Research Topics in Social Work				Staff

## SPEECH

*Major advisers in the College of Science, Literature, and the Arts.*—Professor Rarig; Associate Professor Bryngelson.

*Major sequences in the College of Science, Literature, and the Arts.*—

A. Courses 55-56-57; 61, 67; 101-102; 105; 81-82-83.

B. Courses 31-32-33; 77-78-79 or 91-92-93; 81-82-83; 111-112-113.

C. Courses 61; 67; 121-122; 162-163; Psychology 125-126 and 144-145.

(Prerequisites: 1-2-3 or 5-6; Psychology 1-2. Physiology 2 required for Sequence C.)

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major advisers in the College of Education.*—Professor Rarig; Associate Professor Bryngelson.

*Requirements for a teacher's certificate.*—Major recommendation: Speech 1-2-3 or 5-6; 31-32, 55-56, 61, 67, 81-82, 121-122; total, 39 or 40 credits. Psychology 4-5 or 7 advised.

Minor recommendation: 1-2-3 or 5-6; 61 and 67; 31-32-33 or 55-56-57 or 81-82-83.

Minor recommendation in Speech Correction: 1-2-3 or 5-6, 61, 67, 162-163, Psychology 52, Child Welfare 80.

All students majoring or minoring in speech must present satisfactory evidence of interest and effective participation in one or more activities, such as debating, dramatics, oratory, public reading, or public speaking.

Because of the close relation between English and speech in the high schools of Minnesota, students majoring in speech should have a minor in English as well as one other minor.

Students majoring in speech should register for Special Methods and Directed Teaching in English, Ed.T. 66A-66B-66C. See the program of the College of Education.

Students interested in preparing for clinical work in speech correction in public schools should read the statement of the specialized curriculum in "Speech Pathology" in the Bulletin of the College of Education.

‡ A fee of \$3.50 per quarter is charged for this course.

*Note.*—The University maintains a clinical service for students with speech defects. Students who desire treatment should consult the director of the Speech Clinic, 411 Folwell Hall. The clinic also accepts a limited number of full-time outpatients who pay a fee of \$50 per quarter. Part-time outpatients pay \$30 per quarter.

### Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w-3s*†‡	Fundamentals of Speech (9 cred.; soph., jr., sr.; prereq.* Eng. A-B-C or Comp. 4-5-6 or exemption)				
	Sec. 1	I	MWF	308F	Mr. Gilkinson
	2	II	MWF	306F	and others
	3	III	MWF	306F	
	4	VI	MWF	308F	
	5	I	TThS	305F	
	6	II	TThS	308F	
	7	III	TThS	308F	
	8 (For education students)	VII (f,w only)	MWF	308F	Ar
1w-2s*†	Fundamentals of Speech (2 qtrs. of 1-2-3. See 1f-2w-3s)				
	(For dental hygiene students only)	VI	MWF	104F	Ar
3f*†	Fundamentals of Speech (3rd qtr. of 1-2-3. See 1f-2w-3s)				
		II	MWF	308F	Ar
5f-6w*†‡	Fundamentals of Speech (10 cred.; soph., jr., sr.; prereq.* Eng. A-B-C or Comp. 4-5-6 or exemption)				
	Sec. 1	III	MTWThF	311F	
	2	IV	MTWFS	303F	
	3	VI	MTWThF	6F	
5w-6s*†‡	Fundamentals of Speech (See 5f-6w)				
	Sec. 1	IV	MTWFS	311F	
	2	VI	MTWThF	311F	
5s*†	Fundamentals of Speech (1st qtr. of 5-6. See 5f-6w)				
	Sec. 1	III	MTWThF	311F	
	2	IV	MTWFS	305F	
6f*†	Fundamentals of Speech (2nd qtr. of 5-6. See 5f-6w)				
	Sec. 1	IV	MTWFS	305F	
	2	VI	MTWThF	305F	
31f-32w-33s	Introduction to the Theater (9 cred.; soph., jr., sr.; prereq. 1-2-3 or 5-6 or concurrent registration therein)				
		II	MWF	19Mu	Mr. Whiting

### Senior College Courses

Courses 51, 67, 81-82-83 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

51s‡	Advanced Public Speaking (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6)				
		II	MWF	308F	Ar
55f-56w-57s†	Argumentation and Debating (9 cred.; jr., sr.; prereq. 1-2-3 or 5-6; Phil. 2, Logic, is recommended)				
		VI	T	308F	Mr. Knower
		VI, VII	Th	308F	Mr. Knower

\* Registration is limited. Written permission from the Junior College office, 106 Folwell Hall, is necessary for admission.

† To receive credit for any part of this course a student must complete the parts preceding the dagger. Exception:—Students in Education not majoring in Speech may receive credit for Course 1-2.

‡ A fee of \$1 per quarter is charged for this course.

|| Majors in Speech in the College of Education are required to complete only two quarters each of Courses 31-32-33 and 55-56-57.

No.	Title	Hour	Day	Bldg.	Instructor
61f	Speech Correction (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6; Psy. 1-2)	VI	MWF	303F	Mr. Bryngelson
65s†	Radio Speech—Speech arts and psychology of the radio. Announcing and broadcasting. The radio speech. Radio drama and interpretative reading, voice, diction, articulation, pronunciation. Practice, exercises, projects, and reports on problems of appeal and audience response. (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6)	VIII	MWF	409F, 308F	Mr. Ziebarth
67s†¶	Phonetics (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6)	II	MWF	109F	Miss Hurd
77f-78w-79s††	Acting (9 cred.; jr., sr.; prereq. 1-2-3 or 5-6, 31-32-33, and consent of instructor)	III	MWF	19Mu	Ar
81f-82w-83s†	Interpretative Reading (9 cred.; jr., sr.; prereq. 1-2-3 or 5-6)	IV	MWF	308F	Mr. Rarig
81w-82s†	Interpretative Reading (See 81f-82w-83s)	I	TThS	308F	Mr. Rarig
83f†	Interpretative Reading (3rd qtr. of 81-82-83. See 81f-82w-83s)	I	TThS	308F	Mr. Rarig
91f-92w-93s†††	Stagecraft (9 cred.; jr., sr.; prereq. 31-32-33)	V, VI	MWF	MuAud	Mr. Whiting
97f,w,s	Intercollegiate Oratory and Debate (3 cred.; jr., sr.; prereq. §)	Ar	Ar	308F	Mr. Rarig, Mr. Knower
101f-102w†	Persuasion (6 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6; Psy. 1-2; 10 cred. in soc. sci.)	III	MWF	308F	Mr. Gilkinson
105s	Theory of Reading and Acting (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6; 81-82-83, and Psy. 1-2)	III	MWF	308F	Mr. Rarig
107s†	Platform Reading—An advanced course in the oral reading of literature. Speech melody, rhythm, platform technique. Problems in critical appreciation. Lecture recitals (3 cred.; prereq. 81-82-83 with grade of B in 83)	Ar	Ar	Ar	Mr. Rarig
111f-112w-113s††	Stage Direction (9 cred.; sr., grad.; prereq. 31-32-33, 91-92-93)	VII	MWF	19Mu	Mr. Lees
115f-116w-117s	Playwriting and Production (2 cred.; sr., grad.; prereq. 31-32-33 and permission of instructor)	III	MWF	109Mu	Mr. Lees
121w-122s††	Advanced Speech Problems (6 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6, Psy. 1-2)	II	TThS	305F	Mr. Knower
141-142-143†	<i>Voice Science</i> (9 cred.; jr., sr., grad.; prereq. 1-2-3, Psy. 1-2 and 4-5 or 7) ( <i>Not offered</i> )				
162w-163s††¶	Speech Pathology (6 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6; 61, 67; and permission of instructor)	VI VII	TTh T	406F	Mr. Bryngelson
164f-165w-166s	Clinical Methods and Practice in Speech Pathology (9 cred.; sr., grad.; prereq. 1-2-3; 61, 67, 162, and Ed.Psy. 142. May be taken simultaneously with Sp. 163)	III	TTh	406F	Mr. Bryngelson
171f-172w-173s	History of the Theater (9 cred.; sr., grad.; prereq. 1-2-3 or 5-6; 31-32-33)	IV	MWF	19Mu	Mr. Lees

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per quarter is charged for this course.

†† A fee of \$3 per quarter is charged for this course.

§ Open to representatives of the University in the Northern Oratorical League and to members of the intercollegiate debate squad.

¶ Students intending to take Speech Pathology should take Phonetics the preceding spring.

No.	Title	Hour	Day	Bldg.	Instructor
191f-192w-193s†	Technical Stage Problems—Advanced problems in design and construction; stage management, wiring, color effects. Special problems are assigned to individual students (3 cred.; jr., sr., grad.; prereq. 91-92-93)	IV	MWF	109Mu	Mr. Lees, Mr. Whiting

*For Graduate Students Only*

201f,w,s	General Seminar	Ar	Ar	Ar	Staff
207f-208w-209s	Seminar in Orators	Ar	Ar	Ar	Mr. Rarig
211f-212w-213s	Seminar in Dramatic Theory	Ar	Ar	Ar	Mr. Lees
261f-262w-263s	Seminar in Speech Pathology	Ar	Ar	Ar	Mr. Bryngelson
291f-292w-293s	Research in Special Problems	Ar	Ar	Ar	Mr. Rarig, Mr. Bryngelson, Mr. Gilkinson, Mr. Knower, Mr. Lees

## ZOOLOGY

*Major adviser in the College of Science, Literature, and the Arts.*—Professor Minnich.

*Major sequences in the College of Science, Literature, and the Arts.*—

A. In Zoology, 27 credits in Senior College courses of which at least 18 must be in courses with numbers between 49 and 100.

B. In special fields, as cytology, ecology, embryology, entomology, genetics, histology, parasitology, physiology, or protozoology, a major will consist of the respective one-hundred courses, 5 or more credits in a problem course in the special field, and additional credits in approved courses to make a total of 27 credits in Senior College courses.

(Prerequisites: 1-2-3, or equivalent and 21, 22, or equivalent. If possible beginning chemistry and at least one year of French or German should be completed during the Junior College work.)

Modifications of these sequences will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

*Major advisers in the College of Education.*—Professor Wodsedalek and Associate Professor Ringoen.

*Requirements for a teacher's certificate.*—Major recommendation: General Zoology, Zoology 52, 53, 75, 83 and Physiology 4.

Minor recommendation: A minimum of 18 credits including General Zoology, Zoology 53 and 75.

For a specialized curriculum in Natural Science see College of Education Bulletin.

*Honors Course in Zoology.*—A student who has met all of the requirements for admission to the Senior College and who has maintained a grade of B in his work in the department may enroll for the Honors Course in Zoology. Such a student will carry at least twelve hours of problem work in some special phase of the work and will pursue under the direction of his adviser such special reading and outline courses as may be required. The completion of the Honors Course will require a reading knowledge of either French or German.

Courses in human anatomy, embryology, and hematology may be arranged for with the head of the Department of Anatomy.

Courses in physiology may be arranged for with the head of the Department of Physiology.

† A fee of \$1 per quarter is charged for this course.

## PROGRAM

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w-3s*††	General Zoology (10 cred.; all; no prereq.)				
	Lect. Sec. 1 (Limited to 320)	II	TTh	06Bo	Mr. Minnich
	2 (Limited to 320)	IV	TS	06Bo	Mr. Dawson
	3 (Limited to 320)	III	WF	06Bo	Mr. Wodsedalek
	4 (Limited to 240)	IV	WF	06Bo	Mr. Eddy
	Lab. Sec. 1 (Limited to 150)	I, II	MF	101Z	Ar
	2 (Limited to 174)	III, IV	MF	101Z	Ar
	3 (Limited to 174)	VI, VII	MF	101Z	Ar
	4 (Limited to 174)	VIII, IX	MF	101Z	Ar
	5 (Limited to 174)	I, II	TS	101Z	Ar
	6 (Limited to 174)	III, IV	TS	101Z	Ar
	7 (For Forestry students only. Limited to 60)	V, VI	TTh	101Z	Ar
	14f-15w††	General Zoology. (For students of the College of Agriculture, Forestry, and Home Economics) (6 cred.; all; no prereq.)			
Lect. (Limited to 288)		VII	TTh	150Ph	Mr. Dawson
Lab. Sec. 1 (For Agr. and H. E. students. Limited to 114)		V, VI	TTh	101Z	Ar
2 (For Agr. and H. E. students. Limited to 174)		VIII, IX	TTh	101Z	Ar
21f§	Histology (5 cred.; soph., jr., sr.; prereq. 1-2-3) (Sections limited to 40 each. Written permission must be obtained from the Junior College office, 106 Folwell Hall)				
	Lect.	III	TThS	313Z	Mr. Ringoen,
	Lab. Sec. 1¶	I, II	TThS	201Z	Miss Slider
	2	VI, VII, VIII	TTh	201Z	
22w††	Comparative Anatomy (5 cred.; soph., jr., sr.; prereq. 1-2-3) (Sections 1 and 2 limited to 40 each, section 3 limited to 15. Written permission must be obtained from the Junior College office, 106 Folwell Hall)				
	Lect.	III	TThS	313Z	Mr. Eddy
	Lab. Sec. 1	I, II	TThS	3SZ	
	2	VI, VII, VIII	TTh	3SZ	
	3	VI, VII, VIII	MW	3SZ	
46w-47s†	Ornithology (6 cred.; soph., jr., sr.; prereq. 1-2-3 and permission of instructor)				
		VI, VII, VIII	MW	204,211Z	Dr. Roberts

*Senior College Courses*

Courses 50, 51, 52, 53, 81, 82, and 83 are open to sophomores who have a grade of at least C in Course 1-2-3. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 23.

50s§	Introduction to General Physiology (5 cred.; soph., jr., sr.; prereq. 1-2-3 and high school or college chemistry) (Sections limited to 20 each)				
	Lect.	III	TThS	211Z	Ar
	Lab. Sec. 1	I, II	TThS	10Z	
	2	VI, VII, VIII	TTh	10Z	

\* Lectures may be elected without laboratory with the consent of the chairman of the department. Laboratory must be taken with the lectures, however, if zoology is offered as the required laboratory science. Students should elect lecture sections in which they can continue throughout the three quarters. Changes from one lecture or laboratory section to another may be made only with the consent of the department office.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per quarter is charged for this course.

†† A fee of \$2 is charged for this course.

§ Not open to regular two-year premedical and pre dental students.

¶ Open only to zoology majors.

No.	Title	Hour	Day	Bldg.	Instructor
51f	Introductory Animal Parasitology (5 cred.; jr., sr.; prereq. 1-2-3) (Sections are limited. Written permission must be obtained from the Junior College office, 106 Folwell Hall)				
	Lect.	VI	MWF	313Z	Mr. Riley,
	Lab. Sec. 1 (Limited to 80)	VII, VIII	MWF	208Z	Mr. Wallace
	2 (Limited to 40)	I, II	MWF	208Z	
	3 (Limited to 40)	III, IV	MWF	208Z	
52w	Introductory Entomology (5 cred.; jr., sr.; prereq. 1-2-3) (Sections limited to 20 each)				
	Lect.	VI	MWF	211Z	Mr. Mickel
	Lab. Sec. 1	VII, VIII	MWF	401Z	
	2	VI, VII, VIII	TTh	401Z	
53s	Faunistic Zoology (5 cred.; jr., sr.; prereq. 1-2-3) (Limited to 40. Written permission must be obtained from the Junior College office, 106 Folwell Hall.)				
	Lect.	VI	MWF	211Z	Mr. Eddy
	Lab.	VII, VIII	MWF	3sZ	
		IX	F	3sZ	
75s	Nature Study (3 cred.; jr., sr.; prereq. 15 cred. including 1-2-3. Required of all zoology majors and minors in the College of Education in the junior year)				
		VI, VII, VIII	TTh	208Z	Mr. Wodsedalek
81f	Marine Invertebrates (3 cred.; jr., sr.; prereq. 1-2-3) (Limited to 24. Written permission must be obtained from the Junior College office, 106 Folwell Hall.)				
	Lect.	I, II	MWF	211Z	Mr. Dawson
82w	Evolution (3 cred.; jr., sr.; prereq. Zool. 1-2-3 or Bot. 1, 7, 21)				
	Lect.	II	MWF	211Z	Mr. Oliver
83s	Introduction to Genetics and Eugenics (3 cred.; jr., sr.; prereq. 1-2-3)				
		II	MWF	313Z	Mr. Oliver
107f-108w	Protozoology (6 cred.; jr., sr., grad.; prereq. 15 cred.)				
		I, II	TThS	208Z	Mr. Turner
109f-110w-111s	General Physiology of Animal Reactions (9 cred.; jr., sr., grad.; prereq. 15 cred.)				
		III, IV	MWF	211Z	Mr. Minnich
117f-118w-119s¶	Animal Ecology (9 cred.; jr., sr., grad.; prereq. 15 cred.)				
	Lect.	VI	TTh	211Z	Mr. Eddy,
	Lab.	VII, VIII	TTh	3sZ	Mr. Hodson
120s¶	General Ecology of Insects (3 cred.; jr., sr.; prereq. 15 cred. in zool. or ent.)				
		VI, VII, VIII	TTh	15Ad	Mr. Hodson
121f	Ichthyology (3 cred.; jr., sr., grad.; prereq. 15 cred.)				
	Lect.	VIII, IX	F	211Z	Mr. Eddy
	Lab.	Ar	Ar	Ar	
125f-126w-127s	Advanced Entomology (9 cred.; jr., sr., grad.; prereq. 15 cred.)				
	Lect.	I	TTh	211Z	Mr. Mickel
	Lab.	I, II, III	S	401Z	
132	<i>General Physiology of Development</i> (3 cred.; jr., sr., grad.; prereq. 50 and 180 or consent of instructor) ( <i>Not offered</i> )				
133	<i>Genetics of Development</i> (3 cred.; jr., sr., grad.; prereq. proper preparation in advanced genetics and Course 132, or consent of instructor) ( <i>Not offered</i> )				
144w-145s, 146s*	Animal Parasites and Parasitism (6 or 9 cred.; jr., sr., grad.; prereq. 15 cred.)				
		VI, VII, VIII	TTh	208Z	Mr. Riley,
					Mr. Wallace
149w-150s	Histology and Organology (6 cred.; jr., sr., grad.; prereq. 15 cred. in zool.)				
		VI, VII, VIII	TTh	211Z,	
				201Z	Mr. Ringoen
160f-161w	Cytology (6 cred.; jr., sr., grad.; prereq. 15 cred., with the consent of the instructor)				
		VI, VII, VIII	TTh	104Z	Mr. Wodsedalek
170f-171w	Advanced Genetics (6 cred.; jr., sr., grad.; prereq. 15 cred. including Course 83, or consent of instructor)				
		VI, VII, VIII	MW	10Z	Mr. Oliver

\* 144w-145s is a 6-credit course. 146s (3 cred.) may be taken simultaneously with 145s, at hours to be arranged.

¶ Either 119s or 120s or both may be taken to complete Course 117f-118w.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
180f	Comparative Embryology (3 cred.; jr., sr., grad.; prereq. 15 cred. including Course 21 or equiv.)	III	MWF	211Z	Mr. Ringoen
181w	Endocrines and Reproduction (3 cred.; jr., sr., grad.; prereq. 15 cred.)	III	MWF	211Z	Mr. Ringoen
182s	Experimental Embryology (3 cred.; jr., sr., grad.; prereq. 15 cred.)	III	MWF	211Z	Mr. Ringoen
197f-198w-199s	Problems (5 or more cred.; jr., sr., grad.; prereq. 1-2-3, special requirements)	Ar	Ar	Ar	Ar

## ENTOMOLOGY AND ECONOMIC ZOOLOGY

Students in this college may elect courses in Entomology and Economic Zoology by arrangement with the department. But before registering for any courses they should get the approval of Assistant Dean Shumway, 219 Administration Building. See the program of the College of Agriculture, Forestry, and Home Economics, in another part of this bulletin.

## COURSES IN OTHER COLLEGES

Certain courses in other colleges are open to election by seniors. See the Bulletin of the College of Science, Literature, and the Arts. Students interested in such courses may consult the assistant dean for the Senior College.

## COLLEGE OF EDUCATION

Because the regulations and requirements in subject-matter fields and in education necessary for certification in different states are constantly changing, students who plan to teach in states other than Minnesota should consult their major advisers in the College of Education in order that they may fully complete the requirements for the specific state in which they have to teach.

### GENERAL COURSES

No.	Title	Hour	Day	Bldg.	Instructor
Ed.51Af-51Bw- 51Cs*†	Introduction to Secondary School Teaching (9 cred.; jr.; prereq. 6 cred. in psy.)				
	Sec. 1	I	MWF	210Bu	Mr. Miller(f) Mr. Morse(w) Ar(s)
	2	III	MWF	210Bu	Mr. McConnell(f) Ar(w)
	3	VII	MWF	106Pt 210Bu	Mr. Boardman(s) Miss Edwards(f) Miss Smith(w) Ar(s)
Ed.51Af-51Bw- 51Cs*‡§	Introduction to Secondary School Teaching—Independent Study (See above)	V	W	301Lib	Mr. Bond
	Introduction to Secondary School Teaching (See 51A, B, C)				
Ed.51Aw*	Sec. 1	I	MWF	115Psy	Mr. Van Wagenen
	2	III	TThS	210Bu	Ar
Ed.51As*	Introduction to Secondary School Teaching (See 51A, B, C)				
	Sec. 1	I	MWF	115Psy	Mr. Miller
	2	III	TThS	210Bu	Mr. Van Wagenen
Ed.51Bf*†	Introduction to Secondary School Teaching (See 51A, B, C)	II	TThS	210Bu	Mr. Morse
Ed.51Bs*†	Introduction to Secondary School Teaching (See 51A, B, C)	II	MWF	210Bu	Mr. Morse
Ed.51Cf*	Introduction to Secondary School Teaching (See 51A, B, C)	II	MWF	210Bu	Mr. Boardman
Ed.51Cw	Introduction to Secondary School Teaching (See 51A, B, C)	II	MWF	210Bu	Mr. Boardman
Ed.54-55-56	Fundamental Art Experiences (See Art Ed. 54-55-56)				
Ed.61Af-61Bw- 61Cs*‡	Introduction to Elementary School Teaching (9 cred.; prereq. 6 cred. in psy.)	VII-VIII	TTh	100Pt	Mr. Van Wag- enen(f)
					Dem. Mr. Stauden- schools maier(w,s)

\* The entire course including the final examination covering all units must be successfully completed before credit is given for any quarter. Students who have already received credit for courses formerly numbered Ed.Psy. 55, Ed.Ad. 65, and Ed.T. 15, are not eligible for this course. Graduates of teachers colleges should consult their advisers before registering for any part of this course.

† A fee of \$1 per credit is charged for Ed. 51B and Ed. 61A-61B-61C.

§ Previously designated as Limited Honors Course. The independent study group will not meet each week but the fifth hour on Monday is reserved for conference. An average of B is required for registration in this course.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
Ed.Wf,w,s	Professional Preparation for Teaching (Minimum of 45 cred.; prereq. consent of Mr. Morse, course adviser)				
		Ar	Ar	Ar	Mr. Morse

This course is designed for students already holding a baccalaureate degree and desiring to complete their preparation for teaching. Such students should consult the adviser and outline for approval a program covering at least three quarters' study for completion of work for a teacher's certificate. The entire course, including the final examination, must be completed successfully before credit is given for any quarter.

