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Bulletin of the
University of Minnesota
General Information

1952-1953

University Calendar, 1952-1953

Day Classes

1952			<i>Fall Quarter</i>
August 4-September 26			Fall registration. ¹ Orientation program for new students. Dates for the various colleges will be announced in the press and in mailed instructions. Students are urged to register early. It is expected that all students who can do so will register in August
September	1	Monday	Labor Day; holiday
September	18	Thursday	Fall quarter fees due for students registered through September 12
September	22-26		New Students' Week; program of orientation. Details will be announced in instructions issued at registration. All new students are expected to attend
September	26	Friday	Last day for registration ¹ and payment of fees for the undergraduate colleges
September	29	Monday	Fall quarter classes begin 8:30 a.m. ²
October	2	Thursday	Opening convocation, 11:30 a.m.; IV hour classes excused
October	3	Friday	Last day for registration and payment of fees for the Graduate School, and for teachers in service (Sunday October 12, Columbus Day); holiday
October	13	Monday	Homecoming Day
November	1	Saturday	Dads Football Game
November	8	Saturday	Armistice Day; holiday
November	11	Tuesday	Senate meeting, 3:30 p.m.
November	20	Thursday	Thanksgiving Day; holiday
November	27	Thursday	
November	28, 29	Friday, Saturday	Classes excused
December	12, 13 and 15-18		Final examination period
December	18	Thursday	Commencement, 8:00 p.m.
December	20	Saturday	Fall quarter closes
			<i>Winter Quarter</i>
December	25	Thursday	Christmas Day; holiday
December	26	Friday	Winter quarter fees due for students in residence fall quarter in undergraduate colleges
1953			
January	1	Thursday	New Year's Day; holiday
January	2	Friday	Orientation and registration for new students in undergraduate colleges
January	3	Saturday	Orientation continues
January	5	Monday	Registration resumes; last day for registration and payment of fees for new students in undergraduate colleges; winter quarter classes begin 8:30 a.m. ²
January	9	Friday	Last day for registration and payment of fees for the Graduate School, and for teachers in service
February	12	Thursday	Lincoln's Birthday; holiday
February	19	Thursday	Senate meeting, 3:30 p.m.
February	23	Monday	(Sunday February 22, Washington's Birthday); holiday

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Volume LV, Number 3

February 11, 1952

Entered at the post office in Minneapolis as semi-monthly 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

University of Minnesota

Board of Regents

The Board of Regents is composed of The Honorable Ray J. Quinlivan, St. Cloud, First Vice President and Chairman; The Honorable George W. Lawson, St. Paul, Second Vice President; The Honorable James F. Bell, Minneapolis; The Honorable Daniel C. Gainey, Owatonna; The Honorable Richard L. Griggs, Duluth; The Honorable J. S. Jones, St. Paul; The Honorable Lester A. Malkerson, Minneapolis; The Honorable Charles W. Mayo, Rochester; The Honorable E. E. Novak, New Prague; The Honorable A. J. Olson, Renville; The Honorable Herman F. Skyberg, Fisher; and The Honorable Sheldon V. Wood, Minneapolis.

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Robert Edward Summers, Dean of Admissions and Records, 232 Administration Building
Thomas A. H. Teeter, Dean of Summer Session, 135 Johnston Hall
Edmund G. Williamson, Dean of Students, 200 Eddy Hall

How the University Is Organized

THE UNIVERSITY OF MINNESOTA IS GOVERNED, UNDER ITS CHARTER FROM the State, by its Board of Regents—twelve citizens of the State elected by the legislature. Its chief administrative officers are the president, the provost at Duluth, two vice presidents, and the deans. Money to support the University's teaching, research, and service activities comes from legislative appropriations, from student fees, and from endowments, grants, and donations from many organizations and individuals.

The University grants degrees on three campuses: Minneapolis, St. Paul, and Duluth. Most of the colleges and schools, as well as the University's central administration, are on the Minneapolis Campus. The College of Agriculture, Forestry, Home Economics, and Veterinary Medicine is on the St. Paul Campus. At Duluth is the Duluth Branch. Each campus has an Office of Admissions and Records.

This bulletin gives information about the Minneapolis and St. Paul branches of the University.

How to Enter the University

MINNESOTA RESIDENTS WHO HAVE GRADUATED from accredited high schools with acceptable records may enter the University on certification of graduation. Entrance by examination is possible for those with high school records not meeting the certificate qualifications, and for non-high school graduates. (See page 8.) The differing entrance requirements of different schools and colleges are described on the pages that follow. Anyone who doesn't meet the stated requirements may apply for individual consideration.

Nonresidents of Minnesota may enter the University under conditions described on page 10.

To Apply for Admission

You can get a freshman admission application form from any Minnesota high school, or from the Office of Admissions and Records, University of Minnesota, Minneapolis 14, St. Paul 1, or Duluth 5. Until your admission is completed, all your dealings will be through this office. Once your admission is approved, you will be sent an admission certificate, accompanied or

followed by registration instructions. If you are transferring from another college or university, you will also get a statement of transfer credit allowed.

You must present your admission certificate when you appear for your first registration in the University. If this is for the fall quarter (registration dates for fall, 1952: August 4 to September 26), you should be on campus for New Students' Week, September 22 to 26. During this week new students are guests at a series of meetings and campus inspection trips planned to introduce them to the University. Educational and vocational counseling, campus social life, the fraternity and sorority system, student activities, religious organizations, athletics—introduction to all these, together with a number of social events, make up the New Students' Week program. The events are of interest not only to entering freshmen but also to other new students.

Admission by Certificate

If you have graduated from an accredited high school—one on the ac-

credited list of the Minnesota Department of Education—if you are a Minnesota resident (see page 33 for definition of “nonresident”), and if you have met the requirements of the division of the University you wish to enter, you may be admitted by certificate (without examination). Each of the schools and colleges of the University that accepts beginning students has its own special requirements, which are listed below in terms of subject-matter groups, “units,” “majors,” “minors,” and high school standing or college aptitude rating. Here is what these terms mean:

A “unit” is a full year of a high school subject in senior high (Grades X, XI, and XII). A “major” is 3 or more units in one subject-matter group; a “minor” is at least 2 such units. The subject-matter groups are:

A—English

B—Foreign language (a major or minor must be in one language)

C—History and social sciences (a major must include at least 2 history units; a minor at least 1)

D—Mathematics

E—Natural sciences (no more than 2 half-unit courses may be used for a natural science major or minor)

F—Vocational and miscellaneous subjects

One unit in either foreign language (B) or mathematics (D) completed in Grade IX may be used toward a major or minor. But it cannot be counted among the 12 units completed in Grades X, XI, and XII required by most colleges of the University, nor as a part of required majors or minors.

“College aptitude rating” is the average of the student’s percentile rank in his high school graduating class and his percentile rank on the college aptitude test.

Requirements for entrance by certificate, as set up by individual divisions of the University, are described in the next sections of this bulletin. *Admission by examination is described on page 8.*

College of Science, Literature, and the Arts

This College, the University’s largest—usually called “the Arts College”—admits by certificate high school graduates who have college aptitude ratings of 40 or higher. They should have completed 12 units in senior high school grades, including at least 9 in subject matter areas A through E. They should have a major in English (A), a major in mathematics (D), and one other major or minor.

Students with certain high school ranks and test scores are admitted even though they have not taken the above pattern of high school subjects (although students planning to take mathematics, sciences, or business administration in college should complete at least elementary algebra and plane geometry in high school). These include students in the top 10 per cent of their high school graduating class and students in the top half of their high school class whose college aptitude test score is 40 or better.

Applicants not meeting the above requirements fully may be requested to submit additional information. Recommendations from high school principals or counselors are encouraged.

Institute of Technology

PROFESSIONAL PROGRAMS—The Institute, in which education for engineering centers—students call the Institute “I-T”—admits on certificate any high school graduate who was in the top 10 per cent of his class, if he has met the IT mathematics entrance requirement.

Others are admitted if they were in the top half of their graduating classes, and if they meet these requirements:

Twelve units completed in senior high, including at least 9 in groups A through E; a major in mathematics (D), including algebra and solid geometry; and a major or minor in English (A).



If a student lacks either higher algebra or solid geometry (but not both), he can be admitted on condition that he make up the deficiency by the end of his first quarter in the University. He can take the course in the Summer Session preceding his entrance, or during his first quarter—without University credit.

TECHNICAL AID PROGRAM—To enter the two-year technical aid course for engineering draftsmen or for industrial technicians, you must be a high school graduate and have completed two years of high school mathematics (elementary algebra and plane geometry).

College of Agriculture, Forestry, Home Economics, and Veterinary Medicine

Any high school graduate in the top 25 per cent of his graduating class may enter this college, without regard to the subjects taken in high school. But the college prefers high school records close

to the divisional requirements described below.

Other high school graduates in the top 75 per cent of their classes may enter if they have completed 12 units in senior high, at least 9 of them in groups A through E (except that the 9 may be cut to 8 if a student going into Agriculture has a year of senior high agriculture, or one going into Home Economics has a year of senior high home economics). Major and minor requirements of the four areas are:

AGRICULTURE—A major or minor in English (A); a major or minor in mathematics (D), or one unit in mathematics for a student going into Technical Agriculture, Agricultural Education, Agricultural Extension, or Agricultural Business Administration (a student with only one such unit must take higher algebra during his first two college years); one unit in natural sciences (E) or in senior high agriculture; and other majors or minors to make a total of 2 majors and 1 minor, or 1 major and 2 minors.

FORESTRY—A major or minor in English (A); a major or minor in mathematics (D); one unit in natural sciences (E); and other majors or minors to make a total of 2 majors and 1 minor, or 1 major and 2 minors.

HOME ECONOMICS—A major or minor in English (A); and other majors or minors to make a total of 2 majors and 1 minor, or 1 major and 2 minors.

PREVETERINARY MEDICINE—In general, requirements are those of the College. Specific requirements are a major in English (A) and a minor in mathematics (D). A minor in either foreign languages (B) or natural sciences (E) is recommended.

College of Education

Training for a number of teaching fields is open to any student who graduates from high school in the upper 60 per cent of his class, regardless of what high school courses he has taken. These fields are Art Education, Elementary Education, Industrial Education, Music Education, Nursery School-Kindergarten and Primary Education, Physical Education, and Recreational Leadership.

To enter teacher-training in other fields, the College requires two years of preprofessional work in the Arts College or, for agriculture or home economics teaching, in the College of Agriculture, Forestry, Home Economics, and Veterinary Medicine. Students aiming at these fields must meet entrance requirements of the college they enter.

To gain advanced standing in the College, a student must have maintained an over-all C average, and an average of 1.5 (midway between C and B) in courses in his major. Application for admission with advanced standing should be made prior to June 1, for the next succeeding fall quarter, and by the Friday preceding fall and winter quarter final examinations for admis-

sion to the winter and spring quarters. Such students must also take preadmission psychological tests offered early in the quarter preceding transfer at times published in the "Official Daily Bulletin." (See also Admission with Advanced Standing, page 9.)

Whether a student is well fitted for teaching is a matter the College examines both at his first registration and at later intervals, such as entrance into Senior College and into practice teaching. When College authorities are convinced a student is not well qualified for teaching, he may after personal conference be advised to go into more suitable training.

Duluth Branch

Full information about entering the Duluth Branch can be obtained from the Office of Student Personnel Services, University of Minnesota, Duluth Branch, Duluth 5, Minnesota.

In general a college aptitude rating of 40 or more is required for admission to preprofessional courses or to curricula leading to the B.A. or B.S. degree. Applicants who wish to major in art, industrial education, home economics, music, or physical education must have a college aptitude rating of 25 or above. No special grouping of high school courses is required. Admission to the two-year terminal program leading to the A.A. degree is based on a high school diploma or its equivalent.

General College

Any Minnesota resident who is a graduate of an accredited high school is eligible to enter General College.

School of Nursing

This School offers several different programs preparing for different types of work, all open to men and women students, either married or single.

DEGREE COURSE IN PROFESSIONAL NURSING—To enter this program, you

must meet the entrance requirements of the Arts College, which gives the prenursing program. Upon completing this program, either at the University of Minnesota or at another approved university or college, you enter the School of Nursing.

CURRICULUM IN PRACTICAL NURSING—

High school graduates between 18 and 35 years old can enter the course in practical nursing at the beginning of the fall quarter. Those older than 35 are given individual consideration. This curriculum is offered in the School, without preliminary Arts work.

An associate in arts degree, offered in collaboration with General College, is described on page 15.

ADVANCED CURRICULA—Programs for registered professional nurses or advanced students interested in special nursing study are described on page 17.

Course for Dental Hygienists

High school graduates in the top 10 per cent of their classes may enter without examination; others must have a college aptitude rating of 40 or more. They must have 12 senior high school units, 9 of them in groups A through E; a major in English (A); an additional major and minor, or 2 minors. High school chemistry is also strongly recommended.

College of Pharmacy

A college aptitude rating of 40 or more is the usual entrance requirement for this College. Those with a lower rating may apply for individual consideration. A student with a 40 rating must have 12 senior high school units, at least 9 of them in groups A through E; a major in English (A); a major or minor in mathematics (D), including 1 unit of algebra and 1 of plane geometry; and 1 additional major or minor (2 majors preferred).

To keep up professional standards, the College has set up special require-

ments for admission to the second, or sophomore, year of pharmacy. Any student who has finished the freshman year with an honor point ratio of 1.5 (midway between B and C) or higher will be admitted; applicants with lower ratios will be considered individually. A student wishing to enter sophomore work must submit a transcript of his freshman record as soon as it is available—never later than August 1. He will be notified of the College action within 30 days.

A student taking summer work to make himself eligible for admission to the sophomore year should apply in the same way, and furnish also information about the courses he is taking, the dates he will complete them, and the colleges in which they are offered.

Course in Mortuary Science

This department admits by certificate any high school graduate in the top 10 per cent of his class or those applicants who have a college aptitude rating of 35 or higher. Applicants who do not meet these requirements may be admitted, in certain instances, upon "dean's recommendation."

Admission by Examination

If you are a Minnesota high school graduate, or a non-high school graduate of 19 years or more, you are eligible to apply for admission to the University by examination. The Office of Admissions and Records will send you information about procedure. The tests are of the "objective" type—tests that measure aptitude for college work rather than specific knowledge. Students have found preparation or "cramming" for them of little value.

Some non-high school graduates younger than 19 may also be admitted, under a plan approved by the University, the Minnesota Council of School Executives, and the Minnesota High School Principals' Association. They

must first of all show that they are sufficiently mature to promise ready adjustment to University life and work. Their procedure: application to the Office of Admissions and Records in the usual way, together with letters of recommendation from school principal and parents; then two or three days on campus for counseling and testing, some weeks in advance of the quarter they expect to enter.

Admission with Advanced Standing

If you have finished a year or more of satisfactory work at an accredited college or university, you may gain admission to the University of Minnesota with "advanced standing"—that is, credit for courses completed. If you have less than a year of such work, or if you have none except study experience during military service, you have to meet regular requirements for admission from high school. You must file official college transcripts or military records to cover all such work you have done, whether it has been satisfactory or unsatisfactory. You should make application and supply transcripts to the Office of Admissions and Records at least a month before the beginning of the quarter you want to enter.

ADVANCED STANDING FOR MILITARY SERVICE—Veterans are given University credit for basic military experience, and for a number of kinds of courses and training open to men and women in the armed forces. If you want credit for work of this kind, you must submit with your application for admission official service discharge papers and official college or university transcripts covering college-level courses you have taken.

ADVANCED STANDING BY EXAMINATION—

You can get credit for many University courses if you can show knowledge

of the courses' content by passing examinations. Such knowledge might be gained by taking courses in noncollegiate institutions, or by independent study, or by travel, or in other ways. You must take the examinations for this kind of credit within the first six weeks of your first University enrolment following the experience. Apply to your faculty adviser, or to your college office, for information.

Admission as an Adult Special

Men and women who want individual courses or groups of courses to meet special personal needs may be admitted to the individual colleges as "adult special" students. Usually these students are 24 or older, and of mature experience. They are not candidates for degrees, though their credits may later be applied toward degrees with college approval. Their admission is completed through the Office of Admissions and Records. Restrictions on admission of nonresident undergraduate students described on page 10 apply to admission of adult special students.

Admission to the Summer Session

The two terms of the Summer Session are open to high school graduates under regular entrance regulations, to students already admitted to the University, and to those who have credit from other institutions. There are no nonresident restrictions. Students with credit from other colleges who are not candidates for degrees may enter without filing credentials; but their admission to Summer Session gives them no claim to attendance in regular session. Such students, as well as nonresidents attending Summer Session, are required to meet all regular requirements for the regular academic year.

Transfer from One College to Another

A student who wants to change from one college or school to another must meet the requirements of the second. Application for transfer should be made at the Office of Admissions and Records on the campus where the student is currently or was last registered.

The Transfer Bureau of that office aids in such changes by securing clearances, appointments for counseling, re-evaluation of credits and in other ways. The longer before the actual date of transfer a student applies to a bureau, the better.

Veterans on GI or rehabilitation benefit plans must clear with the University Bureau of Veterans' Affairs before applying to a Transfer Bureau.

Admission to Professional Schools and Colleges

Seven professional schools or colleges of the University require from five quarters to three years of "preprofessional" education before accepting students. You may take this preprofessional work at Minnesota or elsewhere. To take it at Minnesota, you must meet admission requirements of the college offering the work, and also the preprofessional requirements listed in its bulletin (which you can get from the Office of Admissions and Records). Preprofessional work from other institutions must meet the same requirements.

Preprofessional work for specific colleges may be taken as follows:

Business Administration—Two years in the Arts College; or in Agriculture, Forestry, Home Economics, and Veterinary Medicine; or in the Institute of Technology

Dentistry—Two years in the Arts College

Education—Two years in the Arts College, or in Agriculture or Home Economics, or in General College; or six quarters in Arts and ten in the School of Nursing. (See page 15 for curricula which admit students without preprofessional work.)

Law—Two years in the Arts College

Medical—Three years in the Arts College

Nursing—Six quarters in the Arts College

Veterinary Medicine—Two years in Agriculture, or its equivalent

Admission of Nonresidents of Minnesota

The University will consider the application for admission for non-Minnesotans who present above-average high school or college records. This implies no commitment to admit them.

Special consideration will be given to the immediate family of present and former regular students and to applicants to the School of Nursing.

Admission to the Graduate School

Any student with a Bachelor's degree from a recognized institution may apply for admission to the Graduate School. His acceptance as an advanced degree candidate will depend on his undergraduate scholastic record, which must be high, and on the approval of the department in which he wants to take major work.

Inquiries and applications should be sent to the dean of the Graduate School. You should send with an application two official transcripts of your undergraduate work, and one of any graduate work you have taken. Applications that arrive less than four weeks before the beginning of a quarter may not be approved in time for admission in that quarter.

Courses and Degrees

DEGREES AND CERTIFICATES AWARDED BY THE UNIVERSITY ARE OF WIDE variety. They range from certificates in highly specialized areas, such as that in practical nursing, to graduate degrees that may require years of advanced study. Most Bachelor's degrees require four years (twelve quarters) of work.

The pages that follow tell in general terms about the University's courses of study. Some of them are open to students without pre-professional training—these courses, or curricula, are described in the next section of this bulletin. Others, described later, require students to complete preprofessional work first. Each college or major division of the University has its own bulletin—in it you will find outlines of degree requirements as well as full descriptions of courses and regulations. Write to the Office of Admissions and Records for the particular bulletin you want.

If you are in doubt as to the direction your education should take, the University's counseling services are available to help you. There are not only the all-University Student Counseling Bureau (see page 24) but also similar services in individual divisions of the University.

Programs Open to Beginning Freshmen

College of Science, Literature, and the Arts

If one of your goals in coming to the University is to strengthen your understanding of the world in which you live and work and the people with whom you associate—to seek what is usually called a liberal education—you will probably register in the Arts College.

It is here that you can achieve a general education in the humanities, the natural sciences and the social sciences. Here also you can explore many fields of human endeavor and gain help in choosing your vocation.

At the end of four years you may earn a B.A. degree. A two-year A.L.A. degree is also available. (For work in the General College, offering a more limited pattern of courses, see page 14.)

In addition to its broad liberal program, the Arts College offers work leading to a number of professions.

There is:

Specialized training in a variety of fields, combined with liberal education in courses selected to support professional work. Preparatory training for a number of professional schools and colleges.

Four-year courses leading to bachelor of arts (B.A.) degrees are offered in these fields:

American Studies, Anthropology, Architecture, Art, Astronomy, Bacteriology, Biostatistics, Botany, Chemistry, Classics, Economics, English, Geography, Geology and Mineralogy, German, History, Humanities, International Relations and Area Studies, Journalism, Linguistics and Comparative Philology, Mathematics, Music, Philosophy, Physics, Physiology, Political Science, Psychology, Romance Languages, Scandinavian, Social Work, Sociology, Speech, Speech Pathology, Preparation for Theological Training, Zoology.

If you do not find a major suitable to your interests and abilities in one of these departments, you may wish to plan an interdepartmental program

tailor-made to your particular objectives. This permits concentration in terms of a special interest—which may cross departmental lines—rather than in terms of a single department.

A four-year course in Library Science leads to a bachelor of science (B.S.) degree. Students with B.A. degrees can usually earn this degree in one additional year.

In addition, the Arts College cooperates with other colleges to offer five combined arts and professional courses:

Arts and Medicine—An eight-year course leads to B.A. and doctor of medicine (M.D.) degrees.

Arts and Dentistry—A seven-year course leads to B.A. and doctor of dental surgery (D.D.S.) degrees.

Arts and Law—A seven-year course leads to B.A. and bachelor of laws (LL.B.) degrees.

Arts and Architecture—A six-year course leads to B.A. and bachelor of architecture degrees.

Arts and Dental Hygiene—A four-year course leads to B.A. and graduate dental hygienist degrees.

PREPROFESSIONAL TRAINING—A basic liberal education is required in preparation for work in a number of the University's professional schools—usually two years, though sometimes three, of Arts College work. Professional curricula requiring this kind of preparation are those in the Medical School, the Law School, the School of Dentistry, the School of Business Administration, the School of Nursing, and some of those in the College of Education. Specialized courses in nursing education, public health nursing, medical technology, and occupational and physical therapy also ask this kind of preparatory work.

THE TWO-YEAR ASSOCIATE IN LIBERAL ARTS DEGREE—This recognition of the completion of two years of satisfactory work in the Arts College is intended for two groups of students:

Those who plan to attend the University for two years only;

Those who, though working for a Bachelor's degree, want formal recognition of the completion of two years of work.

To earn this degree, you must ordinarily earn 90 credits in six or seven quarters of residence, and you must meet specific requirements in English and two of these three fields: foreign languages, social sciences, and natural sciences. Within these limits, you have broad choice from among hundreds of freshman and sophomore Arts College courses, and you and your adviser design your program to suit your own individual interests.

Institute of Technology

Professional training in engineering is offered by the four branches of the Institute, mostly in five-year courses leading to Bachelor's degrees. The branches and the five-year degree courses they offer are:

COLLEGE OF ENGINEERING—Aeronautical Engineering, Agricultural Engineering, Civil Engineering, Electrical Engineering, Engineering Mathematics, Industrial Engineering, Mechanical Engineering

SCHOOL OF ARCHITECTURE—Architecture

SCHOOL OF CHEMISTRY—Chemical Engineering, Chemistry, Physics

SCHOOL OF MINES AND METALLURGY—Geological Engineering, Geophysics, Metallurgical Engineering, Mining Engineering

A five-year combination degree links any of these engineering fields with work in the School of Business Administration, leading to a degree in engineering and another in business administration. A four-year combination of courses in the College of Engineering and the Business School leads to a business administration degree.

The two-year technical aid course for engineering draftsmen gives a grounding in practical mathematics and shop operations with emphasis on engineering drawing, and leads to a technical aid certificate.

College of Agriculture, Forestry, Home Economics, and Veterinary Medicine

This College and its several schools—all on the St. Paul Campus of the University—offer Bachelor's and advanced professional degrees in a wide range of subject areas. The four-year courses that lead to the B.S. degree or its equivalent are:

AGRICULTURE—Technical Agriculture (including a pretheological "major" in Agriculture), Agricultural Education, Agricultural Extension, Agricultural Business Administration, Agricultural Journalism, Food Technology, Fishery and Wildlife Management, Science Specialization

FORESTRY—Forest Management, Wildlife Management, Building Products Merchandising and Light Construction, Wood Technology, Wood Technology-Furniture

HOME ECONOMICS—General Home Economics, Dietetics, Home Economics Education, Home Economics in Business (foods, textiles and clothing, related art), Institution Management (cafeteria, tea room, restaurant), Journalism-Home Economics, Home Economics and Nursery School Education, Home Economics Extension, Preparation for Research in (a) Experimental Foods, (b) Nutrition, (c) Textiles and Clothing

In Veterinary Medicine, a four-year curriculum which earns a doctor of veterinary medicine degree follows two years of preveterinary medicine—a total of six years.

In some fields, a fifth year of work leads to an advanced degree. In Agricultural Education and Home Economics Education a student may earn a master of education degree.

Two five-year combination curricula lead to special Bachelor's degrees. In cooperation with the Institute of Technology, the College offers a professional agricultural engineering degree. In cooperation with the Institute and the Business School, it offers a degree in agricultural engineering and business administration.

College of Education

If your interest is in school work, the College of Education offers you a four-year program leading to a B.S. degree and a Minnesota teaching certificate.

The variety of courses is virtually as wide as the combined offerings of many of the University's divisions. You can prepare for teaching in kindergarten and primary grades, in elementary, junior high, or high school grades. You can specialize in academic subjects such as English, Latin, French, Spanish, German, social studies, mathematics, science, or speech . . . or in special fields such as agriculture, art, business education, home economics, industrial arts, physical education and coaching, health and hygiene, or music. Some courses of study give you not a one-subject major, but a broad field such as natural science, or the social studies.

There are also four- and five-year programs for school librarians, teachers of handicapped children, teachers of speech correction, and those interested in public health work, public health nursing, nursing education, and recreational leadership.

Master of education degrees, involving a fifth year of graduate study, are offered in physical education for men, physical education for women, art education, music education, nursing education, industrial education, home economics education, agricultural education, early childhood education, elementary education, rural education, English education, natural sciences, and social studies.

Advisers in the College can aid students who want to teach in other states to prepare for getting teacher's certificates elsewhere as well as in Minnesota.

General College

"General education," in which the General College has for years been a leader, aims essentially to produce well-rounded individuals—men and women who can understand the intricate patterns of the modern world, who can meet daily problems with a sound sense of values, who can live full and responsible lives.

A broad two-year program of courses in General College, leading to the associate in arts degree, is designed to help students toward this goal. As a student in this program you may, if you wish, combine with the more general courses certain courses to prepare you for specific occupations which do not require professional training, such as retail selling.

The associate in arts degree is granted when you complete two years of work, including three quarters of physical education, and achieve satisfactory standing in a comprehensive examination covering the general education program. If you wish to transfer to another college of the University, your work will be evaluated by the college of your choice; if it has been of satisfactory caliber, you will ordinarily be admitted with the same advanced standing as if you had done the same amount and type of work in the Arts College.

The General College system of counseling and guidance for students is one of the major factors in the success of its general education program. Through this system, including carefully-designed testing of individual abilities and aptitudes, advisers can help students plan course programs and extracurricular activities of greatest interest and personal benefit. General College counselors and instructors are always available to help students with problems in any way affecting their adjustment to University life.

Duluth Branch

At the Duluth Branch of the University you can get a B.A., a B.S., or an associate in arts degree, or take pre-professional training for transfer to other campuses.

Four-year courses leading to Bachelor's degrees offer majors in art, biology, botany, business and economics, chemistry, elementary education, nursery-kindergarten-primary education, English, French, geography, German, history, home economics, industrial education, mathematics, music, physics, physical and health education, political science, psychology, social studies, sociology, speech, and zoology.

The two-year associate in arts degree is similar in purpose and content to the Arts College associate in liberal arts degree granted on the Minneapolis Campus (see page 12). Each student, consulting with an adviser, chooses courses to fit his individual aims.