Ed.71f,w,s	Brief Course in History of Education (5 cred.; jr., sr.; prereq. 6 cred. in psy.)	IV	MTWFS	210Bu	Miss Alexander
Ed.73s	Educational Sociology (3 cred.; jr., sr.; prereq. 6 cred. in psy.)	VII	MWF	106Pt	Ar
Ed.75	<i>Public Education in the U. S.</i> (3 cred.; jr., sr.; prereq. 6 cred. in psy.) ( <i>Not offered</i> )				
Ed.101f	Historical Foundations of Modern Education (3 cred.; jr., sr., grad.; prereq. 6 cred. in psy.)	VI	MWF	210Bu	Miss Alexander
Ed.102w	History of Modern Secondary and Higher Education (3 cred.; jr., sr., grad.; prereq. 6 cred. in psy.)	VI	MWF	210Bu	Miss Alexander
Ed.103s	History of Modern Elementary Education (3 cred.; jr., sr., grad.; prereq. 6 cred. in psy. Not open to students who have had Ed. 71)	VI	MWF	210Bu	Miss Alexander
Ed.104f	Adult Education (2 cred.; jr., sr., grad.)	III-IV	S	100Pt	Mr. Dickerman
Ed.105s	Visual Aids in Teaching (2 cred.; jr., sr., grad.)	III-IV	S	106Pt	Ar
Ed.129-130	<i>Educational Classics</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. in psy.) ( <i>Not offered</i> )				
Ed.131w	Comparative School Systems (3 cred.; prereq. 9 cred. in ed.)	III	MWF	100Pt	
Ed.133f	Guidance in Secondary Schools (2 cred.; sr., grad.; prereq. 9 hrs. in ed.)	III-IV	S		Miss Edwards
Ed.167s	Junior High School (3 cred.; sr., grad.; prereq. 10 hrs. in ed. including Ed. 51)	III-IV	S	100Pt	
					and 1 hr. ar.

*For Graduate Students Only*

Ed.205	<i>Problems in Adult Education</i> (2 cred. a qtr.; grad.) ( <i>Not offered</i> )					
Ed.208w	Methods in Educational Research (2 cred.; grad.)	IX-X		M	114Ed	Mr. Johnson
Ed.224f-225w-226s	Seminar in Elementary School Problems	IX		Th	209Bu	Mr. Brueckner, Mr. Peik
Ed.228f-229w-230s	Problems of College Education (6 cred.; grad.)	Ar		Ar	Ar	Mr. McConnell and others
Ed.231f,w,s	Problems in Comparative Education (2 cred.; grad.)	Ar		Ar	Ar	
Ed.233f,w,s	Problems in Guidance and Personnel Work (Cred. ar.)	Ar		Ar	Ar	Mr. Wrenn, Miss Edwards
Ed.241f-242w-243s	Problems in the History of Education (2 cred. a qtr.; prereq. permission of instructor)	Ar		Ar	Ar	Mr. Wesley
Ed.250f	Higher Education in the United States (3 cred.; prereq. 15 hrs. in ed.)	I-II	1 hr. ar.	S	114Ed	Mr. McConnell
Ed.251w	Curriculum and Instruction in Higher Education (3 cred.; prereq. same as for 250)	III-IV	1 hr. ar.	S	114Ed	Mr. McConnell

No.	Title	Hour	Day	Bldg.	Instructor
Ed.252s	Student Personnel Work in College and University (3 cred.; grad.; prereq. same as for 250)				
		VII	MWF	100Pt	Mr. Wrenn
Ed.253w	Administration in Higher Education (3 cred.; grad.; prereq. same as for 250)				
		VII	MWF	100Pt	
Ed.254s	Measurement and Evaluation in Higher Education (3 cred.; grad.; prereq. same as for 250)				
		I-II		S 100Pt	Mr. Johnson
Ed.285f	Professional Education of Teachers (2 cred.; grad.; prereq. 15 hrs. in ed.)				
		III-IV		S 205bEd	Mr. Peik
Ed.286f,w,s	Problems in Teacher Training (2 cred. a qtr. including 285 or permission of instructor)				
		Ar	Ar	Ar	Mr. Peik
Ed.287w	Instruction and Administration in Teacher Training Institutions (2 cred.; grad.; prereq. 15 cred. in ed.)				
		I-II		S 205bEd	Mr. Peik
Ed.288f,w,s	Special Problems in Educational Sociology (2 cred.; sr., grad.; prereq. 15 cred. in ed.)				
		Ar	Ar	Ar	Ar

## AGRICULTURAL EDUCATION

*Major adviser.*—Professor Field.

No.	Title	Hour	Day	Bldg.	Instructor
<i>Agr.Ed.51</i>	<i>Educational Psychology</i> (3 cred.; jr., sr.; no prereq.) ( <i>Not offered</i> ) (See Ed. 51A)				
<i>Agr.Ed.52f,s</i>	Vocational Education (3 cred.; jr., sr.; no prereq.)				
		Ar	Ar	102Ad	Mr. Nylin
<i>Agr.Ed.54f,w</i>	Rural Education and Community Leadership (3 cred.; jr., sr.; prereq. 51)				
		IV and 1 hr. ar.	TS	102Ad	Mr. Field
<i>Agr.Ed.80s</i>	Extension Work (3 cred.; jr., sr.; prereq. 6 cred. in farm management, 6 cred. in farm crops, 15 cred. in animal industry, 3 cred. in agr. ed.)				
		VI	MWF	102Ad	Mr. Field
<i>Agr.Ed.81f</i>	Teaching Agriculture (5 cred.; jr., sr.; prereq. 51)				
		III	MTWThF	102Ad	Mr. Field
<i>Agr.Ed.82w</i>	Teaching Agriculture (Same as 81f)				
		III	MTWThF	102Ad	Mr. Field
<i>Agr.Ed.83s</i>	Teaching Agriculture (Same as 81f)				
		III	MTWThF	102Ad	Mr. Field
<i>Agr.Ed.91f,w,s‡§</i>	Supervised Teaching Experience (3 cred.; sr.; prereq. 82)				
		Ar	Ar	Ar	Mr. Field, Mr. Nylin
<i>Agr.Ed.135f</i>	The Curriculum in Vocational Agriculture (3 cred.; sr.; prereq. 10 cred. in ed.)				
		Ar	Ar	Ar	Mr. Field
<i>Agr.Ed.141w</i>	Supervised Practice in Vocational Agriculture (3 cred.; sr.; prereq. 10 cred. in ed.)				
		Ar	Ar	Ar	Mr. Field
<i>Agr.Ed.161s</i>	Vocational Education in Agriculture (3 cred.; jr., sr.; prereq. 15 cred. in ed.)				
		Ar	Ar	Ar	Ar
<i>Agr.Ed.171f,w,s</i>	Problems in Procedure (3 cred.; sr.; prereq. 82, 91, or equiv. teaching experience)				
		Ar	Ar	Ar	Mr. Field
<i>Agr.Ed.291f-292w-293s</i>	Seminar in Agricultural Education (6 cred.; sr.; prereq. 15 cred. in agr. ed.)				
		Ar	Ar	Ar	Mr. Field

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to this course.

## ART EDUCATION

*Major advisers.*—Professor Raymond; Associate Professor Hilpert.

## GROUP A—DESIGN

*Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
ArtEd.1f-2w-3s*	Fundamental Experiences in Design (9 cred.; all; prereq. high school art or 14-15-16)	III-IV	MWF	207AJ	Mr. Torbert
ArtEd.1Tf-2Tw-3Ts	Fundamental Experiences in Art (6 cred.; for non-art majors preparing to teach young children; no prereq.)	III	TTh	207BJ	Mr. Ziegfeld
ArtEd.14f-15w-16s¶	Introduction to Art (9 cred.; required of all entering Art Ed. as majors or minors; no prereq.)	I	MWF	207BJ	Mr. Hilpert
ArtEd.14Af-15Aw-16As	Introduction to Art Laboratory (6 cred.; req. in addition to 14-15-16 of those without high school art; no prereq.)	I-II	TTh	207BJ	Mr. Hilpert
ArtEd.20f-21w-22s*	Fundamental Experiences in Design—Continued (9 cred.; prereq. Art Ed. 1-2-3)	III-IV	MWF	207BJ	Miss Berglund

*Senior College and Graduate Courses*

<i>ArtEd.50</i>	<i>Commercial Design</i> (3 cred.; prereq. 1-2-3 or evidence of fitness) ( <i>Not offered</i> )				
<i>ArtEd.51</i>	<i>Industrial Design</i> (3 cred.; prereq. 1-2-3 or evidence of fitness) ( <i>Not offered</i> )				
ArtEd.52Af-52Bw	Design for Home and Furnishing (3 cred.; jr., sr.) (Formerly Art Y)	VI-VII	MWF	207J	Mr. Faulkner
ArtEd.54f-55w-56s	Fundamental Experiences in Art (6 cred.; for nonmajors; prereq. 14-15-16 or 1T-2T-3T, or evidence of ability)	II-III	TTh	207AJ	Mr. Torbert
ArtEd.70f-71w-72s*	Fundamental Experiences in Design—Continued—Color Emphasis (9 cred.; same as 20-21-22 but held to Senior College level; prereq. 1-2-3 or equiv., or evidence of fitness)	I-II	MWF	207BJ	Miss Berglund
ArtEd.152Es	Landscape Design (3 cred.; sr., grad.)	VI-VII	MWF	207BJ	Mr. Faulkner
ArtEd.153-154-155Ef	Art in Society (9 cred.; sr., grad.) 153—The Home—Not offered 154—Costume—Not offered 155Ef—Painting, Sculpture, Architecture, Ceramics	4:00-5:00 and III-IV	W S	207BJ	Mr. Torbert

## GROUP B—HANDICRAFTS

Art education majors are expected to acquire experience in expressing design in terms of materials. At least 12 credits should be expended thus. Projects will be executed in Art Ed. 1-2-3 and Art Ed. 20-21-22. At the Senior College level each art major should choose one or two materials with which he should acquire expert skill and with whose possibilities in terms of both handicraft and productive industry he should be familiar. Registration may be made in Art Ed. 73,74,75 or Art Ed. 76,77,78

\* Each term gives some craft experience for which 1 credit may be allowed toward requirement in Group B.

¶ These courses may be counted to meet minimal requirements in either Group A or Group D.

for 1, 2, or 3 credits in a term depending upon the hours of work carried. Nonmajors should carry at least Art Ed. 1-2-3 or Art Ed. 54-55-56 before registering for anything but the lecture in these courses.

Opportunities for 1938-39 are:

### Junior College Courses

Contacts with materials and hand-processes, primarily for nonmajors. Lectures and demonstrations in handicraft for public school, social work, and summer camps.

No.	Title	Hour	Day	Bldg.	Instructor
ArtEd.32f	Paper (1 cred.; prereq. or coincident one course in Group A)				
	Lect. and demon.	VI	W	10J	Miss Ross
ArtEd.32Af	Lab.	Ar	W	10J	Miss Ross
	Cardboard and Paper Products (1 cred.; prereq. or coincident one course in Group A)				
ArtEd.32w	Lect. and demon.	IV	S	10J	Miss Ross
	Lab.	Ar			
ArtEd.33w	Simple Bookbinding (1 cred.; prereq. or coincident one course in Group A)				
	Lect. and demon.	VI	W	10J	Miss Ross
ArtEd.35s	Lab.	Ar	W		
	Clay (1 cred.; prereq. or coincident one course in Group A)				
ArtEd.35s	Lect. and demon.	VI	W	10J	Miss Ross
	Lab.	Ar	W		
ArtEd.37w	Reed and Raffia (1 cred.; prereq. or coincident one course in Group A)				
	Lect. and demon.	IV	S	10J	Miss Ross
ArtEd.38s	Lab.	Ar			
	Simple Textile Processes (1 cred.; prereq. or coincident one course in Group A)				
ArtEd.38s	Lect. and demon.	IV	S	10J	Miss Ross
	Lab.	Ar			

ArtEd.39,40,41,42,  
43,45,46

(Not offered 1938-39)

### Senior College Courses

ArtEd.73f,w‡	Ceramic Materials and Simple Processes				
	Lect. and demon. Sec. 1	VII	M	10J	Miss Ross
	2	VI	T	10J	Miss Ross
ArtEd.74,75w‡	Lab.	V, VIII	MTThF	10J	Miss Ross
		(VI, VII)	Ar		
	Ceramic Processes				
ArtEd.74,75w‡	Lect. and demon. Sec. 1	VII	F	10J	Miss Ross
	2	VI	Th		
	Lab.	V, VIII	MTThF	10J	Miss Ross
ArtEd.75Bs‡		(VI, VII)	Ar	10J	Miss Ross
	Bookbinding Processes				
	Lect. and demon.	I-II	TTh	10J	Miss Ross and assistant
ArtEd.76f‡	Lab.	Ar	Ar		
	Textile Materials and Simple Processes				
	Lect. and demon.	I	MWF	11J	Miss Berglund
ArtEd.77w‡	Lab.	II	MWF	11J	Miss Berglund
	Textile Processes				
	Sec. 1 Printing processes	I-II	MWF	11J	Miss Berglund
ArtEd.78s‡	2 Weaving processes ar. if demanded				
	Textile Processes Advanced				
	Lect.	I	MWF	11J	Miss Berglund
	Lab.	II	MWF		

‡ A fee of \$1.50 per quarter is charged for this course.

## GROUP C—REPRESENTATION

No.	Title	Hour	Day	Bldg.	Instructor
ArtEd.4f,w,s-6f,w,s-8f,w,s	Drawing from Still Life and Pose (2 cred. a qtr.; no prereq.)				
	Sec. 1	V-VI	MF	203J	Miss Lutz
	2	VII-VIII	MF	203J	Miss Lutz
	3 (for nonmajors)	VI-VII	W	203J	Mr. Hilpert
	and				
	VI-VII	M or F		203J	Miss Lutz
ArtEd.10-11-12	<i>Experiences with Rhythm and Color</i> (Not offered as separate course in 1938-39)				
ArtEd.23w,s	Composition Clinic (2 cred.)				
		Ar		Ar Ar	Mr. Torbert
ArtEd.24f,w,s-26f,w,s-28f,w,s	Drawing from Still Life and Pose (Continuation of 4-6-8) (2 cred. each)				
	Sec. 1	I-II	TTh	203J	Miss Lutz
	2	III-IV	TTh	203J	Miss Lutz
	3	IV-V	S	203J	Miss Lutz
ArtEd.29f,w,s-30f,w,s	Rhythmic Sketch—Simple recordings on blackboard and paper, helpful in public schools (1 cred. a qtr.; no prereq.)				
	I-II		S		Mr. Torbert
ArtEd.61,62,63f,w,s	Painting in Relation to Architectural, Industrial, and Dramatic Demands (2 cred. each)				
	Sec. 1	I-II	TTh		Miss Lutz
	2	III-IV	TTh		Miss Lutz
	3	I-IV	S		Miss Lutz
ArtEd.66,67,68f,w,s	Painting (Continuation of 61,62,63)				
	I-IV	S and ar			Miss Lutz
ArtEd.124E-125E-126Ef,w,s	Advanced Painting (2 to 6 cred.)				
		Ar		Ar Ar	

## GROUP D—APPRECIATION

Tours to stores and galleries are arranged in connection with all courses.

For History of Art see offerings in Fine Arts, Architecture, and Home Economics.

ArtEd.57w,s-58w,s	Art and Leisure—Participation in cultural advantages of Twin City galleries and auditoriums (1 cred. each)				
	Tutorial conferences and tours	Ar		Ar	Ar
ArtEd.153-154-155Ef	Art in Society (See Group A)				

## GROUP E—PROFESSIONAL COURSES

ArtEd.80f-81w-82s‡	Special Methods in Art (3 cred.; sr., coincident with student teaching; prereq. senior standing)				
		III		TTh	Miss Fisher
ArtEd.86f-87w-88s‡§	Student Teaching in Art (6 cred.; prereq. senior standing)				
		VI-VII		TTh	Pub.Sch. Mr. Ziegfeld
	1 hr. ar.				
ArtEd.183E	<i>Problems in Art Education</i> (3 cred.; sr., grad.) (Not offered)				
ArtEd.185Es	Types of Art Instruction II (3 cred.; sr., grad.)				
		III		ThS	Mr. Ziegfeld
		IV		S	
ArtEd.189	<i>Application of Esthetic Theory to Public Education.</i> (Not offered)				
ArtEd.284Ew	Reading and Research in Art Education (3 cred.; grad.)				
		4:00-5:00		F	207bJ
		I-II		S	207bJ
ArtEd.290Ef,291Ew,292Es	Special Problems in Art Education				
		Ar		Ar Ar	

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to this course.

## CURRICULUM AND INSTRUCTION

*Major advisers.*—Professors Brueckner and Peik; Associate Professor Bond.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.C.I.63f	Children's Literature (2 cred.; jr., sr.)	IX-X	M	106Pt	Miss Smith
Ed.C.I.113w	High School Curriculum (2 cred.; sr., grad.; prereq. 10 hrs. in ed. including Ed. 51)	IX-X	T	210Bu	Mr. Peik
Ed.C.I.118	<i>Problems in Junior High School English (Not offered)</i>				
Ed.C.I.119f	Elementary School Curriculum (3 cred.; sr., grad.; prereq. Ed. 63 or equiv.)	I	MWF	100Pt	Mr. Peik
Ed.C.I.119T-120T	<i>Elementary School Curriculum (4 cred.; sr., grad.) (Not offered)</i>				
Ed.C.I.121w	Educational Advising of Women and Girls (3 cred.; sr., grad.; prereq. 15 cred. in ed.)	VIII	MWF	112Bu	Miss Blitz
Ed.C.I.122s	Literature for Adolescents (2 cred.; jr., sr., grad.; prereq. Ed. 53 or junior-senior high school teaching experience)	IX-X	T	UHSLib	Miss Smith
Ed.C.I.135w	Teaching of Occupations (2 cred.; sr., grad.; prereq. 9 hrs. in ed.)	III-IV	S	PtAud	Miss Edwards
Ed.C.I.143f‡	Teaching of Reading in the Elementary School (2 cred.; jr., sr., grad.; prereq. 9 hrs. in ed. including Ed. 51A)	I-II	S	100Pt	Mr. Bond
Ed.C.I.144w‡	Teaching of Reading in the Upper Grades and Junior and Senior High Schools (2 cred.; sr., grad.; prereq. same as for 143)	I-II	S	100Pt	Mr. Bond
Ed.C.I.145s	Remedial Reading (2 cred.; prereq. Ed.C.I. 143 or 144 or 159)	I-II	S	221Bu	Mr. Bond
Ed.C.I.148	<i>The Teaching of Primary Arithmetic (2 cred.; sr., grad.; prereq. Ed. 61A,B,C, or equiv.) (Not open to students who have had Ed.T. 54B) (Not offered)</i>				
Ed.C.I.149	<i>The Teaching of Intermediate Grade Arithmetic (2 cred.; sr., grad.; prereq. Ed. 61A,B,C, or equiv.) (Not open to students who have had Ed.T. 54B) (Not offered)</i>				
Ed.C.I.150f‡	Supervision and Improvement of Instruction (3 cred.; sr., grad.; prereq. Ed. 61C or equiv.)	II	MWF	100Pt	Mr. Brueckner
Ed.C.I.151w‡	Diagnosis and Remedial Instruction (3 cred.; sr., grad.; prereq. Ed.C.I. 150 or equiv.)	II	MWF	100Pt	Mr. Brueckner
Ed.C.I.152	<i>Supervision: The Adjustment of Schools to Individual Differences (2 cred.; sr., grad.; prereq. 15 hrs. in ed.) (Not offered)</i>				
Ed.C.I.153s	Supervision and Teaching of English in the Elementary Schools (2 cred.; sr., grad.; prereq. Ed. 61A,B,C, or equiv.)	I-II	S	204aEd	Miss Smith
Ed.C.I.154	<i>Supervision and Teaching of the Social Studies (2 cred.; sr., grad.; prereq. Ed. 61A,B,C, or equiv.) (Offered alternate years. Not offered in 1938-39) (See Ed.C.I. 168)</i>				
Ed.C.I.155s	Supervision and Teaching of Arithmetic (2 cred.; sr., grad.; prereq. Ed. 61C or equiv.) (See Ed.C.I. 148, 149)	IX-X	T	204bEd	Mr. Brueckner
Ed.C.I.156s‡	Practice Supervision—Group Problems and Field Work (3 cred.; sr., grad.; prereq. 15 hrs. in ed. and permission of instructor)	II-III	TTh	100Pt,	Mr. Peik
					Dem. schools,
					Twin City schools
Ed.C.I.157f,w,s‡	Practice in Supervision (3 cred. a qtr.; sr., grad.; prereq. consent of instructor)	Ar	Ar	Ar	Mr. Brueckner
Ed.C.I.159w	The Supervision and Teaching of Reading (2 cred.; sr., grad.; prereq. Ed. 61A,B,C, or equiv.)	IX-X	W	106Pt	Mr. Bond

‡ A fee of \$1 per credit is charged for this course.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
Ed.C.I.160†	Supervision of Elementary Subjects (3 cred.; sr., grad.; prereq. Ed.C.I. 150) (Not offered)				
Ed.C.I.162f	Significance of Progressive Education (2 cred. per qtr.; sr., grad.)	IX-X	T	204bEd	Mr. Brueckner
Ed.C.I.168s	Current Developments in the Social Studies (2 cred.; grad. only)	III-IV	S	205aEd	Mr. Wesley
Ed.C.I.169w	Extra-curricular Activities (2 cred.; prereq. 10 hrs. in ed. including Ed. 51A)	III	TTh	106Pt	Ar
Ed.C.I.172s	Curriculum and Course of Study Construction (2 cred.; sr., grad.; prereq. 15 hrs. in ed.)	IX-X	T	112Bu	Mr. Peik
Ed.C.I.173f	Recent Research and Literature in Reading (2 cred.; sr., grad.; prereq. previous training in reading such as Ed.C.I. 159 or equiv.)	Ar	Ar	Ar	Mr. Bond
Ed.C.I.174f-175w- 176s†‡§	Clinical Methods and Practice in Speech Pathology (9 cred.; sr., grad.; prereq. Sp. 1, 2, 3, 61, 67, 162, and permission of instructor)	III	TTh	406F	Mr. Bryngelson, Mr. Eglund
Ed.C.I.181s†	Foundations of Elementary School Methods (3 cred.; sr., grad.; prereq. 9 hrs. in ed.)	II	MWF	100Pt	Mr. Brueckner
Ed.C.I.181T-182T†	Foundations of Elementary School Methods (See 181 above) (Not offered)				
Ed.C.I.184f	Supervision of Student Teaching (2 cred.; sr., grad.)	III-IV	S	111Ed	Mr. Carlson
Ed.C.I.188s†	Advanced Course in Methods of Teaching Modern Languages (2 cred.; sr., grad.; prereq. Ed.T. 72A-B-C, or experience in teaching the modern languages)	Ar	Ar	208Ed	Miss Walker
Ed.C.I.191s†	Advanced Course in the Teaching and Supervision of Secondary School Mathematics (2 cred.; prereq. Ed. 51C or permission of instructor)	I-II	S	115Ed	Mr. Drake
Ed.C.I.198w	Recent Literature in Methods and Curriculum in English (2 cred.; sr., grad.; prereq. Ed.T. 66A-B-C, or equiv.) (Students should not register for this course in the same year with Ed.C.I. 294)	III-IV	S	204aEd	Miss Smith

## For Graduate Students Only

Ed.C.I.201f-202w- 203s†‡	Problems in Teaching the Social Studies (2 cred. a qtr.; grad.; prereq. consent of instructor)	4:00	T		Mr. Krey, Mr. Wesley
Ed.C.I.222f-223w- 224s	Seminar in the Technique of High School Instruction (No cred.; grad.; prereq. Ed. 51C and Ed.C.I. 113)	IX-X	Th	204bEd	Miss Smith, Mr. Johnson, Mr. Wesley
Ed.C.I.225f,w,s	Special Problems in Supervision of Instruction in Secondary Schools (2 cred. a qtr.)	Ar	Ar	218Bu	Mr. Boardman
Ed.C.I.261f,w,s	Special Problems in School Supervision (2 cred.; prereq. 10 hrs. in ed. including Ed. 51A)	III-IV	S	220Bu	Mr. Brueckner
Ed.C.I.263f	Recent Research in Arithmetic Instruction (2 cred.; prereq. Ed.C.I. 156 or 148 or 149 or equiv.)	I-II	S	204bEd	Mr. Brueckner

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to this course.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.C.I.264w	Recent Research in Educational Diagnosis (2 cred.; prereq. Ed.C.I. 151 or equiv.)	I-II	S	204bEd	Mr. Brueckner
Ed.C.I.265s	Recent Literature in Supervision (2 cred.)	I-II	S	204bEd	Mr. Brueckner
Ed.C.I.266s	Supervision of High School Instruction (3 cred. This course is part of a three-quarter sequence. For fall and winter courses see Ed.Ad. 264-265. Students may register for any quarter.)	III-IV	S	111Bu	Mr. Boardman
Ed.C.I.271f,w,s	Problems in Curriculum (2 or 3 cred. a qtr. with a maximum of 6; prereq. completion or current enrolment in one of the following: Ed.C.I. 113, 119, 172 or equiv.)	1 hr. ar.			
Ed.C.I.287f‡	Advanced Course in the Teaching of Science (2 cred.; sr., grad.; prereq. Ed. 51C)	Ar	Ar	Ar	Mr. Peik
Ed.C.I.293s	Foundations of Secondary School Methods (3 cred.)	IX-X	T	114Ed	Mr. Johnson
Ed.C.I.294f‡	Advanced Course in Methods of Teaching English (2 cred.; prereq. Ed.T. 66A-B-C or equiv.)	IX-X and 1 hr. ar	T	202Ed	Mr. Johnson
Ed.C.I.296w-297s	Special Problems in Techniques of Secondary School Instruction (2 cred. a qtr.; grad.)	III-IV	S	204aEd	Miss Smith
		Ar	Ar	206Bu	Miss Smith

## EDUCATIONAL ADMINISTRATION

*Major advisers.*—Professors Neale and Boardman.

*Note.*—This section includes courses formerly listed under Administration and Supervision. For other courses see General Courses, and Curriculum and Instruction.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.Ad.115w	Organization of the Elementary School (2 cred.; jr., sr., grad.; prereq. 10 hrs. in ed.)	III-IV	S	111Ed	Mr. Neale
Ed.Ad.124f	Public School Administration (3 cred.; sr., grad.; prereq. 10 hrs. in ed.)	IX	MWF	210Bu	Mr. Neale
Ed.Ad.125w	Techniques in Administration (3 cred.; sr., grad.; prereq. 124)	IX	MWF	210Bu	Mr. Neale
Ed.Ad.126s	School Plant Management (3 cred.; sr., grad.; prereq. 124, 125)	IX-X	M	224Bu	Mr. Neale
Ed.Ad.180f,w,s‡	Practice in High School Administration (6 cred.; sr., grad.; prereq. 10 hrs. in ed. including Ed. 51C)	1 hr. ar.			
		Ar	Ar	Ar	Mr. Boardman

*For Graduate Students Only*

Ed.Ad.210s	Financial Aspects of Public School Business Administration (3 cred.; prereq. 124, 125)	I-II	S	224Bu	Mr. Neale
		1 hr. ar.			
Ed.Ad.218f-219w-220s	Seminar in Secondary School Problems	IX-X	Th	218Bu	Mr. Boardman
Ed.Ad.228f,w,s	Special Problems in Educational Administration (1 or 2 cred.; prereq. 124, 125)	Ar	Ar	224Bu	Mr. Neale
Ed.Ad.230f-231w	Public Relations for Schools (4 cred.; grad.)	I-II	S	224Bu	Mr. Neale
Ed.Ad.235f-236w-237s	Seminar in Educational Administration	Ar	Ar	224Bu	Mr. Neale

‡ A fee of \$1 per credit is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.Ad.264f-265w	High School Administration (3 cred. a qtr.; grad. For third quarter continuation of this course see Ed.C.I.266. Students may register for any quarter.)	III-IV 1 hr. ar.	S	111Bu	Mr. Boardman
Ed.Ad.270f,w,s	Special Problems in Secondary Education (2 cred.)	Ar	Ar	218Bu	Mr. Boardman
Ed.Ad.278f	School Surveys (3 cred.; grad.)	Ar	Ar	224Bu	Mr. Neale

## EDUCATIONAL PSYCHOLOGY

*Major advisers.*—Professors Miller, Johnson, McConnell, Wrenn; Associate Professor Van Wagenen.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.Psy.60f	Introduction to Statistical Methods (2 cred.; jr., sr.; prereq. 6 cred. in psy.)	I-II	S	PtAud	
Ed.Psy.60w,s	Introduction to Statistical Methods (3 cred.; see 60f)	II	MWF	106Pt	
Ed.Psy.113f-114w-115s	Psychology of Elementary School Subjects (2 cred. per qtr.; jr., sr., grad.; prereq. 10 cred. in psy. and ed.)	IX-X	W	109Psy	Mr. Van Wagenen
Ed.Psy.116w-117s	Statistical Methods in Education (4 cred.; sr., grad.)	IX-X	T	115Psy	Mr. Van Wagenen
Ed.Psy.120f	Basic Principles of Measurement (3 cred.: sr., grad.; prereq. Ed.Psy. 60 or equiv.)	I	MWF	106Pt	
Ed.Psy.120w	Basic Principles of Measurement (3 cred. See 120f)	I-II 1 hr. ar.	S	205bEd	Mr. Wrenn
Ed.Psy.138-139†	<i>Experimental Educational Psychology</i> (4 cred.; sr., grad.; prereq. 51A or equiv.) ( <i>Not offered</i> )				
Ed.Psy.140w	Construction and Use of Educational Tests and Examinations (3 cred.; sr., grad.; prereq. 120 or equiv.)	II	MWF	115Psy	
Ed.Psy.141w	Construction and Use of Group Aptitude Tests (3 cred.; sr., grad.; prereq. 120 or equiv.)	VIII	MWF	115Psy	Mr. Miller
Ed.Psy.142s	Construction and Use of Individual Aptitude Tests (3 cred.; sr., grad.; prereq. 120 or equiv.)	4:30-5:45	TTh	115Psy	
Ed.Psy.146w-147s†	Child Guidance (4 cred.; jr., sr., grad.; prereq. 15 cred. in psy. and ed.)	I-II	S	106Pt	
Ed.Psy.149f-150w†-151s	Psycho-educational Clinic (2 to 6 cred.; sr., grad.; permission of instructor; prereq. 120, 140 and 141 or 142)	Ar	Ar	357Psy	
Ed.Psy.157	<i>Psychology of Child Development</i> (2 cred.; jr., sr., grad.; prereq. 6 cred. in psy.) ( <i>Not offered</i> ) (See Child Welfare 130-131)				
Ed.Psy.158s	Psychology of Adolescence (3 cred.; jr., sr., grad.; prereq. Ed. 51A or equiv.)	III	MWF	210Bu	Miss Edwards
Ed.Psy.159f.	Psychology of Personality (3 cred.; sr., grad.; prereq. Ed. 51A and 116 or parallel)	VII	MWF	115Psy	Mr. Wrenn
Ed.Psy.180	<i>Ethetics in Education</i> (2 cred.; sr., grad.; consent of instructor) ( <i>Not offered</i> )				
Ed.Psy.183w	Psychology of Gifted Children (2 cred.; jr., sr., grad.; prereq. Ed. 51A or equiv.)	II	TTh	115Psy	Mr. Bond

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.Psy.184s	Mental Deficiency (2 cred.; jr., sr., grad.; prereq. Ed. 51A or equiv.)	IX-X	W	Ar	Ar
Ed.Psy.189	<i>The Human Organism</i> (3 cred.; sr., grad.; prereq. permission of instructor) ( <i>Not offered</i> )				

*For Graduate Students Only*

Ed.Psy.201f-202w-203s	Seminar in Educational Psychology	Ar		Ar	301Psy	Mr. Miller, Mr. Johnson, Mr. McConnell, Mr. Wrenn, Mr. Bond, Miss Edwards, Mr. Van Wagenen
Ed.Psy.216f-217w-218s	Statistical Methods in Education (3 cred. a qtr.; grad.)	II		MWF	109Psy	Mr. Johnson
Ed.Psy.225s	Diagnosis and Counseling in Guidance (3 cred.; prereq. Ed. 133 and Ed.Psy. 120 or equiv.)	IX		MWF	115Psy	Mr. Wrenn
Ed.Psy.240f,w,s	Problems in Measurement (2 cred. a qtr.)	Ar		Ar	Ar	Mr. Johnson
Ed.Psy.253f-254w-255s	Research Problems (Ar.; prereq. consult instructor) (See also Ed. 233 and Ed.Psy. 240)	Ar		Ar	Ar	Mr. Miller Mr. McConnell, Mr. Bond, Mr. Van Wagenen
Ed.Psy.281f,w,s	Practice in Personnel Work (2 cred. a qtr.; prereq. satisfactory preparation in psy. and ed. and approval of adviser)	Ar		Ar	Ar	Miss Edwards, Mr. Wrenn
Ed.Psy.290f	Original Nature of Man (3 cred.; prereq. Ed. 51A and 60 or equiv. and permission of instructor)	III		MWF	301Psy	Mr. Miller
Ed.Psy.291w	Individual Differences (3 cred.; prereq. Ed. 51A and 60 or equiv. and permission of instructor)	III		MWF	301Psy	Mr. Miller
Ed.Psy.292s	Recent Literature in Educational Psychology (3 cred.; prereq. Ed. 51A and 60 or equiv. and permission of instructor)	III		MWF	301Psy	Mr. Miller
Ed.Psy.293w-294s	Psychology of Learning (3 cred. a qtr.; prereq. 12 cred. in psy. and ed. psy.)	IV		MWF	100Pt	Mr. McConnell
Ed.Psy.293Tw	Psychology of Learning (3 cred. See 293-294. For teachers and administrators)	III-IV		S	100Pt	Mr. McConnell and others
Ed.Psy.297-298-299	<i>Problems in Subnormality</i> (6 cred.; jr., sr., grad.) ( <i>Not offered</i> )					

### HOME ECONOMICS EDUCATION

*Major advisers.*—Professor Wylle B. McNeal; Associate Professor Clara M. Brown; Assistant Professor Ella J. Rose.

*Note.*—Courses in Home Economics are open to all students in the College of Education who have satisfied the prerequisites or by permission of the chief of the division. For program of courses see page 134.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
H.E.Ed.90f,s	Child Training (3 cred.; jr., sr.; prereq. Psy. 1-2)	IV	MWF	213HE	Mrs. Foster
H.E.Ed.90w	Child Training (Same as 90f,s)	IV 1 hr. ar.	MW	106Pt	Mrs. Foster
H.E.Ed.91f,w*‡§	Observation, Materials, Teaching in Home Economics (5 cred.; jr., sr.; prereq. H.E. 4, 34 or 170], 41, 50, 55, Psy. 1-2, Ed. 51A, 51C, parallel H.E.Ed. 93)	VI	MTWThF	213HE	Miss Rose
H.E.Ed.92w,s	Teaching Problems in Home Economics (2 cred.; sr.; prereq. H.E.Ed. 91, 93, parallel, H.E.Ed. 94 and H.E.Ed. 192)	III-V	Th		
H.E.Ed.93f,w*‡§	Supervised Teaching in Home Economics (3 cred.; jr., sr.; prereq. H.E. 4, 34 [or 170], 41, 50, 55, Psy. 1-2, Ed. 51A, 51C, parallel H.E.Ed. 91)	VII	TTh	213HE	Miss Rose
	3 consecutive hours daily between 8:15-3:00 and 1 hr. ar.	Ar	Ar Ar		Miss Rose and others
H.E.Ed.94w,s*‡	Supervised Teaching in Home Economics (3 cred.; sr.; prereq. H.E.Ed. 91, 93, parallel H.E.Ed. 92 and 192)	Ar	Ar Ar		Miss Rose and others
H.E.Ed.192w,s	Educational Measurement in Home Economics (2 cred.; sr.; prereq. H.E.Ed. 91, 93, parallel H.E.Ed. 92 and 94)	Ar	Ar Ar		Miss Rose and others
H.E.Ed.193w,s	Home Economics Curriculum (3 cred.; sr.; prereq. or parallel H.E.Ed. 94 or permission of instructor)	VIII	TTh	213HE	Miss Clara Brown
H.E.Ed.194af	Adult Education Problems (3 cred.; sr.; prereq. 91, 93)	Ar	Ar Ar		Miss Clara Brown, Miss Rose
H.E.Ed.194bs	Adult Education Problems (3 cred.; sr.; prereq. same as for 194a)	Ar	Ar Ar		
H.E.Ed.197s	Organization and Methods for Related Art Teaching (3 cred.; sr.; prereq. H.E.Ed. 91; H.E. 180 or parallel)	V	MWF	402HE	Miss H. Goldstein
H.E.Ed.199f,w,s	Methods of Investigation and Research (2 cred.; sr.; prereq. 192 or permission of instructor)	Ar	Ar Ar		Miss Clara Brown
<i>For Graduate Students Only</i>					
H.E.Ed.243f,w,s	Trends in Home Economics (3 cred.)	Ar	Ar Ar		Miss McNeal, Miss Clara Brown, Miss Rose
H.E.Ed.292w,s	Educational Measurement Problems (3 cred.; prereq. 192)	Ar	Ar Ar		Miss Clara Brown
H.E.Ed.294f,w,s	Investigations and Research in Home Economics Education (1 to 5 cred.)	Ar	Ar Ar		Miss McNeal
H.E.Ed.295f,w,s	Current Problems in Home Economics Education (1 cred.)	Ar	Ar Ar		Miss McNeal, Miss Clara Brown, Miss Rose

\* A grade of at least C is required in the following courses; H.E. 1, 3, 4, 20, 21, 22, 31, 34 (or 170), 40, 41, 55.

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to registration in this course.

## INDUSTRIAL EDUCATION

Major adviser.—Professor Homer J. Smith.

No.	Title	Hour	Day	Bldg.	Instructor
Ind.11f,w,s‡	Special-Class Woodwork (2 cred.; no prereq.; not open to those who have credit in bench woodwork or cabinet making; for teachers of art, subnormal and primary grade work. Not a part of the four-year curriculum) (Limited to 24)	I-IV	S	6Pt	
Ind.30f	Graphic Presentation (2 cred.; no prereq.)	IX-X	W		
Ind.40f	Analysis (2 cred.; no prereq.)	IX-X	M	112Bu	Mr. Widdowson
Ind.42w	Course Organization (2 cred.; prereq. Ind. 40)	IX-X	M	112Bu	Mr. Widdowson
Ind.44s	Equipment and Management (2 cred.; prereq. Ind. 40, 42)	IX-X	M	112Bu	Mr. Widdowson
Ind.50Af-50Bw-50Cs‡§	Directed Teaching (6 cred.; sr.; prereq. Ind. 70 or 75, and 80)	Ar	Ar	6Pt	
Ind.60f	Philosophy of Vocational Education (2 cred.; no prereq.)	IX-X	Th	112Bu	
Ind.61w	Practices in Vocational Education (2 cred.; prereq. Ind. 60)	IX-X	Th	112Bu	
Ind.65‡	<i>Non-vocational Subjects</i> (Not a part of the four-year curriculum) ( <i>Not offered</i> )				
Ind.66w	Related Subjects (2 cred.; prereq. Ind. 40, 42)	IX-X	F	112Bu	
Ind.70s‡	Methods in Shop Subjects (2 cred.; prereq. Ind. 40, 42)	IX-X	Th	112Bu	
Ind.75s‡	Methods in Drawing (2 cred.; prereq. 10 cred. in drawing or consent of instructor. Not a course in drawing)	IX-X	W	112Bu	
Ind.80f	General Industrial Training (2 cred.; no prereq.)	IX-X	T	112Bu	
Ind.81w	The General Shop (2 cred.; jr., sr.; prereq. Ind. 80. Not a shop course)	IX-X	T	112Bu	
Ind.101f	Tests in Industrial Subjects (2 cred.; prereq. Ed. 51A)	III-IV	S	Ar	
Ind.103w	Instructional Aids (2 cred.; sr., grad.; prereq. Ind. 40, 42)	III-IV	S	Ar	
Ind.105w	Industrial Education (3 cred.; jr., sr., grad.) (Not a part of the four-year curriculum. For advanced students in the specialty and for students of administration and supervision)	VIII	MWF	Ar	Mr. Smith
Ind.107w	Co-ordination (2 cred.; jr., sr., grad.; prereq. Ind. 60, 61 or 105 or consent of instructor)	IX-X	W	Ar	
Ind.108s	Apprenticeship (2 cred.; jr., sr., grad.; prereq. same as for 107)	IX-X	T	Ar	
Ind.110s	Guidance in the Schools (3 cred.; jr., sr., grad.; prereq. Ed. 51A. See Ed. 133)	VIII	MWF	Ar	Mr. Smith
Ind.115s	Supervision of Industrial Education (2 cred.; sr., grad.; prereq. Ind. 60, 80, Ed.Ad. 124 or consent of instructor. Not a part of the four-year curriculum. For advanced students in the specialty and for students of administration and supervision)	III-IV	S		
Ind.170f	Day Industrial Schools (2 cred.; jr., sr., grad.; prereq. Ind. 60, 61)	IX-X	T	112Bu	Mr. Craigo
Ind.171w	Evening Industrial Schools (2 cred.; jr., sr., grad.; prereq. Ind. 170)	IX-X	T	112Bu	
Ind.172s	Part-time Education (2 cred.; jr., sr., grad.; prereq. Ind. 170, 171)	IX-X	T	112Bu	

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to registration in this course.

*For Graduate Students Only*

No.	Title	Hour	Day	Bldg.	Instructor
Ind.200f,w,s	Research Problems (3 to 9 cred.; prereq. consent of instructor)	IX	F	Ar	Mr. Smith
Ind.250f-251w-252s	Problems in Vocational Education (6 cred.; prereq. consent of instructor. Plan for full year)	I-II	S	Ar	Mr. Smith

Shop and Drawing Courses—arranged by Mr. Smith.

Shop and drawing courses are available in wide variety in the Institute of Technology, University campus, and the Division of Agricultural Engineering, Farm campus. Students may elect to pursue courses, day or evening, at the William Hood Dunwoody Industrial Institute without fees other than those paid to the University, except a deposit of \$1. All shop and drawing courses should be taken under special advice and may be either extensive or intensive in resultant preparation for teaching. Degree candidates, especially those transferring from other institutions, should bear in mind the maximum of forty-five quarter credits, of shopwork and drawing combined, which is enforced in this department. Twenty credits of shopwork and ten credits of drawing are required. Credits in excess of forty-five will be recorded but will not be counted toward degree requirements. Certain off-campus courses and services will be available. Those interested should consult with members of the Industrial Education staff.

## METHODS AND DIRECTED TEACHING

*Major adviser.*—Associate Professor Carlson.

*Conference for Student Teachers.*—The director of Student Teaching will arrange for a series of conferences which are a part of the required work in directed teaching. The hour at which these conferences are held will be announced in the fall.

*Statement of fees.*—For all courses in special methods, directed teaching, and special methods and directed teaching combined, a fee of \$1 per credit is charged. Passing the qualifying examination is prerequisite to all special methods and student teaching courses. For Clinical Methods and Directed Teaching in Speech Pathology see Ed.C.I. 174-175-176.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.T.51Aw†§	Special Methods of Teaching in Schools of Nursing (3 cred.; sr., grad.; prereq. Ed. 51A, B)	III	MWF	Ar	Miss Petry
Ed.T.51Bs†§	Special Methods of Teaching in the School and Teaching in Schools of Nursing (5 cred.; sr., grad.; prereq. Ed.T. 51A; prereq. or parallel Nu. 71 and Nu. 69)	III	MWF	Ar	Miss Petry
		and 2 hrs. ar.			
Ed.T.52f,w,s†§	Directed Teaching (5 cred.; sr.; prereq. Special Methods Course)	Ar	Ar	Ar	Mr. Carlson
Ed.T.53s†§	Directed Teaching of Subnormal Children (5 cred.; sr.)	Ar	Ar	Ar	Mr. Carlson
Ed.T:54Af-54Bw-54Cs†§	The Teaching of Elementary School Subjects (15 cred.; sr.; prereq. Ed. 61A-B-C or equiv.)	VI	MTWThF	100Pt	
		Fall—Reading			
		Social Studies			
		Winter—English			
		Arithmetic			
		Spring—Directed Teaching			
Ed.T.55f	Principles of Early Childhood Education (3 cred.; jr., sr.; prereq. C.W. 80 or simultaneously)	VIII	MWF	202Pt	Mrs. Foster
Ed.T.56s	Permanent Play Materials (2 cred.; jr., sr.; prereq. Psy. 1-2)	VII	MW	202Pt	Miss Mattson

† A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to registration in this course.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.T.57s†	Plastic Materials (3 cred.; jr., sr.; prereq. C.W. 80)	VIII	MWF	202Pt	Miss Headley
Ed.T.58w	Rhythms, Games, and Music for the Young Child (2 cred.; jr., sr.; prereq. Ed.T. 55)	VIII-IX	F	202Pt	Miss Mattson
Ed.T.59w	Story Telling for Young Children (2 cred.; jr., sr.; prereq. Ed.T. 55)	V	TTh	202Pt	Miss Headley
Ed.T.60Af-60Bw-60Cs†‡§	Special Methods and Directed Teaching in Geography (9 cred.; sr.; prereq. 15 cred. in geography and Ed. 53)	VIII 1 hr. ar.	MW	100Pt	Mr. Wesley
Ed.T.61s†§	Teachers' Course in Norwegian (3 cred.; sr.; prereq. Scand. 4, 5 or 10-11, or 12)	Ar	Ar	122F	
Ed.T.62f,w†§	Teachers' Course in Swedish (3 cred.; sr.; prereq. Scand. 10-11, 12 or 4, 5)	VII	MWF	122F	Mr. Stomberg
Ed.T.64†§	<i>Teaching of Geography and History in the Elementary School (See Ed.T. 54A) (Not offered)</i>				
Ed.T.65†§	<i>Directed Teaching with Special Methods in Elementary Schools (3 or 5 cred.; sr.; prereq. approval of instructor) (Not offered)</i>				
Ed.T.66Af-66Bw-66Cs††§	Special Methods and Directed Teaching in English (9 cred.; sr.; prereq. consent of instructor)	VIII	TTh(f,w)	210Bu	Miss Smith
Ed.T.66Amf†§	The Teaching of Composition in the Senior High School (2 cred.; sr.)	VIII	M(s)		
Ed.T.66Ams†§	<i>The Teaching of Composition in the Senior High School (See Ed.T. 66Amf) (Not offered)</i>	VIII	TTh	210Bu	Miss Smith
Ed.T.66Bmw†§	The Teaching of Literature in the Senior High School (2 cred.; sr.)	VIII	TTh	210Bu	Miss Smith
Ed.T.67Af-67Bw-67Cs††§	Special Methods and Directed Teaching in Mathematics (9 cred.; sr.; prereq. Math. 50 or 60)	VIII	TTh	205aEd	Mr. Drake
Ed.T.67Amf-67Bmw††§	The Teaching of Secondary School Mathematics (4 cred.; sr.; prereq. consent of instructor)	VIII	TTh	205aEd	Mr. Drake
Ed.T.68Af-68Bw-68Cs††§	Special Methods Course and Directed Teaching in Secondary School Science (9 cred.; sr.; prereq. consent of instructor)	IX	MW	6aPt	Mr. Johnson, Mr. Peterson
Ed.T.68Amf-68Bmw††§	Methods of Teaching Secondary School Science (4 cred.; sr.; prereq. consent of instructor)	IX	MW	6aPt	Mr. Johnson, Mr. Peterson
Ed.T.69Af-69Bw-69Cs††§	Special Methods and Directed Teaching in History and Social Studies (9 cred.; jr., sr.; prereq. 30 cred. in hist. or soc. sci. Consult instructor)	VIII	MW	100Pt	Mr. Wesley
Ed.T.69Amf-69Bmw††§	Methods of Teaching History and Social Studies (4 cred.; jr., sr.; prereq. consent of instructor)	VIII	MW	100Pt	Mr. Wesley

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to registration in this course.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
Ed.T.70Af-70Bw- 70Cst†‡§	Special Methods and Directed Teaching in German (9 cred.; sr.; prereq. German Comp. 50-51-52, German Conversation 53-54-55)	IX	TTh	114Ed	Miss Will
		and 1 hr. ar.			
Ed.T.71Af-71Bw- 71Cst†‡§	Special Methods and Directed Teaching in Latin (9 cred.; jr., sr.; prereq. any two of Latin Courses 51-53 or equiv., 73)	IX	MW	112Ed	Miss Marlowe
		and 1 hr. ar.			
Ed.T.72Af-72Bw- 72Cst†‡§	Special Methods and Directed Teaching in Romance Languages (9 cred.; jr., sr.; prereq. French 49, 50-51-52, 53, 54-55 or 20], 63)	IX	TTh	206Ed	Miss Walker
		and 1 hr. ar.			
Ed.T.73Af-73Bw- 73Cst†‡§	Special Methods and Directed Teaching in Commercial Subjects (9 cred.; jr., sr.; prereq. consent of instructor)				
	Fall—shorthand; winter—typewriting; spring—bookkeeping and junior business training	VIII	MW	111Ed	
		and 1 hr. ar.			
Ed.T.74w‡§	Teachers Course in Journalism (3 cred.; jr., sr.; prereq. Jour. 41 or 51)	VII	MWF	10P	Mr. Kildow
Ed.T.75f,s†	Methods and Observation in the Nursery School (3 cred.; sr.; prereq. Ed.T. 55, C.W. 40, Ed.T. 56, 57, 58, 59. Open only to students in home econ. and nursing ed.)	IV	T and ar	Ar	Miss Matson
Ed.T.76Af-76Bw- 76Cst†‡§	Methods and Observation (3 cred.; jr., sr.; prereq. Psy. 1-2)	IV	T	202Pt	Mrs. Cummings, Miss Headley, Miss Matson
Ed.T.77Af-77Bw- 77Cst†‡§	Directed Teaching in Kindergarten or Nursery School (9 cred.; sr.; prereq. Ed.T. 55 to 59 and 76A-B-C)	II	M	100Pt	Mrs. Foster
Ed.T.78Af-78Bw	Methods in Primary Grades (4 cred.; jr., sr.)	I-II	S	Ar	Ar
Ed.T.81f‡	Techniques of Puppetry (3 cred.; jr., sr.; prereq. Ed. 51A)	III-IV	S	Ar	Mrs. Meader
		1 hr. ar.			