Preprofessional courses, designed to meet requirements of professional schools and colleges of this University and most others, are available to prepare for advanced work in agriculture, business, dentistry, engineering, forestry, journalism, law, medicine, medical technology, nursing, occupational therapy, physical therapy, pharmacy, social work, theology, and veterinary medicine.

An Air Force ROTC program is offered on the Duluth Branch Campus.

College of Pharmacy

Upon the completion of the first year's work, as outlined in the *Bulletin of the College of Pharmacy*, a student may apply for admission to the professional work which begins the second year. The science and art of pharmacy deals with the preparation, compounding, and dispensing of drugs and medicines and also the study of their therapeutic value and use. Upon the satisfactory completion of the four years

of work, the student will receive the B.S. in pharmacy degree.

The College also offers an optional combined five- or six-year course in pharmacy and business administration. This leads to a pharmacy degree and also one in business administration. Evidence of above average academic ability is required for admission to this course.

School of Nursing

BASIC PROFESSIONAL CURRICULUM—This degree program, leading to a B.S., is open to men and women students who have had 90 approved credits in prenursing work (5 credits in physical education should be added).

PRACTICAL NURSING—A certificate in practical nursing is granted students who finish the four-quarter practical nursing program in this School. This program prepares students for non-professional nursing service in general hospitals, public health agencies, homes, and hospitals for the mentally ill and the chronically ill.

Practical nursing students may earn the General College associate in arts degree by completing 45 credits in General College work, either before or after their certificate work.

HOME MANAGEMENT AND PRACTICAL NURSING—For workers in rural

health, the School provides a six-quarter program, in cooperation with the School of Agriculture. Those who finish it are prepared to give nonprofessional nursing service and to assist with the management of homes. Students must start this program in the fall quarter. Admission requirements are those for the School of Agriculture.

Course for Dental Hygienists

This course for young women begins each fall and takes two years. It qualifies its graduates to work in dental offices and public health agencies. Upon getting the degree (graduate dental hygienist) from the School of Dentistry, a graduate may get a license by passing an examination in the state in which she wants to work.

Mortuary Science

This course for young men and women may be entered at the beginning of any quarter or Summer Session. The course consists of 6 quarters of work in a prescribed curriculum. It qualifies graduates, upon completion and awarding of the degree—associate in mortuary science—to write the state board examination in any state requiring one year of college and one year of mortuary science training. Upon successful completion of state board requirements, graduates are eligible for licensure.



Programs Requiring Previous College Work

This section of the bulletin tells about University degree courses for which preparatory work is necessary. For complete information on any of the courses, you should get the bulletin of the school or college in which the work is offered.

Medical School

THE MEDICAL COURSE—This course which leads to the doctor of medicine (M.D.) degree, provides basic preparation for the practice of medicine, for public health service, for medical teaching, and for medical research. The course requires at least three years of premedical college work, four years in the Medical School, and a year of internship.

Although three years of work in an arts college constitutes the minimum required for admission to the Medical School, the Admissions Committee gives preference to candidates with the best backgrounds of general education. A thorough general education is of great importance to a physician, and four years of preliminary work—with a B.A. or B.S.—are considered preferable to three. The *Bulletin of the Medical School* gives details of entrance requirements and suggests appropriate elective courses.

THE MEDICAL TECHNOLOGY COURSE—

This course—four years leading to a B.S.—trains its graduates for laboratory work in hospitals, clinics, and physicians' offices, and for research work in such institutions and in foundations and universities.

The first two years of the course are in the Arts College. The third year, in the Medical School, is in theoretical work. The fourth is in practical rotating laboratory service in the University of Minnesota Hospitals—service that includes technical training in hematology, bacteriology, serology, electrocardiography, basal metabolism, blood bank, tissue preparation, and chemical analysis of blood and urine. A student

may also add six months' training in X-ray techniques.

THE PHYSICAL THERAPY COURSE—This course—four years leading to a B.S.—prepares graduates for work in all physical therapy techniques in hospitals, clinics, schools, and other specialized institutions, under physicians' direction. After two years of Arts College work, the student takes four quarters of Medical School work in theory and practical application of physical therapy. In his last two quarters, he gets practical experience in physical therapy departments affiliated with the University.

THE OCCUPATIONAL THERAPY COURSE—

Graduates of this course are qualified to provide therapeutic activities, education, and recreation to the sick and handicapped in various types of hospitals and institutions. They earn a B.S. degree after two years of Arts College work, four quarters in occupational therapy courses in the Medical School, and ten months during the last year in practical clinical training in hospitals and institutions.

CONTINUATION COURSES—The continuation course program gives practicing physicians and others in allied fields the opportunity of keeping abreast of latest developments in their professions.

The continuation courses—which last from one day to several weeks—are administered by the General Extension Division, the Center for Continuation Study, and the director of continuation medical education. They cover many fields such as hospital administration, medical technology, dietetics, and nursing education, and—for practicing

physicians—psychiatry, neurology, pediatrics, radiology, obstetrics and gynecology, internal medicine, surgery, dermatology, and others.

School of Public Health

Advanced courses for specialists in a number of public health fields lead to Master's or Bachelor's degrees.

The degree master of public health (M.P.H.) can be earned in these fields:

PUBLIC HEALTH AGENCY WORK—A year or more of graduate work in public health theory and practice, open to physicians, dentists, and veterinarians, earns the M.P.H. degree.

PUBLIC HEALTH ENGINEERING—A year or more of graduate work in public health engineering, open to graduate engineers with suitable experience who want to go into public health programs, leads to the M.P.H. degree.

PUBLIC HEALTH NURSING—The M.P.H. degree may be earned by qualified public health nurses who have completed the necessary undergraduate work and have had three years or more of properly supervised field experience in public health nursing.

The B.S. degree with a major in public health nursing is open to properly qualified graduate nurses.

HEALTH EDUCATION — College graduates—preferably with degrees in education or journalism—can earn the M.P.H. by four quarters or more of work in community health education. They must have adequate background in biological sciences, social sciences, and education and at least three years of experience in teachers' or in public health agencies.

IN HOSPITAL ADMINISTRATION a two-year program leads college graduates with adequate training in economics, medicine, or nursing to the degree, master of hospital administration. One

academic year is spent in formal instruction, and a full calendar year in a hospital as an administrative resident.

School of Nursing

Training in the professional nursing fields is offered in several ways.

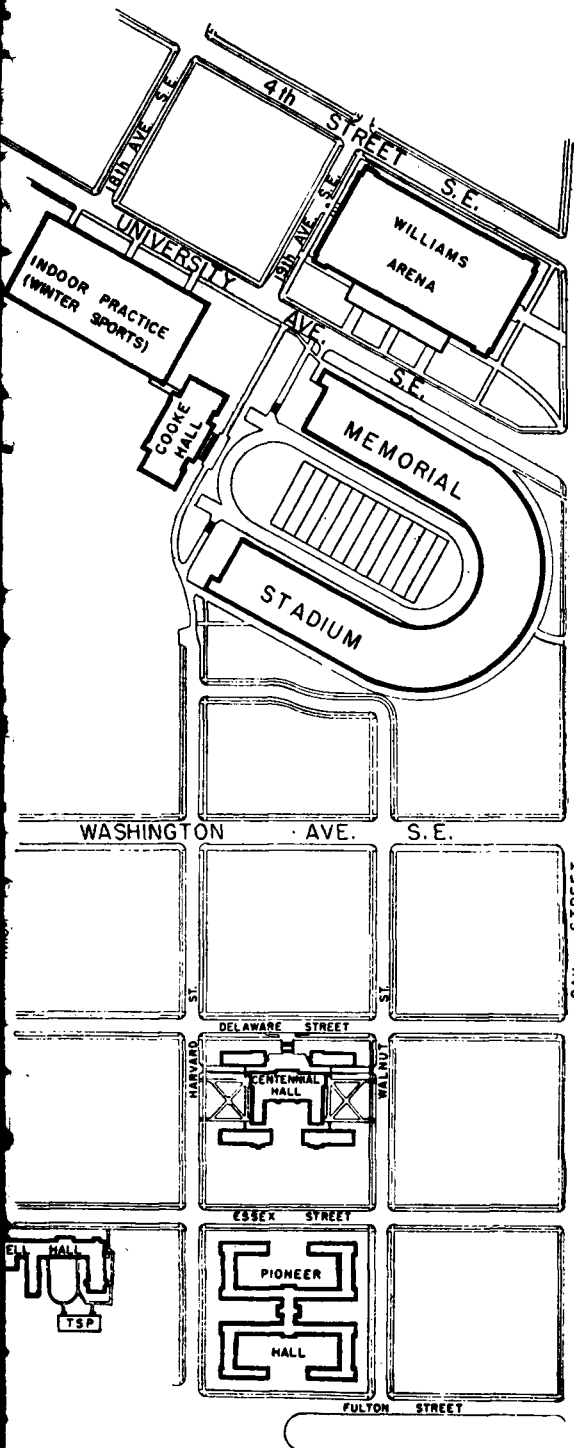
BASIC PROFESSIONAL CURRICULA—Sixteen quarters of college work are necessary to earn the basic degree, B.S. The first six quarters (two academic years) may be taken in any approved college offering the necessary biological science, social studies, and general education. In the next ten quarters, in the School of Nursing, the student takes the required professional work.

The B.S. degree is also open to college graduates who take a ten-quarter curriculum in professional nursing. To be eligible for this degree, a college graduate must have had satisfactory work in sociology, psychology, chemistry, and zoology, or satisfy the School of Nursing of adequate qualification on an individual basis.

ADVANCED PROFESSIONAL CURRICULA FOR PROFESSIONAL NURSES—The B.S. degree program with a major in nursing education is offered jointly by the School of Nursing and the College of Education (the student registers in Education). A minor may be taken in ward administration, science teaching, child care, a clinical field of nursing: medical, obstetric, operating room, children's, psychiatric, rural, surgical, or tuberculosis. Students in the advanced curricula who need more basic nursing experience may arrange for it during the University Summer Session.

MASTER'S PROGRAM IN NURSING EDUCATION—This program is open to qualified candidates who have completed an undergraduate major in nursing education or who have completed an accredited program leading to a Bachelor's or a Master's degree with a major in professional nursing.

The Minneapolis Campus . . .



On this map you will find most of the Minneapolis Campus buildings and offices you'll need to get acquainted with. The map on page 34, showing the St. Paul Campus, provides the same kind of information for students taking work on that campus.

Among Minneapolis Campus buildings and facilities most used by students are:

ADMINISTRATION—Office of Admissions and Records, Employment Bureau and administrative offices.

EDDY HALL—Student Counseling Bureau, Student Housing Bureau, Foreign Student Adviser, Bureau of Student Loans and Scholarships, Coordinator of Students' Religious Activities, KUOM.

SCOTT HALL—Music and theater activities.

SHEVLIN HALL—Bureau of Veterans' Affairs, Speech and Hearing Clinic.

COFFMAN MEMORIAL UNION—offices of student organizations. Campus recreational center.

SPORTS CENTER—football and track in the Stadium, basketball and hockey in Williams Arena, swimming and other sports in Cooke Hall and the indoor practice arena. Not on the map are tennis courts, across Fourth Street from Williams Arena; the baseball diamond north on Seventeenth Avenue; the University golf links near the St. Paul Campus. Women's sports are in Norris Gymnasium.

MURPHY HALL—student publications offices.

MEN'S RESIDENCES—Centennial and Pioneer Halls.

WOMEN'S RESIDENCES—Comstock Hall, Sanford Hall, and Winchell Cottages (northwest on University Avenue, not on the map).

TSMa—Student Activities Bureau.

The inter-campus trolley line, connecting Minneapolis and St. Paul campuses, terminates at the loop west of Jones Hall. Major parking areas are north of Mechanical Engineering, north of Fourth Street, in the area behind Coffman Union and on Washington Avenue at Fifteenth Avenue and at Oak Street.

MASTER'S PROGRAM IN NURSING ADMINISTRATION— This program which leads to the Master's degree in nursing administration is designed to prepare professional nurses for positions in nursing administration such as directors, assistant directors, and supervisors. This program is open to qualified candidates who have completed an accredited program leading to a Bachelor's or a Master's degree with a major in nursing education, nursing administration, or in professional nursing. Persons who do not meet the usual requirements for admission to a Master's degree program may, on special consideration, be admitted to selected course work.

School of Business Administration

To enter this school as a candidate for the degree bachelor of business administration (B.B.A.), you must have finished two years of work, including certain prescribed courses, in the Arts College, the Institute of Technology, or the College of Agriculture, Forestry, Home Economics, and Veterinary Medicine. On this background you can add two years to get the B.B.A. degree in the general course in business, or in these specializations: Accounting, Advertising, Agricultural Business, Factory Management, Finance, Foreign Trade, Industrial Administration, Industrial Relations, Insurance, Merchandising and Selling, Office Management, Retail Store Training, Secretarial and Supervisory Training, and Traffic and Transportation.

Preparation for positions as economic analysts or statisticians—in government service or private industry—is offered in two special sequences that lead to the degree B.S. in economics.

For students who want to go into work requiring both business and engineering training, the School of Busi-

ness Administration and the Institute of Technology combine to offer a number of five-year programs. These lead to engineering and business administration degrees.

The College of Pharmacy and the School of Business Administration also offer a five-year combined program, to prepare students for work in wholesale or retail pharmacy, or for administrative positions in certain industries.

The Law and Business Schools have developed a seven-year combined program to provide training for types of law practice involving work with government agencies, and for business positions in corporations subject to government regulation.

School of Dentistry

The principal courses offered by this School are the four-year course for the degree of doctor of dental surgery (D.D.S.), which prepares students to become dentists, and the two-year course for dental hygienists (see page 15).

To become a candidate for a D.D.S. degree, you must have grades averaging C or higher in two years of accredited arts college work, including a year of English, one of inorganic chemistry with qualitative analysis, a complete organic chemistry course of at least half a year, a year of zoology, and a year of physics. The science courses must include both lectures and laboratory work. An achievement and aptitude examination is required of all entering students.

Law School

The Law School offers two degrees: The professional bachelor of laws (LL.B.) and the nonprofessional bachelor of science in law (B.S.L.). Only the LL.B. qualifies one for bar examina-

tions and admission to practice. The B.S.L. is designed for those who want a fairly extensive knowledge of law for use in other fields, rather than for law practice.

The School provides two approaches to the LL.B.: by the "two-four plan"—two years of prelaw and four of law study—or by way of a B.A. or equivalent degree followed under present rules by three years of law. Beginning with the class entering the Law School in 1953, three and one-half years of law study will be required of those with a degree. The "two-four plan," recommended by the Law School faculty to those intending to go into law when they begin college work as the better balanced and more flexible program, provides broad professional training as well as basic "bread-and-butter" law work. It seeks to equip a lawyer not only for practice but also for the governmental, civic, and social responsibilities commonly open to lawyers.

This plan involves three periods of study:

1. Two years of prelaw study with at least a C average. This study must include the prelaw courses specified in the Arts College and Law School bulletins, or substitutes approved by the dean of the Law School.
2. The prescribed first- and second-year courses in the School. Any student who completes the two years with the minimum required average may be granted the B.S.L. degree. A higher average is required to continue into the third year.
3. Two years of advanced law work. This work includes such courses as Practice, Pleading, Evidence, Judicial Administration, Administrative Law, Jurisprudence, Legislation, Trade Regulation, Labor Law, International Law, and Social Legislation. About half of the work is elective; up to 21 credits may be chosen from appropriate subjects in other divisions of the University, on approval of the Law dean.

Students with B.A. or equivalent degrees may earn the LL.B. by three years of law study, most of which is prescribed. They must achieve the scholastic averages required under the "two-

four plan." It is expected that this approach will be taken by students who have obtained college degrees before deciding to study law. Three and one-half years will be required of students entering the Law School with a degree in the fall of 1953 and thereafter.

The B.S.L. requires two years of prelaw work and two of law. The first two years may be in specified prelaw subjects, or in such other work as individuals desire (the prebusiness course in the Arts College is acceptable). A prelaw average of C or higher is required. The law work may be either the first two years of the professional course, or, if the student does not intend to earn an LL.B. degree, selected law courses to meet individual needs.

Division of Library Instruction

This Division offers a year of professional library training to college graduates and well-qualified University seniors. Its graduates may get B.S., B.S. in library science, or Master's degrees. Its students register in the Arts, Education, or University Colleges, or the Graduate School. A number of its courses are accepted for credit in the School of Business Administration and the College of Agriculture, Forestry, Home Economics, and Veterinary Medicine.

University College

This College draws upon the entire University for its courses. It has no fixed curriculum. Its purpose is to provide flexibility in the educational program of the undergraduate who finds none of the standard curricula of the other schools and colleges suited to his interests or particular objectives. Such a student, with the approval of the University College Committee, may arrange a study program to fit his individual needs. Upon completing it he

is granted either a B.A. or a B.S. degree.

Information about University College is available at the University College Office, 225 Johnston Hall.

School of Veterinary Medicine

To earn the degree doctor of veterinary medicine, you must complete two years of preveterinary work with a 1.5 average (midway between C and B), and four years of professional work.

Graduate School

All work toward advanced degrees,

no matter in which of the University's subject fields you take it, is administered by this School. Students who have Bachelor's degrees or their equivalents may apply for admission to graduate work, and undertake work for advanced degrees at two levels: the degrees master of arts, master of science, master of business administration, master of fine arts, master of forestry, or master of social work; or the degree doctor of philosophy.

Inquiries about graduate work should go to the Dean of the Graduate School, 319 Johnston Hall.

Other Study Opportunities in the University

The Summer Session

Two terms of regular University courses, one of six weeks and one of five, are offered each summer. In each term you can take about half as many credits or courses as in fall, winter, or spring quarter; in the two terms you can complete a full quarter's work.

Most major divisions of the University offer summer courses.

General Extension Division

Extension classes in the evenings—and some in late afternoons—are available in the Twin Cities, Duluth, and some other communities where there is need for them. Usually an evening course meets once a week for seventeen weeks, in a two-hour session. Correspondence courses are open to any student, no matter where he lives, if he meets qualifications. Extension classes and correspondence courses cover many of the regular University subjects, as well as special offerings designed to meet special needs or interests of groups in the area served by the University. All these study oppor-

tunities are open to anybody who, through education, experience, or maturity, is able to profit from them.

The student can use either extension or correspondence courses to earn credits toward a degree, provided he has the necessary prerequisites and is qualified for admission to the University. Extension classes in the Twin Cities and Duluth are classed as residence work; correspondence courses are not. Some divisions of the University have specific limitations as to the amount of degree credit to be granted for correspondence work, or specific requirements that must be met.

Short courses, lasting from a few days to some weeks, are offered—mostly at the graduate level—for men and women in professional, business, and industrial fields. Most of these are held in the Center for Continuation Study, a special self-contained unit, with living and teaching facilities, on the Minneapolis Campus. Others are held elsewhere, wherever special occasion demands.

The Division also provides other educational services. Its Community

Program Service offers concerts, lectures, and assembly programs throughout the Upper Midwest, and maintains a loan play library. The Audio-Visual Extension Service maintains an extensive film library so that educational and cultural films may be made available to schools and community organizations in Minnesota and adjacent states. The Municipal Reference Bureau cooperates with the League of Minnesota Municipalities in the study of city and village affairs. The University radio station, KUOM, broadcasts

the Minnesota School of the Air, the University of the Air, and a distinguished series of musical, dramatic, historical, and other programs. The State Organization Service assists voluntary nonprofit associations, local or statewide, in conducting their business affairs and distributing cultural information. The Division also conducts the Course in Applied Mortuary Science (see page 15).

Headquarters of the Division are in Nicholson Hall on the Minneapolis Campus.

The Reserve Officers Training Corps

THE ROTC, THROUGH ITS THREE SERVICES—ARMY, NAVY, AND AIR

Force—gives college men students an opportunity to combine military or naval training with their academic work. Students are eligible for ROTC enrolment if they are registered in academic courses leading toward degrees, if they are United States citizens, and if they meet physical and other qualifications. The general requirements of the three services, and their special characteristics, are described in the University *Bulletin of the Army-Navy-Air ROTC*.

How Degrees Are Granted

Degrees from the University of Minnesota are granted by the Board of Regents on recommendation of the faculty. Here are the steps leading to the granting of a degree:

First, a student must meet all the course, credit, and grade average requirements of the school, college, or division of the University in which he is enrolled.

Second, he must meet residence requirements. This means that he must have spent at least a year in regular daily work at the University, of which two quarters must be in his senior year (if he has only one year of residence, it

must be his senior year). Extension courses (not correspondence courses) in the Twin Cities and Duluth, and work on the campus in the Armed Forces College Training Program during the war, count as residence credit. (Some schools and colleges have additional residence requirements.)

Third, he must meet all financial obligations to the University.

Fourth, he must attend commencement exercises at which his degree is conferred unless he is excused by the dean of his college. If he fails to attend, his diploma will be withheld for a year, or until he attends another commencement.

Special Services for Students

Students' Health Service

Student health is a major concern of the University as well as of the individual. The Students' Health Service provides full medical and emergency care. No charge is made to students for general care, such as consultation on physical and mental health problems, medical examinations, care of colds and minor diseases, and the like. For specialized and individual services special fees are charged (but no student is denied service because of inability to pay). Major surgery or prolonged medical care is usually obtained through private physicians, but operations at the Students' Health Service may be arranged if necessary.

Personnel Aids

No two among the University's thousands of students face exactly the same problems. To give maximum aid in adjustment to University life, in study problems, in choice of vocation, in budget-making, in housing, speech and hearing difficulties, taking part in student activities, veterans' questions—in every area of special need the University can foresee—a series of personnel services has been set up. If you need such services, the individual agencies or the Office of the Dean of Students, 200 Eddy Hall, can help you.

STUDENT COUNSELING BUREAU—If you don't know what vocation you want to follow, what courses to take, how to read and study effectively, or how to meet personal problems, the trained counselors in the Student Counseling Bureau, 101 Eddy Hall, provide help with these and other questions. Counselors are there to talk with you about marriage and family relations, dating, engagements, parent relations, and other problems. Special services are

provided for physically handicapped students.

If you have any problem that worries you, you are urged to ask the Bureau's specialists about it. One problem may make itself felt in many ways—worrying about lack of money, for example, may show itself seriously in your grades.

Precollege counseling is also available, at a small fee, to those who have not yet entered the University (no fees are charged to University of Minnesota students).

If you are considering attending the University you are encouraged to come to the Student Counseling Bureau before registering in order to obtain information. You might need information about the colleges in the University or you may be unsure of the various university facilities or the various courses which are available to you. Problems such as these as well as the others mentioned above can be discussed with the counselor in the Student Counseling Bureau.

BUREAU OF VETERANS' AFFAIRS—If you are a veteran, you should make the Bureau of Veterans' Affairs, 13 Shevlin Hall, your first point of contact with the University; and you will continue to keep in close touch with it throughout your University life.

The Bureau aids veterans in registering, both with the University and as beneficiaries of the GI or rehabilitation plans. It provides counseling and handles textbooks and supply orders for veteran students.

STUDENT ACTIVITIES BUREAU—The University believes that taking part in student activities is a significant part of college education. To give students an opportunity to participate in community life, scores of student groups—

professional, social, and cultural, religious and recreational, athletic and oratorical, everything from dancing clubs to the All-University Congress, a student-government group—have been organized. The Student Activities Bureau, located in 114 TSMa, exists to aid new groups toward sound organization, to supervise and guide groups in matters of program and finance, and to help individual students in selecting their extracurricular activities.

FOREIGN STUDENT ADVISER—Students from other countries are urged to call at 302 Eddy Hall, the office of the foreign student adviser. This office helps foreign students to meet federal, state, and local regulation problems, aids in liaison with their own governments, and advises them on University and personal problems as well. One of its functions is to guide foreign students to the proper campus agencies for help in problems of language, registration, finances, and social activity.

RELIGIOUS ACTIVITIES COORDINATOR—Student programs of religious activity—an important part of campus life at the University—operate through a wide variety of denominational and interfaith groups.

Through the office of the coordinator of students' religious activity, in 201 Eddy Hall, group activities are aided and stimulated and individual students are guided and encouraged to participate in worship, study, and social functions with appropriate groups.

SPEECH AND HEARING CLINIC—Students with speech and hearing problems—problems that may handicap them in University life or professional work—are urged on entrance to the University to visit this Clinic in 20 Shevlin Hall. Speech clinicians help students to attack problems of stuttering, sound substitutions, lisping, foreign accent, voice deviations, and oral inaccuracy. Students with hearing problems can get

aid in lip reading, speech, and other similar problems.

The Clinic also provides writing lessons for left-handed students whose writing needs improvement.

A fee of \$5 a quarter is charged for these services.

ORIENTATION—Each year the University helps the new students to get acquainted with the campus through informal "orientation programs." Through them you meet other students, new and old; you learn your way around the campus, and identify buildings and offices of special importance to you. You are introduced to campus life and activities, you meet with faculty members, you are helped with registration procedures.

A notice giving dates of orientation programs is sent to each new student soon after his admission.

COLLEGE COUNSELING PROGRAMS—Most of the University's schools and colleges have advisory and counseling programs for their students. Each student is assigned to an adviser who helps him with course and other problems, and some of the schools and colleges maintain employment and job-counseling services as well.

Cultural and Recreational Opportunities

UNIVERSITY LIBRARY—The University's library system centers in the main Library on the Minneapolis Campus, which provides recreational as well as educational materials for students.

In addition, there are in several of the schools and colleges specialized libraries and "work collections" in many departmental offices.

CONVOCATIONS—Most Thursday mornings, at 11:30 o'clock, the University holds its convocation program for students, faculty, staff, and the public. Convocations are usually presented in

Northrop Memorial Auditorium, although some are presented in the Union Ballroom. Programs range from lectures on vital current topics to music and dance recitals. The purpose of the convocations, which are broadcast by KUOM, is to bring ranking figures in current thought, news, science, adventure, entertainment, and the arts before the University and its community.

UNIVERSITY GALLERY—The Gallery, on the third and fourth floors of Northrop Auditorium, presents each year a series of art exhibitions of unusual interest.

Through the Gallery two loan services operate. The University's collection of original works is lent to the faculty for classrooms and offices. The collection of framed prints is available to students for their rooms. The framed prints are lent during the first week of each quarter, from west corridor, third floor, at 25 cents a quarter.

MUSIC—The Minneapolis Symphony

Orchestra, with Antal Dorati as conductor, makes its home in Northrop Auditorium on the Minneapolis Campus, and offers its annual series of evening and Sunday afternoon concerts there. Special season ticket rates are open to students and faculty. The Symphony office is in 110 Northrop.

Other major concerts are regularly offered in Northrop by the University also. The Artists Course brings a number of topflight artists each year. Season tickets for the Artists Course, at remarkably low prices, are sold at the office, 105 Northrop.

Participation in campus musical life is open to all students—not only to music majors—both in Department of Music courses, and in the three large volunteer musical organizations it directs.

The University band has two divisions. The marching band plays at sports events and other student functions, and makes a trip each fall to an out-of-town football game. The concert

band presents a number of public concerts each year. Any student may apply for band membership, in 12 Northrop.

The student symphony orchestra, primarily for those who want well-directed orchestral experience, also offers public concerts. Its office is in 107 Scott Hall.

The mixed chorus presents both long and short public programs. Its office is also in 107 Scott Hall.

The Department of Music also organizes vocal and instrumental ensembles for student participation. Its courses in applied music, from beginning classes to advanced, are available at a regular fee schedule. It also offers courses in music appreciation, music history, and the like.

THEATER—The University Theatre of-

fers a major season of six plays plus a Young People's Series, a Studio Series, a Foreign Language Series, and a student-directed series. In conjunction with the Department of Concerts and Lectures it also operates two touring companies. With such an extensive program, students interested in theater find ample opportunity to participate either as actors or technicians.

The University Newsreel Theater, in the ballroom of Coffman Memorial Union, presents each Wednesday a careful selection of current newsreels at low price.