## MUSIC EDUCATION

*Major advisers*—Professor Scott; Associate Professor Pepinsky; Instructor Mrs. Nohavec.

*Note*.—Students following the Music Education Curriculum may elect seven credits in music in addition to the requirements of their curriculum. All other electives must be in academic subjects:

No.	Title	Hour	Day	Bldg.	Instructor
Mu.Ed.1f	Music Orientation (No cred.; freshmen majoring in music education; no prereq.)	V	TTh	4Mu	Mrs. Nohavec, Mr. Ferguson, and others
Mu.Ed.4f-5w-6s†	Applied Instrumental Technique (6 cred.; soph.; no prereq.)	I	MTWF	4Mu(f) 4NMA(w,s)	Mr. Pepinsky Mr. Prescott

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to registration in this course.

No.	Title	Hour	Day	Bldg.	Instructor
Mu.Ed.50A††	Primary Methods (2 cred.; jr.; no prereq.)	III	TTh	4Mu	Mrs. Nohavec
Mu.Ed.50Bw	Intermediate Methods (2 cred.; prereq. Mu.Ed. 50A)	III	TTh	4Mu	Mrs. Nohavec
Mu.Ed.52s†	Technique of Teaching Appreciation (1 cred.; jr.; prereq. 51)	III	TTh	4Mu	Mrs. Nohavec
Mu.Ed.53s†	High School Methods (3 cred.; jr.; prereq. Ed. 51A)	III	MWF	4Mu	Mrs. Nohavec
Mu.Ed.54w†	Operetta Production (3 cred.; jr.; prereq. Ed. 51A)	III	MWF	4Mu	Mrs. Nohavec
Mu.Ed.55w†	Survey and Evaluation of Vocal Materials and Methods (4 cred.; sr.; prereq. Mu.Ed. 50A, 50B, 53)	VI	MTWF	4Mu	Mrs. Nohavec
Mu.Ed.59w††	Choral Literature and Conducting (2 cred.; all)	V	TTh	106Pt	Mrs. Nohavec
Mu.Ed.60f-61w-62s††§	Supervision and Teaching (9 cred.; sr.; prereq. Ed. 51A,B,C)	III-IV	S	4Mu	Mrs. Nohavec
Mu.Ed.63f†	Band Conducting (2 cred.; jr., sr.; prereq. 4-5-6)	VI	TTh	4NMA	Mr. Prescott
Mu.Ed.64s†	Band Organization (3 cred.; sr.; prereq. 4-5-6)	VI	MWF	4NMA	Mr. Prescott
Mu.Ed.65w†	Instrumentation (3 cred.; jr.; prereq. Phys. 15)	II	TThS	4Mu	Mr. Pepinsky
Mu.Ed.68s	Conducting of Instrumental Music and Survey of Materials (4 cred.; sr.; prereq. Mu.Ed. 65)	I-II	MWF	5NMA	Mr. Pepinsky
Mu.Ed.70f	Accompanying and Sight Reading (2 cred.; jr., sr.)	III	TTh	3Mu	Mr. Scott
Mu.Ed.101s	Tests and Measurements in Music (2 cred.; sr., grad.; prereq. permission of instructor)	VI	TTh	4Mu	

*For Graduate Students Only*

Mu.Ed.220Ew	Survey and Application of Research in Music Education (3 cred.; prereq. Mu.Ed. 101)	Ar	Ar	Ar	Mrs. Nohavec
Mu.Ed.224Es	Seminar and Individual Research Problems in Music Education (3 cred.)	Ar	Ar	Ar	Mrs. Nohavec and others
Mu.Ed.225Ef.w,s	Advanced Applied Music (2 to 4 cred.; prereq., entrance exam.)	Ar	Ar	Ar	Ar

NURSING EDUCATION

*Major adviser*—Professor Densford.

For other courses in Nursing see the Bulletins of the School of Nursing and the Medical School. For courses in Nursing Education and in Public Health Nursing see pages 82-84. For specialized curricula in Nursing Education and Public Health Nursing see the College of Education Bulletin.

No.	Title	Hour	Day	Bldg.	Instructor
Nu.60s	Ward Administration (4 cred.; sr. nurse or grad. nurse; no prereq.)	I, VI-VII	TTh	Ar	Miss Densford and others
Nu.63w	Motion Study (2 cred.)	VI, VII, VIII	Th	202ME	Mr. Koepke

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per credit is charged for this course.

§ Passing the qualifying examination is prerequisite to registration in this course.

¶ Four credits are required for Mu.Ed. 59. This course should be repeated until all four credits are earned.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
Nu.65w	Comparative Nursing Procedures (2 cred.; sr. or grad. nurse; prereq. permission of instructor)	VI	T		Miss Petry
		VI-VII	Th	410MeS	and others
Nu.69f,s	Survey of Conditions and Trends in Schools of Nursing (3 cred.; sr., grad.; no prereq.)				
		IV	MWF	Ar	Miss Densford
Nu.71s	Curriculum Making in Schools of Nursing (3 cred.; sr., grad.; no prereq.)	VI	MWF	Ar	Miss Petry
Nu.72f	Teaching and Supervision in Schools of Nursing (3 cred.; sr., grad.; no prereq.)	VI	MWF	Ar	Miss Petry

## PHYSICAL EDUCATION

The College of Education offers specialized curricula in Physical Education for Men and Physical Education for Women. For curricula see College of Education Bulletin. For schedule of courses see pages 14-22 of this bulletin.

## PREVENTIVE MEDICINE AND PUBLIC HEALTH

The College of Education offers specialized curricula in Public Health Nursing and Nursing Education. For curricula see College of Education Bulletin. For class schedule see pages 82-84 of this bulletin.

## THEORY AND PRACTICE OF TEACHING

For courses formerly listed in this department, see General Courses, and Curriculum and Instruction.

## COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

All courses in the College of Agriculture, Forestry, and Home Economics are scheduled on the University Farm campus except those indicated by an asterisk (\*).

### AGRICULTURAL BIOCHEMISTRY

#### *Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
2f,w	Quantitative Methods (5 cred.; soph., jr., sr.; prereq. Inorg. Chem. 10 cred.) (Limited to 35)				
		VI, VII, VIII, IX	MWF	102SnH	Mr. Rogers
4f	Introduction to Organic and Biochemistry (5 cred.; soph., jr., sr.; prereq. Inorg. Chem. 10 cred. §)	II	MTWThF	122GH	Mr. Bailey, Mr. Reitz
4w	Introduction to Organic and Biochemistry (Same as 4f)	II	MTWThF	122GH	Mr. Bailey, Mr. Reitz
5s	Plant Biochemistry (5 cred.; soph., jr., sr.; prereq. 4, Soils 6 advised)	II	MTWThF	122GH	Mr. Reitz
6f	Animal Biochemistry (5 cred.; soph., jr., sr.; prereq. 4, Soils 6 advised)	II	MTWThF	116SnH	Mr. Palmer

#### *Junior and Senior Courses*

101f-102w	Agricultural Quantitative Analysis (6 cred.; jr., sr.; prereq. 2)	VI, VII, VIII	MWF	208SnH	Mr. Briggs
103s	Dairy Chemistry (5 cred.; jr., sr.; prereq. 2, 6)	VI	MWF	116SnH	Mr. Palmer
	Lect.				
	Lab.	VII, VIII, IX	MWF	208SnH	Mr. Palmer
108s	Chemistry of Wheat and Wheat Products (3 cred.; jr., sr.; prereq. 5)	II	MWF	211SnH	Mr. Bailey
110s	Flour Laboratory Methods (3 to 5 cred.; jr., sr.; prereq. 101-102 or equiv.)	VI, VII, VIII, IX	MWF	202SnH	Mr. Bailey
113f-114w-115s	Biochemical Laboratory Methods (6 cred.; sr.; prereq. quant. anal., parallel 119-123)	VI, VII, VIII	TTh	202, 208SnH	Mr. Sandstrom
116w	Advanced Animal Nutrition (3 cred.; jr., sr.; prereq. 6 or Physiol. Chem. 120 advised)	III	TThS	211SnH	Mr. Palmer, Miss Kennedy
117f,w,s	Laboratory Problems in Animal Nutrition (3 cred.; jr., sr.; prereq. 116, instructor's permission)	Ar	Ar	314SnH	Mr. Palmer, Miss Kennedy
118f,w,s	Laboratory Problems in Biochemistry (3 or 5 cred.; sr.; prereq. 113-114, 119; or 103 or 110)	Ar	Ar	Ar	Ar
119f	Colloids (3 cred.; sr.; prereq. Zool. or Bot. 9 cred., and 5 cred. in Org. Chem. 51-52-153)	III	MWF	113SnH	Mr. Gortner
120w	Proteins (3 cred.; sr.; prereq. 119)	II	MWF	113SnH	Mr. Gortner

§ By special permission of the student's adviser General College Courses 88, 89, 90 will be acceptable as prerequisites.

No.	Title	Hour	Day	Bldg.	Instructor
121w	Carbohydrates (3 cred.; sr.; prereq. 119)	III	MWF	113SnH	Mr. Bailey
122s	The Lipids and Fats (3 cred.; sr.; prereq. 119)	III	TThS	113SnH	Mr. Briggs
123s	Enzymes (3 cred.; sr.; prereq. 119)	III	MWF	113SnH	Mr. Sandstrom

## AGRICULTURAL ECONOMICS

### *Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f	Principles of Economics I (3 cred.; soph., jr., sr.; no prereq.) (Sections limited to 60 each)				
	Sec. 1	I	MWF	109HH	Mr. Lowe
	2	I	TThS	109HH	Mr. Lowe
1w	Principles of Economics I (Same as 1f) (Sections limited to 60 each)				
	Sec. 1	I	TThS	311HH	Mr. Trelogan
	2	III	MWF	109HH	Mr. Lowe
2w	Principles of Economics II (5 cred.; soph., jr., sr.; prereq. 1) (Sections limited to 60 each)				
	Sec. 1	I	MTWThF	109HH	Mr. Lowe
	2	III	MTWThF	204OD	Mr. Trelogan
2s	Principles of Economics II (Same as 2w) (Sections limited to 60 each)				
	Sec. 1	I	MTWThF	109HH	Mr. Trelogan
	2	III	MTWThF	109HH	Mr. Lowe
3f,w,s	Principles of Economics (Home Economics) (5 cred.; soph., jr., sr.; no prereq.) (Sections limited to 60 each)				
		II	MTWThF	109HH	Mr. Lowe
7w	Natural Resources (3 cred.; soph., jr., sr.; no prereq.)				
		III	TThS	311HH	Mr. Dowell
8s	Rural Economics (3 cred.; soph., jr., sr.; prereq. 2 or 3)				
		III	TThS	311HH	Mr. Jesness
25f,w	Principles of Accounting (4 cred.; soph., jr., sr. in agr., for., and home econ. only) (Limited to 50)				
	Lect.	II(f)	MWF	311HH	Mr. Koller
		II(w)	TThS	311HH	
	Lab.	VIII, IX	Th	311HH	
30f	Agricultural Prices (3 cred.; soph., jr., sr.; prereq. 2)				
		II	TThS	312HH	Mr. Trelogan
40f,s	Principles of Marketing Organization (3 cred.; soph., jr., sr.; prereq. 2)				
		I(f)	MWF	312HH	Mr. Cox
		II(s)	MWF	312HH	Mr. Cox
47s	Marketing Accounting (4 cred.; soph., jr., sr.; prereq. 25)				
	Lect.	IV	MWF	311HH	Mr. Koller
	Lab.	VIII, IX	F	311HH	

### *Junior and Senior Courses*

50f§	Farm Finance (5 cred.; jr., sr. in agr. or for. only; prereq. 2)				
		IV	MTWFS	109HH	Mr. Koller
80s	Farm Management (3 cred.; jr., sr.)				
		I	TThS	312HH	Mr. Engene
90f§	Agricultural Statistics (5 cred.; jr., sr.)				
	Lect.	III	TThS	312HH	Mr. Cox
	Lab.	Ar	Ar		
102w	Farm Organization (3 cred.; jr., sr.; prereq. 2) (Limited to 60)				
		II	TThS	312HH	Mr. Pond

§ Open to sophomores on petition.

No.	Title	Hour	Day	Bldg.	Instructor
103s	Farm Operation (3 cred.; jr., sr.; prereq. 102)	I (Limited to 60)			
		II	TThS	312HH	Mr. Pond
104s	Types of Farming (3 cred.; jr., sr.; prereq. 2)	III	MWF	312HH	Mr. Pond
110f-111w	Economics of Agricultural Production I and II (6 cred.; jr., sr.; prereq. 2)	I	TThS	312HH	Mr. Dowell
126f,s	Economics of Consumption (3 cred.; jr., sr.; prereq. 2 or 3)	I	TThS	100HH	Mr. Waite
131w	Market Prices (3 cred.; jr., sr.; prereq. 30, 40)	III	TThS	312HH	Mr. Waite
135s	Methods of Price Analysis (3 cred.; sr.; prereq. 30, 191)	III	TThS	312HH	Mr. Waite
140f	Marketing Organization: Staples (3 cred.; jr., sr.; prereq. 40)	III	MWF	312HH	Mr. Cox
141w	Marketing Organization: Dairy and Poultry Products (3 cred.; jr., sr.; prereq. 40)	II	MWF	312HH	Mr. Jesness
142s	Marketing Organization: Fruits and Vegetables (2 cred.; jr., sr.; prereq. 40)	III	MW	311HH	Mr. Cox
143w	Marketing Organization: Livestock and Meats (3 cred.; jr., sr.; prereq. 40)	III	MWF	312HH	Mr. Dowell
144f	Co-operative Organization (3 cred.; jr., sr.; prereq. 40)	II	TThS	311HH	Mr. Jesness
150s	Advanced Farm Finance (3 cred.; jr., sr.; prereq. 50 or equiv.)	2:30-4:00 p.m.	TTh	312HH	Mr. Jesness
170s	Land Economics (3 cred.; jr., sr.; prereq. 110)	1:30-3:00 p.m.	WF	312HH	Mr. Dowell
191w	Advanced Agricultural Statistics (3 cred.; jr., sr.; prereq. 90)	IV	MWF	312HH	Mr. Waite

See also Economics and Business Administration.

### AGRICULTURAL EDUCATION

See program of the College of Education.

### AGRICULTURAL ENGINEERING

#### *Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
3f,w,s	Mechanical Drawing (3 cred.; no prereq.) (Sections limited to 60 each; fall sections open to foresters only)				
	Sec. 1	III, IV(f,w)	MWF	303En	Mr. Neubauer
		VII, VIII(s)	MWF	303En	
	2	I-II(f)	TThS	303En	
4s	General Woodworking (3 cred.; no prereq.)				
	Lect.	I	MWF	41En	Mr. Christopherson
	Lab. Sec. 1	VI, VII, VIII	W	48En	
	2	VI, VII, VIII	Th	48En	
5w	Farm Building Construction (3 cred.; prereq. 4 or equiv.)				
	Lect.	IV	M	41En	Mr. Christopherson
	Lab.	IV-V	WF	48En	
7s	Farm Structures (3 cred.; prereq. 3)				
	Lect.	I	M	305En	Mr. White
	Lab.	I, II	WF	305En	
11w	Applied Mathematics (5 cred.; no prereq.) (Sections limited to 20 each)				
	Sec. 1	III	MTWThF	105En	Mr. Neal,
	2	III	MTWThF	106En	Mr. Park
	3	IV	MTWFS	106En	
12s	Agricultural Machinery (3 cred.; no prereq.)				
	I		MWF	216En	Mr. Schwantes

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
13f,s	Gas Engines (3 cred.; no prereq.)	VI,VII,VIII(f) VI,VII,VIII(s)	MW TTh	216,37En	Mr. Torrance
14f,s	Tractors (3 cred.; prereq. 13)				
	Lect.	II(f) VI(s)	TTh WF	216En	Mr. Torrance
	Lab.	VI,VII,VIII,IX(f)	F	37En	
19f	Elementary Surveying (3 cred.; prereq. 3, 11 or trigonometry, or Draw. 3 and M.&M. 12) (Sections limited to 30 each)	VII, VIII(s)	WF	216,37En	
	Lect.	IV	T	105En	Mr. Roe, Mr. Neal
	Lab. Sec. 1	I, II, III	TTh	Ar	Mr. Roe,
	2	VI, VII, VIII	TTh	305En	Mr. Neal,
	3	VI, VII, VIII	WF	305En	Mr. Park
19s	Elementary Surveying (Same as 19f)				
	Lect.	VI	T	105En	Mr. Roe, Mr. Neal
	Lab.	VII, VIII, IX	TTh	305En	Mr. Roe, Mr. Neal, Mr. Park
20f	Advanced Surveying (3 cred.; prereq. 19) (Limited to 45)				
	Lect.	IV	M	105En	Mr. Roe, Mr. Neal
	Lab.	VII, VIII, IX VI, VII, VIII	M W	305En	Mr. Roe, Mr. Neal, Mr. Park
20s	Advanced Surveying (Same as 20f)				
	Lect.	VI	M	105En	Mr. Roe, Mr. Neal
	Lab.	VII, VIII, IX	MF	305En	Mr. Roe, Mr. Neal, Mr. Park
22s	Agricultural Machinery Laboratory (1 cred.; prereq. 12 or parallel)	VI, VII, VIII	W	105En	Mr. Schwantes
23f	General Physics (5 cred.; no prereq.) (Sections limited to 20 each)				
	Lect.	III	TThS	101En	Mr. Hustrulid
	Lab. Sec. 1	I, II	ThS	102En	Mr. Hustrulid
	2	VI, VII	TTh	102En	Mr. Tyler
23s	General Physics (Same as 23f) (Sections limited to 20 each)				
	Lect. Sec. 1	III	TThS	101En	Mr. Hustrulid
	2	IV	MWF	101En	Mr. Hustrulid
	Lab. Sec. 1	I, II	WF	102En	Mr. Hustrulid
	2	I, II	TS	102En	Mr. Hustrulid
	3	VI, VII	TTh	102En	Mr. Tyler
	4	VI, VII, VIII, IX	M	102En	Mr. Tyler
	5	VI, VII, VIII, IX	W	102En	Mr. Tyler
	6	III, IV	MW	102En	Mr. Tyler
24f	Agricultural Physics I (4 cred.; prereq. Math. 6 or equiv.) (Limited to 16)				
	Lect.	III	MWF	107En	Mr. Hustrulid
	Lab. Sec. 1	VI, VII	M	102En	Mr. Hustrulid
	2	VIII, IX	M	102En	Mr. Hustrulid
	3	VI, VII	W	102En	Mr. Hustrulid
	4	VI, VII	F	102En	Mr. Hustrulid
	5	VIII, IX	F	102En	Mr. Hustrulid
25w	Agricultural Physics II (4 cred.; prereq. 24)				
	Lect.	I	TThS	107En	Mr. Hustrulid
	Lab. (Same as 24f)			102En	
28w	Land Clearing (3 cred.; no prereq.) (Offered only in even numbered years)	I	TThS	103En	

No.	Title	Hour	Day	Bldg.	Instructor
31w,s	Principles of Drainage (3 cred.; no prereq.)	II(w) I(s)	MWF	105En	Mr. Roe Mr. Neal
32w	Elements of Supplemental Irrigation (3 cred.; no prereq.) (Offered only in odd numbered years)	I	TThS	105En	Mr. Roe, Mr. Park
34f	Household Mechanics (3 cred.; home econ. students only; prereq. 23 or equiv. or G.C. 88)	I	TThS	41,106En	Mr. Christopherson, Mr. Dent
35w	Household Physics (3 cred.; prereq. 23 or equiv. or G.C. 88)	II	TThS	48,20En	Mr. Dent
37f,w	Rural Sanitation (3 cred.; no prereq.)	I, II	MWF	103En	Mr. Hustrulid
40f,s	Mechanical Training (3 cred.; no prereq.)	I(f) I(w)	TThS MWF	101En 101En	Mr. Tyler Mr. Tyler
41w	Metal Work (3 cred.; no prereq.)	I, II	MWF	20,106En	Mr. Dent, Mr. Manson
43s	Mechanical Laboratory (3 cred.; for prof. agr. eng. only; no prereq.)	I-IV I-II	T Th	20,106En	Mr. Dent
44s	Advanced Drawing (2 cred.; prereq. 3 or equiv.)	I	T	303En	Mr. Neubauer
	Lab.	Ar	Ar	303En	

*Junior and Senior Courses*

51w	Land Reclamation (5 cred.; jr. and sr. prof. agr. eng. only; prereq. Agr. Eng. 19 or parallel, Soils 6, M.&M. 143) (Offered only in even numbered years)	VI	MTWThF	105En	Mr. Roe, Mr. Neal
67f	Farm Structures Design (3 cred.; jr., sr.; prereq. 7, M.&M. 128)	I II, III	TThS TTh	305En	Mr. White
70s	Steam Boilers and Engines (3 cred.; jr., sr.; prereq. Phys. 23, 24)	II	MWF	216En	Mr. Boss
71f	Design and Economics of Agricultural Machinery (3 cred.; jr., sr.; prereq. 12, 13, 22, M.E. 27)	VIII, IX VI, VII, VIII	M F	106En 49En	Mr. Schwantes
72w	Applied Electricity (3 cred.; jr., sr.; prereq. 25)	VI	T	101En	Mr. Hustrulid
	Lect.	VII, VIII, IX	T		
	Lab.	VI, VII, VIII	Th		
91,92,93f,w,s	Seminar (1 cred. each for 92 and 93; prof. agr. eng. only)	IX(f) I(w) IX(s)	2d Th ea. mo. 2d T ea. mo. 2d W ea. mo.	217En 107En 103En	Mr. Boss Mr. Boss Mr. Boss
101f-102w-103s	Advanced Drainage Problems (3 to 6 cred. per qtr.; sr.; prereq. 51)	Ar	Ar	Ar	Mr. Roe, Mr. Neal
111f-112w-113s	Farm Building Problems (3 to 6 cred. per qtr.; sr.; prereq. 67)	Ar	Ar	305En	Mr. White, Mr. Neubauer, Mr. Christopherson



No.	Title	Hour	Day	Bldg.	Instructor
121f-122w-123s	Farm Power and Machinery Problems (3 to 6 cred. per qtr.; jr., sr.; prereq. 126)	Ar	Ar	Ar	Mr. Schwantes, Mr. Hustrulid
126w	Selection and Management of Agricultural Machinery (3 cred.; jr., sr.; prereq. 14, 71, Agr. Econ. 103)	III	MW	103En	Mr. Schwantes
	Lect.	3 hrs. ar.			
	Lab.				

## AGRONOMY AND PLANT GENETICS

### *Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f,s	General Farm Crops (3 cred.; no prereq.)	IV	MWF	204So	Mr. Johnson
21w	Grain Crops (4 cred.; soph., jr., sr.; prereq. 1)	VI, VII	MWF	102Ad	Mr. Wilson
22s	Grain and Hay Grading (3 cred.; soph., jr., sr.; prereq. 1)	I, II	MWF	100Ad	Mr. Wilson
23f	Forage Crops (4 cred.; soph., jr., sr.; prereq. 1)	VI, VII	MWF	100Ad	Mr. Arny
31f,w	Principles of Genetics (4 cred.; soph., jr., sr.)	I	TThS	102Ad	Mr. Immer, Mr. Anderson, Mr. Murphy
	Lect.	Ar	Ar		
	Lab.				

### *Junior and Senior Courses*

124s	Problems in Farm Crops (3 cred.; jr., sr.; prereq. 1, 31, and at least two courses from groups 21, 23, 132, 134. Seniors and special students may register in course with approval of instructor)	III	MWF	100Ad	Mr. Wilson
126f	Crop Judging (3 cred.; jr., sr.; prereq. 22)	III	TThS	202So	Mr. Wilson
		IV	TS		
132w	Farm Crops Plant Breeding (4 cred.; jr., sr.; prereq. 31)	VI, VII, VIII	TTh	102Ad	Mr. Johnson
133s	Pasture Crops and Management (3 cred.; jr., sr.; prereq. 23)	IV	MWF	100Ad	Mr. Arny
134s	Seminar in Agronomy (2 cred.; sr.; prereq. 9 cred.)	Ar	Ar	Sem.Ag.	Staff

## ANIMAL AND POULTRY HUSBANDRY

### ANIMAL HUSBANDRY

#### *Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w	Market Livestock Production (6 cred.; no prereq.)	I, II	MWF	CSt	Mr. Peters, Mr. Harvey
1w-2s	Market Livestock Production (Same as 1f-2w)	I, II	TThS	CSt	Mr. Ferrin, Mr. Harvey
1s-2f	Market Livestock Production (Same as 1f-2w)	I, II	MWF	CSt	Mr. Harvey
	1s	I, II	TThS	CSt	Mr. Johnson
	2f	I, II			
3f-4w	Breeds of Livestock (6 cred.; soph., jr., sr.; prereq. 1-2)	III, IV	TS	WSt	Mr. Ferrin, Mr. Winters
		III	Th		
5s	Livestock Judging (3 cred.; soph., jr., sr.; prereq. 3-4)	III, IV	MWF	CSt	Mr. Harvey

*Junior and Senior Courses*

No.	Title	Hour	Day	Bldg.	Instructor
50s	Fundamentals of Livestock Production (3 cred.; jr., sr. in forestry or prof. agr. eng. only; no prereq.)				
	For.	II	MWF	3St	Mr. Ferrin
	Prof. agr. eng.	I	TThS	3St	Mr. Ferrin
51w	Meat Selection (3 cred.; jr., sr.; prereq. 1-2)				
		VI, VII, VIII	WF	MS	Mr. Anderson
52s	Meats (3 cred.; jr., sr.; prereq. 1-2, 51)				
		VI, VII, VIII	TTh	MS	Mr. Anderson
53f	Advanced Meats (3 cred.; jr., sr.; prereq. 52)				
		VI, VII, VIII	TTh	MS	Mr. Anderson
54w	Utilization of Meats (3 cred.; jr., sr. home econ. students; no prereq.)				
		III	ThS	MS	Mr. Anderson
		III, IV	T		
56f-57w	Livestock Feeding (6 cred.; jr., sr.; prereq. 1-2)				
		III	MWF	3St	Mr. Ferrin
101f	Advanced Stock Judging (3 cred.; jr., sr.; prereq. 5)				
		VI, VII	MWF	CSt	Mr. Harvey
107s	Meat Problems (3 cred.; jr., sr.; prereq. 53)				
	Lect.	IV	TS	MS	Mr. Anderson
	Lab.	VI, VII, VIII	F	MS	
108s	Seminar (3 cred.; jr., sr.; prereq. 3-4)				
		II	TThS	3St	Mr. Peters
112w	Animal Breeding (3 cred.; jr., sr.; prereq. Agron. 31)				
		IV	MWF	3St	Mr. Winters
113s	Livestock Management (3 cred.; jr., sr.; prereq. 3-4)				
		III	MWF	3St	Mr. Peters
115f	The Marketing of Livestock (3 cred.; jr., sr.; prereq. 3-4)				
		II	TThS	3St	Mr. Peters

POULTRY HUSBANDRY

*Freshman and Sophomore Courses*

1w	Poultry Production (3 cred.; soph.; no prereq.)				
		IV	MWF	102Ve	Mr. Sloan
2w	Poultry Judging (3 cred.; prereq. 1 or parallel)				
		VII, VIII	TTh	102Ve	Mr. Canfield

*Junior and Senior Courses*

50w,s	Poultry Problems (2 to 6 cred.; jr., sr.; prereq. 6 cred. in poultry husbandry)				
		Ar	Ar	Ar	Mr. Sloan
51s	Incubating, Brooding, and Breeding (4 cred.; jr., sr.; prereq. 1, Agron. 31)				
		III	MWF	102Ve	Mr. Sloan
52f	Advanced Poultry Judging (3 cred.; jr., sr.; prereq. 2)				
		VII, VIII	TTh	102Ve	Mr. Canfield
103f	Poultry Feeding and Management (3 cred.; jr., sr.; prereq. 2, Agr. Biochem. 6)				
		IV	MWF	103Ve	Mr. Sloan

ARCHITECTURE

See program of the College of Science, Literature, and the Arts.

BACTERIOLOGY AND IMMUNOLOGY

MEDICAL SCHOOL

See program of the College of Science, Literature, and the Arts.

## PROGRAM

## BEEKEEPING

See Entomology and Economic Zoology, page 131.

## BOTANY

See program of the College of Science, Literature, and the Arts.

## CHILD WELFARE INSTITUTE

See program of the College of Science, Literature, and the Arts.

## DAIRY HUSBANDRY

*Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f,s	Elements of Dairying (5 cred.; prereq. entrance credit in chem. or Inorg. Chem. 1 or 9) (Limited to 75)	III	MTWThF	100HH	Mr. Combs
2w	Dairy Bacteriology (3 or 5 cred.; 3 cred. for lecture, 2 cred. for lab.; soph., jr., sr.; prereq. Bact. 41) (Lecture taken separately only on permission of instructor)	VI	MWF	210HH	Mr. Macy
	Lect.	VI	MWF	210HH	Mr. Macy
	Lab.	VII-VIII	MWF	212HH	Mr. Olson
3f	Testing Dairy Products (1 cred.; prereq. 1)	VII, VIII	M	210HH	Mr. Olson
4s	Dairy Products Practice (3 cred.; soph., jr., sr.; prereq. 1)	Ar	Ar	Ar	Mr. Combs
9s	Dairy Cattle Judging (1 cred.; soph., jr., sr.; no prereq.)	VI, VII, VIII	F	DB	Mr. Allen
10s	Dairy Products Judging (1 cred.; soph., jr., sr.; prereq. 1, 2)	Ar	Ar	20HH	Mr. Coulter

*Junior and Senior Courses*

51s	Market Milk (3 cred.; jr., sr.; prereq. 1, 2)	IV	MW	210HH	Mr. Macy
		VI, VII, VIII	Th		
101f	Milk Production (5 cred.; jr., sr.; prereq. 1)	IV	MTWFS	210HH	Mr. Fitch
103w	Dairy Stock Feeding (3 cred.; sr.; prereq. 101, Agr. Biochem. 6) (Only 2 credits allowed to those who have completed An. Husb. 56-57)	III	MWF	210HH	Mr. Fitch
104f	Dairy Stock Selection (2 cred.; jr., sr.; prereq. 9, 101 or parallel)	VI, VII, VIII	TTh	210HH	Mr. Allen
105f	Seminar I (1 cred.; sr.; prereq. 3 courses in dairy husbandry)	II	S	214HH	Mr. Fitch, Mr. Macy
106w	Seminar II (1 cred.; sr.; prereq. 105)	II	S	214HH	Mr. Fitch, Mr. Macy
110w	Dairy Products III (3 cred.; jr., sr.; prereq. 1, 3)	IV	TS	210HH	Mr. Combs, Mr. Coulter
		VI, VII, VIII	T		
111f	Dairy Products I (3 cred.; jr., sr.; prereq. 1, 2, 3)	VI	MW	100HH	Mr. Combs, Mr. Coulter
		VI, VII, VIII	F		
112s	Dairy Products II (3 cred.; jr., sr.; prereq. 1, 2, 3)	IV	TS	210HH	Mr. Combs
		VI, VII, VIII	T	210HH	Mr. Coulter

No.	Title	Hour	Day	Bldg.	Instructor
113s	Technical Control (3 cred.; sr.; prereq. 2, 111 or 112)	I, II, III	TTh	210HH	Mr. Coulter
115s	Advanced Dairy Bacteriology (3 cred.; sr.; prereq. 2, 111 or 112)	Ar	Ar	Ar	Mr. Macy
116s	Milk Secretion (3 cred.; sr.; prereq. Physiol. 9 cred. and Agr. Biochem. 103)	I	MWF	214HH	Mr. Petersen
117s	Dairy Cattle Breeding (3 cred.; jr., sr.; prereq. 101, 104, Agron. 31)	VI, VII, VIII	MW	210HH	Mr. Petersen

For course in Dairy Chemistry see Agricultural Biochemistry 103, page 123.

### ENTOMOLOGY AND ECONOMIC ZOOLOGY

#### *Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor	
5f,w	Economic Entomology (5 cred.; soph., jr., sr.; prereq. Zool. 14-15 or equiv.)	VI, VII, VIII	MWF	302Ad	Mr. Ruggles	
13su	Field Zoology (1 cred.; no prereq.)	Given at Itasca Park			Mr. Mickel, Mr. Hodson	
14f,s-15w-16s	Principles of Beekeeping (2 to 6 cred.; no prereq.)	(14f-15w-16s) (14s)	IV III	MF MF	307Ad	Mr. Tanquary
17f,s-18w-19s	Beekeeping Practice (1 to 3 cred.; prereq. 14-15 or parallel)	II, III, IV or ar	W	307Ad	Mr. Tanquary, Mr. Haydak	
20f,w,s	Advanced Beekeeping (2 to 6 cred.; prereq. 14 to 19 and 5 cred. in ent.)	Ar	Ar	Ar	Mr. Tanquary	
49s	Introductory Entomology (3 cred.; fr., soph.; prereq. Zool. 14-15 or equiv.)	VI, VII, VIII	TTh	302Ad	Mr. Mickel	

#### *Junior and Senior Courses*

51f*§	Introductory Parasitology (5 cred.; jr., sr.; prereq. Zool. 14-15 or equiv.) (Sections limited. Written permission must be obtained from the Junior College office, 106 Folwell Hall)	VI, VII, VIII	MWF	208Z	Mr. Riley	
52w*§	Introductory Entomology (5 cred.; jr., sr.; prereq. Zool. 14-15 or equiv.) (Sections limited to 20 each)	Lect. Lab. Sec. 1 2	VI VII, VIII VI, VII, VIII	MWF MWF TTh	211Z 402Z 402Z	Mr. Mickel
56f,w	Forest Entomology (3 cred.; jr., sr.; prereq. Zool. 14-15 or equiv.) (Sections limited to 50)	VI, VII, VIII	WF	307Ad	Mr. Hodson	
61s	Forest Zoology (3 cred.; jr., sr.; prereq. Zool. 14-15 or equiv.)	Given at Cloquet			Mr. Hatfield	
62su	Wildlife Conservation Principles and Administration (3 cred.; jr., sr.; prereq. Zool. 1-2-3 or equiv.) (Formerly Course 69)	Given at Itasca Park			Mr. Swanson	
64w	Economic Vertebrate Zoology (3 cred.; jr., sr.; prereq. Zool. 1-2-3)	I	MWF	301Ad	Mr. Swanson	
114s	Apiculture (3 cred.; jr., sr.; prereq. 9 cred. in beekeeping, 9 cred. in entomology)	I	MW	307Ad	Mr. Tanquary, Mr. Haydak	
117f-118w-119s*	General Ecology (9 cred.; jr., sr.; prereq. 15 cred. in zool. or ent.)	VI, VII, VIII	TTh	401Z	Mr. Eddy, Mr. Hodson	

\* Offered on the Minneapolis campus.

§ Open to sophomores on petition.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
120s	General Ecology of Insects (3 cred.; jr., sr.; alternative to 119s, or both may be taken; prereq. 117f-118w)	VI, VII, VIII	TTh	307Ad	Mr. Hodson
125f-126w-127s*	Advanced General Entomology (9 cred.; jr., sr.; prereq. 15 cred. in zool. or ent.)	I	TTh	208Z	Mr. Mickel
	Lect.	I, II, III	S	402Z	
139f-140w	Histology and Development of Insects (9 cred.; jr., sr.; prereq. 125-126-127 or equiv.)	Ar	Ar		Mr. Riley
141f-142w	Insects in Relation to Plant Diseases (6 cred.; jr., sr.; prereq. 8 cred. in ent. or plant path.)	III, IV	TThS	302Ad	Mr. Leach, Mr. Granovsky
144w-145s-146s*	Animal Parasites and Parasitism (3 to 9 cred.; jr., sr.; prereq. Zool. 9 cred.)	VI, VII, VIII	TTh	208Z	Mr. Riley
150s	Introduction to Aphidology (3 cred.)	Ar	Ar	Ar	Mr. Granovsky
161f	Waterfowl and Upland Game Birds (3 cred.; jr., sr.; prereq. Zool. 46-47 or equiv.)	III, IV	TS	301Ad	Mr. Swanson
		III	Th		
163f	Mammalogy (3 cred.; jr., sr.; prereq. Zool. 22)	IV	MWF	301Ad	Mr. Hatfield
	(Formerly Course 63)				
165w	Game Management (3 cred.; jr., sr.; prereq. 62, 64, 163)	VI, VII, VIII	TTh	307Ad	Mr. Swanson
	(Formerly Course 66)				
166s	Methods in Field Zoology (3 cred.; jr., sr.; prereq. 163, 165)	VI, VII, VIII	TTh	301Ad	Mr. Swanson
175f	Insecticides and Their Action (4 cred.; jr., sr.; prereq. inorg. and org. chem.)	I	MWF	302Ad	Mr. Shepard
		Lab. hrs. ar.			
176w-177s	Advanced Economic Entomology (6 cred.; sr.; prereq. 5 or 56, Zool. 117-118-119 or equiv.)	I	MWF	302Ad	Mr. Ruggles
197f,w,s,us	Introduction to Research (5 or more cred.; sr.; prereq. work as prescribed by the division)	Ar	Ar	Ar	Mr. Riley, Mr. Ruggles, Mr. Tanquary, Mr. Granovsky, Mr. Mickel, Mr. Shepard, Mr. Swanson

## FORESTRY

*Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f	General Forestry (3 cred.; no prereq.)	III	TThS	122GH	Mr. Cheyney
2su	Field Dendrology (1 cred.; no prereq.)	Given at Itasca Park			
3w	Dendrology (3 cred.; no prereq.)	III	TThS	122GH	Mr. Schmitz
4s	Dendrology (4 cred.; no prereq.)	III	MWF	122GH	Mr. Schmitz
	Lect.	Ar	Ar		Mr. Rees
	Lab.				
5su	Field Silviculture (2 cred.; no prereq.)	Given at Itasca Park			Mr. Cheyney
6su	Field Mensuration (1 cred.; no prereq.)	Given at Itasca Park			Mr. Brown

\* Offered on the Minneapolis campus.

No.	Title	Hour	Day	Bldg.	Instructor
7f-8w-11s	Forest Mensuration (9 cred.; all; prereq. 6, Math. 1 and 6)				
	Lect.	IV	MW	122GH	Mr. Brown
	Lab. Sec. 1	VI, VII, VIII	M	218GH	
	2	VI, VII, VIII	W	218GH	
	3	II, III, IV	S	218GH	
9su	Camp Management (1 cred.; no prereq.)				
	Given at Itasca Park				
10w	Farm Forestry (3 cred.; no prereq.; not open to students majoring in forestry)	VI	MWF	208GH	Mr. Cheyney
20w	Grazing (3 cred.; soph., jr., sr.; no prereq.)	II	TThS	207GH	Mr. Allison
29f	Sawmill and Woodworking Machinery (3 cred.; soph., jr., sr.)	IV	MWF	208GH	Mr. Hansen
48s	Forest Products (3 cred.; no prereq.)	I	MWF	207GH	Mr. Bailey
49s	House and Furniture Woods (2 cred.; soph., jr., sr.; no prereq.; not open to students majoring in forestry)	III, IV	TS	208GH	Mr. Rees

*Junior and Senior Courses*

53f-54w	Wood Structure and Identification (6 cred.; jr., sr.; prereq. 3-4)				
	Sec. 1	VI, VII, VIII	WF	201GH	Mr. Rees
	2	VI, VII, VIII	TTh		
57f	Wood Utilization (3 cred.; sr.; prereq. 53-54)	II	MWF	207GH	Mr. Bailey
58w	Lumber Merchandising and Grading (3 cred.; sr.; prereq. 53-54, 152)	VI	MWF	Ar	Mr. Bailey
62f-63w	Forest Problems (4 cred.; sr. class)	IV	TS	207GH	Mr. Schmitz
101w	Advanced Dendrology (3 cred.; jr., sr.; prereq. 3, 4)	I	MWF	207GH	Mr. Rees
111s	Advanced Forest Mensuration (3 cred.; sr.; prereq. 11)				
	Lect.	III	MWF	207GH	Mr. Brown
	Lab.	VI, VII, VIII	F	218GH	
113f	Wood Pulp and Paper (3 cred.; jr., sr.; prereq. 53-54, Chem. 3 or 10)	III	MWF	208GH	Mr. Bailey
114f	Mechanical and Physical Properties of Wood (3 cred.; jr., sr.; prereq. 53-54, Math. 7)	I	TThS	208GH	Mr. Rees
115w-116s	Mechanical and Physical Properties of Wood (6 cred.; jr., sr.; prereq. 114)				
	115w	I, II	TThS	15GH	Mr. Rees
	116s	I, II	MWF	15GH	Mr. Rees
119s	Advanced Wood Structure I (4 cred.; sr.; prereq. 53-54)				
	Lect.	IX	M	208GH	Mr. Bailey
	Lab.	VI, VII, VIII	MWF	201GH	
125s	Wood Preservation (3 cred.; jr., sr.; prereq. 53-54)	III	MWF	208GH	Mr. Bailey
126f	Silvics (3 cred.; jr., sr.; no prereq.)	III	MWF	207GH	Mr. Cheyney
127w	Silviculture (3 cred.; jr., sr.; prereq. 126)	III	MWF	207GH	Mr. Cheyney
128s	Silviculture Laboratory (6 cred.; jr., sr.; prereq. 127)				
	Given at Cloquet				
129f,w,s	American Silvicultural Practice (3 cred.; jr., sr.; prereq. 127)	Ar	Ar	Ar	Mr. Cheyney
130f	Forest Valuation (5 cred.; jr., sr.)	I	MTWThF	207GH	Mr. Allison
131w	Forest Policy and Administration (5 cred.; jr., sr.)	IV	MTWFS	207GH	Mr. Allison
132s	Forest Regulation Laboratory (6 cred.; jr., sr.; prereq. 130)				
	Given at Cloquet				
					Mr. Allison

No.	Title	Hour	Day	Bldg.	Instructor
136f	Forest Economics (3 cred.; jr., sr.; prereq. 130, Agr. Econ. 2)	II	MWF	208GH	Mr. Allison
137w	Seeding and Planting (3 cred.; jr., sr.; prereq. 126 or 127)	III	TThS	208GH	Mr. Cheyney
140f	Forest Working Plans (3 cred.; sr.; prereq. 128, 132)	III	TThS	207GH	Mr. Allison
141f	Principles of Silvics (3 cred.; jr., sr.; prereq. 126)	IV	MWF	207GH	Mr. Cheyney
142s	Wood Chemistry (3 cred.; jr., sr.; prereq. Org. Chem. 52, For. 54)	II	TThS	208GH	Mr. Bailey
143s	Forest Recreation (3 cred.; jr., sr.)	III	TThS	207GH	Ar
151f,w,s	Logging (3 cred.; jr., sr.) (Formerly Course 51)	I	MWF	208GH	Mr. Brown
152s	Wood Seasoning (3 cred.; jr., sr.; prereq. 53-54) (Formerly Course 52)	I	TThS	208GH	Mr. Rees
155w	Forest Protection (3 cred.; jr., sr.; prereq. 127) (Formerly Course 55)	III	MWF	208GH	Mr. Lorenz
220f-221w-222s	Major Report (2 cred. per qtr.; grad.)	Ar	Ar	Ar	Mr. Schmitz, Mr. Allison, Mr. Cheyney
223f-224w-225s	Literature Seminar (1 cred. per qtr.; grad.)	Ar	Ar	Ar	Mr. Schmitz

### FRESHMAN ASSEMBLY

During the fall quarter all freshmen are required to attend the assembly fourth hour on Tuesdays, in the Auditorium, Administration Building, University Farm. See the Official Daily Bulletin in the *Minnesota Daily* for any change of place of meeting and further announcements.