MUSEUMS—"Habitat exhibits"—nearly a hundred displays of Minnesota animal life mounted in typical environment—are featured in the ivy-covered Museum of Natural History on the Minneapolis Campus. These exhibits are open to the public, without charge. In addition, many thousands of specimens of regional mammal and bird life are available here for study by students and qualified visitors.

A number of smaller specialized exhibits—such as rare books in the University Library and scientific and technical collections in other departments—

are maintained for use and study by University classes and the public.

PHYSICAL EDUCATION, ATHLETICS, AND SPORTS—Elaborate opportunities for sports and exercise are open to both men and women students. Though the intercollegiate athletics program for men is best known, nonvarsity sports attract many times as many participants each year.

For women, instruction in a wide variety of seasonal sports, dance, body conditioning, as well as recreational activities center in the Norris Gymnasium for Women. All instruction is under expert leadership. The Women's Athletic Association is comprised of organized athletic programs and honorary clubs in aquatics, modern dance, tennis, badminton, riding and golf; these activities are under joint faculty and student leadership and are open to all women in the University.

For men students an extensive plan of intramural team sports is supplemented by elaborate facilities for individual exercise. Cooke Hall, the Memorial Stadium, the Field House, and the Williams Arena provide abundant opportunity for gymnastics, handball and squash, boxing and wrestling, swimming, skating, and other sports. Outdoor playing fields and tennis courts, the indoor ice skating rink, and the 18-hole golf course, near the St. Paul Campus, are open to both men and women.

GENERAL SOCIAL PROGRAMS—Students organize much of their social and extracurricular activity around the facilities of three Unions.

At the Coffman Memorial Union on the Minneapolis Campus, full-time social consultants aid 35 Union student committees in planning and conducting a wide variety of recreational and social enterprises. For student groups, the Union has meeting and office rooms, general lounges, two ballrooms, a card room, restaurant and soda fountain

facilities, an arcraft workshop, billiard and pool tables, and a 16-lane bowling alley.

The "Ag" Union, on the St. Paul Campus, has similar facilities for students on that campus. The new Village Union, at University Village for married veterans and their families, provides not only similar facilities but also play center facilities for small children.

Financial Aids

STUDENT LOANS—Should you need financial aid or advice, the Bureau of Student Loans and Scholarships, in 211 Eddy Hall, may be able to help you. Loan funds have been set up to help any student who is making normal progress toward a degree. Usually you must have finished two quarters at the University before a loan will be granted you, but emergency needs get special consideration.

SCHOLARSHIPS AND MERIT AWARDS—

Scholarships for entering freshmen, chosen from among graduates of Minnesota high schools, are offered through the Bureau of Student Loans and Scholarships. This fund is supported by gifts from alumni and friends of the University through the Greater University Fund. The scholarships, which range from \$150 to \$500 are awarded to applicants on the basis of scholarship, character, leadership, vocational and academic promise, and relative need. Applications should be made through Minnesota high school principals in January.

Veterans of World War I, or their direct blood descendants, are eligible for LaVerne Noyes scholarships. Applications go to the Bureau of Student Loans and Scholarships.

Merit awards to students in many of the University's fields of study are offered annually, usually as cash grants in recognition of outstanding grade records. Information about these awards is available at the Bureau of

Student Loans and Scholarships; applications should usually be made through the deans of colleges.

In addition to the cash awards, a large number of trophies and medals go each year to students in recognition of unusual achievement, scholastically or in other phases of the University's life.

GRADUATE ASSISTANTSHIPS AND FELLOWSHIPS—Graduate students have open to them a number of teaching assistantships and fellowships—usually requiring part-time work—in many University departments. You can get information about these from the Graduate School dean or the dean of the college concerned.

COUNSELORSHIPS—For selected Graduate students there are a number of dormitory counselorships, which provide room and board and require part of their holders' time. The directors of individual residence halls, the Office of the Dean of Students, or the Employment Bureau can furnish information about these positions.

AIDS FOR HANDICAPPED STUDENTS—Blind students under certain conditions are eligible for tuition scholarships. Application for aid should be made at the Office of Admissions and Records (window 18).

"Rehabilitation funds" for the education of disabled persons are available through the State Department of Education. Applications for aid from these funds go to the Division of Vocational Rehabilitation, State Office Building, St. Paul 1, Minnesota.

AIDS TO VETERANS—Veterans approved for training by the Veterans Administration are provided books, supplies, tuition fees, and allowance for living expenses. Application should be made to the Veterans Administration, Fort Snelling, St. Paul 11 (telephone DEsoto 2411). Information and application forms can be obtained at the

University Bureau of Veterans' Affairs, 13 Shevlin Hall.

A veteran who is a Minnesota resident may, if his eligibility under the Veterans Administration has expired, be eligible for limited tuition assistance from the State Department of Veterans' Affairs. Direct inquiries to the Department at Fourth Floor, Shubert Building, St. Paul 2, Minnesota.

STUDENT EMPLOYMENT BUREAU—This Bureau, in 17 Administration Building on the Minneapolis Campus, helps to find part-time jobs for students who need to supplement their educational funds. All campus jobs are listed with the Bureau, and many off-campus jobs as well. You must apply in person, after you have enrolled and know your class schedule. Your chances for work depend on the supply of job openings, your work experience and training, your need for work, and the hours you have available. When possible, you are placed in work that will give you experience in your own vocational field. Work in exchange for board and room is usually available for women students, and sometimes for men or married couples.

Housing Facilities

Most out-of-town students live either in University-maintained dormitories or in private rooming houses. All such students must live in University-approved residences, under substantially the same obligations. Information concerning dormitories may be obtained from the director of Women's Residences at Comstock Hall, and from the Director of Men's Residences, 11 Administration Building.

Information about private rooming houses may be obtained from the Student Housing Bureau, 209 Eddy Hall.

WOMEN'S RESIDENCE HALLS—Sanford Hall, Comstock Hall, and the Winchell Cooperative Houses, provide room and board, counseling services,

health supervision, and varied activity programs for women students.

Sanford Hall, for freshman, upper-class and graduate women, is located on University Avenue near the main entrance to the campus.

Comstock is the hall for sophomore, junior, senior and graduate women. It is situated on the Mississippi River close to the center of university life.

Winchell Cooperative Village on University Avenue near Sanford Hall provides low cost living for undergraduates and graduates in small comfortable units, where the women share in the work to cut expenses.

MEN'S RESIDENCES—Two large residence halls—Pioneer and Centennial—provide room, board, and social and athletic programs for men students, as well as counseling services. Costs are held at a minimum. Pioneer Hall will be occupied largely by freshmen, Centennial by upperclass and graduate students. Many residents can earn part of their board and room by dining room or other types of work in the halls.

ST. PAUL CAMPUS—On the St. Paul Campus, dormitory rooms for men are available during spring quarter and Summer Session and for women through the school year and Summer Session. Meals are available at the campus cafeteria.

HOUSING FOR MARRIED STUDENTS—University Village has over seven hundred units of housing for student families. Minnesota resident veteran families with children get first priority. However, the demand for family housing is decreasing and it is hoped there will be housing available for all families with children. The University Village projects are midway between the Minneapolis and St. Paul campuses and adjacent to the St. Paul Campus. Applications for these quarters should go to University Village, 11 Administration Building.

Vacancies in other housekeeping and

sleeping rooms are reported to the Student Housing Bureau, where married students may help get help with housing problems. Many students have found it desirable for one member of the family to come and live in temporary accommodations while looking for quarters for the entire family.

PRIVATE HOUSING—Rooms or apartments in private residences must be engaged "on the spot"—no reservations can be made before arrival on campus. Single students are assured that adequate housing will be provided.

If you select quarters not in residences already approved by the University, you must get the approval of the Student Housing Bureau director before occupying them. The Bureau recommends that in either case you sign a contract on a University form, and for one quarter at a time.

Whatever lease arrangement you make, housing regulations provide that you must give notice according to pay period if you plan to move. Any change of address must be reported to the Bureau. The Bureau is the agency to consult in case of problems or difficulties about housing, or about your privileges, rights, and obligations. Use of Bureau counsel in a dispute is likely to lead to a satisfactory conclusion.

Women students living in private rooms and rooming houses are expected to follow hour regulations established for the University's women's dormitories. They may entertain callers in suitable rooms until 12 midnight any night of the week. Earlier hours may be established with mutual agreement of householder and students.

MOVING TO FRATERNITIES AND SORORITIES—Joining a fraternity or sorority does not excuse you from a rooming contract until it has ended. If you plan to move to a fraternity or sorority house, you should make the move at the beginning of a quarter if you have a room commitment. Information on

rush week and fraternity and sorority pledging may be obtained from the Student Activities Bureau, 114 TSMa.

Food Services and Restaurants

MINNEAPOLIS CAMPUS—A number of restaurants and food services are available to students in Coffman Memorial Union. Largest is the cafeteria, on the ground floor. There are also a soda fountain, a lunch counter, and "commuters' lunchrooms" for students who bring lunches from home. Banquet, party, and private dining room facilities are also available for organized University groups.

Shevlin Hall has a cafeteria and lunchroom for students.

Pioneer and Centennial Halls, for men, and Comstock and Sanford Halls and the Winchell Cooperative Cottages, for women, have board for their residents. Most fraternities and sororities maintain regular dining rooms. There are also several cooperative dining clubs, and privately operated restaurants, lunch counters, tea rooms, and soda fountains near the campus.

ST. PAUL CAMPUS—The Agricultural Cafeteria provides full food service for students. Lunchroom and soda fountain facilities are available in the "Ag" Union. Fraternity and sorority dining rooms, for members, and privately operated restaurants are also available near the campus.

How Much Will It Cost?

A PROSPECTIVE COLLEGE STUDENT always must ask, "How much will it cost?" Whether he is "on his own," earning some or all of his own funds, or getting aid from parents or others, he asks the inevitable question of University advisers.

A general answer is, "Usually more than \$1000 for three quarters." But this has to be qualified at once, for there are many factors that can't be tied down to specific figures. In the table of estimated expenses on page 31, the largest item is that for board and room—board estimated at \$450, room at \$250. But in some cases these estimates will be too high—many students, living at home or with relatives, make no cash outlay for board and room; others "work out" board and room costs. Depending on tastes and special situations, the costs may be higher.

There is also variation in the costs of tuition and books and supplies. Tuition fees for Minnesota residents are about half of those for students from outside the state; individual course fees (given in college bulletins) also vary considerably. Dental and medical courses demand more costly equipment than most other curricula.

Moreover, an estimate such as this does not take into account clothing expenses, nor those for recreation, travel, and other incidentals.

So you should consider the estimates in the table on page 31 not as exact figures, but as general guides.

Tuition Fees

The table shows the basic tuition fee in each University division, and some of the special fees. It also shows that a student taking only a few credits a quarter may pay tuition on a credit-hour basis. You pay your fees in ad-

vance—at the time you register, before you begin your quarter's work.

Graduate students of certain classifications who are giving 25 per cent or more of full-time service to the University are privileged to pay tuition at the Graduate School resident rate, regardless of source of fund, resident status,

Estimated Average Expenses—Fall, Winter, and Spring Quarters, 1952-53

	Tuition Fee		Special Fees*	Laundry†	Books and Instruments	Total	
	Resident	Nonresident		Room Board		Resident	Nonresident
Arts—General—Agriculture, Forestry, Home Economics—Education—Public Health—Dental Hygiene—Duluth	\$ 99	\$300	\$63	\$790	\$ 60	\$1,012	\$1,213
Nursing (basic professional course)	99	150	63	323	60	545	596
Business Administration—University College‡	114	300	63	790	60	1,027	1,213
Institute of Technology	114	300	65	790	90	1,059	1,245
Graduate School	114	300	61	790	60	1,025	1,211
Law School	135	345	63	790	90	1,078	1,288
Medical Technology—Physical Therapy—Occupational Therapy—Advanced Clinical Nursing	135	345	63	790	60	1,048	1,258
Dentistry, including graduate work	234	435	63	790	300§	1,387	1,588
Medicine, including clinical graduate work	240	525	63	790	265¶	1,358	1,643
Pharmacy, including graduate work	129	330	63	790	60	1,042	1,243
Library Instruction	135	300	63	790	60	1,048	1,213
Mortuary Science	180	300	63	790	60	1,093	1,213
Nursing, Basic and Practical	99	150	63	790	60	1,012	1,063
Veterinary Medicine	204	465	63	790	60	1,117	1,378

* In this item: course fees estimated at \$10, matriculation deposit of \$5 (except \$3 in Graduate School), incidental fee of \$47.55 (except \$50.10 in Institute of Technology).

† Laundry estimated at \$90, board at \$450, room at \$250 (except that students of professional nursing are furnished board and room after their first quarter).

‡ An average. University College tuition is that of the college in which major work is taken.

§ Of this amount \$225 is for instruments.

¶ Of this amount \$175 is for microscope.

Credit-hour tuition fee—A student carrying less than a complete schedule of courses may pay tuition fees on a credit-hour basis. See Tuition Fees, page 33.

or curriculum pursued. Those included are fellows, scholars, assistants, instructors, research associates, and members of the teaching staff and scientific bureaus and experiment stations; they must be regularly enrolled in the Graduate School or in the final year of the Master's degree curricula in undergraduate colleges. Full-time civil service appointees are eligible for the same privilege.

INCIDENTAL FEE—If you are registered for six or more credits in a quarter, you pay the \$15.85 fee which entitles you to the privileges of the Coffman Memorial Union, the Students' Health Service, the Speech and Hearing Clinic, the Student Counseling Bureau, and the University post-office service; it also brings you the *Minnesota Daily*, the *Student Address Book*, and certain athletic and student activities. Students in the Institute of Technology pay 85 cents more a quarter and receive in addition the *Minnesota Technologist*.

A student registered for fewer than six credits does not pay this fee.

The incidental fee at the Duluth Branch is \$13.85.

MATRICULATION DEPOSIT—This deposit (\$5 in all divisions of the University except the Graduate School, where it is \$3) you pay at registration for your first quarter. It covers laboratory or other breakages or damage, drawing board rental in architecture, military equipment, library fines, and like costs. If the deposit is used up before you leave the University, you pay an additional \$5 fee.

If charges against your fee don't use it up by the time you graduate or leave the University, the unused remainder will be refunded to you by mail.

Special Fees.

ADVANCED STANDING EXAMINATION FEE \$5.00
Such an examination may be taken only upon approval of the appropriate committee. (If it is taken within six weeks after entering the University, no fee.)

CHEMISTRY DEPOSIT	\$10.00
This deposit, to cover cost of materials, is required of students in chemistry and agricultural biochemistry courses. Unused portions are credited to students' matriculation deposits at the end of courses.	
COURSE FEE	
For individual courses, given in the <i>Class Schedule</i> issued at registration.	
CREDENTIALS FEE	\$5.00
Required of nonresidents applying for admission to Law, Medicine, Dentistry, Education (Senior College), and Business Administration.	
DENTISTRY EXAMINATION FEE	\$26.00
For examinations to determine advanced standing in Dentistry for students presenting foreign credentials.	
DUPLICATE DIPLOMA FEE	
To replace large diploma	\$7.50
To replace small diploma	5.00
GRADUATION FEE (including small diploma)	
Each degree, and technical aid certificate	\$10.00
LARGE DIPLOMA FEE	\$5.00
Any graduate may get a large diploma in place of a small one, by paying this fee in addition to the graduation fee.	
MICROSCOPE RENTAL FEE	
Partial use, one quarter	\$3.00
Continuous use, one quarter	6.00
MUSIC PRACTICES FEES	
For rent of pianos, organs, and music practice rooms. Rates are given in the <i>Class Schedule</i> issued at registration.	
PLACEMENT SERVICE FEE —required of degree candidates from:	
Institute of Technology	\$2.50
College of Education (except Nursing Education majors)	5.50
PRIVILEGE FEE —for late registration or late payment of fees	
Through third day of classes	\$2.00
Each additional day (to a \$5 maximum)	.50
Late change of registration	2.00
RECORD SERVICE FEE	\$0.50
This fee, deducted from students' matriculation deposits, provides three certified copies of student records. Each additional copy 50 cents.	
SPECIAL EXAMINATION FEE	\$5.00
SPEECH AND HEARING CLINIC FEES	
See <i>Class Schedule</i> issued at registration.	
THESIS BINDING FEE	
Master's thesis	\$2.50
THESIS EXAMINATION FEE	
For professional engineer degree	\$15.00
THESIS PUBLICATION FEE	
Ph.D. thesis	\$35.00

STUDENTS OF ONE COLLEGE TAKING WORK

IN ANOTHER—If a student takes outside his own school or college courses which his college accepts as part of its curriculum he pays his college's regular tuition fee. If he wants to apply credits for such work toward a degree in a higher fee college, however, he must pay whatever additional tuition the second college asks.

This rule does not apply to students in combination courses (Arts and Medicine, Arts and Business, and the like) if they have paid regular tuition fees in the college with the higher fee.

Refunds

If you cancel your registration before six weeks of any quarter have passed, you are entitled to refund of tuition, incidental, and course fees on this basis: If you do not attend classes at all, you get full refund; if you cancel within the first week, you get 90 per cent; within the second, 80; third, 70; fourth, 60; fifth, 50; sixth, 40. After

the sixth week there is no refund.

Nonresident Students

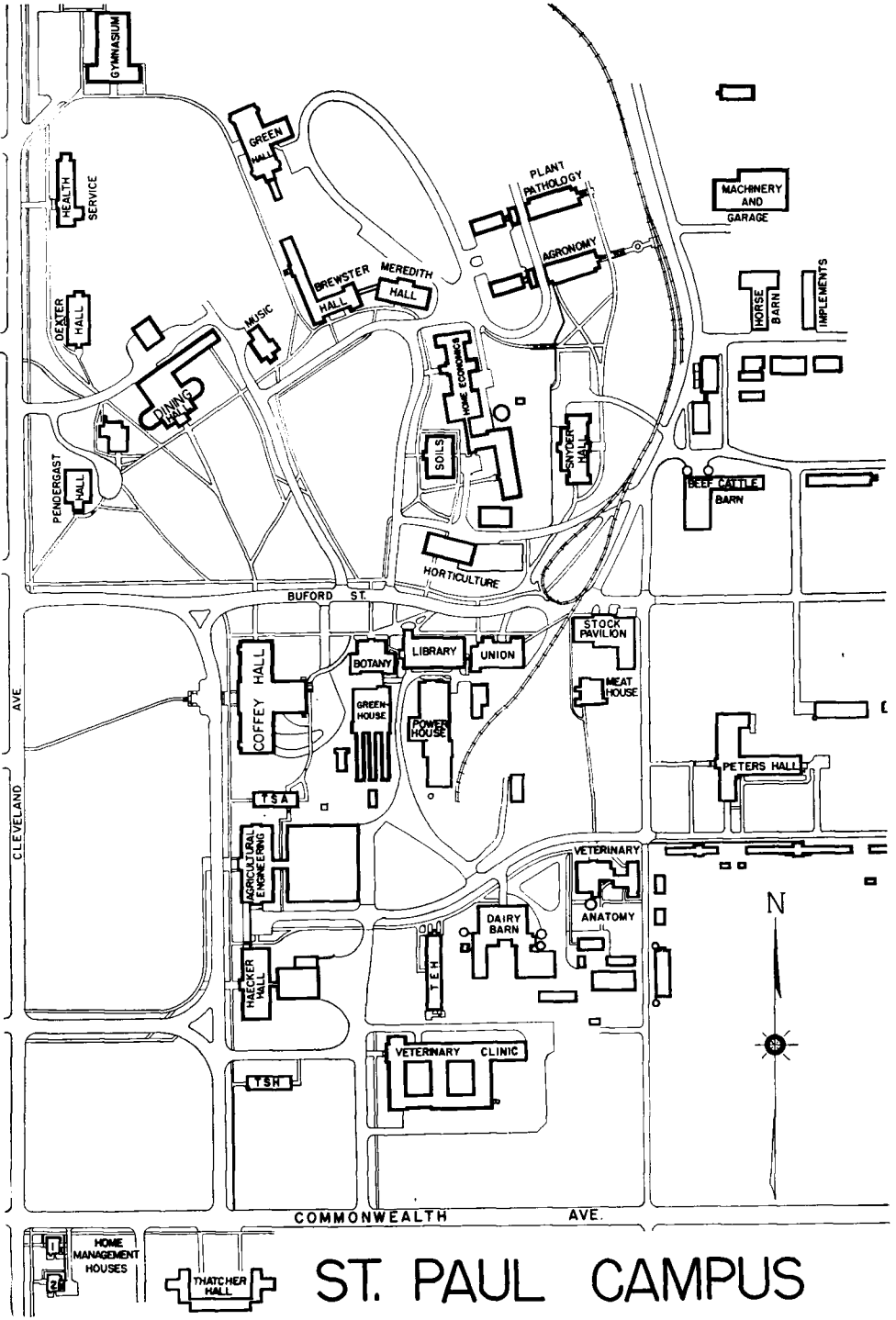
Nonresident tuition fees will be charged students whose permanent homes are outside Minnesota, or who have not lived in permanent homes in Minnesota for at least a calendar year prior to first University registration. "Permanent" means family home, or home established for a purpose other than attendance at the University. A year's registration in the University does not of itself establish Minnesota residence, if the student lives in the state only to go to the University.

Initial classification of a student as a nonresident, however, does not prevent his reclassification at any time he meets the residence requirement.

If there is question about your residence classification, it is your own responsibility to apply to the dean of admissions and records for consideration of your status. Make written statement of your case on Form A265.

Tuition Fees

School or College	Quarter Fee		Credit Hour Fee	
	Resident	Non-resident	Resident	Non-resident
Agriculture, Forestry, Home Economics	\$33.00	\$100.00	\$2.75	\$ 8.50
Business Administration	38.00	100.00	3.25	8.50
Dental Hygiene	33.00	100.00	2.75	8.50
Dentistry and Graduate Work	78.00	145.00	6.50	12.25
Duluth Branch	33.00	100.00	2.75	8.50
Education	33.00	100.00	2.75	8.50
General College	33.00	100.00	2.75	8.50
Graduate School				
More than 6 credits	38.00	100.00	No credit hour	
Six credits or less, or thesis only	19.00	50.00	fee provided	
Institute of Technology	38.00	100.00	3.25	8.50
Law School and Graduate Work	45.00	115.00	3.75	9.75
Library Instruction	45.00	100.00	3.75	8.50
Medical School and Clinical Graduate Work	80.00	175.00	6.75	14.75
Medical Technology	45.00	115.00	3.75	9.75
Mortuary Science	60.00	100.00	5.00	8.50
Nursing, Basic and Practical	33.00	50.00	2.75	4.25
Nursing, Advanced Clinical	45.00	115.00	3.75	9.75
Pharmacy and Graduate Work	43.00	110.00	3.75	9.25
Physical and Occupational Therapy	45.00	115.00	3.75	9.75
Public Health	33.00	100.00	2.75	8.50
Science, Literature, and the Arts	33.00	100.00	2.75	8.50
University College				
Veterinary Medicine	68.00	155.00	5.75	13.00
	Tuition of college in which work is taken			



ST. PAUL CAMPUS

University Calendar, 1952-53

Continued from inside front cover

February	22-28		University of Minnesota Week
February	26	Thursday	Charter Day convocation, 11:30 a.m.; IV hour classes excused
March 13, 14 and 16-19			Final examination period
March	19	Thursday	Spring quarter fees due for students in residence winter quarter in undergraduate colleges. Commencement, 8:00 p.m.
March	21	Saturday	Winter quarter closes
			<i>Spring Quarter</i>
March	26, 27	Thursday, Friday	Orientation program; registration ¹ and payment of fees for new students in all undergraduate colleges
March	30	Monday	Spring quarter classes begin 8:30 a.m. ²
April	2	Thursday	Last day for registration and payment of fees for the Graduate School, and for teachers in service
April	3	Friday	Good Friday; holiday
April	16	Thursday	Parents Day
May	21	Thursday	Cap and Gown Day Convocation, 11:30 a.m.; IV hour classes excused; Senate meeting, 3:30 p.m.
May	30	Saturday	Memorial Day; holiday
June 6 and 8-12			Final examination period
June	7	Sunday	Baccalaureate service, 3:00 p.m.
June	13	Saturday	Spring quarter closes. Commencement, 8:00 p.m.
			<i>Summer Session</i>
June	15, 16	Monday, Tuesday	Registration ¹ for new students not already registered. First term fees due for students in all colleges
June	17	Wednesday	First term Summer Session classes begin 8:30 a.m. ²
July	4	Saturday	Independence Day; holiday
July	23	Thursday	Commencement, 8:00 p.m.
July	25	Saturday	First term closes
July	27	Monday	Registration ¹ for new students not already registered. Second term fees due for students in all colleges
July	28	Tuesday	Second term classes begin 8:30 a.m. ²
August	27	Thursday	Commencement, 8:00 p.m.
August	29	Saturday	Second term closes

General Extension Division

1952			
September	15	Monday	Registration, first semester, ⁴ begins
September	27	Saturday	Last day for registration, first semester
September	29	Monday	First semester classes begin ³
November	27	Thursday	Thanksgiving Day; holiday
December	20	Saturday	Christmas recess begins
1953			
January	5	Monday	Classes resume ⁴
January	26	Monday	Second semester registration begins
February	6	Friday	First semester classes close
February	7	Saturday	Second semester registration closes
February	9	Monday	Second semester classes begin ³
June	5	Friday	Second semester classes close

¹ Registration subsequent to the date specified will necessitate the approval of the college concerned. See privilege fees for late registration or late payment of fees, page 32 in this bulletin, and in the *Summer Session Bulletin*.

² First hour classes begin at 8:00 a.m. on St. Paul Campus.

³ This date does not refer to correspondence study courses, which may be started at any time during the year.

⁴ A few Extension classes are offered on the quarter basis on same schedule as day school with registration two weeks preceding opening.

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The Bulletin of the
UNIVERSITY of MINNESOTA

Class Schedule
and Registration Instructions
Spring Quarter
1952

including

- Registration instructions
- Final examination schedule
- Courses tallied in college offices
- Registration dates
- Course fees
- Calendar

How to Use the Class Schedule

The *Class Schedule* lists hours and days and room schedules for courses offered by colleges of the University. Brief course titles and prerequisites are also shown, as well as last-minute changes in course offerings.

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

The following information should appear on your registration blank:

1. The departmental abbreviation listed after each departmental heading (divisional headings are abbreviated in some instances).
2. The course and section numbers for each lecture, recitation or laboratory period for which you are registering.
3. The abbreviated course title.
4. The number of credits shown for the course.
5. The hours and days scheduled for the class.

The University of Minnesota reserves the right to cancel any and all courses in which registration is insufficient to warrant continuation of the course.

Changes made subsequent to publication of the *Class Schedule* are published in the Official Daily Bulletin.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office.

This can be done on those days listed for your college on page 4. Supplementary instructions may be issued by the college in which you are registering.

Step 2—Get class reservation cards for courses tallied in the college offices.

Courses tallied in the college offices are listed on pages 77-78. These cards reserve a place for you in those courses.

Step 3—Turn in your Registration Permit, class reservation cards, and approved Registration Blank to your college window in the Office of Admissions and Records to get a fee statement.

Graduate students must first obtain approval of their program from the Graduate School office.

Step 4—Pay your fees to the bursar.

Fees for students in residence winter quarter in undergraduate colleges are due March 20.

Fees for new students in undergraduate colleges are due March 28.

Fees for students in the Graduate School are due April 4.

If you are a veteran:

First—Have your fee statement approved at the veterans' window in the Office of Admissions and Records for collection from the Veterans Administration (veterans must pay the \$5.00 matriculation fee for new students themselves).

Second—Take it to the bursar to get a receipt.

Third—Present this receipt with your Veterans' Course List to the Bureau of Veterans' Affairs, Shevlin Hall, to complete your registration with the Veterans Administration and to obtain books and supplies. These may be obtained before classes convene if you do this early.

Note: *You will not be issued a fee statement if you do not have your registration permit card and necessary class reservation cards, or if your registration blank does not show proper approval by your college.*

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

CHANGE OF REGISTRATION

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

WITHDRAWAL FROM THE UNIVERSITY

Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. Veterans must also notify the Bureau of Veterans' Affairs.