### HOME ECONOMICS

#### *Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f	Choice and Care of Clothing (4 cred.; fr.; no prereq.) (Limited to 60)				
	Sec. 1	II	MTWTh	313HE	Miss Brew
	2 (Open only to 1st qtr. fr.)	III	MTWTh	313HE	Miss Brew
1w	Choice and Care of Clothing (Same as 1f) (Limited to 60)	III	MTWTh	313HE	Miss Brew
1s	Choice and Care of Clothing (Same as 1f) (Limited to 60)	I	MTWF	313HE	Miss Brew
2f	Introduction to Textiles (3 cred.; all; no prereq.) (Limited to 24) (For S.L.&A., Bus. Adm., and Art Ed.)	VI, VII	MWF	307HE	Miss Brew
2s	Introduction to Textiles (Same as 2f) (Limited to 24)	VI, VII	MWF	307HE	Miss Brew
3f	Clothing Construction A (3 cred.; soph.; prereq. 1) (Limited to 24)	VI, VII, VIII	TTh	305HE	Miss Gorham
3w	Clothing Construction A (Same as 3f) (Limited to 24)	VI, VII, VIII	TTh	305HE	Miss Gorham
3s	Clothing Construction A (Same as 3f) (Sections limited to 24 each)				
	Sec. 1	III, IV	MWF	305HE	Miss Gorham
	2	VI, VII, VIII	TTh	305HE	Miss H. Johnson
4f	Clothing Construction B (3 cred.; soph., jr.; prereq. 3, 21, and home pract. in clothing construction) (Limited to 24)	III, IV	MWF	304HE	Miss Gorham

No.	Title	Hour	Day	Bldg.	Instructor
4w	Clothing Construction B (Same as 4f) (Limited to 24)	I, II	MWF	304HE	Miss Gorham
4s	Clothing Construction B (Same as 4f) (Limited to 24)	I, II	MWF	304HE	Miss Gorham
10f	Introduction to Home Economics (2 cred.; 1st qtr. fr. only; no prereq.)	IV	WF	203HE	Miss McNeal, Miss Seibert, and others
15w	Personal Relationships (2 cred.; fr.; no prereq.) (Limited to 40)	IV	MW	203HE	Miss Powell
15s	Personal Relationships (Same as 15w) (Limited to 40)				
	Sec. 1	IV	MW	213HE	Miss Powell
	2	VI	TTh	203HE	Miss Powell
20f,w	Introduction to Related Art (4 cred.; fr.; no prereq.) (Limited to 60)	III	MTWTh	203HE	Miss H. Gold- stein, Miss V. Goldstein
20s	Introduction to Related Art (Same as 20f,w) (Sections limited to 60 each)				
	Sec. 1	II	MTWTh	203HE	Miss Segolson
	2	IV	MTWF	203HE	Miss Segolson
21f	Color and Design I (3 cred.; prereq. 20) (Sections limited to 24 each)				
	Sec. 1	I, II	MWF	402HE	Mrs. Weismann
	2	I, II	TThS	402HE	Mrs. Weismann
21w	Color and Design I (Same as 21f) (Limited to 24)	VI, VII	MWF	402HE	Miss H. Gold- stein
21s	Color and Design I (Same as 21f) (Limited to 24)	I, II	MWF	402HE	Mrs. Weismann
22f	Color and Design II (3 cred.; all; prereq. 21) (Limited to 24)	VI, VII	MWF	402HE	Miss V. Gold- stein
22w	Color and Design II (Same as 22f) (Sections limited to 24 each)				
	Sec. 1	III, IV	MWF	402HE	Miss V. Gold- stein
	2	VI, VII, VIII	TTh	402HE	Miss V. Gold- stein
22s	Color and Design II (Same as 22f) (Limited to 24)	VI, VII	MWF	112HE	Miss Segolson
23w	Advanced Design (3 cred.; soph., jr.; prereq. 22) (Limited to 24)	VI, VII	TTh	401HE	Mrs. Weismann
24f	Problems in Home Planning and Furnishing (5 cred.; soph.; prereq. 20)	III, IV	MTWF	401HE	Miss H. Gold- stein
24s	Problems in Home Planning and Furnishing (Same as 24f) (Limited to 24)	VI, VII, VIII	MW	401HE	Miss H. Gold- stein
25s	Design Applied to Crafts (3 cred.; prereq. 22) (Limited to 24)	III, IV	TS	110HE	Mrs. Weismann
		III	Th		
26f	Decorative Needlework and Other Crafts (3 cred.; prereq. 22) (Limited to 24)	VI, VII	TTh	402HE	Mrs. Weismann
30s*§	Introduction to Nutrition (2 cred.; no prereq.; not open to home econ. students)	VI	TTh	133Ph	Miss Biester
31f	Introduction to Nutrition (3 cred.; fr.; no prereq.) (Sections limited to 60 each)				
	Sec. 1	I	MWF	205HE	Miss Hunt
	2	II	MWF	213HE	Miss Biester
31w	Introduction to Nutrition (Same as 31f) (Limited to 60)	IV	MWF	213HE	Miss Hunt
31s	Introduction to Nutrition (Same as 31f) (Limited to 60)	VI	MWF	213HE	Miss Hunt

\* Offered on the Minneapolis campus.

§ Intended for students in Science, Literature, and the Arts. Open to students in Home Economics only by special permission of chief of division.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
33f	Nutrition I (4 cred.; soph., jr., sr.; prereq. Agr. Biochem. 4, Physiol. 4 or 51) (Limited to 24)				
	Lect.	III	MWF	211,213HE	
	Lab.	VI, VII, VIII	T		Miss Donelson
34f	Nutrition Problems (4 cred.; 3rd qtr. soph., jr., sr.; prereq. biol.) (Limited to 60)			31, 40, physiol. or human	
		I	TWThF	313HE	Miss Biester
40f,s	Food Preparation (5 cred.; prereq. 2 qtrs. chem.) (Sections open to freshmen)				
	Sec. 1	III, IV	MTWF	209HE	Miss G. Johnson
		III	Th		
	2	VI, VII	MTWThF	209HE	
40w	Food Preparation (Same as 40f,s) (Sections limited to 20 each)				
	Sec. 1	I, II	MTWThF	209HE	
	2	VI, VII	MTWThF	209HE	
41f,w	Food Management and Marketing (5 cred.; soph., jr., sr.; prereq. to 20)			31, 40) (Limited	
		III, IV	MTWF	207HE	Miss Kern
41s	Food Management and Marketing (Same as 41f)				
	Sec. 1	III, IV	MTWF	207HE	Miss Kern
		V	WF		
	2	VII, VIII	MTWF	207HE	Miss Kern
		IX	MW		
42	Demonstrations (1 cred.; open only to sr.)				
		VI, VII, VIII	W	Ar	Ar
43	Food Service for Special Occasions (1 cred.; open only to sr.)				
		Ar	Ar	Ar	Ar
44	Camp Cookery	Ar	Ar	Ar	Ar

*Junior and Senior Courses*

50f	Textiles (3 cred.; jr., sr.; prereq. 1) (Limited to 24)				
		I, II	MWF	307HE	
50w	Textiles (Same as 50f) (Limited to 24)				
		I, II	MWF	307HE	
53f	Advanced Clothing (3 cred.; jr., sr.; prereq. 4, 22, 50) (Limited to 24)				
		I, II	MWF	305HE	Miss Carlotta Brown, Miss Gorham
53w	Advanced Clothing (Same as 53f) (Limited to 24)				
		VI, VII	MWF	305HE	Miss Carlotta Brown, Miss Gorham
53s	Advanced Clothing (Same as 53f) (Limited to 24)				
		VII, VIII	MWF	305HE	Miss Carlotta Brown, Miss Gorham
54w	Problems in Clothing Construction (3 cred.; jr., sr.; prereq. 53 or permission of instructor) (Formerly Course 52)				
		III, IV	MWF	304HE	Miss Gorham
55f	Related Art Problems (3 cred.; jr., sr.; prereq. 22 or 56) (Limited to 24)				
		I, II	TThS	401HE	Miss V. Goldstein
55w	Related Art Problems (Same as 55f) (Limited to 24)				
		VI, VII	MWF	401HE	Mrs. Weismann
55s	Related Art Problems (Same as 55f) (Limited to 24)				
		I, II	MWF	401HE	Mrs. Weismann
56Af-56Bs	Applications of Color and Design (3 cred. each; no prereq.; courses must be taken in the sequence indicated; not open to home econ. students. Written permission must be obtained from the Junior College office, 106 Folwell Hall) (Limited to 24)				
	56Af	VI, VII, VIII	TTh	401HE	Miss H. Goldstein
	56Bs	VI, VII	MWF	402HE	Miss H. Goldstein

No.	Title	Hour	Day	Bldg.	Instructor
61f,w	Quantity Cookery (4 cred.; jr., sr.; prereq. 40, 41) (Limited to 12)				
	Lect.	I	S	313HE	Miss King
	Lab.	I, II, III	TTh	DH	Miss King
61s	Quantity Cookery (Same as 61f,s) (Sections limited to 12 each)				
	Lect.	I	S	313HE	Miss King
	Lab. Sec. 1	I, II, III	TTh	DH	
	2	VI, VII, VIII	MW	DH	
62f,w,s	Institution Experience A (3 cred.; jr., sr.; prereq. 40, 41) (Limited to 10)				
	Lect.	IV	M	DH	Miss Dunning
	Lab.	IV, V	WF		
63f,w,s	Institution Experience B (3 cred.; jr., sr.; prereq. 61, 62) (Sections limited to 6 each) (Open only to institution management majors)				
	Lab. Sec. 1	I, II, III	MW	DH	Miss Dunning
	2	VI, VII, VIII	TTh		Miss King
64f	Institution Buying (4 cred.; jr., sr.; prereq. 61 or parallel, 62 or parallel)				
	Lect.	I	MWF	213HE	Miss King
	Lab.	VI, VII, VIII	F		
70s	Advanced Food Preparation (3 cred.; prereq. Agr. Biochem. 4, H.E. 40)				
		I, II, III	TTh	105HE	Miss Child
75f	Dietetics Laboratory (2 cred.; jr., sr.; prereq. 34 or 170) (Limited to 20)				
		I, II	TTh	107HE	Miss Hunt
75w	Dietetics Laboratory (Same as 75f) (Limited to 20)				
		I, II	MW	107HE	Miss Hunt
76s*	Nutrition (3 cred.; not open to home econ. students; permission of instructor) (Formerly Course 32)				
		III	TThS	114F	Miss Donelson
79s	Selected Problems for Dietitians (3 cred.; jr., sr.; prereq. 170 or equiv., home practice in foods)				
		II	MWF	213HE	Miss Biester
84f,w,s	Junior-Senior Problems (2 cred.; permission of instructor under whom student wishes to work)				
		Ar	Ar	Ar	Staff
85f,w	Home Management: Operation and Maintenance, Lectures (3 cred.; jr., sr.; prereq. 40, H.E.Ed. 90 or C.W. 40 or parallel)				
		VIII	MWF	203HE	Miss Studley
86f,w,s§	Home Management: Operation and Maintenance, Laboratory (4 cred.; jr., sr.; prereq. 85 or parallel, 40, 185 parallel, H.E.Ed. 90 or C.W. 40) (Sections limited to 12 each)				
	Sec. 1 1st half of quarter	I and	S	Home	Miss Studley
	2 2nd half of quarter	other hours		Mgt	Miss Powell
				House	
89s*	Home Management with Special Reference to Low Income Families (3 cred.; jr., sr.; not open to students in Home Economics) (S.L.&A., especially those preparing for social work)				
		III	MWF	125F	Miss Studley
98w	Home Economics Extension (3 cred.; sr.; prereq. H.E.Ed. 91 or parallel)				
		V	MW	213HE	Miss Newton, Miss Krost, and others
	Anyone taking this course must plan to spend 4 full days in the field.				
102f,s	Advanced Textiles (3 cred.; jr., sr.; prereq. 50, Agr. Biochem. 4, Agr. Econ. 3 or parallel) (Limited to 16)				
		VI, VII, VIII	TTh	307,311HE	Miss Phelps
107w	Textile Analysis (3 cred.; jr., sr.; prereq. 102, Agr. Biochem. 2)				
		VI, VII, VIII	MWF	311HE	Miss Phelps
115w	Clothing Economics (2 cred.; jr., sr.; prereq. 50, Agr. Econ. 3)				
		III	TTh	213HE	Miss Brew

\* Offered on the Minneapolis campus.

§ Students who register for H.E. 86, Section 1, will take H.E. 185 the last half of the quarter, and students who register for H.E. 86, Section 2, will take H.E. 185 the first half of the quarter.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
120f,w,s	Art History and Appreciation (3 cred.; open to Senior College and grad. students only)	VIII	MWF	313HE	Miss H. Goldstein, Miss V. Goldstein
121s	Textile Design (3 cred.; jr., sr.; prereq. 50, 55, 120)	VI, VII, VIII	TTh	402HE	Mrs. Weismann
122s	Advanced Interior Design (3 cred.; jr., sr.; prereq. 180, 120 or permission of instructor) (Limited to 20)	I, II	TThS	401HE	Miss V. Goldstein
125w	Advanced Costume Design (3 cred.; jr., sr.; prereq. 4 or 22; 26 recommended) (Limited to 20)	I, II	TThS	402HE	Miss H. Goldstein
142f,w	Experimental Cookery (3 cred.; jr., sr.; prereq. 40, Agr. Biochem. 4)	VI, VII, VIII	MW	107HE	Miss Child, Miss Noble
142s	Experimental Cookery (Same as 142f,w)	I, II, III	TTh	107HE	Miss Noble, Miss Satorius
146s	Special Food Problems (3 cred.; sr.; prereq. 142)	VI, VII, VIII	MW	107HE	Miss Noble
147s	Special Food Problems (5 cred.; sr.; prereq. 142)	VI, VII, VIII	MW	107HE	Miss Noble
163s	Institution Management Problems (3 cred.; sr.; prereq. 61, 62, 64 or parallel)	III	TTh	313HE	Miss Dunning
170f	Nutrition of the Family (3 cred.; jr., sr.; prereq. 31, 40, 3 cred.) (Limited to 35)	III, IV	S	DH	
170w	Nutrition of the Family (Same as 170f) (Limited to 35)	II	MWF	213HE	Miss Hunt
171w,s	Child Nutrition (3 cred.; jr., sr.; prereq. 170, H.E.Ed. 90 or C.W. 40) (Limited to 30)	I	MWF	313HE	Miss Donelson
	Lect.	III	MW	307HE	Miss Leichsenring
	Lab.	III*	F	Ar	Miss Donelson
		IV	Ar before completing registration		
173s	Nutrition in Disease (3 cred.; jr., sr.; prereq. 170, 175 also advised)	I	MWF	213HE	Miss Hunt
175w	Nutrition II (4 cred.; jr., sr.; prereq. 33) (Each lab. section limited to 24)	III	MWF	211HE	Miss Hunt
	Lect.	VI, VII, VIII	T	213HE	
176w	Advanced Nutrition (4 cred.; jr., sr.; prereq. 33, 175 or parallel) (Limited to 12)	II, III, IV	TS	313HE	Miss Biester
		II, III	Th	311HE	
177s	Digestion and Metabolism (3 cred.; jr., sr.; prereq. 175) (Limited to 15)	VI, VII, VIII	TTh	313HE	Miss Leichsenring
178f,w,s	Clinical Problems in Nutrition (2 cred.; jr., sr.; prereq. 75 or parallel) (Limited to 8)	V	T	313HE	Miss Hunt, Miss Donelson
	Lect.	V, VI, VII, VIII	Th	Ar	
179f	Readings in Nutrition (2 cred.; jr., sr.; prereq. 170) (Limited to 15)	III	TTh	313HE	Miss Donelson
179s	Readings in Nutrition (Same as 179f) (Limited to 15)	I	TTh	213HE	Miss Hunt

\* Offered on the Minneapolis campus.

No.	Title	Hour	Day	Bldg.	Instructor
180w	Home Planning and Furnishing (5 cred.; jr., sr.; prereq. 55; 120 recommended) (Limited to 24)	III, IV	MTWF	401HE	Miss H. Goldstein
180s	Home Planning and Furnishing (Same as 180w) (Limited to 24)	III, IV	MTWF	401HE	Miss V. Goldstein
185f,w§	Family Relationships (2 cred.; jr., sr.; prereq. 86 or parallel, H.E.Ed. 90 or C.W. 40)	VII	MWF	213HE	Miss Studley
	and 1 hr. ar.				
185s	Family Relationships (Same as 185f,w)	VI	MWF	203HE	
	and 1 hr. ar				
186s	Problems in Income Management (3 cred.; prereq. 85 or parallel, 86, 170 or equiv., Agr. Econ. 126 or parallel)	VII	MWF	203HE	Miss Studley
195s	Development of Home Economics (2 cred.; sr.; permission of instructor)	III	TTh	213HE	Miss McNeal

HOME ECONOMICS EDUCATION

See program of the College of Education.

HORTICULTURE

*Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
6f	Fruit Growing (3 cred.; no prereq.)	II	MWF	102Hr	Mr. Angelo
10s	Home Floriculture (3 cred.; no prereq.; not open to students with credit in Hort. 11 or 56)	III	MWF	8Hr	Mr. Longley
	1 extra lab. hr. ar.				
11s	Garden Flowers (3 cred. [2 cred. if Course 10 has been taken]; prereq. Bot. 10 cred. or equiv.) (Offered only in odd numbered years)	VI, VII, VIII	TTh	8Hr	Mr. Longley
12f	Commercial Floriculture, Fall Crops (3 cred.; prereq. Bot. 1 or equiv.)	VI, VII, VIII	T	8Hr	Mr. Longley
		VI, VII	Th		Mr. Sando
14s	Commercial Floriculture, Spring Crops (3 cred.; prereq. Bot. 1 or equiv.) (Offered only in even numbered years)	VI, VII, VIII	T	8Hr	Mr. Longley
		VI, VII	Th		Mr. Sando
21f	Plant Materials, Fall and Winter Aspects (3 cred.; prereq. Bot. 10 cred. or equiv.)	VI, VII, VIII	MW	8aHr	Mr. Longley
22s	Plant Materials, Spring and Summer Aspects (3 cred.; prereq. Bot. 10 cred. or equiv.)	VI, VII, VIII	MW	8aHr	Mr. Longley
24w	Principles of Landscape Design (3 cred.; prereq. 21 or 22, Draw. and Des. Geom. 41 or Agr. Eng. 3) (Formerly Course 74)	VI, VII, VIII	MW	107Hr	Mr. Longley
32s	Vegetable Growing (3 cred.; no prereq.) Lect.	II	MWF	102Hr	Mr. Krantz, Mr. Hutchins
40s	Horticultural Laboratory (2 cred.; prereq. Hort. 3 cred.)	VI, VII, VIII, IX	T	8Hr	Mr. Angelo, Mr. Hutchins

§ Students who register for H.E. 185, Section 1, will take H.E. 86 the last half of the quarter, and students who register for H.E. 185, Section 2, will take H.E. 86 the first half of the quarter.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
41f	Judging Horticultural Crops (2 cred.; soph., jr., sr.; prereq. 6 or 32) (Offered only in even numbered years)	VI, VII, VIII	T	8Hr	Mr. Angelo
<i>Junior and Senior Courses</i>					
56w	Plant Propagation (3 cred.; [2 cred. if Course 10 has been taken]; jr., sr.; prereq. Bot. 7 cred. or equiv.) (Offered only in even numbered years)	VI, VII, VIII	T	8Hr	Mr. Longley
		VI, VII	Th		Mr. Sando
107f	Orchard Management (3 cred.; jr., sr.; prereq. 6) (Offered only in even numbered years)	III	TTh	106Hr	Mr. Brierley
		VI, VII	Th		
110w	Horticultural Crop Breeding (3 cred.; jr., sr.; prereq. Agron. 31)	III	TThS	106Hr	Mr. Wilcox
111f	Systematic Pomology (3 cred.; jr., sr.; prereq. 6, Bot. 10 cred. or equiv.) (Offered only in odd numbered years)	VI, VII, VIII	TTh	106Hr	Mr. Brierley
121w	Small Fruit Culture (3 cred.; jr., sr.; prereq. 6 or 32, Bot. 10 cred. or equiv.)	I	MWF	106Hr	Mr. Brierley
135f	Potatoes (3 cred.; jr., sr.; prereq. 32, Bot. 10 cred. or equiv.)	Ar	Ar	Ar	Mr. Krantz
137w	Vegetable Crops (3 cred.; jr., sr.; prereq. 32, Bot. 10 cred. or equiv.)	Ar	Ar	Ar	Mr. Currence
153w	Conservatory Plants and Florists' Flowers (3 cred.; jr., sr.; prereq. Bot. 10 cred. or equiv.) (Offered only in odd numbered years)	VI, VII, VIII	T	8aHr	Mr. Longley
		VI, VII	Th		Mr. Sando
176s	Landscape Construction (3 cred.; sr.; prereq. 74) (Offered only in odd numbered years)	VI, VII, VIII, IX	F	107Hr	Mr. Longley
		1 hr. lect. ar.			
190f-191w-192s	Special Problems (2 to 4 cred. per qtr.; jr., sr.; prereq. instructor's permission)	Ar	Ar	Ar	Mr. Alderman and staff
193f-194w	Horticultural Seminar (1 cred. per qtr.; sr.; prereq. Hort. 9 cred.)	IX	W	106Hr	Horticultural staff

For course in Food Plants of Game Animals see Plant Pathology 53, page 141.

## INORGANIC CHEMISTRY

## INSTITUTE OF TECHNOLOGY

See program of the College of Science, Literature, and the Arts.

## MATHEMATICS

See program of the College of Science, Literature, and the Arts.

## MILITARY SCIENCE AND TACTICS

See program of Military Science and Tactics, page 12.

## PHYSICAL EDUCATION FOR MEN

See program of Physical Education for Men, page 14.

## PHYSICAL EDUCATION FOR WOMEN

See program of Physical Education for Women, page 17.

PHYSIOLOGY

See Physiology, College of Science, Literature, and the Arts, page 77.

PLANT PATHOLOGY AND BOTANY

*Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f	Plant Pathology (5 cred.; soph., jr., sr.; prereq. 10 cred. in plant sciences of which at least 7 shall be in botany. Not open to students who have taken Course 10)	VII, VIII, IX	MWF	106,107PP	Mr. Stakman, Mr. Tervet
1s	Plant Pathology (See 1f)	VII, VIII, IX	MWF	106,107PP	Mr. Moore, Mr. Eide
7w,8s¶	Weeds and Grasses (6 cred.; fr., soph., jr., sr.; prereq. Bot. 7 cred.)	III IV	TThS TS	100PP 100PP	Mr. Larson
9f	Weeds and Seed Testing (3 cred.; fr., soph., jr., sr.; prereq. Bot. 7 cred.)	III IV	TThS TS	100PP 100PP	Mr. Larson
10w	Forest Pathology (5 cred.; soph., jr., sr.; prereq. Bot. 9 cred.) (Not open to those who have completed Course 1)	VII, VIII, IX	MWF	106,107PP	Mr. C. Christensen
10s	Forest Pathology (Same as 10w)	I I, II	MWF TThS	107PP 106,107PP	Mr. C. Christensen

*Junior and Senior Courses*

51f,w,s	Special Problems in Forest Pathology (2 to 5 cred.; jr., sr.; prereq. 10)	Ar	Ar	Ar	Mr. C. Christensen
52w	Seed Problems (3 cred.; jr., sr.; prereq. 9)	Ar	Ar	Ar	Mr. Larson
53s	Food Plants of Game Animals (3 cred.; jr., sr.; prereq. one yr. of botany and one yr. of zool. or equiv.)	IV	MWF	100PP	Mr. Larson, Mr. Angelo
105f-106w-107s	Mycology (3 or 5 cred. per qtr.; jr., sr.; prereq. 1 or 10 or equiv.)	Ar	Ar	302PP	Miss Dossdall
110w	Principles of Pathology (3 cred.; jr., sr.; prereq. 1 or 10, Bact. 41)	III, IV	MWF	106,107PP	Mr. Stakman, Mr. Eide
111w	Diseases of Field Crops (3 cred.; jr., sr.; prereq. 1 or 10)	VI, VII	MWF	106,107PP	Mr. J. J. Christensen
112s	Diseases of Fruit and Vegetable Crops (3 cred.; jr., sr.; prereq. 1 or 10)	III, IV	MWF	107PP	Mr. Leach, Mr. Eide
114w	Advanced Forest Pathology (3 cred.; jr., sr.; prereq. 1 or 10)	Ar	Ar	Ar	Mr. Stakman, Mr. C. Christensen
118f	Bacterial Diseases of Plants (3 cred.; jr., sr.; prereq. 1 or 10)	Ar	Ar	106,107PP	Mr. Leach

¶ May be started winter or spring and either quarter may be taken separately for credit.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
119s	Principles of Plant Disease Control (3 cred.; jr., sr.; prereq. 1 or 10)	VI, VII, VIII	TTh	107PP	Mr. Leach, Mr. Eide, Mr. Moore
141f-142w	Insects in Relation to Plant Disease (6 cred.; jr., sr.; prereq. 8 cred. in ent. or plant path.)	III, IV	TS	302Ad	Mr. Leach, Mr. Granovsky
143f	Methods (3 cred.; jr., sr.; prereq. 1 or 10)	III Ar	Th Ar	Ar	Miss Hart, Mr. Moore
160f or w	Plant Histochemistry (3 cred.; sr.; prereq. bot. and elem. chem.)	Ar	Ar	Ar	Mr. Harvey, Mr. Landon
161f	Transport, Storage, and Ripening of Fruits and Vegetables (3 cred.; sr.; prereq. Plant Physiol. 3 cred.)	Ar	Ar	Ar	Mr. Harvey
162w	Physiological Relations of Crop Plants to Temperature (3 cred.; sr.)	Ar	Ar	206PP	Mr. Harvey
163s	Applied Plant Physiology (3 cred.; jr., sr.; prereq. Plant Physiol. 3 cred., Org. Chem. 5 cred.)	Ar	Ar	206PP	Mr. Harvey, Mr. Landon

## POLITICAL SCIENCE

See program of the College of Science, Literature, and the Arts.

## PREVENTIVE MEDICINE AND PUBLIC HEALTH

## MEDICAL SCHOOL

See program of the College of Science, Literature, and the Arts.

## PSYCHOLOGY

See program of the College of Science, Literature, and the Arts.

## PUBLICATIONS AND RURAL JOURNALISM

No.	Title	Hour	Day	Bldg.	Instructor
50f-51w-52s	Agricultural Journalism (9 cred.; jr., sr.; prereq. Journ. 13-14-15, 51-52, and permission of instructor)	VI	MWF	Ar	
53w	Publicity (3 cred.; jr., sr.; prereq. Rhet. 1, 2, 3)	I	TThS	Ar	

For additional courses see under Journalism, College of Science, Literature, and the Arts, page 59.

## RHETORIC

*Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f	Rhetoric I (3 cred.; no prereq.) (Sections limited to 35 each)				
	Sec. 1	II	MWF	216En	Mr. Randel
	2	II	TThS	310En	Mr. Randel
	3	III	TThS	308En	Miss Thurston
	4	I	TThS	312En	Mr. Randel
	5	I	MWF	310En	Mr. Brown
	6	IV	MWF	312En	Mr. Lansing
	7	III	MWF	308En	Miss Thurston
	8	II	TThS	105En	Mr. Nichols

No.	Title	Hour	Day	Bldg.	Instructor
1w	Rhetoric I (Same as 1f) (Limited to 35)	I	MWF	310En	Mr. Brown
1s	Rhetoric I (Same as 1f)	II	TThS	306En	Mr. Randel
2f	Rhetoric II (3 cred.; prereq. 1 or exemption on basis of placement test) (Sections limited to 35 each)	II	MWF	308En	Miss Thurston
	Sec. 1	III	MWF	105En	Mr. Randel
	2	III	MWF	310En	Mr. Brown
	3	II	TThS	307En	Mr. Lansing
	4	II	MWF	310En	Mr. Brown
	2	II	TThS	310En	Mr. Brown
	3	III	MWF	310En	Mr. Randel
	4	I	MWF	308En	Mr. Randel
	5	II	MWF	216En	Mr. Randel
	6	III	TThS	310En	Mr. Brown
	7	III	MWF	308En	Miss Thurston
2s	Rhetoric II (Same as 2f) (Limited to 35)	IV	MWF	310En	Mr. Brown
3f	Rhetoric III (3 cred.; prereq. 2) (Limited to 35)	IV	MWF	310En	Mr. Brown
3w	Rhetoric III (Same as 3f) (Sections limited to 35 each)	III	TThS	216En	Mr. Nichols
	Sec. 1	III	MWF	216En	Mr. Nichols
	2	IV	MWF	308En	Miss Thurston
	3	II	TThS	216En	Mr. Randel
	4	II	MWF	310En	Mr. Brown
	2	III	MWF	306En	Mr. Randel
	3	I	TThS	307En	Mr. Lansing
	4	I	MWF	312En	Mr. Nichols
	5	III	TThS	306En	Mr. Randel
	6	IV	MWF	306En	Mr. Randel
	7	II	MWF	312En	Mr. Nichols
11f	Argumentation (3 cred.; soph., jr., sr.; prereq. 3, 22 recommended)	II	MWF	307En	Mr. Lansing
11s	Argumentation (Same as 11f) (Limited to 30)	II	MWF	307En	Mr. Lansing
22f§	Public Speaking (3 cred.; soph., jr.; prereq. 3) (Sections limited to 20 each)	IV	MWF	311En	Mr. Routledge
	Sec. 1	III	MWF	311En	Mr. Routledge
	2	I	TThS	310En	Mr. Nichols
	3	III	MWF	103En	Mr. Nichols
	4	II	TThS	311En	Mr. Routledge
	5	I	MWF	311En	Mr. Nichols
	6	I	MWF	311En	Mr. Nichols
	7	II	MWF	310En	Mr. Nichols
22w§	Public Speaking (Same as 22f) (Sections limited to 20 each)	IV	MWF	311En	Mr. Routledge
	Sec. 1	II	MWF	102Ad	Mr. Nichols
	2	III	MWF	311En	Mr. Routledge
	3	III	TThS	311En	Mr. Routledge
	4	II	TThS	311En	Mr. Routledge
	5	I	MWF	311En	Mr. Nichols
	6	I	TThS	307En	Mr. Nichols
22s§	Public Speaking (Same as 22f) (Sections limited to 20 each)	III	MWF	311En	Mr. Routledge
	Sec. 1	II	TThS	311En	Mr. Nichols
	2	III	TThS	307En	Mr. Nichols
23s§	Public Speaking (5 cred.; soph., jr., sr.; prereq. 3) (Limited to 20)	IV	MTWFS	311En	Mr. Routledge

§ Students may not receive credit for both Rhetoric 22 and 23.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
24s	Advanced Public Speaking (3 cred.; soph., jr., sr.; prereq. 22) (Limited to 20)	II	MWF	311En	Mr. Routledge
28f	Play Production (3 cred.; soph., jr., sr.; prereq. 3)	III	TThS	311En	Mr. Routledge
31f	Survey of English Literature I (5 cred.; soph., jr., sr.; prereq. 3) (Limited to 40)	III	MTWThF	307En	Mr. Lansing
31w	Survey of English Literature I (Same as 31f) (Limited to 40)	II	MTWThF	308En	Miss Thurston
31s	Survey of English Literature I (Same as 31f) (Limited to 40)	III	MTWThF	308En	Miss Thurston
32f	Survey of English Literature II (3 cred.; soph., jr., sr.; prereq. 3) (Limited to 40)	III	TThS	310En	Mr. Brown
32s	Survey of English Literature II (Same as 32f) (Limited to 40)	III	TThS	310En	Mr. Brown
34f,w,s	Books and Reading (1 cred.; no prereq.) (Sections limited to 50 each)	II	F	103En(fall)	Mr. Brown
		IV	F	216En(winter)	
	Sec. 1	I	F	307En(spring)	
	2	III	W	307En(spring)	

*Junior and Senior Courses*

51f	Exposition (3 cred.; jr., sr.; prereq. 3) (Limited to 35)	II	TThS	308En	Miss Thurston
51w	Exposition (Same as 51f)				
	Sec. 1	II	TThS	307En	Mr. Lansing
	2	III	MWF	307En	Mr. Lansing
51s	Exposition (Same as 51f)				
	Sec. 1	II	TThS	308En	Miss Thurston
	2	IV	MWF	308En	Miss Thurston
59s	Advanced Play Production (3 cred.; jr., sr.; prereq. permission of instructor)	III	TThS	311En	Mr. Routledge
60w,s	Contemporary Literature (3 cred.; jr., sr.; prereq. 3)	IV	MWF	105En(winter)	
		III	TThS	105En(spring)	Mr. Lansing

## SOCIOLOGY AND SOCIAL WORK

See program of the College of Science, Literature, and the Arts.

## SOILS

*Freshman and Sophomore Courses*

No.	Title	Hour	Day	Bldg.	Instructor
6w	Soils (5 cred.; soph., jr., sr.; prereq. Agr. Biochem. 4)	II	MTWThF	204So	Mr. Rost

*Junior and Senior Courses*

50s	Forest Soils (2 cred.; jr. in forestry; prereq. Agr. Biochem. 4)				Mr. McMiller
101f	Chemical Analysis of Soils (3 to 5 cred.; jr., sr.; prereq. 6, quant. anal.)				
	Lect.	IV	T	204So	Mr. Rost
	Lab.	Ar	Ar		
103s	Soil Erosion (3 cred.; jr., sr.; prereq. 6)	II	TThS	204So	Mr. Rost

No.	Title	Hour	Day	Bldg.	Instructor
104s	Soil Mapping (3 cred.; jr., sr.; prereq. 108)	Ar	Ar	Ar	Mr. McMiller
107f	Fertilizers (3 cred.; jr., sr.; prereq. 6)	II	TThS	204So	Mr. Rost
108w	Physical Properties of Soils (3 cred.; jr., sr.; prereq. 6)				
	Lect.	VI	W	204So	Mr. McMiller
	Lab.	VII, VIII, IX	W	201So	Mr. McMiller
		VI, VII, VIII	F	201So	

VETERINARY MEDICINE

*Junior and Senior Courses*

No.	Title	Hour	Day	Bldg.	Instructor
50f-51w-52s	Anatomy, Physiology, and Hygiene of Domestic Animals (9 cred.; jr., sr.)	I	TThS	102Ve	Mr. Fitch, Mr. Boyd, Mr. Kernkamp

ZOOLOGY

See program of the College of Science, Literature, and the Arts, page 101.

# SCHOOL OF BUSINESS ADMINISTRATION

## ECONOMICS

*Junior College advisers.*—Mr. Borak, Mr. Boddy, Mr. Kebker, Mr. Langum, Mr. Lund, Mr. Nelson, Mr. Stoltz, Mrs. Youngs.

*Majors advisers in the College of Science, Literature, and the Arts.*—Mr. Garver, Mr. Marget, Mr. Myers.

*Major sequence in the College of Science, Literature, and the Arts.*—A student majoring in Economics is required to earn at least 33 credits in Senior College courses as follows: (1) required courses: Economics 103-104, 141, 161; (2) at least 6 credits from Economics 105, 106, 149, 176, 191-192; (3) at least 6 credits from Economics 154, 160, 172, 185; and (4) 9 additional credits from any Senior College economics courses listed in this bulletin. Students who expect to take postgraduate work in business or economics in this or another university are advised to include in their program the following courses: Economics 5 and 113-114 in statistics; and Economics 25-26 in accounting.

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College.

(Prerequisites: Economics 3 and 6-7. In addition the student is urged to earn at least 9 credits in History, Political Science, or Sociology.)

*Honors Course.*—Students whose records show that they are capable of doing better than average work, and who wish to study for graduation honors or to pursue a special interest should consult a major adviser for modification of the sequential requirements.

### *Junior College Courses*

No.	Title	Hour	Day	Bldg.	Instructor
1f	Introduction to Economics (5 cred.; fr. only; no prereq.)				
	Lect.	III	TTh	BuAud	Mr. Filipetti,
	Sec. 1	I	MWF	113V	Mr. Heaton,
	2	I	TThS	221V	and others
	3	I	TThS	211V	
	4	II	MWF	105V	
	5	II	TThS	221V	
	6	III	MWF	6V	
	7	III	MWF	205V	
	8	IV	MWF	6V	
	9	IV	MWF	2V	
	10	V	MWF	2V	
	11	V	MWF	221V	
	12	VI	MWF	2V	
	13	VI	MWF	205V	
	14	VII	MWF	105V	
1w	Introduction to Economics (See 1f)				
	Lect.	III	TTh	166Ph	Mr. Filipetti,
	Sec. 1	I	MWF	105V	Mr. Heaton,
	2	IV	MWF	4V	and others
	3	VII	MWF	105V	
1s	Introduction to Economics (See 1f)				
		IV	MTWFS	2V	Ar

No.	Title	Hour	Day	Bldg.	Instructor
3f	Elements of Money and Banking (5 cred.; 2nd and 3rd qtr. fr., soph.; no prereq.)				Mr. Stehman and others
	Lect.	II	TTh	JAud	
	Sec. 1	I	TThS	205V	
	2	II	MWF	211V	
	3	III	MWF	2V	
	4	III	TThS	221V	
	5	V	MWF	210V	
	6	VII	MWF	221V	
3w	Elements of Money and Banking (See 3f)				Mr. Stehman and others
	Lect.	III	TTh	BuAud	
	Sec. 1	I	MWF	210V	
	2	I	MWF	211V	
	3	I	TThS	205V	
	4	II	MWF	2V	
	5	II	TThS	307V	
	6	II	TThS	210V	
	7	III	MWF	205V	
	8	III	MWF	221V	
	9	IV	MWF	221V	
	10	IV	MWF	211V	
	11	V	MWF	221V	
	12	V	MWF	211V	
	13	VI	MWF	205V	
	14	VI	MWF	6V	
	15	VII	MWF	211V	
3s	Elements of Money and Banking (See 3f)				Mr. Stehman and others
	Lect.	IV	MW	150Ph	
	Sec. 1	I	MWF	211V	
	2	III	MWF	221V	
	3	III	TThS	211V	
	4	V	MWF	112V	
	5	VI	MWF	6V	
	6	VII	MWF	205V	
5f*	Elements of Statistics (5 cred.; 3rd qtr. fr., soph.; no prereq.)				Mr. Kozelka and others
	Lect.	III	M	JAud	
	Sec. 1	I	MWThF	301V	
	2	II	MWThF	301V	
	3	IV	MTWF	205V	
	4	V	MTWF	205V	
5w*	Elements of Statistics (See 5f)				Mr. Kozelka and others
	Lect.	III	M	JAud	
	Sec. 1	I	MWThF	221V	
	2	II	MWThF	205V	
	3	IV	MTWF	2V	
	4	V	MTWF	205V	
5s*	Elements of Statistics (See 5f)				Mr. Kozelka and others
	Lect.	III	T	BuAud	
	Sec. 1	I	MWThF	115V	
	2	I	MWThF	112V	
	3	II	MWThF	115V	
	4	II	MWThF	211V	
	5	II	MWThF	2V	
	6	III	MWThF	115V	
	7	III	MWThF	112V	
	8	III	MWThF	205V	
	9	IV	MTWF	6V	
	10	IV	MTWF	211V	
	11	V	MTWF	211V	
	12	V	MTWF	115V	
	13	VI	MWThF	115V	
	14	VI	MWThF	2V	
	15	VI	MWThF	113V	
	16	VII	MWThF	112V	
	17	VII	MWThF	115V	

\* Not open to students who have received credit in Soc. 45 or B. A. 70.

No.	Title	Hour	Day	Bldg.	Instructor
6f-7w†§	Principles of Economics (10 cred.; soph., jr., sr.; no prereq.; not open to students who have received credit in Econ. 4)				
	Lect.	II	F	BuAud	Mr. Marget
	Sec. 1	I	MWThF	115V	and others
	2	I	MWThF	112V	
	3	II	MTWTh	115V	
	4	II	MTWTh	112V	
	5	III	MWThF	115V	
	6	III	MWThF	307V	
	7	IV	MTWF	115V	
	8	IV	MTWF	301V	
	9	V	MTWF	115V	
	10	V	MTWF	112V	
	11	VI	MWThF	115V	
	12	VI	MWThF	112V	
	13 (fall only)	VI	MWThF	211V	
	14	VII	MWThF	115V	
	15	VII	MWThF	112V	
6w-7st	Principles of Economics (See 6f-7w)				
	Lect.	IV	T	JAud	Mr. Marget
	Sec. 1	I	MWThF	113V	and others
	2	II	MTWF	113V	
	3	III	MWThF	2V	
	4 (winter only)	IV	MWFS	210V	
	5	V	MTWF	113V	
	6	VI	MWThF	211V	
	7	VII	MWThF	113V	
6st	Principles of Economics (1st qtr. of 6-7. See 6f-7w)				
	Lect.	II	F	4V	Mr. Marget
	Sec. 1	II	MTWTh	112V	and others
	2	VI	MWThF	112V	
7ft	Principles of Economics (2nd qtr. of 6-7. See 6f-7w)				
	Lect.	IV	T	1V	Mr. Marget
	Sec. 1	II	MWThF	205V	and others
	2	VII	MWThF	211V	
8f-9w	General Economics (6 cred.; soph., jr., sr.; no prereq. Open to Institute of Technology students only)				
	Sec. 1	I	MWF	2V	Mr. Filipetti
	2 (fall only)	I	MWF	211V	and others
	3	II	MWF	210V	
	4	III	MWF	210V	
	5	III	TThS	113V	
	6	IV	MWF	307V	
10f	An Introduction to Economic Analysis (3 cred.; no prereq. Open to College of Pharmacy students only)				
		I	MWF	202Phm	Ar
20f¶	Elements of Accounting (3 cred.; 3rd qtr. fr., soph.; no prereq.)				
	Sec. 1	I	MWF	210V	Mr. Heilman
	2	I	MWF	307V	and others
	3	I	TThS	210V	
	4	II	MWF	307V	
	5	II	TThS	210V	
	6	III	MWF	221V	
	7	III	TThS	301V	
	8	IV	MWF	221V	
	9	V	MWF	211V	
	10	VI	MWF	210V	
	11	VI	MWF	221V	
	12	VII	MWF	210V	

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ The final examination in this course will conflict with that of any course having lectures the same hour on MW. Therefore, students must not register for two such courses.

¶ Students who have had high school training or other experience in bookkeeping and who pass the placement test may be exempt from this course and admitted to Economics 25.

No.	Title	Hour	Day	Bldg.	Instructor
20w§	Elements of Accounting (See 20f)				
	Sec. 1	I	MWF	301V	Mr. Heilman
	2	II	MWF	307V	and others
	3	III	TThS	221V	
	4	V	MWF	210V	
	5	VII	MWF	2V	
20s§	Elements of Accounting (See 20f)				
	Sec. 1	I	MWF	221V	Mr. Heilman
	2	I	TThS	221V	and others
	3	II	MWF	210V	
	4	III	MWF	210V	
	5	III	TThS	221V	
	6	VI	MWF	221V	
	7	VII	MWF	210V	
25f-26w	Principles of Accounting (6 cred.; soph., jr., sr.; prereq. Econ. 20)				
	Sec. 1	I	TThS	307V	Mr. Heilman
	2	III	MWF	112V	and others
	3	III	TThS	205V	
	4	V	MWF	307V	
	5	VI	MWF	307V	
25w-26s	Principles of Accounting (See 25f-26w)				
	Sec. 1	I	TThS	301V	Mr. Heilman
	2	I	TThS	210V	and others
	3	II	MWF	301V	
	4	II	TThS	301V	
	5	III	MWF	301V	
	6	III	TThS	301V	
	7 (winter only)	III	TThS	210V	
	8	VI	MWF	210V	
25s	Principles of Accounting (1st qtr. of 25-26. See 25f-26w)				
	Sec. 1	I	MWF	210V	Mr. Heilman
	2	II	TThS	210V	and others
	3	III	MWF	307V	
	4	IV	MWF	307V	
26f	Principles of Accounting (2nd qtr. of 25-26. See 25f-26w)				
	Sec. 1	II	TThS	307V	Mr. Heilman
	2	III	MWF	301V	and others
	3	VII	MWF	307V	
28f	Business Law (3 cred.; soph., jr., sr. with 6 cred. in econ. or sr. without econ. cred. Open to Institute of Technology and College of Agriculture students only)				
		I	MWF	135E	Mr. Palmer
28s	Business Law (See 28f)				
		I	MWF	135E	Mr. Palmer
29f	Principles of Accounting (3 cred.; soph., jr., sr.; no prereq. Open to Institute of Technology students only)				
	Sec. 1	I	MWF	205V	Ar
	2	IV	MWF	112V	Mr. Lund
29s	Principles of Accounting (See 29f)				
		I	MWF	307V	Mr. Lund
30w	Elements of Retail Accounting (3 cred.; prereq. Econ. 10. Open to College of Pharmacy students only)				
		II	MWF	211V	Mr. Ostlund
32f-33w*†‡¶	Secretarial Training: Typewriting (2 cred.; 2nd qtr. fr. soph., jr.; prereq. consent of instructor)				
	Sec. 1	IV	MTWFS	209V	Miss Donaldson
	2	VI	MTWThF	209V	and others

\* Students who have had one year of high school typewriting are admitted to Economics 33.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$2.50 a quarter is charged students registering for one or more of these courses.

§ Students who have had high school training or other experience in bookkeeping and who pass the placement test may be exempt from this course and admitted to Economics 25.

¶ This course carries credit only if required in the student's major sequence.

No.	Title	Hour	Day	Bldg.	Instructor
32w*†‡¶	Secretarial Training: Typewriting (1st qtr. of 32-33. See 32f-33w)	V	MTWThF	209V	Miss Donaldson and others
33s*†‡¶	Secretarial Training: Typewriting (2nd qtr. of 32-33. See 32f-33w)	V	MTWThF	209V	Miss Donaldson and others
34f‡¶	Secretarial Training: Advanced Typewriting (1 cred.; soph., jr.; prereq. consent of instructor)	V	MTWThF	209V	Miss Donaldson and others
34s‡¶	Secretarial Training: Advanced Typewriting (See 34f)	VI	MTWThF	209V	Miss Donaldson and others
37f-38w-39s†‡¶**	Secretarial Training: Shorthand (9 cred.; soph., jr.; prereq. 33 or consent of instructor)				
	Secretarial students	II	MTWThF	209V	Miss Donaldson and others
	Commercial education students	III	MTWThF	209V	
40f-41w-42s†‡¶**	Secretarial Procedure (9 cred.; soph., jr., sr.; prereq. 33 and 39 or consent of instructor)				
	Secretarial students	I	MTWThF	209V	Miss Donaldson and others
	Commercial education students	VII	MTWThF	209V	

### Senior College Courses

82f§	Competition and Monopoly in Modern Industry (3 cred.; jr., sr.; no prereq.)	II	TThS	211V	Mr. Vaile
83w§	The Inequality of Incomes (3 cred.; jr., sr.; prereq. Econ. 82)	II	TThS	211V	Mr. Schmidt
84s	Comparative Economic Systems (3 cred.; jr., sr.; prereq. Econ. 6-7 or 83)	I	TThS	211V	Mr. Uppgren
97f,98w,99s	Honors Course in Economics (Cred. ar.; jr., sr.; prereq. consent of major advisers)	Ar	Ar	Ar	Ar
103f-104w†§§	Advanced Economics: Competition, Monopoly, and Inequality of Incomes (6 cred.; jr., sr., grad.; prereq. 20 cred. in soc. sci. including Econ. 6-7 or 83)	II	MWF	221V	Mr. Mudgett
105	<i>History of Economic Ideas: The Classical Economists</i> (3 cred.; jr., sr., grad.; prereq. B. A. 101-102 or Econ. 103-104 or consent of instructor) ( <i>Not offered</i> )				
106s	<i>History of Economic Ideas: The Critics of the Classical Economists</i> (3 cred.; jr., sr., grad.; prereq. B. A. 101-102 or Econ. 103-104 or consent of instructor)	VII	MWF	207V	Ar
113w-114s†	Theory of Statistics (6 cred.; jr., sr., grad.; prereq. Econ. 5)	I	MWF	205V	Mr. Mudgett
115w	Probability and Statistics (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	IV	MWF	112V	Mr. Altschul
117w	Modern European Economic Problems (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	VII	MWF	210V	Mr. Altschul
124w	Comparative Banking: British Systems (3 cred.; jr., sr., grad.; prereq. Econ. 141 or B. A. 142)	III	MWF	113V	Mr. Myers

\* Students who have had one year of high school typewriting are admitted to Economics 33.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$2.50 a quarter is charged students registering for one or more of these courses.