COLLEGE OFFICES AND REGISTRATION DATES

Students in attendance winter quarter must register during the period set for their college.

Students returning to the University who are not in attendance winter quarter may register during the period set for their college or on March 27-28.

New students will register during the orientation program on March 27-28.

Agriculture, Forestry, and Home

Economics

203d Coffey Hall
Seniors, February 26-27
Juniors, February 28-29
Sophomores, March 3-5
All students, March 6-13

Business Administration

107 Vincent Hall
February 28-March 7
Tallying, March 4, 1:30

Dental Hygiene

106 Owre Hall
February 25-29

***Dentistry**

149 Owre Hall
March 27-28

Education

204 Burton Hall
February 25-March 13

General College

106 Nicholson Hall
February 25-March 4

Graduate School

316 Johnston Hall
February 25-April 4

Institute of Technology

Architecture and Engineering,
133 Main Engineering Bldg.
Chemistry, 127 Chemistry Bldg.
Mines, Metallurgy, 103 Appleby
Hall
February 25-March 5

***Law School**

204 Fraser Hall
March 27-28

***Medical School**

136 Owre Hall
March 27-28

Medical Technology

605 West Hospitals
February 25-March 7

Mortuary Science

156 Nicholson Hall
February 25-26

Nursing

125 Owre Hall
February 25-March 7

Occupational Therapy

204 Temporary West Hospitals
February 25-March 7

Pharmacy

101 Wulling Hall
February 25-March 7

Physical Therapy

209 Temporary West Hospitals
February 25-March 7

Public Health

121 Millard Hall
February 25-March 7

Science, Literature, and the Arts

Junior College, 214 Johnston Hall
Senior College, 223 Johnston Hall
Special Students, 214 Johnston Hall
Starting dates: Issue of material,
February 25; Tally, February 26.
Students should complete registration
by March 13 because advisers
generally will not be available af-
ter that date.

University College

223 Johnston Hall
Dates same as for Science, Litera-
ture, and the Arts

Veterinary Medicine

203d Coffey Hall
3rd and 4th year, February 26-27
1st and 2nd year, February 28-29

* Students in these colleges have normally already registered for the entire year. Registration dates indicated are for students who have not already registered for winter quarter.

EXPLANATIONS

Course titles—When a course title appears in bold-face type, a student registering for that course must obtain a class reservation card in the college registration office in which the course is tallied (see pages 77-78).

Credits—The number of credits is listed in parentheses following the course title.

Prerequisites—Certain courses require for enrolment therein the completion of specific elementary courses, or the possession of some definite qualifications or minimum standing. These are listed in parentheses following the number of credits.

Unless otherwise indicated, courses are numbered as follows: courses primarily for freshmen and sophomores, 1 through 49; for juniors and seniors, 50 through 99; for juniors, seniors and graduate students, 100 through 199; for graduate students only, 200 and over.

Work substantially equivalent to courses listed as prerequisites is occasionally accepted in lieu of the prerequisite listed. See your college bulletin for further information.

When no departmental designation precedes the course number listed as a prerequisite, the prerequisite course is in the same department. Unless otherwise indicated a prerequisite reading "6 cr" means 6 credits in the same department.

Days and hours—MTWThF indicates that the class meets every day, Monday through Friday; TTh, that the class meets only on Tuesdays and Thursdays.

A class listed I-II MW meets the first through the second hour Mondays and Wednesdays, the hyphen always indicating *through*.

Building abbreviations—See page 71 for building abbreviations. Maps of the Minneapolis and St. Paul Campuses are also included at the back of the *Class Schedule*.

Information not listed—Course information not listed, or listed as "ar," should be obtained from the department offering the course.

Room changes—When necessary to make them, room changes are posted on classroom doors.

Class hour schedule—Class hours are identified by Roman numerals, and continue for fifty minutes after the beginning time listed below.

Hour	I	II	III	IV	V	VI	VII	VIII	IX	X
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30	4:30	5:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00

Symbols—The following symbols are used throughout the bulletin

* Course may be taken with consent of the instructor irrespective of prerequisites.

† To receive credit for this course, you must complete all courses listed after the †.

§ Credit is not given if the equivalent course listed after the § has been taken for credit.

COLLEGE OF AGRICULTURE, FORESTRY, HOME ECONOMICS, AND VETERINARY MEDICINE

AGRICULTURAL BIOCHEMISTRY (AGBI)

- 1 **Introd Organic Chemistry** (5 cr; prereq 8 cr inorg chem or see col bul)
II MTWThF, GHAud, Spriestersbach
- 5 **Plant Biochemistry** (3 cr, §105; prereq 3, org chem)
I MWF, 102Hr, Cuendet
- 6 **Animal Biochemistry** (3 cr, §106; prereq 3, org chem)
II MWF, 204So, Schultze
- 103 **Dairy Chemistry** (6 cr; prereq 2, 6)
Lect VI MWF, 113SnH, Jenness
Lab VII-IX MWF, 102SnH
- 105 **Plant Biochemistry** (3 cr, §5; prereq 3, org chem)
I MWF, 102Hr, Cuendet
- 106 **Animal Biochemistry** (3 cr, §6; prereq 3, org chem)
II MWF, 204So, Schultze
- 108 **Chemistry of Wheat, Wheat Products** (3 cr; prereq 5)
IV MWF, 113SnH, Geddes
- 110 **Flour Lab Methods** (3-5 cr; prereq 2, concur regis 108)
VI-IX MWF, 208SnH, Geddes, Cuendet
- 117 **Lab Probs in Animal Nutrition** (3 cr; prereq 116, cons instr)
Ar, Liener
- 118 **Lab Probs in Biochemistry** (3-5 cr; prereq sr, cons instr)
Ar
- 122 **Lipides** (3 cr; prereq* sr, 119)
II MW, 113SnH, VI W, 116SnH, Lundberg
- 123 **Enzymes** (3 cr; prereq* sr, 119)
III MWF, 116SnH, Boyer
- 132 **Lipides Lab** (2 cr; prereq 2, concur regis 122)
VI-VIII MW, 202SnH, Lundberg
- 133 **Enzymes Lab** (2 cr; prereq 2, concur regis 123)
VI-VIII TTh, 202SnH, Boyer
- 203 **Research Probs** (2-5 cr; prereq cons instr)
Ar, Staff
- 205 **Special Topics in Biochemical Literature** (1-3 cr; prereq cons instr)
Ar, Staff
- 208 **Cereal Chemistry Seminar** (1 cr; prereq* 108)
Ar, Geddes
- 216 **Nutrition, Enzymes Seminar** (1 cr; prereq 116, 123, cons instr)
Ar, Schultze, Boyer
- 224 **Gen Seminar** (1 cr)
Ar, Geddes

AGRICULTURAL ECONOMICS (AGEC)

- 2 **Prin Economics II** (5 cr, †1-2; prereq 1, —1, I MTWThF, 109HH, Chappel
—2, III MTWThF, 109HH, Lowe
 - 3 **Prin Economics** (5 cr; prereq soph, maj HE)
II MTWThF, 109HH, Lowe
 - 8 **Rural Economics** (3 cr; prereq soph, 2 or 3)
II TThS, 210HH, Jesness
 - 40 **Prin Marketing Organization** (3 cr; prereq soph, 2)
II MWF, 210HH, Dahl
 - 47 **Marketing Accounting** (4 cr; prereq soph, 25)
Lect IV MWF, 311HH, Koller
Lab VIII-IX F, 311HH
 - 80 **Farm Accounting** (3 cr)
I TThS, 210HH, Engene
 - 103 **Farm Operation** (3 cr; prereq 102)
II TThS, 100HH, Pond
 - 104 **Types of Farming** (3 cr; prereq 2)
III MWF, 311HH, Pond
 - 107 **Farm Work Simplification** (3 cr; prereq 2)
VIII-IX MWF, 130TSH, Engene
 - 128 **Economics of Consumption** (3 cr; prereq 2 or 3)
I TThS, 100HH, Cochrane
 - 135 **Methods of Price Analysis** (3 cr; prereq sr, 131, 191)
III TThS, 130TSH, Cochrane
 - 142 **Marketing Organization: Fruits, Vegetables** (2 cr; prereq 40)
III MW, 130TSH, Cox
 - 150 **Adv Farm Finance** (3 cr; prereq 50)
1:45-3:15 TTh, 311HH, Koller
 - 172 **Economics of World Agriculture** (3 cr; prereq* 110)
1:15-2:30 WF, 311HH, Dowell
 - 226 **Adv Farm Organization** (3 cr)
Ar, Pond
 - 270 **Seminar: Land Tenure** (3 cr)
Ar, Dowell
- ## AGRICULTURAL ENGINEERING (AGEN)
- 3 **Mechanical Drawing** (3 cr)
III-IV MWF, 303En, Christopherson
 - 6 **Farm Buildings** (3 cr)
I MWF, 303En, Christopherson
 - 7 **Farm Building Construction** (3 cr)
Lect VI TTh, 41En, Miller
—1, Lab VII-IX T, 48En
—2, Lab VII-IX Th, 48En
 - 12 **Agricultural Machinery** (3 cr, §54; prereq 23)
II MWF, 217En, Schwantes

- 19 Elem Surveying (3 cr; prereq 3, 11 or trig)
Lect VI T, 103En, Larson
Lab VII-IX TTh, 305En
- 21 Elements of Surveying (5 cr; prereq Draw
3, MM 12, regis IT)
Lect VI M, 305En, Manson
Lab VII-X M, VI-IX WF, 305En
- 35 Household Physics (5 cr)
—1, Lect I MWF, 101En, Hustrulid
—2, Lect III TThS, 101En, Hustrulid
—1, Lab I-II TTh, 102En
—2, Lab VI-VII TTh, 102En
—3, Lab VIII-IX TTh, 102En
- 41 Metal Work (3 cr)
VI-VIII TTh, 106, 20En, Dent
- 42 Art Metal Work (3 cr)
VI-VIII WF, 106, 20En, Dent
- 54 Farm Power, Machinery (4 cr, 12, 13; pre-
req 23, 41)
Lect VI-VII MWF, 217En, Johnson, Keppel
Lab VII-VIII WF, 49En
- 104 Soil Moisture Relation in Agriculture (4
cr; prereq Soil 4)
I-IV TTh, 305En, Manson
- 107 Drainage, Irrigation, Soil Erosion Control
Design (4 cr; prereq* 61, 106, regis IT)
Lect I TTh, Lab II-IV TTh, Allred, Larson
- 113 Probs in Agricultural Engineering (2-6 cr;
prereq 167, regis IT)
Ar
- 114 Buildings, Equipment, Methods of Con-
struction (3 cr; prereq 3, 6, 7)
Ar, Otis, Christopherson
- 124 Agricultural Machinery, Mechanical Power
Mgt (3 cr; prereq 9 cr agric engr incl 12)
Ar, Schwantes
- 125 Topics in Agricultural Physics (3 cr; prereq
25, 172, integ calculus)
Ar, Hustrulid
- 150 Inspection Trip (1 cr; prereq sr, regis IT)
Ar, Schwantes
- 172 Applied Electricity (3 cr; prereq EE 38 or
concur regis, regis IT)
Lect II MF, 101En, Hustrulid
Lab VI-IX W, 102En
- 213 Adv Probs and Research (2-6 cr; prereq
111-112-113)
Ar

**AGRICULTURAL JOURNALISM
(AGJO)**

- 55 Agricultural Journalism Outlets (3 cr; pre-
req* Jour 15, 51-52, 69, or 73)
Ar, Swanson

**AGRONOMY AND PLANT GENETICS
(AGRO)**

- 1 Gen Farm Crops (3 cr)
Lect IV MWF, 202Ag, Dunham
- 22 Grain, Hay Grading (3 cr; prereq soph, 1)
Lab I-II MWF, 201Ag, Lambert

- 24 Identification, Judging (1 cr; prereq soph,
1, 22 or concur regis)
Lab VIII-IX Th, 201Ag, Schmid
- 122 Grain, Hay Grading (3 cr)
Lab I-II MWF, 201Ag, Lambert
- 133 Pasture Crops, Mgt (4 cr; prereq 23)
Lect VI MWF, 202Ag, Schmid
Lab VII MWF, 201Ag
- 134 Seminar: Agronomy (2 cr; prereq sr, 9 cr)
Lect ar, Staff
- 136 Intro to Applied Statistics (3 cr)
Lect I TTh, 202Ag, Thomas
Lab ar
- 201 Research: Farm Crops (ar cr; prereq 121,
123)
Ar, Dunham, Schmid
- 241 Research: Plant Genetics (ar cr)
Lect ar, Hayes, Burnham, Rinke, Thomas
- 242 Seminar: Plant Breeding (1 cr)
Lect ar, Agron, Hort staff

ANIMAL HUSBANDRY (ANHU)

- 1 Livestock Production (4 cr)
II MTWThF, Center LsPav, Aunan
- 8 Breeds of Livestock (4 cr; prereq soph, 1)
—1, III-IV TThS, 3LsPav, Harvey
—2, III-IV TThS, West LsPav, R M Ander-
son
- 9 Livestock Judging (3 cr; prereq 8)
III-IV MWF, Center LsPav, R M Anderson
- 52 Meats (3 cr; prereq 1, 50)
VI-VIII TTh, Meat Shop, P A Anderson
- 54 Meat Judging, Grading (3 cr; prereq 1)
III-IV TThS, Meat Shop, Aunan
- 107 Meat Probs (3 cr; prereq 53)
Lect IV TTh, Meat Shop
Lab VI-VIII F, Meat Shop, P A Anderson
- 113 Livestock Mgt (3 cr; prereq 57, 112)
VI-VIII MW, 3LsPav, Harvey, Ferrin, P A
Anderson
- 114 Artificial Insemination (4 cr; prereq 112,
cons instr)
Lect IV MWF, 15PetH
Lab VI-VIII TTh, 15PetH, Cummings
- 204 Adv Animal Breeding III (3 cr; prereq 201,
203, PH 130)
III MWF, VI-VIII Th, Ar, Winters, Rempel
- 205 Seminar: Animal Breeding (2 cr; prereq
201, 203)
IV-V F, Ar, Winters
- 207 Adv Livestock Feeding II (3 cr; prereq 206)
VI MWF, 108PetH, Hanson
- 210 Seminar: Animal Husbandry (1 cr)
IX M, 108PetH, Ferrin
- 212 Research: Meats (3-9 cr)
Ar
- 213 Research: Animal Husbandry (3-9 cr)
Ar

DAIRY HUSBANDRY (DYHU)

- 1 Elements of Dairying (3 cr; prereq entr cr
in chem or InCh 1 or 4)
III MWF, 100HH, Combs, Morris, Rudnick

- 4 Dairy Products Practice** (3 cr; prereq soph, 1)
Ar, Combs
- 9 Dairy Cattle Judging** (1 cr; prereq soph)
—1, VI-VIII F, DCB, Combs
—2, VI-VIII T, DCB, Thoele
- 20 Household Microbiology** (4 cr; prereq 3rd qtr fresh, cons advs and instr)
Lect VI MWF, 100HH, Olson
Lab VI-VII W, 212HH
- 51 Market Milk** (3 cr; prereq 3, 50)
Lect IV MW, 210HH, Olson
Lab VI-VIII Th, 212HH
- 52 Dairy Herd Mgt** (2 cr; prereq 103)
VII-IX TTh, 9HH, Combs
- 112 Cheese** (3 cr; prereq 3, 50)
Lect IV TS, 210HH, Combs, Morris
Lab VI-VIII T, 6HH
- 113 Technical Control** (3 cr; prereq sr, 50, 111 or 112)
I-III TTh, 102HH, Coulter, Jezeski
- 115 Adv Dairy Bacteriology** (3 cr; prereq sr, 50, 111 or 112)
II-III MWF, 212HH, Jezeski
- 116 Milk Secretion** (3 cr; prereq sr, 9 cr physiol, AgBi 103)
I MWF, 210HH, Peterson
- 117 Dairy Cattle Breeding** (3 cr; prereq 101, 104, Agro 31)
III TThS, 9HH, Hervey
- 204 Research: Dairy Production** (ar cr)
Ar
- 207 Research: Dairy Manufacturing** (ar cr)
Ar
- 214 Research: Dairy Bacteriology** (ar cr)
Ar
- ENTOMOLOGY AND ECONOMIC ZOOLOGY (ENT)**
- 5 Economic Entomology** (5 cr; prereq soph, Zool 15)
Lect VI MWF, 102Hr, Cook
Lab VII-VIII MWF, 302CofH, Cook
- 21 Prin Beekeeping** (3-5 cr)
VI-VIII MWF, 307CofH, Haydak
- 114 Apiculture** (3 cr; prereq 9 cr)
Lect I MW, 307CofH, Haydak
Lab ar
- 127 Adv Gen Entomology** (3 cr; prereq 15 cr zool or ent)
Lect I TTh, 211Z, Mickel
Lab I-III S, 402Z
- 140 Biological Microscopy** (4 cr; prereq sr, 15 cr zool, ent, or bot, cons instr)
Lect VI WF, 208Z, Richards
Lab VII-IX WF, 208Z
- 146 Helminthology** (3 cr; prereq 15 cr zool, cons instr)
VII-IX TTh, 208Z, Wallace
- 166 Wildlife Mgt** (3 cr; prereq 63, 64, Zool 46-47, Bot 50, PIPa 53)
Lect III TTh, 100CofH, Beer
Lab ar
- 167 Techniques in Forest Wildlife Mgt** (3 cr; prereq grad, 64)
Given at Cloquet
- 170 Fisheries Resources** (3 cr; prereq* 168, 169)
I MWF, 100CofH, Smith
- 177 Insecticides, Their Action** (5 cr; prereq* sr, 15 cr ent incl 5, inorg chem, org chem)
Lect IV MWF, 18CofH, Cutkomp
Lab I-III WF, 18CofH
- FORESTRY (FOR)**
- 4 Dendrology** (4 cr)
Lect III MWF, GHAud, Rees
Lab ar
- 9 Intro to Forest Surveys, Aerial Photography** (3 cr; prereq 7, 8)
Lect IV MW, GHAud, Brown
—1, Lab VI-VIII W, 206GH
—2, Lab II-IV S, 206GH
- 10 Farm Forestry** (3 cr; prereq no forestry maj)
Lect IV WF, 203GH, Duncan
—1, Lab VI-IX M, 203GH
—2, Lab VI-IX T, 203GH
- 51 Logging** (3 cr)
V MWF, 203GH, Hall
- 52 Seasoning** (3 cr)
I TThS, 201GH, Kemp
- 116 Fabrication, Properties of Wood Products** (3 cr; prereq 114)
VI-VIII MW, 211GH, Rees
- 119 Adv Wood Structure** (4 cr; prereq sr, 53, 54)
Lect IX T, 211GH, Rees, Hossfeld
Lab VI-VIII TTh, 209GH
- 120 Building Cost Estimating** (3 cr)
Ar, Larson
- 125 Wood Preservation** (3 cr; prereq 53, 54)
III TThS, 201GH, Kaufert
- 128 Field Silviculture I** (3 cr; prereq 127)
Given at Cloquet, Schantz-Hansen, Schneider
- 129 Field Silviculture II** (3 cr; prereq 126, 127)
Given at Cloquet, Schantz-Hansen, Schneider
- 133 Forest Mgt, Utilization** (4 cr)
Given at Cloquet, Allison, Schantz-Hansen
- 134 Forest Inventory, Photographic Interpretation** (4 cr; prereq 9)
Given at Cloquet, Spurr
- 142 Wood Chemistry** (3 cr; prereq 53, 54, org chem)
II MWF, 201GH, Hossfeld
- 202 Research Probs: Silviculture** (ar cr)
Ar
- 209 Research Probs: Wood Technology** (ar cr)
Ar
- 215 Research Probs: Forest Utilization** (ar cr)
Ar
- 225 Seminar** (1 cr)
Ar

HOME ECONOMICS (HE)

- 1 **Choice, Care of Clothing** (4 cr, §GC15, not open to HE sr or men)
II MTWTh, 313HE, Carlson
- 3 **Clothing Construction A** (3 cr; prereq 1, 3rd qtr fresh)
-1, III-IV MWF, 304HE, Ahlstrand
-2, VI-VIII TTh, 304HE, Ahlstrand
- 4 **Clothing Construction B** (3 cr, soph; prereq 3 or 20)
-1, VI-VIII TTh, 305HE, Gorham
-2, VI-VII MWF, 304HE, Ahlstrand
- 6 **Institution Experience** (3 cr; prereq maj instit mgt, cons instr)
Ar, Cafeteria, Scholl
- 17 **Personal, Family Living** (3 cr; prereq no HE sr)
-1, IV MWF, 213HE, Gallagher
-2, VII MWF, 213HE, Gallagher
- 20 **Intro Related Art** (4 cr, §56; prereq no HE sr)
II MTWF, 350HE, Myren
- 21 **Color, Design I** (3 cr; prereq 20)
-1, II-III MWF, 359HE, Anderson
-2, VI-VIII TTh, 359HE, Anderson
-3, VI-VIII TTh, 342HE, Esteros
- 22 **Color, Design II** (3 cr; prereq 1, 20)
VI-VII MWF, 342HE, Petersen
- 24 **Probs in Home Planning, Furnishing** (5 cr, §GC 16, FL 15, HE 57, 180, prereq soph, 20, 49 recommended; not open to textiles and clothing in business, related art, HE educ maj)
VI-VIII MW, VI-VII F, 360HE, Anderson
- 25 **Design Applied to Crafts** (3 cr; prereq 21 or 22)
VI-VIII TTh, 433HE, Petersen
- 27 **Related Art Probs** (3 cr; prereq soph. 21)
-1, II-III MWF, 360HE, Petersen
-2, VI-VIII TTh, 360HE, Ludwig
- 30 **Intro Nutrition** (2 cr; no prereq for SLA students; HE students, cons dir)
VI TTh, 206WeH, Nymon
- 31 **Intro Nutrition** (3 cr, §30; prereq no HE sr)
III MWF, 213HE, Rehfeld
- 34 **Nutrition Probs** (4 cr, §76, or 170, 171; prereq 3rd qtr soph, 31, 40, physiol or human biol)
II MTWTh, 213HE, Nymon
- 40 **Food Preparation** (5 cr; prereq 2 qtrs chem)
-1, III-IV MWF, IV TTh, 157HE, III TTh, 48HE, Gordon
-2, VII-IX MWF, IX TTh, 157HE, VIII TTh, *48HE, Jones
- 41 **Food Mgt, Marketing** (5 cr; prereq soph, 31, 40)
-1, III-V WF, 152, 156HE, VII-VIII T, 150HE, VII-VIII Th, 57HE, Trammell
-2, III-V TTh, 152, 156HE, III-IV W, 57HE, III-IV F, 150HE, Jones
-3, VII-VIII M, 150HE, VII-IX TTh, 152, 156HE, VII-VIII W, 57HE, Asp

- 45 **Quantity Cookery** (6 cr; prereq soph, 40, 41)
Lect V TTh, 213HE, Billings
-1, Lab I-IV TThs, Cafeteria
-2, Lab I-IV MWF, Cafeteria
- 46 **Cafeteria Experience** (3 cr; prereq soph)
Lect IV W, Cafeteria, Higgins
-1, Lab IV-VI MF, Cafeteria
-2, Lab IV-VI TTh, Cafeteria
- 49 **Household Equipment** (3 cr; prereq* soph, AgEn 35)
-1, III-IV MWF, 106HE, Bonnell
-2, VI-VIII TTh, 106HE, Bonnell
-3, VII-VIII MWF, 106HE, Bonnell
- 50 **Textiles** (3 cr; prereq 1)
-1, III-IV MWF, 307HE, Gorham
-2, III-IV TThs, 307HE, Carlson
- 53 **Adv Clothing** (3 cr; prereq 4, 50 or concur regis)
VI-VII MWF, 305HE, Gorham
- 57 **Application of Color, Design II** (3 cr, §24 or 180; prereq* 56 or 20, not open to HE students)
II-III TTh, IV Th, 360HE, Ludwig
- 65 **Institution Mgt Probs** (3 cr; prereq 45, 46, 64)
10:15-11:35 TTh, 213HE, Scholl
- 71 **Demonstrations** (1 cr; prereq 3rd qtr jr, 41)
VI-VIII F, 57HE, Trammell
- 79 **Selected Probs for Dietitians** (3 cr; prereq 170, maj HE)
II MWF, 307HE, Biester
- 85 **Home Mgt Principles** (3 cr; prereq 40, 41 advised)
VII MWF, 203HE, Jeary
- 86 **Home Mgt Lab** (4 cr; prereq 85 or concur regis, PH 52a, 52b; 40, 41 advised)
-1, I S and ar, Home Mgt House, Jeary
-2, I S and ar, Home Mgt House, Stephens
- 98 **Home Economics Extension** (3 cr; prereq sr, HEEd 91 or concur regis)
Ar
- 120 **Art History** (3 cr)
VIII MWF, 350HE, Esteros
- 122 **Adv Interior Design** (3 cr; prereq* 27, 120)
III-IV TThs, 433HE, Esteros
- 142 **Experimental Cookery** (3 cr; prereq 40, AgBi 1)
VI T, 48HE, VII-VIII T, 56HE, VI-VIII Th, 56HE, Trammell
- 146 **Special Food Probs** (3 cr; prereq sr, 142)
VI M, 48HE, VII-VIII M, 56HE, VI-VIII W, 56HE, Gordon
- 171 **Child Nutrition** (3 cr; prereq 170, HEEd 90)
St Paul Campus: III MW, 203HE, and Minneapolis Campus: III F, 206WeH
III-IV one day ar, Leichsenring
- 173 **Nutrition in Disease** (4 cr; prereq 170, 35 advised)
Lect 9:00-10:15 TTh, 203HE, Rehfeld
Lab VI-VII F, 144HE
- 177 **Digestion, Metabolism** (3 cr; prereq 35)
VI-VIII MW, 307HE, Nymon

- 178 **Clinical Probs in Nutrition** (2 cr; prereq 170, 35 or concur regis)
Lect V M, 313HE, Rehfeld
—1, Lab VI-VIII T, U Hosp
—2, Lab VI-VIII Th, U Hosp
- 180 **Home Planning, Furnishings** (5 cr, §GC 16, FL 15, HE 24, 57; prereq 27, 49, 120 advised)
VI-VII MWF, VIII MW, 359HE, Myren
- 209 **Seminar: Textiles, Clothing** (1 cr; prereq cons instr)
Ar, Phelps
- 249 **Seminar: Foods** (1 or 2 cr; prereq cons instr)
Ar, Noble
- 279 **Seminar: Nutrition** (1 cr; prereq cons instr)
Ar, Biester
- 296 **Home Economics Probs** (1-5 cr; prereq cons instr, continuation of 295)
Ar
- 299 **Home Economics Probs** (ar cr; prereq cons instr)
Ar

HORTICULTURE (HORT)

- 10 **Home Floriculture** (3 cr)
III MWF, 1 hr ar, 8Hr, Phillips
- 16 **Greenhouse Mgt** (3 cr; prereq 6 cr bot)
IV TTh, VI-VIII F, 8aHr, Widmer
- 22 **Plant Materials: Spring, Summer Aspects** (3 cr; prereq 6 cr bot)
VI-VIII MW, 8Hr, Widmer
- 32 **Vegetable Growing** (3 cr; prereq 6 cr bot)
II MWF, 102Hr, Krantz, Hutchins
- 40 **Horticulture Lab** (2 cr; prereq* soph, 6)
VI-IX F, 8Hr, Weir
- 51 **Garden Flowers** (3 cr; prereq* 6 cr bot)
VI-IX Th, 1 hr ar, 107Hr, Phillips
- 54 **Commercial Floriculture, Spring Crops** (3 cr; prereq 16, 6 cr in bot or equiv)
III TTh, VI-VIII T, 8Hr, Widmer
- 62 **Special Probs: Landscape Design, Composition** (2-4 cr; prereq sr, 61)
Ar, Phillips
- 150 **Prin of Quality Control** (2 cr; prereq* maj or min in Hort or Food Tech)
Ar, Winter
- 192 **Special Probs** (2-4 cr; prereq cons instr)
Ar, Alderman, staff
- 247 **Report on Special Horticultural Topics** (9 cr or less)
Ar, Staff
- 249 **Research: Horticultural Crop Breeding** (ar cr)
Ar, Krantz, Currence, Hutchins, Wilcox