§ Not open to students who have received credit for Econ. 6-7.

¶ This course carries credit only if required in the student's major sequence.

|| This course may not be included as a part of the Senior College work required for a minor in economics in the College of Science, Literature, and the Arts.

\*\* Students who have had one year of high school shorthand are admitted to Econ. 38; those who have had two years of high school shorthand are admitted to Econ. 40.

§§ Not open to School of Business Administration students.

No.	Title	Hour	Day	Bldg.	Instructor
125s	Comparative Banking: European Systems (3 cred.; jr., sr., grad.; prereq. Econ. 141 or B. A. 142)	II	MWF	205V	Mr. Myers
127	<i>Comparative Banking: South American Systems</i> (3 cred.; jr., sr., grad.; prereq. Econ. 141 or B. A. 142) ( <i>Not offered</i> )				
128s	Business Cycle Theory in European Literature (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	IV	MWF	210V	Mr. Altschul
131f	Introduction to Mathematical Analysis in Economics (3 cred.; sr., grad.; prereq. Econ. 6-7 or 83)	III	TThS	210V	Mr. Altschul
140s	The Co-operative Movement (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	VI	MWF	105V	Mr. Vaile
141ff	Monetary and Banking Policy (3 cred.; jr., sr., grad.; prereq. Econ. 3, and either Econ. 6-7 or 83)	I	TThS	6V	Mr. Myers
144f	Cartels and Trusts (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	VII	MWF	113V	Mr. Altschul
149f	Business Cycles (3 cred.; sr., grad.; prereq. Econ. 141 or B. A. 142 or consent of instructor)	III	TThS	1V	Mr. Marget
149w	Business Cycles (See 149f)				
	Sec. 1	I	MWF	6V	Mr. Marget
	2	VI	MWF	2V	Ar
149s	Business Cycles (See 149f)				
	Sec. 1	II	TThS	6V	Mr. Marget
	2	VI	MWF	207V	Mr. Marget
154s	Public Utilities (3 cred.; jr., sr., grad.; prereq. 20 cred. in soc. sci. incl. Econ. 6-7 or 83)	II	TThS	105V	Mr. Garver
160w	The Modern Corporation (3 cred.; jr., sr., grad.; prereq. Econ. 3 and either 6-7 or 83)	IV	MWF	205V	Mr. Stehman
161f	Labor Problems and Trade Unionism (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	III	MWF	1V	Mr. Schmidt
	Sec. 1	IV	MWF	4V	Mr. Yoder
	2				
161w	Labor Problems and Trade Unionism (See 161f)				
	Sec. 1	I	TThS	1V	Ar
	2	II	MWF	4V	Mr. Yoder
161s	Labor Problems and Trade Unionism (See 161f)				
	Sec. 1	I	TThS	207V	Mr. Schmidt
	2	IV	MWF	105V	Mr. Yoder
162w	Labor and Socialist Movements (3 cred.; jr., sr., grad.; prereq. Econ. 161)	VI	MWF	221V	Mr. Schmidt
163	<i>Economic Aspects of Population and Immigration</i> (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83) ( <i>Not offered</i> )				
164s	Labor Legislation and Social Insurance (3 cred.; jr., sr., grad.; prereq. Econ. 161)	III	TThS	113V	Mr. Schmidt
166	<i>International Economic Problems</i> (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83) ( <i>Not offered</i> )				
172f	Economics of Transportation (3 cred.; jr., sr., grad.; prereq. 20 cred. in soc. sci. including Econ. 6-7 or 83)	II	TThS	2V	Mr. Schmidt
176f	International Commercial Policies (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	I	MWF	207V	Mr. Blakey
176s	International Commercial Policies (See 176f)				
	I		MWF	207V	Mr. Blakey
185w	Economics of Marketing (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	II	TThS	2V	Mr. Vaile

¶ Not open to School of Business Administration students.



## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
191f-192w†§	Public Finance (6 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	III	MWF	211V	Mr. Blakey
193s	State and Local Taxation (3 cred.; jr., sr., grad.; prereq. Econ. 191-192 or B. A. 58)	III	MWF	211V	Mr. Blakey

## COURSES OPEN TO GRADUATE STUDENTS ONLY

203f-204w	Seminar in Economic Theory (6 cred.; grad.)	VIII½-IX	MW	308V	Mr. Garver
206	<i>Seminar in Market Prices</i> (3 cred.; grad.) ( <i>Not offered</i> )				
215s	Mathematical Economics (3 cred.; grad.)	VIII½-IX	MW	308V	Mr. Mudgett
233-234	<i>Seminar in Public Finance</i> (6 cred.; grad.) ( <i>Not offered</i> )				
243f-244w	Seminar in Money and Banking (6 cred.; grad.)	VIII½-IX	TF	308V	Mr. Marget
248-249	<i>Seminar in Unemployment and Business Cycles</i> (6 cred.; grad.) ( <i>Not offered</i> )				
251s	Seminar in Industrial Relations	VIII½-IX	TF	308V	Mr. Yoder
	Discussion of Papers in European Periodicals	VIII-IX	Th	210V	Mr. Altschul

## BUSINESS ADMINISTRATION

For advisers see the Bulletin of the School of Business Administration.

## COURSES OPEN TO BUSINESS ADMINISTRATION STUDENTS ONLY

No.	Title	Hour	Day	Bldg.	Instructor
51f*	Business Law: Contracts (3 cred.; jr., sr.; prereq. Econ. 6-7)	IV	T	BuAud	Mr. Gray
	Lect.	I	ThS	4V	Mr. Gray
	Sec. 1	I	ThS	4V	Mr. Gray
	2	II	ThS	105V	Mr. Wattson
	3	II	ThS	4V	Mr. Wattson
	4	III	Th	4V	Mr. Wattson
	5	V	S	4V	Mr. Wattson
52w*	Business Law: Agency, Partnership, and Corporations (3 cred.; jr., sr.; prereq. B. A. 51)	IV	T	BuAud	Mr. Gray
	Lect.	I	ThS	4V	Mr. Gray
	Sec. 1	I	ThS	4V	Mr. Gray
	2	II	ThS	113V	Mr. Wattson
	3	II	ThS	4V	Mr. Wattson
	4	III	Th	4V	Mr. Wattson
	5	V	S	4V	Mr. Wattson
53s*	Business Law: Negotiable Instruments (3 cred.; jr., sr.; prereq. B. A. 51)	IV	T	BuAud	Mr. Gray
	Lect.	I	ThS	4V	Mr. Gray
	Sec. 1	I	ThS	4V	Mr. Gray
	2	II	ThS	113V	Mr. Wattson
	3	II	ThS	4V	Mr. Wattson
	4	III	Th	4V	Mr. Wattson
	5	V	S	4V	Mr. Wattson
57f†	Money and Banking (3 cred.; jr., sr.; no prereq.)	III	MWF	113V	Mr. Graves
	Sec. 1	III	TThS	2V	Mr. Borak
	2	III			

\* No credit will be allowed for B. A. 51, 52, or 53 until all three are completed.

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ Credit may not be received for both Economics 191-192 and B. A. 58.

‡ Credit may not be received for both Economics 3 and B. A. 57.

No.	Title	Hour	Day	Bldg.	Instructor
58f§¶¶	Elements of Public Finance (3 cred.; jr., sr.; prereq. Econ. 6-7)	IV	Econ. 6-7	113V	Mr. Blakey
58w§¶¶	Elements of Public Finance (See 58f)				
	Sec. 1	IV	MWF	113V	Mr. Blakey
	2	VI	MWF	113V	Mr. Borak
58s§¶¶	Elements of Public Finance (See 58f)				
	Sec. 1	IV	MWF	113V	Mr. Blakey
	2	VI	MWF	205V	Mr. Borak
59f	Life Insurance (3 cred.; jr., sr.; prereq. Econ. 6-7)	III	TThS	211V	Mr. Graves
60w	Fire and Marine Insurance (3 cred.; jr., sr.; prereq. Econ. 6-7)	III	MWF	6V	Mr. Graves
61s	Casualty Insurance (3 cred.; jr., sr.; prereq. Econ. 6-7)	III	MWF	6V	Mr. Graves
62f¶	Elementary Accounting: Combined Course (5 cred.; jr., sr.; no prereq.)	II	MTWThF	113V	Mr. Lund
64w	Graphic Arts I: Elementary Principles of Design—Identical with Drawing and Descriptive Geometry 64 (3 cred.; jr., sr.; prereq. permission of adviser in School of Business Administration or in Department of Journalism)	IV	MWF	206E	Mr. Doseff
65f	Graphic Arts II: Processes—Identical with Drawing and Descriptive Geometry 65 and Journalism 65 (3 cred.; jr., sr.; prereq. permission of adviser in School of Business Administration or in Department of Journalism)	IV	MWF	110P	Mr. Barnhart
67s	Retail Store Management (3 cred.; prereq. Econ. 10 and 30. Open to College of Pharmacy students only)	I	MWF	1V	Mr. Chute
68f	Sales Management (3 cred.; jr., sr.; prereq. B. A. 77)	II	TThS	1V	Mr. Chute
69w	Retail Store Management (3 cred.; jr., sr.; prereq. B. A. 77)	II	TThS	1V	Mr. Chute
70f*	Statistics Survey (3 cred.; jr., sr.; prereq. Econ. 6-7)				
	Sec. 1	I	MWF	6V	Mr. Kozelka
	2	VII	MWF	6V	Mr. Graves
71f	Transportation: Services and Charges I (3 cred.; jr., sr.; prereq. Econ. 6-7)				
	Sec. 1	I	MWF	1V	Mr. Nightingale
	2	II	MWF	1V	Mr. Nightingale
	3	IV	MWF	1V	Mr. Nightingale
71w	Transportation: Services and Charges I (See 71f)				
	Sec. 1	III	TThS	1V	Mr. Nightingale
	2	VI	MWF	1V	Mr. Nightingale
71s	Transportation: Services and Charges I (See 71f)				
	Sec. 1	II	MWF	1V	Mr. Nightingale
	2	VI	MWF	1V	Mr. Nightingale
72w	Transportation: Services and Charges II (3 cred.; jr., sr.; prereq. B. A. 71)	VIII	MWF	1V	Mr. Nightingale
76s	Credits and Collections (3 cred.; jr., sr.; prereq. B. A. 77)	II	TThS	205V	Mr. Chute
77f	Survey in Marketing (3 cred.; jr., sr.; no prereq.)				
	Sec. 1	I	TThS	1V	Mr. Chute
	2	VII	MWF	4V	Mr. Chute
77w	Survey in Marketing (See 77f)				
	Sec. 1	I	MWF	1V	Mr. Chute
	2	IV	MWF	1V	Mr. Chute

\* Not open to students who have received credit in Economics 5.

§ Credit may not be received for both Economics 191-192 and B. A. 58.

¶ A combination of Economics 20 and Economics 25.

¶¶ Economics 191-192 (6 cred.) may be substituted for B. A. 58 as a core group requirement.

## PROGRAM

No.	Title	Hour	Day	Bldg.	Instructor
77s	Survey in Marketing (See 77f)				
	Sec. 1	I	TThS	1V	Mr. Vaile
	2	IV	MWF	IV	Ar
78	<i>Marketing of Raw Materials</i> (3 cred.; jr., sr.; prereq. B.A. 77) ( <i>Not offered</i> )				
86w	Office Organization and Management (3 cred.; jr., sr.; prereq. Econ. 6-7)	VI	MWF	105V	Miss Donaldson
86s	Office Organization and Management (See 86w)	III	MWF	105V	Miss Donaldson
87f	Report Writing (1 cred.; jr., sr.)	VI	T	1V	Mr. Heilman and others
87w	Report Writing (See 87f)	IV	S	1V	Mr. Heilman and others
87s	Report Writing (See 87f)	VI	T	1V	Mr. Heilman and others
88w	Advertising (3 cred.; jr., sr.; prereq. B. A. 77 and Psy. 56)	I	TThS	2V	Mr. Vaile
88s	Advertising (See 88w)	II	TThS	1V	Mr. Vaile
89f	Production Management (3 cred.; jr., sr.; no prereq.)	II	MWF	4V	Mr. Filipetti
89w	Production Management (See 89f)				
	Sec. 1	II	MWF	6V	Mr. Filipetti
	2	III	MWF	1V	Ar
89s	Production Management (See 89f)				
	Sec. 1	I	MWF	6V	Ar
	2	II	MWF	207V	Mr. Filipetti
91f	Tabulating Equipment Laboratory (1 cred.; jr., sr.; prereq. Econ. 26 and either 5 or B. A. 70)	VIII-IX	F	2V	Mr. Boddy
91w	Tabulating Equipment Laboratory (See 91f)	IV-V	T	6V	Mr. Boddy
91s	Tabulating Equipment Laboratory (See 91f)				
	Sec. 1	IV-V	T	1V	Mr. Boddy
	2	VIII-IX	M	2V	Mr. Boddy
92f	Accounting Practice Laboratory (1 cred.; jr., sr.; prereq. Econ. 26, open to accounting majors only)	III-IV	S	307V	Mr. Lund
	Sec. 1	VI-VII	T	307V	Mr. Lund
92w	Accounting Practice Laboratory (See 92f)	VI-VII	Th	307V	Mr. Lund
93w	Accounting Laboratory (1 cred.; jr., sr.; prereq. Econ. 26, open to accounting majors only)	III-IV	S	307V	Mrs. Youngs
93s	Accounting Laboratory (See 93w)	VI-VII	T	307V	Mrs. Youngs
94w	Cost Accounting Laboratory (1 cred.; jr., sr.; prereq. B. A. 152 or 130 or concurrent; open to accounting majors only)	VI-VII	T	307V	Mr. Lund
94s	Cost Accounting Laboratory (See 94w)	III-IV	S	307V	Mr. Lund
96s	Office Practice for Dental Hygienists (3 cred.; jr., sr.; prereq. Econ. 32-33 or equiv., open to dental hygienists only)	IV	MWF	209V	Miss Kean
97f,98w,99s	Honors Course in Business Administration (Cred. ar.; jr., sr.; prereq. permission of the dean)	Ar	Ar	Ar	
101f-102w†	Advanced General Economics (6 cred.; sr., grad.; prereq. Econ. 6-7)				
	Sec. 1	I	TThS	105V	Mr. Boddy
	2	II	TThS	207V	Mr. Garver
	3	III	MWF	105V	Mr. Mudgett
	4	IV	MWF	105V	Mr. Boddy

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

No.	Title	Hour	Day	Bldg.	Instructor
101w-102s†	Advanced General Economics (See 101f-102w)				
	Sec. 1	I	TThS	6V	Mr. Garver
	2	VII	MWF	6V	Mr. Boddy
101s†	Advanced General Economics (1st qtr. of 101-102. See 101f-102w)				
		III	TThS	1V	Mr. Boddy
109w	Business Policy (3 cred.; sr., grad.; prereq. B. A. 101-102)				
		II	MWF	105V	Mr. Reighard
109s	Business Policy (See 109w)	II	MWF	105V	Mr. Reighard
112f‡	Business Statistics (3 cred.; jr., sr., grad.; prereq. Econ. 5 or B. A. 70)				
	Sec. 1	I	TThS	207V	Mr. Kozelka
	2	III	TThS	207V	Mr. Mudgett
	3	VI	MWF	6V	Mr. Kozelka
112w‡	Business Statistics (See 112f)				
	Sec. 1	I	TThS	207V	Mr. Kozelka
	2	II	MWF	1V	Mr. Kozelka
	3	III	TThS	211V	Mr. Kozelka
112s‡	Business Statistics (See 112f)				
	Sec. 1	II	MWF	6V	Mr. Kozelka
	2	II	TThS	221V	Mr. Kozelka
130f	Cost Accounting (General Survey) (3 cred.; jr., sr., grad.; prereq. Econ. 25-26)				
		I	MWF	105V	Mr. Ostlund
130s	Cost Accounting (General Survey) (See 130f)				
		I	TThS	105V	Mr. Ostlund
133s	Cost Accounting Methods (3 cred.; jr., sr., grad.; prereq. B. A. 130 or 153)				
		II	TThS	307V	Mr. Ostlund
134f	Income Tax Accounting (3 cred.; jr., sr., grad.; prereq. B. A. 139 or 151)				
		I	MWF	4V	Mr. Reighard
134w	Income Tax Accounting (See 134f)				
		III	TThS	105V	Mr. Reighard
135f	Auditing and Public Accounting (3 cred.; jr., sr., grad.; prereq. B. A. 139 or 151)				
		III	MWF	207V	Mr. Reighard
135s	Auditing and Public Accounting (See 135f)				
		III	TThS	207V	Mr. Reighard
136s	Internal Auditing and Accounting Control (3 cred.; jr., sr., grad.; prereq. B. A. 139 or 151)				
		III	MWF	1V	Mr. Reighard
139f‡	Advanced General Accounting (3 cred.; jr., sr., grad.; prereq. Econ. 25-26)				
	Sec. 1	IV	MWF	207V	Mr. Heilman
	2	VI	MWF	4V	Mr. Heilman
139w‡	Advanced General Accounting (See 139f)				
	Sec. 1	I	MWF	4V	Ar
	2	VI	MWF	207V	Mr. Heilman
139s‡	Advanced General Accounting (See 139f)				
	Sec. 1	IV	MWF	4V	Mr. Heilman
	2	VI	MWF	4V	Ar
142f	Advanced Money and Banking (3 cred.; jr., sr., grad.; prereq. Econ. 3 and 6-7)				
	Sec. 1	II	MWF	6V	Mr. Uppgren
	2	VI	MWF	207V	Ar
142w	Advanced Money and Banking (See 142f)				
	Sec. 1	II	TThS	105V	Mr. Myers
	2	IV	MWF	6V	Mr. Myers
142s	Advanced Money and Banking (See 142f)				
	Sec. 1	I	MWF	105V	Ar
	2	III	TThS	105V	Mr. Uppgren
145s	Foreign Exchange (3 cred.; jr., sr., grad.; prereq. B. A. 142)				
		IV	MWF	205V	Mr. Myers
146f	Investments (3 cred.; jr., sr., grad.; prereq. B. A. 155)				
		VI	MWF	105V	Mr. Uppgren

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per quarter is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
147f	Bank Administration (3 cred.; jr., sr., grad.; prereq. B. A. 142)	I	MWF	221V	Mr. Myers
148w	The Securities Market (3 cred.; sr., grad.; prereq. B. A. 146 and Econ. 149)	II	TThS	221V	Mr. Upgren
150f-151w††	Accounting Practice and Procedure (6 cred.; jr., sr., grad.; prereq. Econ. 25-26)	II	MWF	207V	Mr. Heilman
150w-151s††	Accounting Practice and Procedure (See 150f-151w)	III	MWF	207V	Mr. Heilman
152f-153w†	Cost Accounting (6 cred.; jr., sr., grad.; prereq. Econ. 25-26)	II	TThS	6V	Mr. Ostlund
152w-153s†	Cost Accounting (See 152f-153w)	IV	MWF	207V	Mr. Ostlund
155f	Corporation Finance (3 cred.; jr., sr., grad.; prereq. Econ. 3 and 6-7)	III	MWF	4V	Mr. Stehman
	Sec. 1	III	MWF	4V	Mr. Stehman
	2	VII	MWF	207V	Mr. Upgren
155w	Corporation Finance (See 155f)	III	MWF	4V	Mr. Stehman
	2	VI	MWF	4V	Mr. Upgren
155s	Corporation Finance (See 155f)	III	MWF	4V	Mr. Stehman
	2	VII	MWF	4V	Mr. Upgren
156f	Finance Management (3 cred.; jr., sr., grad.; prereq. B. A. 155)	I	TThS	113V	Mr. Stehman
157w	Advanced Accounting Theory (3 cred.; sr., grad.; prereq. B. A. 139 or 151)	III	TThS	112V	Mr. Stevenson
158s	Governmental Accounting (3 cred.; sr., grad.; prereq. B. A. 139 or 151)	I	TThS	307V	Mr. Heilman
159s	Public Utility and Railroad Accounting (3 cred.; sr., grad.; prereq. B. A. 139 or 151)	II	MWF	307V	Mr. Stevenson
165f	Economics of Public Utilities (3 cred.; jr., sr., grad.; prereq. Econ. 3 and 6-7)	I	TThS	2V	Mr. Schmidt
	Sec. 1	I	TThS	2V	Mr. Schmidt
	2	III	TThS	105V	Mr. Garver
165w	Economics of Public Utilities (See 165f)	III	TThS	207V	Mr. Schmidt
165s	Economics of Public Utilities (See 165f)	I	MWF	4V	Mr. Schmidt
	2	III	TThS	6V	Mr. Garver
167f	Personnel Administration (3 cred.; jr., sr., grad.; prereq. Econ. 161)	III	TThS	6V	Mr. Yoder
167w	Personnel Administration (See 167f)	III	TThS	6V	Mr. Yoder
177w	Foreign Trade (3 cred.; jr., sr., grad.; prereq. Econ. 176)	I	MWF	207V	Mr. Blakey
180f-181w-182s	Senior Topics Courses (School of Business Administration seniors)				
	A. Accounting (6 cred.; fall and winter)	VI½-VII(f)	TTh	113V	Mr. Rotzel
		I(w)	MWF	307V	Mr. Reighard
	B. Business Finance (6 cred.; winter and spring)	VII	MWF	221V	Mr. Upgren(w)
					Mr. Stehman(s)
	C. Marketing (9 cred.)	VI½-VII	TTh	205V	Mr. Vaile(f,w)
					Mr. Chute(s)
	D. Personnel Management (9 cred.)	VI½-VII	TTh	221V	Mr. Yoder
	E. Secretarial Practice (6 cred.; fall and winter)	IV	MWF	210V(f)	MissDonaldson
				208V(w)	
	F. Statistics (9 cred.)	VII-VIII½(f,w)	MW	205V	Mr. Mudgett,
		III(s)	MWF	113V	Mr. Kozelka

† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$1 per quarter is charged for this course.

SCHOOL OF BUSINESS ADMINISTRATION

No.	Title	Hour	Day	Bldg.	Instructor
180f-181w-182s Senior Topics Courses—Continued					
	G. § Production Management (9 cred.)	VII	MWF	301V	Mr. Filipetti
	H. Insurance (3 cred.; spring)	IV	MWF	112V	Mr. Graves
	I. Public Utilities and Transportation (6 cred.; fall and winter)	VI½-VII	TTh	210V	Mr. Schmidt
	J. Office Management (3 cred.; spring)	IV	MWF	208V	Miss Donaldson
183f,w,s	Practice Course (Cred. ar.; jr., sr., grad.; prereq. consent of adviser)	Ar	Ar	Ar	Members of the staff
184s§	Scientific Management in Industry (3 cred.; sr., grad.; prereq. Econ. 6-7)	VI	MWF	301V	Mr. Filipetti
194s	Advanced Advertising Procedure (3 cred.; jr., sr., grad.; prereq. B. A. 88)	IV	MWF	115V	Mr. Vaile and others

§ Credit may not be received for both B. A. 181G and B. A. 184.

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