ORIENTATION (ORIE)

- 1 **College Orientation Lectures** (1 cr)
V M, 105En, McFarland

PLANT PATHOLOGY AND AGRICULTURAL BOTANY (PLPA)

- 1 **Plant Pathology** (5 cr, §10; prereq soph, 9 cr pl sci incl 6 in bot)
Lect VIII MWF, 103, 105PP, Moore
—1, Lab VI-VII MWF, 103, 105, 106PP
—2, Lab IX-X MWF, 103, 105, 106PP
- 3 **Weeds** (3 cr; prereq 6 cr bot)
III-IV TThS, 106AgrBot, Larson
- 10 **Forest Pathology** (5 cr, §1; prereq soph, 6 cr bot)
Lect I MWF, 103, 105PP, French
Lab I-II TThS, 103, 105, 106PP
- 53 **Food Plants of Game Animals** (3 cr; prereq 1 yr bot, 1 yr zool)
II TThS, 107AgrBot, Larson
- 107 **Mycology** (3 or 5 cr; prereq 1 or 10)
VI-VIII TTh, 103, 105, 110PP, Dossdall
- 119 **Prin Plant Disease Control** (3 cr; prereq 1 or 10)
III-V TTh, 103, 105, 106PP, King
- 120 **Adv Plant Pathology** (3 cr, §1, 10; prereq* 14 cr pl sci)
—1, Lect I MWF, 103, 105, 106PP, French
Lab I-II TThS
—2, Lect VIII MWF, 103, 105, 106PP, Moore
Lab IX-X MWF
- 160 **Plant Histochemistry** (3 cr; prereq* 15 cr pl sci)
Lect ar; Landon
Lab ar
- 161 **Technology of Fruits, Vegetables** (3 cr; prereq* 15 cr pl sci)
Ar, Landon
- 205 **Research: Plant Pathology** (ar cr)
Ar, Stakman, staff
- 209 **Special Probs in Mycology** (ar cr)
Ar, Stakman, C Christensen, Dossdall
- 213 **Seminar** (2 cr)
IX-X T, 401PP, Stakman, staff
- 217 **Ecology of Plant Pathogens** (3 cr)
Lect III-IV W, 103PP, Kernkamp
Lab II-IV MWF, 105, 106PP
- 253 **Seminar: Applied Plant Physiology** (1 cr)
Ar, Landon
- 256 **Research Probs: Applied Plant Physiology** (ar cr)
Ar, Landon
- 262 **Research Probs: Agricultural Botany** (3 or 5 cr)
Ar, Stakman, Larson

POULTRY HUSBANDRY (POHU)

- 1 **Poultry Production** (4 cr)
II MTWF, 110PetH, Canfield
- 51 **Hatchery Mgt** (3 cr; prereq 1, Zool 15)
VII-VIII TTh, 214PetH, Canfield
- 55 **Special Probs** (1-3 cr; prereq 6 cr)
Ar, Sloan
- 153 **Poultry Nutrition, Feeding** (3 cr; prereq 1, AgBi 1)
IV MWF, 110PetH

- 214 Research: Poultry Husbandry (ar cr; prereq 9 cr)
Ar, Staff
- 215 Research: Poultry Nutrition (ar cr; prereq 9 cr agric biochem)
Ar, Sloan
- 216 Research: Poultry Breeding (ar cr; prereq 9 cr genetics)
Ar, Shoffner
- 217 Poultry Husbandry Seminar (1 cr)
Ar, Sloan

RHETORIC (RHET)

- 1-2-3 **Communications I, II, III** (3 cr per qtr)
All entering freshmen will meet in 217En the first period every day for the first week of the quarter. At this time they will be given diagnostic tests in the communication skills, and at the end of the week will be sectioned according to their needs and abilities. After the first week, all sections will continue to meet during the first hour but a student will be assigned to a MWF or a TThS sequence.
Students transferring to this college with fewer than nine credits of freshman English earned elsewhere are also required to take these diagnostic tests. All students who have taken at least one course in Communications on this campus but who have not completed their Freshman Communications requirement will be given their section assignment in 107En the first period of the first class day of the quarter.
- 22 **Public Speaking** (3 cr; prereq soph, rhet comm require)
-1, II MWF, 312En, Woods
-2, III MWF, 307En, Nichols
-3, IV MWF, 307En, Nichols
-4, VI MWF, 120TSA, Sandquist
-5, VII MWF, 120TSA, Sandquist
-6, II TThS, 120TSA, Hagen
-7, III TThS, 312En, Woods
- 26 **Original Writing** (3 cr; prereq soph, rhet comm require)
III MWF, 312En, Woods
- 31 **English Literature I** (5 cr; prereq soph, rhet comm require)
III MTWThF, 308En, Thurston
- 32 **English Literature II** (3 cr; prereq soph, rhet comm require)
II TThS, 210TSA, Rosegrant
- 33 **American Life in American Literature** (3 cr; prereq soph, rhet comm require)
II MWF, 307En, Rodabaugh
- 47 **Efficient Reading** (3 cr)
-1, VI MWF, 311En, Brown
-2, VII MWF, 185ForH, Wright
-3, VIII MWF, 185ForH, Wright

- 51 **Exposition** (3 cr; prereq rhet comm require)
-1, III MWF, 120TSA, Bahlke
-2, IV MWF, 120TSA, Rodabaugh
-3, VI MWF, 308En, Thurston
-4, III TThS, 307En, Brown
-5, IV TThS, 307En, Rosegrant
- 54 **Adv Public Speaking** (3 cr; prereq 22)
-1, II MWF, 120TSA, Drake
-2, VI MWF, 210TSA, Hagen
-3, II TThS, 307En, Sandquist
- 59 **Adv Play Production** (3 cr; prereq* 28)
III MWF, 220TSA, Drake
- 60 **Contemporary Literature** (3 cr; prereq rhet comm require)
IV MWF, 312En, Woods
- 91 **American Speech for Foreign Students** (no cr)
Ar, Woods

SOILS (SOIL)

- 5 **Soil Mgt** (3 cr; prereq soph, 4)
II TThS, 204So, Rost
- 109 **Soil Genesis, Classification** (3 cr; prereq 108)
IV MWF, 204So, McMiller
- 202 **Research Probs in Soils** (2-5 cr)
Ar, Rost, Burson, McMiller, Caldwell, MacGregor
- 208 **Soil Fertility** (3 cr; prereq 4)
II TThS, 204So, Rost

VETERINARY MEDICINE (VET)

- 52 **Anatomy, Physiology, Hygiene of Domestic Animals** (3 cr)
I TThS, 103VetA, Kernkamp
- 103 **Animal Anatomy** (4 cr; prereq regis 1st yr vet med; grad, cons instr)
VI-IX MWF, 102VetA, Kitchell
- 104 **Special Studies: Animal Anatomy** (1-3 cr; prereq 101)
Ar, Kitchell, Weber
- 108 **Special Animal Gross, Microscopic Anatomy** (3 cr; prereq 107)
Ar, Kitchell, Weber
- 113 **Animal Histology, Embryology** (4 cr; prereq regis 1st yr vet med; grad, cons instr)
Lect I MW, 103VetA, Weber
Lab I-III TTh, 204VetA
- 114 **Special Studies: Animal Histology, Embryology** (1-3 cr; prereq 111)
Ar, Weber, Kitchell
- 119 **Seminar: Animal Anatomy** (1 cr; prereq* 101, 111)
Ar, Kitchell, Weber
- 121 **Animal Bacteriology** (5 cr; prereq 10 cr zool, 13 cr chem)
Lect II MWF, 207TEH, Pomeroy
Lab III-IV MWF, 100TEH

- 126 **Dairy Hygiene** (4 cr; prereq regis 4th yr vet med, 123, 179; grad, cons instr)
Lect VI TTh, 210HH, Olson
Lab VII-IX TTh, 212HH
- 127 **Veterinary Public Health** (2 cr; prereq regis 4th yr vet med, 123, 179; grad, cons instr)
I WF, Pomeroy
- 137 **Probs: Animal Physiology** (ar cr; prereq 135, 136 or Phsl 107)
Ar, Sellers
- 140 **Seminar: Animal Physiology** (2 cr; prereq 136)
Ar, Sellers
- 153 **Animal Pathology** (6 cr; prereq* sr, 103, 113)
Lect VI MWF, I F, 207TEH, Kernkamp, Sautter
Lab VII-IX WF, 100TEH
- 154 **Veterinary Clinical Pathology** (2 cr; prereq regis 3rd yr vet med; grad, cons instr, 152)
VI MW, 220TSH, Rehfeld
- 157 **Veterinary Postmortem Pathology** (1-3 cr; prereq 153, cons instr)
Ar, Kernkamp, Sautter
- 158 **Veterinary Surgical Pathology** (1-3 cr; prereq 153, cons instr)
Ar, Kernkamp, Sautter
- 162 **Animal Parasitology** (6 cr; prereq sr, 161)
Lect III WF, IV TTh, 207TEH, Griffiths
Lab VI-VIII TTh, 100TEH
- 170 **Veterinary Clinical Diagnosis** (3 cr; prereq sr, 136, 151)
Lect III M, I W, 207TEH, Pritchard
Lab VII-IX M, 70VetC
- 171c **Clinical Conference** (1 cr, †171a-171b-171c; prereq regis 3rd yr vet med, 170; grad, cons instr)
VI F, 125VetC, Bartlett
- 171f **Clinical Conference** (1 cr, †171d-171e-171f; prereq regis 4th yr vet med, 170)
VI F, 125VetC, Bartlett
- 174 **Adv Animal Surgery** (3 cr)
Lect VI T, I S, 220TSH, Arnold
Lab VII-IX T, 70VetC
- 179 **Large Animal Medicine** (5 cr)
I MTWThF, 220TSH, Boyd
- 181 **Infectious Diseases of Domestic Animals** (5 cr; prereq regis 4th yr vet med, 179; grad, cons instr)
I MTTh, VII MF, 125VetC, Hoyt
- 185 **Small Animal Medicine** (4 cr)
VI Th, VII MWF, 220TSH, Mather
- 190 **Clinical, Lab Practice** (5 cr; prereq regis 3rd yr vet med, 170)
II-IV MTWThFS, 70VetC, Campbell, others
- 193 **Clinical, Lab Practice** (5 cr; prereq regis 4th yr vet med, 190; grad, cons instr)
II-IV MTWThFS, 55VetC, Campbell, others
- 194 **Veterinary Obstetrics, Probs of Animal Reproduction** (3 cr; prereq regis 4th yr vet med, 190; grad, cons instr)
VIII MWF, 220TSH, Bartlett
- 197 **Animal Diseases, Poisonous Plants** (3 cr; prereq regis 4th yr vet med, 143, 170, 179, 188; grad, cons instr)
Lect VI MW, 125VetC, Pritchard, Larson
Lab VII-IX W, 70VetC
- 201 **Adv Animal, Poultry Pathology** (ar cr; prereq cons instr)
Ar, Fenstermacher, Sautter
- 205 **Adv Animal Bacteriology** (ar cr; prereq cons instr)
Ar, Pomeroy, Fenstermacher
- 209 **Adv Clinical Technique** (ar cr; prereq cons instr)
Ar, Campbell
- 213 **Veterinary Obstetrics, Gynecology** (ar cr, cons instr)
Ar, Boyd
- 217 **Seminar: Veterinary Medicine** (1 cr)
Ar, Kernkamp
- 230 **Research: Veterinary Medicine** (ar cr)
Ar, Staff
- 235 **Research: Animal Physiology** (ar cr; prereq 135, 136 or Phsl 107)
Ar, Sellers
- 240 **Adv Veterinary Parasitology** (ar cr; prereq 161, 162)
Ar, Griffiths
- 245 **Research: Veterinary Parasitology** (ar cr; prereq cons instr)
Ar, Griffiths

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

- 53 **Sales, Negotiable Instruments** (3 cr, †51, 52, or 53; prereq 51)
Lect IV T, 105MurH, Wright, others
—1, I TTh, 1 VH
—2, II TTh, 1 VH
—3, III TTh, 1 VH
—4, III TTh, 113VH
- 55 **Elem Accounting** (4 cr, †Econ 23, 26)
II MWThF, 306VH
- 56 **Property Rights, Obligations** (3 cr; prereq 52 or 53)
8:30-10:00 TTh, 113VH, Wright
- 58 **Elements of Public Finance** (3 cr, †Econ 189, or 191-192; prereq Econ 7)
—1, II MWF, 113VH, Heller, Borak
—2, III MWF, 2VH
—3, VIII MWF, 207VH
- 65 **Analysis of Financial Statements** (3 cr, †139, 151; prereq Econ 26)
10:00-11:30 TTh, 6VH, Heilman

- 66 **Managerial Costs** (3 cr, §130, 152; prereq Econ 26)
IV MWF, 306VH, Ostlund
- 67 **Retail Store Mgt for Pharmacy Students** (3 cr; prereq Econ 30)
VI MWF, 115ForH, Werner
- 70 **Statistics Survey** (3 cr, §Econ 5, Soc 45; prereq Econ 7)
I MWF, 205VH
- 71 **Transportation Services, Charges I** (3 cr, §Econ 172; prereq Econ 7)
—1, II MWF, 4VH, Nightingale
—2, VI MWF, 1 VH
- 74 **Business Statistics** (3 cr, §112; prereq Econ 5)
—1, II MWF, 2VH, Mudgett, others
—2, IV MWF, 113VH
- 76 **Credits, Collections** (3 cr; prereq 77)
III MWF, 207VH, Neidert
- 77 **Survey, Marketing** (3 cr, §Econ 185; prereq Econ 7)
Lect III T, 4ME, Vaile, others
—1, I TTh, 2VH
—2, II TTh, 207VH
—3, IV TTh, 1 VH
- 86 **Survey Office Mgt** (3 cr; prereq Econ 7)
IV MWF, 301VH, Donaldson
- 87 **Advertising Probs** (3 cr, §188; prereq 77, Jour 18, Psy 56, open to jour adv maj)
2:30-4:00 TTh, 113VH, Lewis
- 89 **Production Mgt** (3 cr, §187; prereq Econ 7)
—1, III MWF, 301VH, Filipetti, others
—2, V MWF, 1 VH
- 91 **Tabulating Equipment Lab** (1 cr; prereq Econ 5, 26)
Lect VI T, 4VH, Leary
—1, VI Th, 307VH
—2, VII T, 307VH
—3, VII Th, 307VH
- 93 **Accounting Lab** (1 cr; prereq Econ 26)
VII-VIII T, 306VH
- 94 **Cost Accounting Lab** (1 cr; prereq concur regis 153)
—1, III-IV Th, 306VH
—2, VII-VIII Th, 306VH
- 111 **Procurement** (3 cr; prereq 77)
8:30-10:00 TTh, 6VH, Holloway
- 113 **Sales Mgt** (3 cr, §68; prereq 77)
10:00-11:30 TTh, 2VH, Lewis
- 114 **Retail Store Mgt** (3 cr, §69; prereq 77)
10:00-11:30 TTh, 205VH, Canoyer
- 117 **Casualty Insurance** (3 cr, §61; prereq Econ 50)
1:30-3:00 TTh, 207VH, Graves
- 118 **Auditing Principles, Procedures** (4 cr; prereq 151)
Lect VI TTh, 301VH, Lund
Lab VII-VIII TTh, 301VH
- 133 **Standard Costs** (3 cr; prereq 153)
I MWF, 6VH, Ostlund
- 134 **Income Tax Accounting** (4 cr; prereq 151)
II MTWF, 301VH, Nelson
- 135 **Auditing, Public Accounting** (3 cr; prereq 118)
VII MWF, 307VH, Reighard
- 145 **Int'l Finance, Foreign Exchange** (3 cr; prereq Econ 64 or 142)
I MWF, 207VH, Uppgren
- 148 **Securities Market** (3 cr; prereq 146, Econ 149)
II MWF, 207VH, Sutton
- 151 **Intermed Accounting II** (3 cr, §65, 139; prereq 150)
II MWF, 6VH, Heilman
- 153 **Cost Accounting** (3 cr; prereq 152)
III MWF, 306VH, Wheeler
- 156 **Finance Mgt** (3 cr; prereq Econ 75 or 155)
III MWF, 205VH, Stehman
- 159 **Adv Accounting** (3 cr; prereq 151)
IV MWF, 307VH, Nelson
- 167 **Introd Industrial Relations** (3 cr; prereq Econ 73 or 161)
—1, I MWF, 1 VH, Turnbull
—2, VI MWF, 113VH
- 177 **Foreign Trade** (3 cr; prereq Econ 7)
VI MWF, 301VH, Holloway
- 182B **Sr Topics: Business Finance** (3 cr; prereq sr)
2:30-4:00 TTh, 6VH, Stehman
- 182C **Sr Topics: Marketing** (3 cr; prereq sr, 114)
3:00-4:30 TTh, 207VH, Canoyer
- 182D **Sr Topics: Industrial Relations** (3 cr; prereq sr, 167)
3:00-4:30 TTh, 1 VH, Yoder
- 182E **Sr Topics: Office Mgt** (3 cr; prereq sr, 181E)
VII TTh, VIII Th, 205VH, Donaldson
- 182F **Sr Topics: Statistics** (3 cr; prereq sr, 123; cons instr)
2:00-3:30 TTh, 2VH, Mudgett
- 182G **Sr Topics: Production Mgt** (3 cr; prereq sr, 89 or 187)
—1, III MWF, 4VH, Filipetti
—2, VI MWF, 2VH
- 182H **Sr Topics: Insurance** (3 cr; prereq sr, 6 cr insur)
IV MWF, 210VH, Graves
- 182I **Sr Topics: Transportation** (3 cr; prereq* sr, 181I)
2:30-4:00 TTh, 4VH, Nightingale
- 183 **Practice Course** (ar cr; prereq cons advis)
Ar
- 184 **Scientific Mgt: Industry** (3 cr; prereq sr, 89 or 187)
VII MWF, 6VH, Filipetti
- 188 **Advertising** (3 cr, §87, 88; prereq 77, Psy 56)
VII MWF, 207VH, Lewis
- 194 **Adv Advertising Procedure** (3 cr; prereq 87, 88, or 188)
II MWF, 309JohH, Longstaff
- 198 **Internship: Public Accounting** (ar cr; prereq cons instr)
Ar

- 199 Internship: Internal Accounting (ar cr; prereq cons instr)
Ar
- 259 Case Studies: Specialized Accounting (3 cr)
VIII-IX Th, 210VH, Wheeler

ECONOMICS (ECON)

- 3 Elements of Money, Banking (5 cr, §BA 57; prereq 2nd qtr fresh)
Lect III TTh, BuAud, Stehman, others
-1, I MWF, 307VH
-2, I MWF, 306VH
-3, II MWF, 307VH
-4, II MWF, 111C
-5, III MWF, 211Z
-6, IV MWF, 215C
-7, IV MWF, 60ForH
-8, V MWF, 2VH
-9, VI MWF, 308MurH
-10, VII MWF, 205VH
-11, VII MWF, 120ForH
- 5 Elements of Statistics (5 cr, §Soc 45, BA 70; prereq soph)
Lect II Th, 155ForH, Gaumnitz
-1, I MTWF, 301VH
-2, II MTWF, 211Z
-3, VII MTWF, 104E
- 6 Prin Economics (5 cr, §8, 62; prereq soph)
-1, II MTWThF, 145Ph
-2, IV MTWThF, 211Z
- 7 Prin Economics (5 cr, §9, 63; prereq 6, 3 advised)
Lect VII TTh, 150Ph, Smith, others
-1, I MWF, 211Z
-2, IV MWF, 70ForH
-3, VI MWF, 205VH
-4, VII MWF, 203E
- 9 Gen Economics (3 cr, §7, 63; prereq 8)
-1, I MWF, 85ForH, Filippetti, others
-2, VI MWF, 120ForH
- 10 Introd Economics Analysis (3 cr; for pharmacy students)
I MWF, 201WuH
- 24 Prin Accounting (3 cr, §22, BA 54; prereq soph)
-1, III MWF, 111C, Heilman, others
-2, VI MWF, 4VH
- 25 Prin Accounting (3 cr, §23, BA 55; prereq 24)
-1, IV MWF, 4VH, Heilman, others
-2, VII MWF, 301VH
- 26 Prin Accounting (3 cr, §23, BA 55; prereq 25)
-1, I MWF, 308MurH, Heilman, others
-2, II MWF, 160ForH
-3, IV MWF, 115C
-4, VI MWF, 307VH
-5, VII MWF, 306VH
- 27 Accounting Survey (5 cr, §24-25, BA 54, for prelaw students; prereq soph)
VI MTWThF, 306VH
- 28 Business Law (3 cr, §BA 51; prereq soph or jr with 6 cr econ, sr)
I MWF, 335EE, Palmer
- 32 Bgn Typing (1 cr)
-1, I MTWThF, 209VH, Donaldson, others
-2, VI MTWThF, 211VH
- 33 Intermed Typing (1 cr, †33-34; prereq 30 words a min)
VII MTWThF, 209VH, Donaldson, others
- 34 Typing Procedures (2 cr, †33-34; prereq soph, 33, 45 words a min)
VI MTWThF, 209VH, Peterson
- 35 Office Practice for Dental Hygienists (3 cr; prereq jr, 30 words a min)
IV MWF, 209VH, Peterson
- 39 Shorthand (3 cr, †37-38-39; prereq 38, or 2 yr HS shorthand)
II MTWThF, 211VH, Donaldson
- 42 Adv Secretarial Procedure (3 cr; prereq* 34, 41)
II MTWThF, 209VH, Peterson
- 50 Insurance Prin (3 cr; prereq 7)
VIII MWF, 1 VH, Graves
- 64 Economics of Money, Banking (3 cr, §142; prereq 3, 7)
-1, I MWF, 4VH, H Smith
-2, VIII MWF, 113VH
- 73 Manpower Economics, Labor Probs (3 cr, §161; prereq 7)
Lect II T, 100C, Yoder, others
-1, I TTh, 207VH
-2, III TTh, 301VH
-3, IV TTh, 113VH
-4, VI TTh, 6VH
- 75 Corporation Finance (3 cr, §155; prereq 3, 7)
-1, III MWF, 1 VH, Borak
-2, IV MWF, 207VH
- 81 Intermed Economic Analysis (3 cr, §104; prereq 80)
-1, I MWF, 2VH, McKenna, others
-2, IV MWF, 205VH
-3, VI MWF, 207VH
- 84 Comparative Economic Systems (3 cr; prereq 7)
III MWF, 6VH, Papandreou
- 85 Govt Regulation of Business (3 cr; prereq 7)
-1, III MWF, 113VH, Boddy, Papandreou
-2, IV MWF, 2VH
-3, VII MWF, 4VH
- 102 Econometrics II (3 cr; prereq* Math 50-51 or concur regis Math 51)
VIII-IX TTh, 2VH, Hurwicz
- 104 Adv Economic Theory (3 cr, †103-104, §81; prereq 103)
IV MWF, 6VH, Brownlee
- 110 Industrial Price Control (3 cr; prereq 7; 15 addtl cr Econ and/or BA, Econ 75 or 155 advised)
I MWF, 113VH, S Smith
- 123 Theory of Statistics (3 cr; prereq 122)
II MWF, 205VH, Mudgett

- 149 **Business Cycles** (3 cr; prereq* sr, 64 or 142)
—1, IV MWF, 1 VH, Upgren, H Smith
—2, VII MWF, 1 VH
- 161 **Gen Manpower Economics, Labor Probs**
(3 cr, 73; prereq jr and sr with cons instr
or grad, 7)
Lect II T, 100C, Yoder, others
Rec VI TTh, 113VH, Ulman
- 166 **Settlement of Industrial Disputes** (3 cr;
prereq 73 or 161)
VII MWF, 113VH, Turnbull
- 176 **Introd Int'l Economics** (3 cr; prereq 7)
II MWF, 1 VH, Upgren
- 179 **Economic Probs of the Far East** (3 cr; pre-
req 7)
VI MWF, 6VH, Vaile
- 195 **Fiscal Polley** (3 cr; prereq sr with cons
instr or grad, 20 cr soc sci incl a course
pub fin and 64 or 142)
10:00-11:30 TTh, 307VH, Heller
- 206 **Seminar: Market Prices** (3 cr)
VIII-IX M, 210VH, Vaile
- 215 **Welfare Economics** (3 cr; prereq 213)
VIII-IX W, 210VH, Brownlee
- 216 **Topics in Mathematical Economics** (3 cr;
prereq* 100)
VIII-IX M, 2VH, Hurwicz
- 252 **Seminar: Industrial Relations** (3 cr)
VI-VII M, 210VH, Yoder

SCHOOL OF DENTISTRY

CROWN AND BRIDGE (CRBR)

- 62 **Crown, Bridge** (4 cr; prereq 60)
Lect 1:00-2:00 F, 12 Owre, Yock
Lab II-IV TTh, VII-IX F, 1 Owre
- 82 **Crown, Bridge** (lect 1 cr, clinic 1 cr; pre-
req 80)
Lect I T, 111 Owre, Yock
Clinic ar
- 92 **Crown, Bridge** (2 cr; prereq 82)
Clinic ar

DENTAL HYGIENE (DHYG)

- 9 **Oral Anatomy** (2 cr)
Lect VI W, 401 Owre, Hall
—1, Lab VII-IX W, 104 Owre, Bruning, Hall
—2, Lab 2:00-5:00 pm, 104 Owre, Hall
- 22 **Dental Prophylaxis** (1 cr)
Ar, Clinic, Bruning, Jackson
- 42 **Educational School Work** (2 cr)
I T, 401 Owre, Bruning
- 47 **Dental Assisting** (2 cr)
Ar, Clinic, Staff
- 55 **Dental Prophylaxis** (2 cr)
Ar, Clinic, Bruning, Jackson
- 59 **Prosthetic Dentistry, Dental Lab** (2 cr)
Lect I Th, 401 Owre, Hall
Lab VII-IX Th, 104 Owre
- 62 **Dental Radiology** (2 cr)
VI T, 113 Owre, Peterson

DENTURE PROSTHESIS (PROS)

- 52 **Denture Prosthesis** (4 cr; prereq 50)
Lect I M, 12 Owre, Hall
Lab II-IV M, I-III W, 1 Owre
- 62 **Denture Prosthesis** (2 cr; prereq 60)
Lect I-IV S, 12 Owre, Listiak
Clinic ar
- 82 **Denture Prosthesis Clinic** (3 cr; prereq 80)
Lect 1:00-2:00 M, 111 Owre, Listiak
Clinic ar

- 92 **Denture Prosthesis Clinic** (2 cr; prereq 80)
Clinic ar

OPERATIVE DENTISTRY (OPER)

- 62 **Operative Dentistry** (4 cr; prereq Oral Anat
52, regis 2nd yr dent)
Lect 1:00-2:00 M, 12 Owre, Thiers
Lab VII-IX MWTh, 1 Owre
- 82 **Operative Dentistry** (lect 2 cr, clinic 3 cr;
prereq regis 3rd yr dent)
Lect I MTh, 111 Owre, Simon
Clinic ar, Simon
- 92 **Operative Dentistry Clinic** (3 cr)
Ar, Simon

ORAL ANATOMY (ANAT)

- 52 **Oral Anatomy** (2 cr; prereq 50)
Lect I F, 12 Owre, Hall
Lab II-IV F, 1 Owre

ORAL DIAGNOSIS AND RADIOLOGY
(DIAG)

- 62 **Dental Radiology** (1 cr; prereq regis 2nd
yr dent)
VI T, 113 Owre, Mitchell
- 92 **Oral Diagnosis** (1 cr)
Clinic ar, Mitchell

ORAL HISTOLOGY AND PATHOLOGY
(PATH)

- 242 **Research in Oral Pathology** (ar cr)
Ar
- 243 **Dental Research Seminar** (1 cr)
Ar
- 244 **Clinical Oral Pathology Conference** (1 cr)
Ar

ORAL HYGIENE AND PERIODONTIA (PERI)

- 82 Periodontia Clinic (1 cr)
Ar, Zander

ORAL SURGERY (OSUR)

- 82 Oral Surgery (1 cr; prereq regis 3rd yr dent)
Lect I W, 111 Owre, Clark
- 83 Oral Surgery (1 cr; prereq regis 3rd yr dent)
I F, 111 Owre, Clark
- 92 Oral Surgery (3 cr; prereq regis 4th yr dent)
Clinic ar, Clark
- 141 Adv Oral Surgery (ar cr)
Ar, Clark, others
- 142 Oral Surgery Seminar (1 cr)
Ar, Clark
- 143 Research in Oral Surgery (ar cr)
Ar, Clark, others
- 144 Problems in Oral Surgery (ar cr)
Ar, Clark, others

ORTHODONTIA (ORTH)

- 92 Orthodontic Clinic (1 cr; prereq 91)
Ar, 302 Owre, Speidel
- 150 Adv Orthodontic Techniques (4 cr)
Ar, Speidel, Steadman, McIver
- 151 Treatment Procedures in Orthodontics (2 cr)
Ar, Speidel, Steadman, McIver
- 152 Case Analysis (2 cr)
Ar, Speidel, Steadman, McIver
- 153 Treatment Planning (2 cr)
Ar, Speidel, Steadman, McIver
- 154 Adv Clinical Orthodontics (ar cr)
Ar, Speidel, Steadman, McIver
- 155 Osteology, Myology of the Head (2 cr)
Ar, Steadman
- 156 Growth of the Head (2 cr)
Ar, Speidel, Steadman, McIver
- 157 Comparative Anatomy of the Head (1 cr)
Ar, Steadman
- 158 Seminar in Orthodontics (1 cr)
Ar, Speidel, Steadman, McIver
- 245 Problems, Research in Orthodontics (ar cr)
Ar, Speidel, Steadman, McIver

PEDODONTICS (PEDS)

- 62 Pedodontics (1 cr)
1:00-2:00 W, 12 Owre, Wittich

- 82 Pedodontics (1 cr)
Clinic ar, Wittich

PRACTICE MANAGEMENT (PRM)

- 92 Practice Management (1 cr; prereq regis 4th yr dent)
I W, 113 Owre, Thorson

RESTORATIVE DENTISTRY (REST)

- 92 Restorative Dentistry (1 cr)
I Th, 113 Owre, Listiak, Simon, Yock
- 130 Adv Oral Anatomy (ar cr)
Ar, Hall
- 131 Adv Oral Anatomy (ar cr)
Ar, Hall
- 132 Adv Oral Anatomy (ar cr)
Ar, Hall
- 133 Adv Oral Anatomy (ar cr)
Ar, Hall
- 134 Adv Technical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 135 Adv Technical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 136 Adv Technical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 137 Adv Dental Radiographic Technique (ar cr)
Ar, Simon, others
- 138 Adv Oral Diagnosis (ar cr)
Ar, Simon
- 139 Adv Oral Pathology (ar cr)
Ar
- 140 Preventive Dentistry (ar cr)
Ar
- 230 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 231 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 232 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 233 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 234 Research: Probs in Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 235 Research: Probs in Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 236 Research: Probs in Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch
- 237 Research: Probs in Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, Radusch

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AGED)

- 56 Rural Education through Extension Methods (3 cr)
V MWF, 301Hr, Swanson, McFarland
- 82 Methods in Teaching Agriculture (3 cr; prereq 81)
III MWF, 301Hr, Kitts
- 91 Supervised Student Teaching (6 cr; prereq 82, C+ aver in maj)
Ar, Kitts
- 104 Planning Programs (2 cr; prereq* regis last qtr undergrad)
IV TTh, 301Hr, Peterson, Donahoo
- 221 Field Probs (3 cr)
Ar, Peterson, Kitts
- 232 Research: Agricultural Education (3-9 cr)
Ar, Peterson, Kitts
- 291 Seminar: Agricultural Education (3 cr)
III-IV S, 301Hr, Peterson, staff

ART EDUCATION (ARED)

- 17 Survey of Art in Life, Education (3 cr)
—1, III-IV MWF, 213TNUH, Bratlee
—2, VI-VIII TTh, 213TNUH, Bratlee
- 18 Survey of Art in Life, Education (3 cr)
VI-VII MWF, 213TNUH, Page
- 19 Survey of Art in Life, Education (3 cr)
I-II MWF, 213TNUH, Page
- 58 Basic Prin, Experiences in Art Education (5 cr; prereq concur regis Ed 55A-B)
III-IV MTWThF, 109J, Hastie
- 81 Puppetry in Art Education Programs (3 cr)
IX-X MWF, 109J, Page
- 84 Teaching Art in Elem School (3 cr; prereq* 17, 18)
—1, VII-VIII TTh, 109J, Gayne
—2, I-II S, 109J, Bratlee
- 88 Student Teaching, Supervision of Art (2 cr, †86-87-88; prereq sr, 56-57, Ed 55B, cons dir student tchg, concur regis 88A)
Ar, Hastie
- 88A Teaching, Supervision of Art (2 cr, †86A-87A-88A; prereq 56-57, Ed 55B, cons dir student tchg, concur regis 88)
IX-X T, 109J, Hastie
- 158 Art Education in Europe (3 cr)
IX-X Th, 109J, Gayne
- 295 Probs: Art Education (ar cr; prereq cons maj advis)
Ar, Gayne, others

CURRICULUM AND INSTRUCTION (EDCI)

- 58 Core Curriculum Foundations (1 cr; prereq cons instr)
IX-X Th, 339 Lib, Adkins
- 60 Teaching Reading in Elem School (3 cr; prereq Ed 71B)
VI MWF, 301F, Walters

- 61 Teaching Social Studies in Elem School (3 cr; prereq Ed 71C)
VIII MWF, 110Pt, Chase
- 63 Children's Literature (2 cr)
I-II S, 2P, D Smith
- 65 Teaching Science in Elem School (3 cr; prereq Ed 71B, 10 hr nat sci)
VII-VIII T, VII Th, 225C, Goossen
- 104 Adult Education (2 cr jr or sr, 3 cr grad)
VIII-IX Th, 207NH, Nolte
- 105 Visual Materials in Education (3 cr; prereq sr)
VII MWF, 202WeH, Pearson
- 107 Radio in Education (3 cr; prereq 9 cr educ)
III MWF, 302MurH, Tyler
- 108 Radio in Education (3 cr; prereq 9 cr educ)
III MWF, 302MurH, Tyler
- 109 Audio-Visual Materials, Equipment Lab (3 cr; prereq* 105 or concur regis)
Lect VII T, 206WeH, Pearson
Lab ar
- 122 Literature for Adolescents (2 cr; prereq Ed 55B or jr, sr high school tchg exper)
III-IV S, 2P, D Smith
- 125 Occupational Information Lab (1 cr)
VI M, 5ShH, Dugan
- 135 Group Procedures in Guidance (3 cr; prereq* 9 cr educ, EPsy 133)
VIII-IX M, 111Bu, Dugan
- 141 Cooperative Part-time Distributive Education Classes (3 cr)
IX-X W, 103F, Meyer
- 145 Remedial Reading (3 cr; prereq recent course-reading or basic training counseling or school psy work)
IX-X T, 213NH, Bond
- 149 Teaching, Supervision of Arithmetic in Elem School (3 cr, §62A or B; prereq Ed 71C)
III-IV S, 216NH, Brueckner
- 151 Diagnosis, Treatment of Learning Difficulties (3 cr; prereq 150 or basic training counseling or school psy work)
IX-X W, 207NH, Brueckner
- 153 Supervision, Teaching English in Elem Schools (3 cr; prereq Ed 71C)
IX-X W, 112Bu, Archer
- 157 Practice in Supervision (3 cr; prereq cons instr)
Ar, Brueckner
- 161 Curriculum Construction in Business Education (3 cr; prereq* 113)
IX-X Th, 202TNUH, Price
- 173A Organizing Units of Instruction in the Elementary School (3 cr; prereq 119 or tchg exper)
III-IV S, ar, 213NH, Cook
- 174 Clinical Methods Practice in Speech Pathology (3 cr; prereq Spch 61, 67, 85, 162, 163 or concur regis)
VII-VIII W, ar, 409F, Bryngelson, others

- 175 Clinical Methods Practice in Speech Pathology (3 cr; prereq Spch 61, 67, 85, 162, 163 or concur regis)
VII-VIII W, ar, 409F, Bryngelson, others
- 176 Clinical Methods Practice in Speech Pathology (3 cr; prereq Spch 61, 67, 85, 162, 163 or concur regis)
VII-VIII W, ar, 409F, Bryngelson, others
- 199E Internship (ar cr)
Ar, Grim
- 201 Probs in Teaching Social Studies (3 cr; prereq cons instr)
Ar, McCune, Morse, West
- 205 Probs in Visual Education (ar cr; prereq* 105, 106)
Ar, Pearson
- 207 Probs in Radio Education (1-3 cr; prereq 107)
Ar, Tyler
- 215 Probs in School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 216 Field Work in School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 217 Seminar: School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 222 Seminar: Current Probs in Techniques of High School Instruction (ar cr; prereq 113, Ed 51B)
IX-X W, 5ShH, D Smith
- 225 Special Probs: Supervision, Instruction in Secondary Schools (ar cr; prereq cons instr)
IX-X W, 5ShH, Boardman, Stout
- 226 Seminar: Elem School Probs (no cr)
IX-X Th, 3UHS, Archer, Bond, Brueckner, Cook, Goossen
- 227 Probs of Rural Education (ar cr; prereq 117)
Ar, Archer
- 228 Probs of Higher Education, Teacher Training (ar cr; prereq cons instr)
Ar, Grim, Eckert
- 238 Probs in Distributive Education (ar cr)
Ar, Meyer
- 239 Probs in Business Education (ar cr)
Ar, Price
- 243 Recent Research in Reading (3 cr; prereq cons instr)
VIII TTh, ar, 111Bu, Bond
- 250 Higher Education in United States (3 cr; prereq* 18 cr educ)
I-II S, 5ShH, Eckert
- 252 Effective College Teaching (3 cr; prereq* 18 cr educ)
I-II T, I Th, 5ShH, Eckert
- 254 Supervision of Social Studies (3 cr)
III-IV S, 209NH, McCune
- 261 Special Probs in Improvement of Instruction (ar cr; prereq cons instr)
Ar, Brueckner
- 266 Supervision of High School Instruction (3 cr)
IV MWF, 112Bu, Boardman
- 271 Probs of Curriculum Construction (3-9 cr; prereq cons instr)
Ar, Cook, Birkmaier, Goossen, D Johnson
- 273 Probs in Reading (3-9 cr; prereq* 143 or 144)
Ar, Bond
- 284 Probs in Student Teaching (ar cr; prereq cons instr)
Ar, Grim
- 286 Professional Education of Teachers (3 cr; prereq* EdCI 285)
III-IV S, 111Bu, Grim
- 296 Special Probs in Teaching English (ar cr)
Ar, D Smith

EDUCATION (ED)

- 55B Introd Secondary School Teaching (5 cr; prereq for nurs educ maj, Psy 2; others, 55A)
-1, Lect I TThS, BuAud, Mork
-1, II-III TTh, 5F, Bowers
-2, II-III TTh, 9F, Van Wagenen
-3, VI-VII TTh, 112Bu, Bowers
-2, Lect VI-VIII T, VI-VII Th, 114JohH, Davies (for nurs educ maj only)
- 71C Introd Elem School Teaching (5 cr; prereq 71B)
Lect III MWF, 100C, Brueckner
-1, I-II TTh, 111Bu, Archer
-2, I-II TTh, 112Bu, Goossen
-3, III-IV TTh, 111Bu, Archer
-4, III-IV TTh, 112Bu, Goossen
-5, VI-VII TTh, 111Bu, Archer
- 81 Introd Education for Public Health Nurses (3 cr, not open to educ degree cand)
III MWF, 113 Owre, Grout

EDUCATIONAL ADMINISTRATION (EDAD)

- 167 Jr High School (3 cr; prereq sr, 9 cr educ)
III-IV S, 112Bu, Davies
- 210 Financial Aspects of Public School Business Admin (3 cr; prereq 227)
I MWF, 111Bu, Neale
- 218 Recent Literature in Secondary Education (ar cr)
IX-X W, 5ShH, Boardman, Stout
- 226 School Plant Planning, Mgt (3 cr; prereq 227)
I-II S, 111Bu, Neale
- 228 Special Probs in Educational Admin (ar cr; prereq 225)
Ar, Neale
- 235 Seminar: Education Admin (no cr)
Ar, Neale
- 265 Admin of Noninstructional Activities in Secondary School (3 cr)
III MWF, 112Bu, Boardman

- 270 Special Probs in Secondary Education (ar cr)
Ar, Boardman, Keller, Stout

EDUCATIONAL PSYCHOLOGY (EPSY)

- 60 Introd Measurement, Statistics (3 cr; prereq 6 cr psy)
II MWF, 111Bu, Van Wagenen
- 115 Psychology of Elem School Subjects (2 cr; prereq 9 cr psy, educ)
IX-X W, 106JohH, Van Wagenen
- 120 Basic Prin Measurement (3 cr; prereq 60)
VII MWF, 213NH, Cook
- 126 Social Structure of Student Groups (3 cr; prereq 125)
VI-VII TTh, 130, 175ForH, Flanders
- 142 Individual Mental Testing (3 cr; prereq sr, 120)
I-II S, ar, 202Pt, Reynolds
- 150 Psychoeducational Clinic (ar cr sec 1, 3 cr sec 2; prereq 142 or EdCI 145, cons instr)
-1, IX T, ar, 108Pt, Reynolds (testing)
-2, Ar, Bond (reading)
- 158 Psychology of Adolescence (3 cr; prereq Ed 55B)
III MWF, 206WeH, Person
- 159 Personality Adjustment, Mental Hygiene (3 cr; prereq sr)
IV MWF, 111Bu, Wrenn
- 218 Statistical Methods in Education (3 cr)
II MWF, 112Bu, P O Johnson
- 218a Statistical Methods in Education Lab (2 cr)
-1, II-III TTh, 221Bu, P O Johnson, Moonan (for students taking entire seq 216-217-218 concur)
-2, VII-VIII TTh, 221Bu, P O Johnson, Moonan (for students electing 1 or more qtrs)
- 221 Adv Theory of Measurement (2 cr; prereq 220)
IX-X T, 5ShH, Van Wagenen
- 226 Diagnosis, Counseling in Student Personnel Program (3 cr; prereq 133, 140 or concur regis)
IV MWF, 5ShH, Wrenn
- 233 Probs in Guidance, Personnel Work (ar cr)
Ar, Dugan, Edwards, Wrenn
- 240 Probs in Measurement (3 cr)
Ar, P O Johnson
- 243 Probs in Statistics for Students in Education, Psychology (3 cr)
Ar, P O Johnson
- 251 College Student Personnel Work (1-3 cr; prereq 250)
VI-VII W, 5ShH, Wrenn
- 253 Research Probs (ar cr)
Ar, Staff
- 254 Measurement, Evaluation in Higher Education (3 cr)
III-IV S, 5ShH, P O Johnson
- 260 Educational Psychology Seminar (no cr)
VIII-IX F, 5ShH, Staff

- 280 Practice in Student Group Work (3 cr; prereq cons instr)
VI-VII TTh, ar, 130, 175ForH, Flanders
- 281 Practice in Personnel Work (3 cr sec 1, ar cr sec 2; prereq 225, 226)
-1, VI-VII F, ar, 101EdH, Hagenah
-2, Ar, Edwards, Wrenn
- 282 Practice in High School Personnel Work (3 cr; prereq 133, 120, cons instr)
Ar, Dugan
- 290 Individual Differences (3 cr)
VI MWF, 40ForH, Flanders
- 294 Recent Theory, Research in Human Learning (3 cr; prereq cons instr)
III MWF, 111Bu, Mork

HISTORY AND PHILOSOPHY OF EDUCATION (HED)

- 71 History of Education (5 cr)
IV MTWThF, 109Psy, Alexander
- 110 Intercultural Education (3 cr)
IX-X M, 207NH, Hornung
- 155 History of Education in United States (3 cr)
VI MWF, 109Psy, Alexander
- 179 Critical Thinking for Teachers (3 cr)
IX-X T, 216NH, Amioka
- 180 The School, the Social Order (3 cr; prereq sr)
-1, VII-VIII T, VII Th, 211NH, Beck
-2, II MW, III M, 335EE, Kosaki
-3, VIII MW, IX W, 211NH, Beck
- 182 Comparative Philosophies of Education (3 cr)
IX-X T, 112Bu, Beck
- 241 Probs in History, Philosophy of Education (ar cr; prereq cons instr)
Ar, Beck, Alexander

HOME ECONOMICS EDUCATION (HEED)

- 90 Child Training (3 cr; prereq soph, Psy 1-2)
IV MWF, 203HE, Peterson
- 91 Observation, Materials, Teaching Home Economics (5 cr; prereq HE 4, 21, 22, 41, Ed 55B, home exper, concur regis 93)
VIII MWF, IX M, 1 hr ar, 114HE, Rose, Kafka, Ford
- 92 Teaching Probs in Home Economics (2 cr; prereq sr, 91, 93, concur regis 94, 192, 194A)
Ar, Rose
- 93 Supervised Teaching in Home Economics (3 cr; prereq HE 4, 21, 22, 41, Ed 55B, home exper)
3 consec hrs, MTWThF, Rose, Ford, Kafka, others
- 94 Supervised Teaching in Home Economics (6 cr; prereq 93)
Ar, Rose, Ford, Kafka, others

- 95 **Field Experience for Home Agents** (6 cr; prereq 91, 93, cons HEED head, dir agr ext)
Ar, Rose, others
- 192 **Evaluation in Home Economics** (2-3 cr; prereq 91, 93, Ed 55B)
-1, Ar, Army, Rose
-2, II MWF, 114HE, Army
- 193A **Home Economics Curriculum** (3 cr; prereq* sr, 94)
IX-X W, Ar, Army, Rose
- 194A **Adult Education in Home Economics** (3 cr; prereq sr, 91, 93)
-1, Ar, 114HE, Ford
-2, VIII TTh, 1 hr ar, 114HE, Ford
- 194B **Adult Education in Home Economics** (3 cr; prereq 194A)
IX MF, 2 hrs ar, 114HE, Ford
- 195 **Space, Equipment, Furnishings, Materials for Home Economics Departments** (3 cr; prereq sr, 91, 93, HE 49)
Ar, Rose, Kafka
- 197 **Organization, Methods for Related Art Teaching** (1-3 cr; prereq* sr, 91, HE 180 or concur regis)
Ar, Esteros
- 292 **Probs in Evaluation** (3 cr; prereq cons instr)
Ar, Army
- 293 **Probs in Home Economics Education** (1-9 cr; prereq cons instr)
Ar, Rose, Esteros, Army, Ford
- 295 **Seminar: Home Economics Education** (1-3 cr)
IX Th, 114HE, Army, Rose, Esteros

INDUSTRIAL EDUCATION (IND)

- 3 **Shop Finishing** (3 cr; prereq 2)
VIII-X TTh, 6Pt, Kavanaugh
- 7 **Building Construction Drawing** (3 cr; prereq 6)
II-IV TTh, 201TNUH, Kavanaugh
- 20 **Craft Work A** (3 cr)
I-II MWF, 1 TNUH, McIntosh
- 21 **Craft Work B** (3 cr; prereq 20)
VI-VII MWF, 1 TNUH, Tinkham
- 40 **Analysis** (2 cr)
IX-X W, 202TNUH, Micheels
- 44 **Equipment, Mgt** (3 cr; prereq 42)
IX-X M, 202TNUH, Widdowson
- 50A **Student Teaching** (3 cr; prereq 70 or 100, 80, Ed 55B, 1.5 HPR, cons instr)
Ar, Anderson
- 50B **Student Teaching** (3 cr; prereq 50A)
Ar, Anderson
- 50C **Student Teaching** (3 cr; prereq 50B)
Ar, Anderson
- 70 **Teaching Industrial Subjects** (3 cr; prereq 42, Ed 55B)
IX-X F, Ar, 202TNUH, Micheels
- 101 **Tests in Industrial Subjects** (3 cr; prereq Ed 55B)
III MWF, 202TNUH, Micheels

- 109 **Conference Leading for Industry** (3 cr; prereq cons instr)
VIII-X T, 116TNUH, Widdowson
- 110 **Vocational Guidance** (3 cr; prereq Ed 55B)
II MWF, 202TNUH, Smith
- 125 **Philosophy, Practice of Industrial Education** (3 cr, \$61)
IV MWF, 202TNUH, Smith
- 200 **Research Probs** (3, 6, or 9 cr)
VIII MWF, Ar, Micheels, Smith
- Dunwoody Shopwork: Drawing (ar cr)
Smith
- Off-Campus Courses, Services (ar cr)
Widdowson

METHODS AND STUDENT TEACHING (EDT)

- 51B **Teaching Nursing** (6 cr; prereq 51A)
I TTh, PoHAMph, VIII ThF, 2309PoH and ar, Norris, Weise
- 52 **Student Teaching** (ar cr; prereq spec methods course or exper, cons dir student tchg)
Ar, Grim
- 53A **Teaching Exceptional Children** (5 cr, \$53A-B; prereq Ed 71C)
Ar, Reynolds
- 53B **Teaching Exceptional Children** (5 cr; \$53A-B; prereq 53A)
Ar, Reynolds
- 54A **Student Teaching in Elem School** (5 cr; \$54A-B; prereq Ed 71C)
Ar, Chase, Curtis, Hughes, McRae
- 54B **Student Teaching in Elem School** (5 cr; \$54A-B; prereq 54A)
Ar, Chase, Curtis, Hughes, McRae
- 58 **Nursery School, Kindergarten Lab in Play Materials, Music, Science** (5 cr; prereq 57)
VIII MTWThF, 5Pt, Peterson
- 67 **Student Teaching in Mathematics** (2 cr; prereq sr, concur regis 67A-B-C, C+ aver maj)
Ar, D Johnson
- 67C **Teaching Secondary School Mathematics** (1 cr, \$67A-B-C; prereq 67B, concur regis 67)
VIII-IX M, 105UHS, D Johnson (for majors only)
- 68 **Student Teaching in Natural Science** (2 cr; prereq sr, concur regis 68A-B-C, C+ aver in maj)
Ar, Boeck
- 68C **Teaching Secondary School Science** (1 cr, \$68A-B-C; prereq 68B, concur regis 68)
IX-X M, 3UHS, Boeck (for majors only)
- 68M **Teaching Secondary School Science** (3 cr; prereq Ed 55B)
VII MWF, 202TNUH, Boeck (for minors only)

- 69 Student Teaching in Social Studies (2 cr; prereq sr, concur regis 69A-B-C, C+ aver maj)
Ar, West
- 69C Teaching Social Studies in Secondary School (1 cr, †69A-B-C; prereq 69B, concur regis 69)
VIII-IX M, 206UHS, West (for majors only)
- 69M Teaching Social Studies in Secondary School (3 cr; prereq Ed 55B)
I MWF, 112Bu, West (for minors only)
- 70 Student Teaching of Modern Languages (2 cr; prereq sr, concur regis 70A-B-C, C+ aver maj)
Ar, Birkmaier
- 70C Teaching Modern Languages (1 cr, †70A-B-C; prereq 70B, concur regis 70)
VIII-IX M, 110UHS, Birkmaier (for majors only)
- 71 Student Teaching in Latin (2 cr; prereq sr, concur regis 71A-B-C, C+ aver maj)
Ar, Birkmaier
- 71C Teaching Latin (1 cr, †71A-B-C; prereq 71B, concur regis 71)
VIII-IX M, 110UHS, Birkmaier (for majors only)
- 72A Student Teaching in Distributive Education Subjects (2 cr, †72A-B-C; prereq Ed 55B, cons instr)
Ar, Meyer
- 72B Student Teaching in Distributive Education Subjects (2 cr, †72A-B-C; prereq 72A)
Ar, Meyer
- 72C Student Teaching in Distributive Education Subjects (2 cr, †72A-B-C; prereq 72B)
Ar, Meyer
- 73A Student Teaching in Business Subjects (2 cr, †73A-B-C; prereq Ed 55B, cons instr)
Ar, Price
- 73B Student Teaching in Business Subjects (2 cr, †73A-B-C; prereq 73A)
Ar, Price
- 73C Student Teaching in Business Subjects (2 cr, †73A-B-C; prereq 73B)
Ar, Price
- 75 Student Teaching of Language Arts (2 cr; prereq sr, concur regis 75A-B-C, C+ aver maj)
Ar, Burton
- 75C Teaching Language Arts (1 cr, †75A-B-C; prereq 75B, concur regis 75)
VIII-IX Th, 115Psy, Ballet (for majors only)
- 75M Teaching Language Arts (3 cr)
IX MTh, X Th, 112Bu, D Smith (for minors only)
- 77 Student Teaching in Nursery School (5 cr; prereq see col bul)
IX M and ar, 209NH, Fuller
- 78 Student Teaching in Kindergarten (5 cr; prereq see col bul)
IX M and ar, 209NH, Fuller
- 79 Student Teaching in Primary Grades (5 cr; prereq see col bul)
IX M and ar, 209NH, Fuller
- 80 Teaching Typewriting (2 cr; prereq Ed 55B or concur regis)
IX-X M, 113TNUH, Price
- 84A Practice, Field Work in Recreation Leadership (2 cr; prereq cons instr)
V W, 3 hrs ar minors, 6 hrs ar majors, 215CH, Giles
- 84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
V W, 3 hrs ar minors, 6 hrs ar majors, 215CH, Giles
- 84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
V W, 3 hrs ar minors, 6 hrs ar majors, 215CH, Giles
- 85A Practice, Field Work in Recreation Leadership (1 or 2 cr; prereq cons instr)
V W, 3 hrs ar minors, 6 hrs ar majors, 215CH, Giles
- 85B Practice, Field Work in Recreation Leadership (1 or 2 cr; prereq 85A)
V W, 3 hrs ar minors, 6 hrs ar majors, 215CH, Giles
- 85C Practice, Field Work in Recreation Leadership (1 or 2 cr; prereq 85B)
V W, 3 hrs ar minors, 6 hrs ar majors, 215CH, Giles
- 90C Teaching Distributive Education Subjects (2 cr; prereq cons instr)
IX-X T, 112TNUH, Meyer
- 93 Teaching of Core Curriculum (2 cr; prereq Ed 55B, C+ aver maj)
Ar, Adkins

MUSIC EDUCATION (MUED)

- 6 Applied Instrumental Technique (2 cr; prereq mus educ maj)
VI MTWF, 4NMA, Prescott
- 53 High School Methods (3 cr; prereq* 50B, Ed 55B)
III MWF, 4ScH, Winslow
- 60 Supervision, Teaching of Music (3 cr; †60-61-62; prereq sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Winslow
- 61 Supervision, Teaching of Music (3 cr, †60-61-62; prereq sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Winslow
- 62 Supervision, Teaching of Music (3 cr, †60-61-62; prereq sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4 ScH, Winslow
- 64 Band Organization (3 cr; prereq 4-5-6, cons instr)
VII MWF, 5NMA, Prescott
- 67 Teaching of Instrumental Music in Elem School (2 cr; prereq cons instr)
III MWF, 104ScH, Ivory

- 68 Teaching of Instrumental Music in Secondary School (2 cr; prereq sr, 65)
IV MWF, 104ScH, Ivory
- 104E Adv Topics in Vocal Music Education (3 cr; prereq sr, cons instr)
IV MWF, 4ScH, Winslow
- 224E Seminar: Individual Research Probs (2-6 cr)
Ar, 213ScH, Winslow, Ivory
- 225E Adv Applied Music (2-4 cr)
Ar, 107ScH, Ar

NURSING EDUCATION (NUED)

- 65 Analysis Nursing Care (4 cr)
VIII-IX MW, 111 Owre, Hanson
- 67 Field Practice in Ward Admin (6 cr; prereq 60, 65, 73, EdT 51B or concur regis, cons instr)
III MF and ar, 111 Owre, Grainger
- 68 Construction, Use of Examinations, Other Measurement in Basic Nursing Courses (3 cr)
VI MWF, 113 Owre, Johnston
- 69 Survey of Conditions, Trends in Nursing (3 cr)
IV MWF, 113 Owre, Densford
- 167 Studies, Experience in Ward Admin (8 cr; prereq 60, 65, 73, EdT 51B or concur regis)
III MF and ar, 111 Owre, Grainger
- 171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51A, B or concur regis)
IV MWF, 111 Owre, Harrington
- 198E Adv Teaching of Nursing (4 cr; prereq intro to statistics, cons instr)
IX-X TTh, 130ForH, Harrington

PHYSICAL EDUCATION (PE)

Undergraduate Courses for Men

- 4B Basketball Fundamentals (1 cr)
VI-VII TTh, Gym CH, Vancisin
- 5C Stunts, Contests, Softball, Baseball (1 cr)
III-IV TTh, CH, Piper, Ostrander, Siebert
- 6C Aquatics (1 cr)
IV MWF, Pool CH, Thorpe
- 7C Recreational Games (1 cr)
II-III TTh, CH, Ostrander, Osell
- 8 Tennis, Golf (1 cr)
IV-V TTh, CH, Bolstad, Brain
- 9B Folk, Square, Ballroom Dancing (1 cr)
V-VI TTh, NGW, Piper
- 11C Survey Recreation Activities (1 cr; prereq 11B)
V M, CH, Starr
- 23C Introd Recreation Leadership (1 cr; prereq 23B)
V F, CH, Starr
- 45 Camp Craft (2 cr)
IV MWF, CH, Ostrander
- 46 Camp Leadership (2 cr)
VII MW, CH, Osell
- 56 Theory of Play (3 cr; prereq soph)
VII MWF, NGW, Bockstruck

- 58 Leadership in Community Recreation (3 cr; prereq 57)
VII MWF, CH, Giles
- 59 Instructor's Course in First Aid (3 cr; prereq 25 or 26)
I MWF, CH, Osell
- 60A Prevention, Care of Injuries (3 cr; prereq 50, 51, or Anat 57)
IV TThs, CH, Stein
- 60B Athletic Training Lab (1 cr; prereq 60A)
30 hrs ar, CH, Stein
- 61 History of Physical Education (3 cr)
I MWF, CH, Keller
- 63 Organization, Admin of Physical Education (3 cr; prereq 32 or 101, 55)
III MWF, CH, Piper
- 67 Football Coaching (2 cr; prereq 4A, or yr exper on squad)
III TThs, CH, Fesler
- 73 Directed Teaching (2 cr)
V M, hrs ar, CH, Bartelma
- 74 Directed Teaching (2 cr)
V M, hrs ar, CH, Bartelma
- 75 Directed Teaching (2 cr)
V M, hrs ar, CH, Bartelma

Undergraduate Courses for Women

- 22A Folk, Ballroom Dance (1 cr)
V-VI TTh, 153, 153aNGW, Bell
- 22B Golf, Track, Field (1 cr)
VII MWF, 60NGW
- 22C Tennis (1 cr)
III TThs, 151NGW, Tenney
- 25 First Aid (1 cr)
-1, II TTh, 201, 151NGW
-2, III TTh, 201, 153aNGW
- 42A Life Saving, Water Safety (1 cr; prereq 41A)
VI MWF, 58NGW, Spears
- 48 Teaching of Individual Sports, Dual Sports (2 cr; prereq cons instr)
II MTWTh, 60, 153NGW, Tenney
- 49 Teaching Team Sports (3 cr)
I MTWThF, 60, 153NGW, Hauptfuehrer
- 54 Camp Leadership (3 cr)
II MWF, 201NGW, Tinker
- 56 Adv Folk Dance (2 cr; prereq cons instr)
VII MWF, 151NGW, Bockstruck
- 58 Introd Elem Physical Education Program (3 cr; prereq 3rd qtr soph, elem educ maj)
VIII MWF, 153, 201NGW, Lampe
- 60 Prin Play (3 cr; prereq child welfare jr)
VII MWF, 201, 153NGW, Tinker
- 64 Teaching Group Gymnastics (1 cr; prereq 40C)
I TThs, 153, 3NGW
- 80 Prin Rhythm (3 cr; prereq cons instr)
III TTh, IV Th, 3NGW, Bockstruck
- 85 Remedial Activities in Physical Education (3 cr)
III MWF, 3NGW, Wilson

- 88 Adv Probs in Dance Composition (2 cr; prereq cons instr)
3:00-4:15 TTh, 151NGW, Bockstruck
- 90A Student Teaching in Physical Education (2 cr)
II TTh, ar, 3NGW, Hauptfuehrer
- 90C Student Teaching in Physical Education (3 cr, †90A-B-C; prereq sr, 55B)
4:30-6:00 M, 3NGW
- 94 Student Teaching in School Health Education (2 cr; prereq 83)
IV Th, ar, 3NGW, Ericson
- 95 Admin of Physical Education (3 cr; prereq sr)
IV MWF, 3NGW, Baker
- Advanced Courses for Men and Women**
- 112 Programming in Recreation (3 cr; prereq 58)
VI MWF, CH, Giles
- 114 School Health Education Program (3 cr; prereq 83)
3:30-5:00 TTh, 3NGW, Ericson
- 116 Community Recreation Resources, Organizations (3 cr; prereq 110, 111, 112)
II MWF, CH, Ostrander
- 118E Probs in Teacher Education in Health, Physical Education, Recreation (ar cr; prereq cons dept advis)
Ar, Baker, Ericson, Wilson
- 121 Prin Recreation Methods (3 cr; prereq EdT 84A-B-C, 85A-B-C)
III MWF, CH, Fitzgerald
- 124 Supervision of Physical Education (3 cr; prereq cons instr)
III MWF, 201NGW, Ericson
- 135 Tests, Measurements in Physical Education (3 cr; prereq sr, EPsy 60)
III MWF, CH, Keller
- 143 Program Planning in Hospital Recreation (3 cr; prereq* 142)
VIII-IX F, CH, Baird
- 155 Instructional Aids in Health, Physical Education, Recreation (3 cr; prereq sr)
VI MWF, CH, Bartelma
- 224 Research Probs: School Health Education, Physical Education for Women (ar cr; prereq cons dept advis)
Ar, Baker, Ericson, Wilson
- 242 Community Organization for Recreation (3 cr)
IV MWF, CH, Fitzgerald

GENERAL COLLEGE (GC)

- 1A Individual Orientation (4 cr)
-1, IV MTThF, 20ForH, Hoover
-2, VI MTThF, 20ForH, Hoover
- 2 Vocational Orientation (5 cr; prereq cons instr or counselor)
III MTWThF, 122NH, Cunningham
- 3 Home Life Orientation (5 cr)
II MTWThF, 213NH, Anderson
- 4 Probs of Contemporary Society (5 cr)
I MTWThF, 211NH, McCune
- 6C Related Physical Sciences (5 cr, §7B, 7D; prereq* 6B)
III MTWThF, 133Ph, J M Harris
- 7B Elements of Light, Astronomy (5 cr, §6C)
I MTWThF, 150Ph, Appel
- 7D Elements of Geology (5 cr, §6C)
V MTWThF, 210P, J M Harris
- 8 Applied Mathematics (5 cr; prereq one yr high school math)
-1, II MTWThF, 207NH, McCutcheon
-2, V MTWThF, 207NH, McCutcheon
- 10B Human Biology: Living Machinery in Man (3 cr; prereq 10A)
-1, I MWF, 207NH, Alrutz
-2, III MWF, 207NH, Alrutz
- 10C Human Biology: Healthful Living (3 cr)
-1, V MWF, 211NH, Cieslak
-2, VI MWF, 211NH, Cieslak
- 11C Basic Wealth: Utilization, Conservation of Animal Life (3 cr)
II MWF, 133Ph, Hanson
- 12 Nature Study (3 cr)
VII-VIII TTh, 204NH, Cieslak
- 15 Clothing Selection, Purchase, Care (3 cr)
VII MWF, 206WeH, Carlson
- 17 Income Mgt, Buying (2 cr)
II MW, 206WeH, Kafka
- 19B Probs in Investment Transaction (4 cr; prereq* 19A)
III MTWTh, 209NH, Wang
- 21 Gen Arts (3 cr)
IV MWF, 213NH, Hill
- 22X Art in Business (3 cr)
III MWF, hr ar, 100NH, Safer
- 23A Art Lab (3 cr)
-1, I-II MW, 100NH, Roman
-2, VI-VII MW, 100NH, Safer
-3, VI-VII TTh, 100NH, Frise
- 23D Introd to Commercial Art (3 cr)
II-III TTh, 100NH, Safer
- 24C Music Today (2 cr)
-1, III TTh, 111NH, Hill
-2, VI TTh, 111NH, Hill
- 26A Photography (3 cr)
Lect V Th, 308MurH, Liebling
Lab VI-IX Th, 20MurH, Liebling
- 26B Photography (3 cr; prereq* 23A, and grade B in 26A)
VI-IX T, 20MurH, Liebling
- 30A Literature Today: Individual, Literature (3 cr)
VI MWF, 207NH, Kivits

- 30C Literature Today: Themes in Current Literature** (3 cr)
I MWF, 115JohH, Draxten
- 30E Literature Today: Introd World Literature** (3 cr)
III MWF, 211NH, Appel
- 31A Writing Lab: Descriptive Writing** (3 cr)
—1, I-II M, I WF, 216NH, Wright
—2, IV-V TTh, 209NH, Appel
- 31B Writing Lab: Organization in Writing** (3 cr; prereq 31A)
—3, I-II TTh, 216NH, Wright
—4, IV MW, III-IV F, 209NH, Wright
—5, VI MF, VI-VII W, 216NH, Sheldon
- 31C Writing Lab: Report Writing** (3 cr; prereq 31A, 31B advised)
—6, I-II TTh, 209NH, Reisman
—7, VI-VII TTh, 209NH, Draxten
- 31D Writing Lab: Business Writing** (3 cr; prereq 31A, 31B advised)
—8, III MF, II-III W, 216NH, Sheldon
—9, V-VI M, V WF, 209NH, Draxten
- 31E Writing Lab: Individual Writing** (3 cr; prereq 31A, cons instr)
IV-V M, IV WF, 216NH, Liebeler
- 31X Writing Lab: Fundamentals of English Usage and Style** (3 cr)
I-II MW, I F, 209NH, Kivits
- 32A Oral Communication: Basic Principles** (3 cr)
—1, I MWF, 107NH, Unes
—2, IV MWF, 107NH, Unes
—3, V MWF, 107NH, Olson
—4, VI MWF, 107NH, Olson
- 32B Oral Communication: Applications of Speech** (3 cr; prereq 32A)
I MWF, 105JohH, Olson
- 32C Oral Communication: Speech Organization** (3 cr; prereq 32A)
II MWF, 107NH, Olson
- 32D Oral Communication: Group Discussion** (3 cr; prereq 32A)
VI MWF, 122NH, Unes
- 32Ex Oral Communication: Everyday Business Speech** (3 cr; prereq* 32A, cons instr)
III MWF, 107NH, Unes
- 33A Oral Communication: Speech Studio** (3 cr)
II-III T, I Th, 107NH, Goodrich
- 33B Oral Communication: Speech Studio** (3 cr; prereq 33A)
IV T, III-IV Th, 107NH, Goodrich
- 37 Social Trends, Probs** (5 cr)
V MTWThF, 213NH, Anderson
- 39 Gen Anthropology** (3 cr)
III MWF, 213NH, Cooper
- 40A Introd Philosophy** (3 cr)
VII MWF, 207NH, Reisman
- 40Cx Religions in Minnesota** (3 cr)
IV MWF, 111AH, Allen
- 41 Practical Application of Psychology** (5 cr)
11:30-12:50 MWF, BuAud, Longstaff
- 42B Personal Adjustment** (3 cr; prereq 42A)
VI MWF, 2P, Templin
- 43B Historical Biography** (3 cr)
I MWF, 213NH, Moen
- 43X The Far East** (5 cr)
II MTWThF, 211NH, Stout
- 44B Current History** (2 cr)
VI TTh, 213NH, F Harris
- 45B American Economic, Social Development** (3 cr)
VI MWF, 213NH, F Harris
- 45C Minnesota, Upper Midwest** (5 cr)
IV MTWThF, 207NH, Stout
- 45D Community Probs** (1-3 cr; prereq cons instr)
Ar, 214NH, McCune
- 46B Functions, Probs of Government** (3 cr)
IV MWF, 211NH, Hein
- 47A Fundamentals of Typewriting** (1 cr)
—1, II MTWThF, 115TSMc, Newcomb
—2, IV MTWThF, 115TSMc, Newcomb
- 47BX Bgn Shorthand** (2 cr)
VII MTWTh, 107NH, Newcomb
- 47DX Bookkeeping, Accounting Lab** (3 cr; prereq* 47CX)
VI-VII TTh, 15ForH, Ellis
- 47E Office Organization, Procedure** (2 cr; prereq cons instr)
III T, III-IV Th, 216NH, Liebeler
- 48C Prin Business Operation** (3 cr; prereq 48B or 5 cr econ)
VII MWF, 115ForH, Taylor
- 49C Retail Store Promotion** (5 cr; prereq cons instr)
Lect II M, 122NH, Determan
—1, I-II TTh, 122NH, Determan
—2, 6:30-10:00 pm T, 122NH, Determan

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING (AERO)

- 20 Flying** (2 cr)
Ar, Lincoln
- 21 Flying** (2 cr)
Ar, Lincoln
- 22 Flying** (2 cr)
Ar, Lincoln
- 46 Orientation Course** (2 cr; prereq sr or cons dept)
Ar, Lincoln
- 102 Aerodynamics** (3 cr; prereq 101)
IV MWF, 227AE, Stolarik
- 107 Aerodynamics of Viscous Fluids** (3 cr; prereq 102)
Ar, Cronk

- 110 **Vibration, Flutter** (3 cr; prereq 115; MM 80)
I MWF, 227AE, Werner
- 118 **Adv Stresses on Aircraft Structures** (3 cr; prereq 115)
I MWF, 327AE, Wise
- 119 **Testing of Aircraft Structures, Models** (3 cr; prereq 115)
Lect VI TTh, 211AE, Wise
Lab VII-IX T, 21AE
- 122 **Airplane Design** (2 cr; prereq 121)
IV TTh, 211AE, Upson
- 123 **Adv Airplane Design** (2-5 cr; prereq 124)
Ar, Staff
- 128 **Adv Probs in Airscrew Design** (2-5 cr; prereq 127)
Ar, Stolarik
- 132 **Airplane Design Lab** (2 cr; prereq 131, concur regis 122)
VI-VIII MW, 317AE, Stolarik
- 133 **Airplane Static Testing** (2 cr; prereq 142)
Lect IV F, 211AE, Staff
Lab VII-IX F, 21AE
- 140 **Aeronautical Lab** (4 cr; prereq 142)
Lect I MWF, 211AE, Staff
Lab I-III T, 130AE
- 141 **Aerodynamics Lab** (2 cr; prereq 101)
VII-IX TTh, 19AE, Cronk
- 155 **Aeronautical Calculations** (2 cr; prereq sr)
IV MW, 211AE, Leadon
- 158 **Physics of the Atmosphere** (2 cr)
VII MWF, 227AE, Piccard
- 167 **Adv Aeronautical Lab** (2-4 cr; prereq 166)
Ar, Akerman
- 191 **Seminar** (1 cr; prereq 190)
VI F, 227AE, Piccard
- 192 **Seminar** (1 cr; prereq 191)
Ar, Staff
- 193 **Adv Probs in Aeronautical Engineering** (2-5 cr; prereq sr or grad in AE)
Ar, Staff
- 194 **Adv Probs in Aeronautical Engineering** (2-5 cr; prereq 193)
Ar, Staff
- 195 **Adv Probs in Aeronautical Engineering** (2-5 cr; prereq 194)
Ar, Staff
- 203 **Aerodynamics of Compressible Fluid** (3 cr; prereq* 106)
IV MWF, 19AE, Hermann
- 204 **Supersonic Aerodynamics Lab** (3 cr; prereq concur regis 201 or ME 134)
Ar, Bradfield
- 232 **Aerodynamics, Flight Performance of Supersonic Missiles** (3-5 cr; prereq special permission)
Ar, Hermann
- 272 **Research: Aeronautical Engineering** (3-6 cr; prereq cons instr)
Ar, Staff
- 273 **Research: Aeronautical Engineering** (3-6 cr; prereq cons instr)
Ar, Staff

- 274 **Research: Aeronautical Engineering** (3-6 cr; prereq cons instr)
Ar, Staff

ARCHITECTURE (ARCH)

- AD I Architectural Design Grade I** (6 cr; prereq soph for IT or jr for SLA students, cons school arch)
Lect VII MTWThF, 305E, McClure, Heath, others
Lab VI-VIII MTWThF, 411E
- AD II Architectural Design, Grade II** (6 cr; prereq AD I)
VI-VIII MTWThF, 3 hrs ar, 306E, Vivrett, others
- AD III Architectural Design, Grade III** (9 cr; prereq AD II)
VI-VIII MTWThF, 12 hrs ar, 315E, Cerny, Nagle, others
- AD IV Architectural Thesis** (12 cr; prereq AD III)
VII-VIII MTh and 30 hrs ar, 411E, Roy Jones
- 1 Introd Architecture** (1 cr; prereq cons instr)
III M, 305E, McClure
- 53 History of Architecture** (4 cr; prereq 52)
IV MTWF, 305E, Koeper
- 59 Building Materials, Methods** (4 cr; prereq 58)
II MTWF, 305E, Robert Jones
- 73 Building Equipment** (2 cr; prereq 72)
III T, III-IV Th, 305E, Close
- 103 Tutorial Work in History of Architecture** (2 cr; prereq sr, 53)
Ar, Koeper
- 106 City Planning** (3 cr; prereq sr, 104)
Ar, Robert Jones

CHEMICAL ENGINEERING (CHEN)

- 100 Chemical Engineering Stoichiometry** (3 cr; prereq AnCh 1, 2)
I MWF, 154ChE
- 103 Unit Operations** (5 cr; prereq 102)
Lect II TThS, 240ChE, Stoppel
-1, Rec I MWF, 158ChE
-2, Rec II MWF, 158ChE
- 105 Fuels, Combustion** (2 cr; prereq AnCh 1-2)
Lect IV TTh, 142ChE, Stoppel
-1, Lab VI-IX T, 260ChE
-2, Lab VI-IX W, 260ChE
- 113 Unit Operations Lab** (1 cr; prereq 103)
-1, Lab VI-IX T, 3rd fl, ChE
-2, Lab VI-IX W, 3rd fl, ChE
- 155 Special Probs** (3 cr or more)
Ar, Staff
- 193 Seminar** (1 cr; prereq sr)
VII M, 240ChE, Staff
- 203 Seminar** (1 cr)
VII M, 240ChE, Staff
- 210 Adv Unit Operations** (3 cr; prereq 103)
Ar, Madden

- 213 Process, Plant Design (3 cr; prereq 103)
I MWF, ar, Isbin
- 220 Adv Chemical Engineering Thermodynamics
(3 cr; prereq PCh 201-202)
IV MWF, 158ChE, Freckshot
- 222 Reaction Kinetics in Chemical Engineering
(3 cr; prereq cons instr)
III MF, 150ChE, Piret
- 227 Fluid Flow, Related Topics (3 cr; prereq
cons instr)
V MWF, 162ChE, Amundson
- 303 Research: Chemical Engineering (ar cr)
Ar, Staff

CHEMISTRY

Analytical Chemistry (ANCH)

- 2 Quantitative Analysis (5 cr; prereq InCh 13
for chemists, InCh 12 for chem engr)
Lect VI MWF, 410C, Meehan
—1, Lab VII-IX MWF, 310C
—2, Lab V-IX TTh, 310C
- 7 Quantitative Analysis (4 cr; prereq InCh 11
or 12)
Lect VI MWF, 225C, O'Connor
Lab VI-IX TTh, 310C
- 98 Sr Thesis (5 cr; prereq sr)
Ar, Staff
- 102 Quantitative Analysis (5 cr; prereq InCh 13)
VI-IX MWF, 310C, Meehan
- 103 Quantitative Inorganic Microanalysis (3 cr;
prereq 1-2)
Lect VI F, 315C, Sandell
Lab ar
- 108 Gen Technical Analysis (2 or 3 cr; prereq
1-2)
Ar, Sandell
- 109 Rock Analysis (3 cr; prereq 1-2, cons instr)
Ar, Goldich
- 127 Optical Methods in Analytical Chemistry
(2 cr; prereq PCh 103)
III TTh, 315C, Meehan
- 133 Voltammetry, Amperometric Titrations (2
cr; prereq 1-2, PCh 103)
VI MW, 111C, Kolthoff
- 134 Voltammetry, Amperometric Titrations (2
cr; prereq 133 or concur regis)
Lab ar, Kolthoff
- 137 Seminar: Modern Probs in Analytical Chem-
istry (1 cr; prereq 1-2, PCh 103)
IV T, 315C, Staff
- 138 Adv Volumetric Analysis (3 cr; prereq 131)
Ar, Kolthoff
- 203 Selected Topics in Analytical Chemistry (3
cr; prereq 1-2, 123)
Ar, Kolthoff
- 303 Research: Quantitative Analysis (ar cr)
Ar, Staff

Inorganic Chemistry (INCH)

- 2 Gen Inorganic Chemistry (4 cr, †1-2; pre-
req 1)
Lect V MWThF, 100C, Pray
—1, Lab I-IV M, ar
—2, Lab VI-IX Th, ar

- 7 Gen Inorganic Chemistry (5 cr, †6-7; pre-
req 6)
Lect II MWF, 215C, Johnson
Lab V-VII MW, Ar
- 11 Semimicro Qualitative Analysis (4 cr; pre-
req 2, 5, 7, or 10)
—1, Lect I MWF, 100C, Heisig
Lab VI-IX Th, Ar
—2, Lect VI MWF, 100C, Pervier
Lab VI-IX T, Ar
—3, Lect VIII MWF, 100C, Barber
Lab VI-IX T, Ar
—4, Lect VII MWF, 100C, Maynard
Lab VI-IX Th, Ar
—5, Lect VII MTTh, 325C, Brasted
Lab VI-IX W, Ar
- 12 Semimicro Qualitative Analysis (5 cr; pre-
req 2, 5, 7, or 10)
—1, Lect II MWF, 100C, Sneed
Lab I-III TTh, Ar
—2, Lect II MWF, 325C, O'Brien
Lab I-III TTh, Ar
- 54 Seminar (1 cr; prereq sr)
VIII T, 215C, Heisig
- 98 Sr Thesis (5 cr)
Ar, Staff
- 102 Semimicro Qualitative Analysis (3 cr; pre-
req AnCh 1-2)
Ar, Barber
- 105 Adv Inorganic Chemistry (3 cr; prereq
AnCh 1-2, OrCh 62)
III MWF, 215C, Maynard
- 108 Nonaqueous Systems (3 cr; prereq AnCh
1-2, OrCh 62)
Ar, Pray
- 110 Synthetic Inorganic Chemistry (3-5 cr; pre-
req OrCh 63)
Ar, Heisig
- 136 Seminar (1 cr; prereq grad)
VIII T, 215C, Heisig
- 303 Research: Inorganic Chemistry (ar cr)
Ar, Staff

Organic Chemistry (ORCH)

- 62 Elem Organic Chemistry (4 cr, †61-62; pre-
req 61)
Lect IV MTWThF, 100C, Koelsch
—1, Lab VI-IX W, 390C
—2, Lab VI-IX Th, 390C
—3, Lab I-IV Th, 390C
—4, Lab VI-IX F, 390C
Lect III MTWThF, 410C, Fenton
—5, Lab VI-IX M, 390C
—6, Lab VI-IX T, 390C
—7, Lab VI-IX Th, 390C
—8, Lab VI-IX F, 390C
- 63 Elem Organic Chemistry (3 cr; prereq 62)
III MWThF, 325C, Parham
- 64 Elem Organic Chemistry Lab (3 cr; prereq
63 or concur regis)
III S, 325C, Parham
—1, Lab II-IV, VI-VIII T, 390C
—2, Lab VI-VIII TTh, 390C

- 98 **Sr Thesis** (5 cr; prereq 64)
Ar, Staff
- 107 **Adv Organic Chemistry** (3 cr; prereq 106)
IV MWF, 325C, Smith
- 130 **Organic Quantitative Analysis** (3 cr; prereq 64, AnCh 1-2, cons instr)
Ar, Lauer
- 139 **Adv Organic Chemistry Lab Work** (2-5 cr; prereq 64, read Ger, cons instr)
Ar, Arnold
- 142 **Chemistry of Natural Products** (3 cr; prereq 64)
I TThS, 325C, Fenton
- 153 **Organic Chemistry Seminar** (1 cr; prereq sr)
7:45-8:45 pm W, 325C, Staff
- 203 **Organic Chemistry Seminar** (1 cr)
7:45-8:45 pm W, 325C, Staff
- 212 **Physico-Organic Chemistry** (4 cr; prereq* 107, PCh 103, calculus)
I MWF, 315C, Arnold
- 303 **Research: Organic Chemistry** (ar cr; prereq 110, cons div)
Ar, Staff

Physical Chemistry (PCH)

- 98 **Sr Thesis** (5 cr; prereq sr)
Ar, Staff
- 103 **Physical Chemistry** (3 cr; prereq 102)
IV MWFS, 225C, Crawford
- 106 **Physical Chemistry Lab** (1 or 2 cr; prereq 103 or concur regis)
—1, Lect VI M, 325C, Wertz
Lab VII-VIII M, VI-VIII W, 190C
—2, Lect VI Th, 325C
Lab VI-VIII T, VII-VIII Th, 190C
—3, Lect VI M, 325C, Wertz
Lab III-IV T, II-IV Th, 190C
- 112 **Adv Physicochemical Experiments** (2-3 cr; prereq 111, cons instr)
Ar, Wertz
- 118 **Adv Physical Chemistry** (3 cr; prereq 117)
II TThS, 225C, Lipscomb
- 121 **Intro Molecular Structure** (3 cr; prereq 120)
V TTh, IX W, 215C, Crawford
- 131 **Colloidal Processes** (3 cr; prereq 128)
IV MWF, 111C, Reyerson
- 134 **Colloid Chemistry Lab** (1 or 2 cr; prereq sr, 128)
Ar, Reyerson
- 152 **Seminar** (1 cr; prereq sr)
7:30 pm M, 325C, Livingston
- 203 **Thermodynamics, Chemistry** (4 cr; prereq 103, calculus)
II MWF, 225C, MacDougall
- 209 **Adv Crystal Chemistry** (3 cr; prereq 103)
Ar, Lipscomb
- 213 **Adv Physical Chemistry Lab** (ar cr; prereq 103)
Ar, MacDougall, others
- 223 **Colloid Seminar** (1 cr)
Ar, Reyerson

- 231 **Radioactivity Lab** (1 or 2 cr; prereq 161 or concur regis)
Ar, O'Connor
- 252 **Physical Chemistry Seminar** (1 cr)
7:30 pm M, 325C, Livingston
- 257 **Research Seminar: Crystal Structure** (1 cr)
Ar, Lipscomb
- 303 **Research: Physical Chemistry** (ar cr)
Ar, Staff

CIVIL ENGINEERING (CE)

- 13 **Surveying** (3 cr; prereq 11)
—1, I-IV TTh, 220TNCE
—2, VI-IX TTh, 220TNCE
—3, VI-IX WF, 220TNCE
- 16 **Surveying** (2 cr; prereq 14)
—1, Lect IV M, 205E
Lab I-IV T, 217E
—2, Lect IV M, 205E
Lab VI-IX W, 217E
—3, Lect II Th, 215E
Lab VI-IX Th, 217E
—4, Lect II Th, 215E
Lab VI-IX F, 210TNCE
- 17 **Surveying** (3 cr; prereq MM 12)
VI-IX ThF, 120TSCE
- 22 **Railway Engineering** (2 cr; prereq 21)
—1, Lect II M, 215E
Lab I-III T, 120TNCE
—2, Lect II M, 215E
Lab I-III Th, 120TSCE
—3, Lect VII Th, 215E
Lab VII-IX M, 120TSCE
—4, Lect VII Th, 215E
Lab VII-IX T, 120TSCE
- 33 **Design in Timber** (3 cr; prereq 32)
—1, Lect IV MWF, 227E
—2, Lect V TThF, 227E
—1, Lab I-III T, 229E
—2, Lab VII-IX M, 100TSCE
—3, Lab VII-IX F, 100TSCE
- 37 **Elem Structural Engineering** (3 cr; prereq MM 128)
Lect VI TTh, 215E
Lab VII-VIII Th, 210TSCE
- 41 **Elem Structural Design: Concrete** (3 cr; prereq 39)
III MWF, 227E
- 53 **Elements of Soil Mechanics** (3 cr; prereq 52)
—1, Lect III MW, 104E
—2, Lect V TTh, 104E
—3, Lect VI MW, 104E
—1, Lab II-IV T, 10Ex
—2, Lab II-IV Th, 10Ex
—3, Lab VII-IX W, 10Ex
—4, Lab VII-IX Th, 10Ex
—5, Lab VII-IX F, 10Ex
- 132 **Structural Design** (2 cr; prereq 131)
—1, Lect IV M, 206E
—2, Lect IV W, 206E
—1, Lab VII-IX T, 225E
—2, Lab VII-IX W, 225E

- 143 Arch Analysis, Design (3 cr; prereq 131, 142)
Ar
- 146 Concrete, Concrete Materials (3 cr; prereq MM 141)
Lect IV TTh, 215E
Lab VI-IX M, 8Ex
- 147 Foundations (3 cr; prereq 32)
I MWF, 227E
- 151 Adv Highway Lab (3 cr; prereq 52)
Ar
- 152 Highway Design (3 cr; prereq 52)
Lect II TTh, 227E
Lab I-III M, 229E
- 160 Applied Hydraulics (3 cr; prereq Hyd 102, 104)
Lect IV TTh, 227E
—1, Lab I-IV F, 229E
—2, Lab VI-IX M, 229E
Lect V MW, 227E
—3, Lab VI-IX T, 220TSCE
—4, Lab VI-IX W, 220TSCE
- 171 Sewerage, Sewage Treatment (3 cr; prereq 161, 170)
Lect III MW, 19AE
—1, Lab I-IV T, 225E
—2, Lab I-IV T, 229E
Lect V MW, 215E
—3, Lab VI-IX Th, 225E
—4, Lab VI-IX Th, 229E
- 175 Industrial Waste Disposal (3 cr; prereq 171)
Ar
- 178 Sanitary Engineering Seminar (1 cr; prereq 177)
III-IV F, 225E
- 244 Dynamics of Structures Lab (3 cr; prereq 243)
Ar
- 251 Adv Soil Mechanics Lab (3 cr; prereq 159 or concur regis)
Ar
- 252 Adv Soil Mechanics Lab (3 cr; prereq 159 or concur regis)
Ar
- 262 Water, Sewage Plant Design (3-5 cr; prereq 173 or 174)
Ar
- 277 Adv Sanitary Engineering: Sewage, Industrial Waste (3-5 cr; prereq 174)
Ar
- 3 Descriptive Geometry (3 cr; prereq 2, MM 11)
—1, I-II MTWF, 210TNCE
—2, I-II MTWF, 210TSCE
—3, I-II MTWF, 120TSCE
—4, III-IV MWThF, 210TSCE
—5, III-IV MWThF, 120TNCE
—6, III-IV MWThF, 210TNCE
—7, V-VI MTWF, 201E
—8, V-VI MTWF, 225E
—9, VII-IX MW, VII-VIII F, 201E
—10, VII-IX MW, VII-VIII F, 100TNCE
- 8 Engineering Drawing (3 cr; prereq 7)
V-VI MWThF, 100TNCE
- 10 Solid Geometry (no cr; prereq plane geometry)
II MWF, 227E
- 22 Structural Detailing (2 cr; prereq 21)
I-II MWF, 201E
- 23 Structural Detailing (2 cr; prereq 22)
—1, I-II MWF, 100TNCE
—2, III-IV MWF, 100TNCE
- 28 Drafting (2 cr; prereq 3)
I-II MWF, 120TNCE
- 37 Lettering for Engineers (2 cr; prereq 2)
III TTh, 100TNCE
- 38 Reading Drawings (2 cr; prereq 2)
VII TTh, 201E
- 44 Lettering (1 cr)
IV T, 201E
- 45 Alphabets (2 cr; prereq soph, 44)
III TTh, 201E
- 51 Graphic Representation, Computation (3 cr; prereq 2, MM 11)
I MWF, 220TSCE
- 52 Alignment Charts (3 cr; prereq 2, MM 12)
I TTh and hr ar, 201E
- 113 Adv Descriptive Geometry (3 cr; prereq 112)
Ar
- 117 Curve Fitting (3 cr; prereq 116)
Ar
- 118 Short Course in Curve Fitting (3 cr; prereq* 3, MM 25)
Ar
- 154 Nomography (3 cr; prereq 153)
Ar
- 159 Graphical Mathematics (2 cr; prereq 158)
Ar

DRAWING AND DESCRIPTIVE GEOMETRY (DRAW)

- 1 Engineering Drawing (3 cr; prereq solid geometry)
I-II MWThF, 100TSCE
- 2 Engineering Drawing (3 cr; prereq 1)
—1, III-IV TWThF, 100TSCE
—2, VII-VIII MTWF, 210TSCE
—3, VII-VIII MTWF, 120TNCE

ELECTRICAL ENGINEERING (EE)

- 13 Elements of Electrical Engineering (3 cr; prereq 11, concur regis 25)
VI MWF, 138EE
- 14 Elements of Electrical Engineering Lab (1 cr; prereq 13 or concur regis)
—1, VIII-IX M, 9EE
—2, VIII-IX T, 9EE
- 15 Elements of Electrical Engineering (3 cr; prereq 13)
—1, III MWF, 138EE
—2, III MWF, 237EE
—3, VII MWF, 237EE

- 16 **Elements of Electrical Engineering Lab** (2 cr; prereq 15, or regis 15)
 -1, I-III T, 21EE
 -2, VII-IX T, 21EE
 -3, VII-IX Th, 21EE
 -4, VIII-X M, 21EE
- 37 **Electrical Engineering Survey** (3 cr; prereq 36, primarily for ME, chem engr students)
 Lect I TTh, 138EE
 -1, Lab V-VI T, 207aEE
 -2, Lab VII-VIII F, 207aEE
- 38 **Electrical Engineering Survey** (3 cr; prereq 37, primarily for ME, chem engr students)
 -1, Lect II TTh, 138EE
 -2, Lect II TTh, 237EE
 -3, Lect VII TTh, 138EE
 -1, Lab III-IV T, 207cEE
 -2, Lab III-IV Th, 207cEE
 -3, Lab V-VI T, 207cEE
 -4, Lab V-VI W, 207cEE
 -5, Lab V-VI Th, 207cEE
 -6, Lab VII-VIII Th, 207cEE
- 42 **Electrical Engineering Survey** (3 cr; prereq CE sr, Phys 8)
 II MWF, 238EE
- 100 **Inspection Trip** (2 cr; prereq sr)
 For jr, sr EE engr students graduating prior to Spring 1953
- 115 **Electrical Engineering** (3 cr; prereq 113, 114)
 -1, II MWF, 138EE
 -2, VI MWF, 238EE
- 116 **Electrical Engineering Lab** (1 cr; prereq concur regis 115)
 -1, I-II T, 107bEE
 -2, I-II Th, 107bEE
 -3, VI-VII T, 107bEE
 -4, VI-VII Th, 107bEE
 -5, VIII-IX W, 107bEE
- 119 **Engineering Electronics** (3 cr; prereq 117)
 -1, I MWF, 238EE
 -2, VII MWF, 238EE
 -3, VII MWF, 114ME
- 120 **Engineering Electronics Lab** (1 cr; prereq concur regis 119)
 -1, I-II Th, 227EE
 -2, III-IV T, 227EE
 -3, VI-VII Th, 227EE
 -4, VIII-IX M, 227EE
 -5, VIII-IX Th, 227EE
- 123 **Electrical Engineering** (3 cr; prereq 121)
 IV MWF, 138EE
- 124 **Electrical Engineering Lab** (2 cr; prereq 122, concur regis 123)
 -1, II-IV T, 107aEE
 -2, VII-IX W, 107aEE
- 125 **Electrical Engineering** (3 cr; prereq 123)
 -1, I MWF, 237EE
 -2, V MWF, 237EE
- 126 **Electrical Engineering Lab** (2 cr; prereq 124, concur regis 125)
 -1, VII-IX M, 107aEE
 -2, VII-IX T, 107aEE
 -3, VII-IX Th, 107aEE
- 129 **Transient Electrical Phenomena** (3 cr; prereq 128)
 Lect IV TTh, 237EE
 -1, Lab VI-VII T, 9EE
 -2, Lab VII-VIII W, 9EE
- 135 **Electronic Circuit Design** (3 cr; prereq 133)
 Lect III TTh, 138EE
 -1, Lab V-VI W, 36EE
 -2, Lab VII-VIII F, 36EE
- 136 **Electric Design** (3 cr; prereq 134)
 II MWF, 237EE
- 140 **Power Systems** (3 cr; prereq 139)
 Lect III TTh, 238EE
 Lab VII-VIII M, 107bEE
- 151 **Illuminating Engineering** (3 cr; prereq concur regis 121)
 I MWF, 138EE
- 159 **Industrial Electronics** (3 cr; prereq 158)
 Lect II TTh, 238EE
 -1, Lab VII-VIII W, 35EE
 -2, Lab VII-VIII F, 35EE
- 162 **Electric Communication** (4 cr; prereq 161)
 Lect V MWF, 138EE
 -1, Lab III-IV Th, 307EE
 -2, Lab VII-VIII F, 307EE
- 163 **Electric Communication** (4 cr; prereq 162)
 -1, Lect II MWF, 211AE
 -2, Lect VI MWF, 237EE
 -1, Lab VI-VII T, 307EE
 -2, Lab VI-VII Th, 307EE
 -3, Lab VIII-IX M, 307EE
 -4, Lab VIII-IX W, 307EE
- 166 **Communication Circuits** (3 cr; prereq 165)
 Lect II TTh, 106ME
 Lab VIII-IX T, 307EE
- 169 **Radio Communication** (3 cr; prereq 167)
 Lect V TTh, 138EE
 Lab VIII-VIII F, 308EE
- 185 **Special Electrical Lab** (1-3 cr; prereq 184)
 Ar
- 189 **Communication Seminar** (1 cr; prereq 188)
 VII M, 133EE, Hartig
- 190 **Theory, Application of Nonsinusoidal Wave Forms** (3 cr; prereq 127, 163)
 Ar
- 213 **Adv Network Analysis** (3 cr; prereq cons instr)
 IV MWF, 237EE
- 229 **Stability of AC Power Systems** (3 cr; prereq 140)
 VII MWF, 138EE, Caverley
- 266 **Communication Seminar** (1-3 cr; prereq cons instr)
 VIII M, 133EE, Shepherd
- 274 **Electromechanical Vibrating Systems, Engineering Acoustics** (3 cr; prereq cons instr)
 IV MWF, 238EE, Lambert
- 289 **Adv Vacuum Tube Analysis** (3 cr; prereq cons instr)
 Ar, Shepherd
- 293 **Electronic Seminar** (1-3 cr; prereq cons instr)
 VIII-IX T, 133EE, van der Ziel

ENGINEERING ENGLISH (ENGL)

- 5 **Written, Spoken Communication** (3 cr; prereq 4)
 -1, IV MWF, 106ME
 -2, VI MWF, 206E
- 6 **Written, Spoken Communication** (3 cr; prereq 5)
 -1, I MWF, 15AE
 -2, I MWF, 106ME
 -3, II MWF, 227AE
 -4, II MWF, 110ME
 -5, III MWF, 106ME
 -6, III MWF, 15AE
 -7, IV MWF, 15AE
 -8, IV MWF, 21AE
 -9, V MWF, 206E
 -10, V MWF, 227AE
 -11, VI MWF, 106ME
 -12, VI MWF, 110ME
 -13, VII MWF, 106ME
- 86 **Adv Technical Communication** (3 cr; prereq 85)
 -1, II MWF, 106ME
 -2, V MWF, 238EE

GENERAL ENGINEERING (GE)

- 70 **Slide Rule** (1 cr; prereq MM 11 or concur regis)
 -1, VI T, 305E
 -2, VI Th, 305E
- 101 **Contracts, Specifications** (3 cr; prereq sr)
 -1, III MWF, 215E, Fixen
 -2, IV MWF, 215E, Fixen
 -3, VI MWF, 215E, Fixen

GEOPHYSICS (GPHY)

- 110 **Introd Exploration Geophysics** (3 cr; prereq 9, Geol 2)
 II MWF, 202AH, Mooney
- 127 **Prin Electrical Exploration** (2 cr; prereq 126)
 III TTh, 108AH, Mooney

HYDROMECHANICS (HYDR)

- 101 **Fluid Mechanics** (3 cr; prereq MM 26 or 84)
 II MWF, 110Ex
- 102 **Fluid Mechanics** (4 cr; prereq MM 26)
 III MWThF, 110Ex
- 103 **Fluid Mechanics** (5 cr; prereq MM 26 or 84)
 -1, I MTWThF, 110Ex
 -2, IV MTWThF, 110Ex
- 104 **Hydraulics Lab** (1 cr; prereq cr or regis in 101, 102, 103 or ChEn 101)
 -1, VIII-IX M, Ex
 -2, VIII-IX T, Ex
 -3, VIII-IX W, Ex
 -4, VIII-IX Th, Ex
 -5, VI-VII F, Ex
 -6, VIII-IX F, Ex

- 192 **Natural, Artificial Waterways** (3 cr; prereq* 183 or cons instr)
 Ar
- 193 **Hydraulic Measurements** (3 cr; prereq* 187 or cons instr)
 Ar
- 196 **Adv Hydraulics Lab** (2 cr; prereq 195)
 Ar
- 295 **Hydrodynamics** (3 cr; prereq* 187, differ equations or adv calculus)
 Ar

INDUSTRIAL ENGINEERING (IE)

- 91 **Industrial Assignment** (3 cr; prereq regis in work study program)
 Ar, MacKenzie
- 92 **Industrial Assignment** (3 cr; prereq regis in work study program)
 Ar, MacKenzie
- 150 **Elements of Industrial Engineering, Mgt** (3 cr; prereq* ME 15)
 -1, II MWF, 102ME, Block
 -2, III MWF, 102ME
- 153 **Methods Engineering, Work Measurement** (3 cr; prereq 150)
 Lect I TTh, 102ME, Block
 -1, Lab VII-IX T, 180ME
 -2, VII-IX Th, 180ME
- 154 **Adv Methods Engineering, Work Measurement** (3 cr; prereq 153)
 Lect II TTh, 102ME, MacKenzie
 -1, Lab VII-IX M, 180ME
 -2, Lab VII-IX F, 180ME
- 165 **Industrial Plants** (3 cr; prereq 153 or 155)
 Lect III TTh, 102ME, Whitson
 Lab VII-IX W, 180ME
- 170 **Production Planning, Control** (3 cr; prereq 153 or 155)
 I MWF, 102ME, Block
- 173 **Engineering Economic Analysis, Cost Control** (3 cr, for 5th yr chem engrs only)
 I MWF, 321ME, Whitson
- 180 **Elements of Supervision** (3 cr; prereq 150)
 VI MWF, 102ME, MacKenzie
- 192 **Industrial Engineering Seminar** (1 cr)
 VI T, 102ME, Staff
- 193 **Inspection Trip** (1 cr)
 Ar
- 194 **Applied Production Engineering, Mgt** (3 cr; prereq* 18 cr)
 Lect I TTh, 106ME, Whitson
 Lab VII-IX T, 102ME
- 253 **Adv Industrial Engineering, Mgt** (3 cr; prereq cons instr)
 Ar
- 263 **Production Engineering Probs** (3-5 cr; prereq cons instr)
 Ar
- 273 **Industrial Engineering Research** (3-5 cr; prereq cons instr)
 Ar

**MATHEMATICS AND MECHANICS
(MM)**

- 11 College Algebra (5 cr; prereq 9)
III MTWThF, 327AE
- 12 Trigonometry (5 cr; prereq 11)
-1, IV MTWThF, 214ME
-2, IV MTWThF, 302ME
-3, VI MTWThF, 327AE
- 13 Analytic Geometry (5 cr; prereq 11, 12)
-1, II MTWThF, 327AE
-2, II MTWThF, 202ME
-3, II MTWThF, 19AE
-4, III MTWThF, 21AE
-5, III MTWThF, 211AE
-6, IV MTWThF, 154ChE
-7, V MTWThF, 327AE
-8, V MTWThF, 110Ex
-9, V MTWThF, 202ME
-10, VI MTWThF, 227E
-11, VI MTWThF, 19AE
-12, VII MTWThF, 327AE
- 24 Calculus I: Differential (5 cr; prereq 13)
-1, II MTWThF, 109AH
-2, V MTWThF, 21AE
- 25 Calculus II: Integral (5 cr; prereq 24)
-1, I MTWThF, 21AE
-2, III MTWThF, 111AH
-3, III MTWThF, 302ME
- 26 Technical Mechanics: Statics (5 cr; prereq 25)
-1, I MTWThF, 162ChE
-2, I MTWThF, 106E
-3, II MTWThF, 21AE
-4, III MTWThF, 214ME
-5, III MTWThF, 162ChE
-6, V MTWThF, 102ME
-7, VI MTWThF, 110Ex
- 80 Elem Differential Equations (3 cr; prereq 25)
-1, I MWF, 19AE
-2, II MWF, 15AE
-3, III MWF, 238EE
-4, V MWF, 104E
- 84 Technical Mechanics (5 cr; prereq 25 or 91)
IV MTWThF, 50ChE
- 85 Strength of Materials (3 cr; prereq 26 or 84)
-1, I MWF, 206E
-2, III MWF, 227AE
-3, IV MWF, 150ChE
-4, IV MWF, 162ChE
- 87 Materials Testing Lab (1 cr; prereq 85 or concur regis)
-1, IV-V Th, Ex
-2, VI-VII T, Ex
-3, VIII-IX W, Ex
-4, VIII-IX Th, Ex
-5, VIII-IX F, Ex
- 90 Elem Engineering Statistics (3 cr; prereq 13)
II MWF, 162ChE
- 93 Strength of Materials (4 cr; prereq 91, 92)
-1, I MTWF, 305E
-2, I MTWF, 215E
- 127 Technical Mechanics: Dynamics (5 cr; prereq 26)
-1, I MTWThF, 203E
-2, I MTWThF, 104E
-3, III MTWThF, 206E
-4, IV MTWThF, 327AE
- 128 Strength of Materials (5 cr; prereq 26)
-1, IV MTWThF, 208ME
-2, V MTWThF, 305E
- 134 Industrial Statistics (3 cr; prereq 133)
V MWF, 106E, McElrath
- 141 Materials Testing Lab (1 cr; prereq 128 or concur regis)
-1, VI-VII Th, Ex
-2, VIII-IX M, Ex
-3, VIII-IX T, Ex
- 151 Ordinary Differential Equations (3 cr; prereq 80)
II MWF, 206E, Turriffin
- 152 Calculus IV (3 cr; prereq 150)
IV MWF, 142ChE, Loye
- 153 Calculus V (3 cr; prereq 152)
-1, I MWF, 205E, Loye
-2, III MWF, 205E, Thompson
- 155 Vector Analysis, Dyadics with Applications (3 cr; prereq 154)
V MWF, 205E, Polansky
- 156 Elements of Tensor Analysis (3 cr; prereq 154)
II MWF, 205E, Polansky
- 163 Adv Technical Mechanics (3 cr; prereq 162)
IV MWF, 106E, Wilcox
- 169 Mathematical Theory of Flow (3 cr; prereq 168, Hyd 103)
III-IV TTh, 203E, Doeringsfeld
- 175 Elem Partial Differential Equations with Applications (3 cr; prereq 174)
II MWF, 106E, Munro
- 183 Applied Elasticity (3 cr; prereq 182)
II MWF, 203E, Miller
- 186 Adv Numerical Analysis in Engineering (3 cr; prereq 151, 153, 184)
III MWF, 106E, Munro
- 192 Problem Seminar (3 cr; prereq 191)
VI MWF, 205E, McElrath
- 198 Special Functions in Mathematical Analysis (3 cr; prereq 197)
IV MWF, 104E, Fulks
- 229 Mathematics of Computers, Control Devices (3 cr; prereq 186)
V MWF, 203E, Munro
- 263 Functions of a Complex Variable (3 cr; prereq 153)
II-III TTh, 205E, Warschawski
- 266 Conformal Mapping (3 cr; prereq* 261)
IV MWF, 203E, Warschawski
- 276 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 151, 153)
II MWF, 104E, Rosenbloom

- 286 Nonlinear Mechanics (3 cr; prereq 127, 151, 153)
III MWF, 203E, Turrittin
- 296 Mathematical Theory of Elasticity (3 cr; prereq 128, 153)
VI MWF, 203E, Young

MECHANICAL ENGINEERING (ME)

- 12 **Molding, Casting Processes** (2 cr)
Lect I TTh, 202ME, Holtby
-1, Lab VII-IX M, 70ME
-2, Lab VII-IX W, 70ME
-3, Lab VII-IX F, 70ME
- 13 **Metal Processing** (2 cr)
Lect I TTh, 18ME, Hughes
-1, Lab VII-IX M, 50ME
-2, Lab VII-IX Th, 50ME
-3, Lab VII-IX F, 50ME
- 14 **Machine Tool Operation** (2 cr)
Lect I TTh, 4ME, Crowder
-1, Lab VII-IX M, 171ME
-2, Lab VII-IX W, 171ME
-3, Lab VII-IX F, 171ME
- 20 **Elem Machine Design** (2 cr; prereq Draw 2)
Lect I W, 214ME, Palmer
Lab VII-IX Th, 314ME
- 21 **Kinematics** (3 cr; prereq MM 24)
Lect II TTh, 321ME, Baillif
-1, Lab VII-VIII W, 308ME
-2, Lab V-VI F, 308ME
-3, Lab VII-VIII Th, 308ME
- 22 **Mechanisms** (2 cr; prereq 21, MM 24)
Lect III T, 321ME, Larsen
Lab VI-VII T, 325ME
- 23 **Dynamics of Machinery** (3 cr; prereq 22, 127 or concur regis)
Lect II MW, 321ME, Larsen
-1, Lab VII-IX M, 314ME
-2, Lab VII-IX W, 314ME
-3, Lab V-VII F, 314ME
- 24 **Elements of Machine Design** (3 cr; prereq MM 128)
Lect VI TTh, 321ME, Baillif
Lab VII-IX W, 102ME
- 33 **Mechanical Engineering Lab I** (2 cr; prereq 131 or concur regis, regis Phys 7 for work-study program)
Lect VI T, 302ME, Carlson
-1, Lab VII-VIII MW, 370ME
-2, Lab VII-VIII TTh, 370ME
- 34 **Mechanical Engineering Lab II** (2 cr; prereq 33, 132 or concur regis, regis Phys 8 for work-study program)
Lect VI Th, 302ME, LaJoy
-1, Lab V-VII T, 370ME
-2, Lab VII-IX Th, 370ME
-3, Lab VII-IX M, 370ME
-4, Lab VII-IX W, 370ME
- 35 **Mechanical Engineering Lab III** (2 cr; prereq 34)
Lect I Th, 302ME, Baillif
-1, Lab VII-IX M, 370ME
-2, Lab VII-IX F, 370ME
- 38 **Heat Engines** (3 cr; prereq Phys 7)
V MWF, 302ME
- 39 **Heat Engine Lab** (1 cr; prereq 38 or concur regis)
-1, VIII-X T, 260ME
-2, VIII-X Th, 260ME
- 42 **Heat Engines** (4 cr; prereq Phys 7)
-1, I MWThF, 110ME
-2, VII MTWF, 110ME
- 55 **Internal Combustion Engines** (3 cr; prereq 41)
Lect I TTh, 114ME
Lab VII-IX Th, 480ME
- 92 **Industrial Assignment** (3 cr; prereq regis in coop work-study program)
Ar
- 93 **Industrial Assignment** (3 cr; prereq regis in coop work-study program)
Ar
- 102 **Milling III** (3 cr; prereq 101)
II MWF, 114ME
- 104 **Milling Lab II** (2 cr; prereq 103)
VI-VIII TTh, 101 OSL
- 106 **Milling Design II** (2 cr; prereq 104, 105)
VII-IX MW, 214ME, MacKenzie
- 115 **Control of Manufacturing Standards** (3 cr; prereq 14)
Lect V Th, 114ME, Crowder
Lab VII-IX TTh, 155ME
- 117 **Adv Plastics** (3 cr)
Lect ar, Holtby
Lab ar, 359ME
- 118 **Adv Processing Technology** (3 cr; prereq 12, 13, 14, 24, MM 141)
Lect II TTh, 18ME
-1, Lab VII-IX T, ME Shops
-2, Lab VII-IX Th, ME Shops
- 121 **Machine Design** (2 cr; prereq 24)
Lect VI W, 321ME, Ryan
Lab I-III Th, 325ME
- 122 **Mechanical Engineering Design I** (3 cr; prereq 121)
Lect VI T, 110ME, Ryan
Lab I-III TTh, 314ME
- 125 **Machine Design Lab** (2 cr; prereq 24)
Lect I W, 302ME, Ryan
Lab I-III Th, 357ME
- 127 **Lubrication** (3 cr; prereq 121)
III MWF, 114ME, Ryan
- 129 **Vibration Engineering** (3 cr; prereq MM 127)
IV MWF, 110ME, Kemler
- 131 **Thermodynamics** (3 cr; prereq MM 25, Phys 8)
III MWF, 208ME
- 132 **Thermodynamics** (3 cr; prereq 131)
-1, VI MWF, 208ME
-2, II MWF, 302ME
- 135 **Turbomachinery** (3 cr; prereq 131, 132)
I MWF, 208ME, Lee
- 141 **Heat Power Engineering** (3 cr; prereq 132)
-1, III MWF, 321ME
-2, V MWF, 321ME

- 147 **Design of Steam Machinery** (3 cr; prereq 141)
Lect I F, 302ME
Lab VII-IX TTh, 208ME
- 149 **Adv Steam Lab** (2 cr; prereq 35, 141)
VI-IX M, 260ME
- 150 **Internal Combustion Engines** (4 cr; prereq 132)
—1, Lect II MWF, 214ME
Lab I-III T, 460ME
—2, Lect VI MWF, 214ME
Lab VII-IX Th, 460ME
- 151 **Adv Internal Combustion Engines** (3 cr; prereq 150)
IV MWF, 321ME
- 151A **Adv Internal Combustion Engines** (2 cr; prereq 150 or 150A)
III TTh, 208ME
- 154 **Design of Internal Combustion Engines** (3 cr; prereq 121, 150)
Lect I M, 214ME
Lab I-III TTh, 308ME
- 155 **Design of Internal Combustion Engine** (3 cr; prereq 154)
Lect I M, 214ME
Lab I-III TTh, 308ME
- 157 **Gas Turbine, Jet Propulsion Power Plants** (3 cr; prereq 150 or 150A)
V MWF, 208ME, Murphy
- 159 **Internal Combustion Engine Lab** (2 cr; prereq 150 or concur regis)
VI-IX T, 480ME
- 160 **Heating, Ventilation** (3 cr; prereq MM 127, Hyd 102 or 103)
I MWF, 114ME
- 161 **Heating, Ventilation, Air Conditioning Design** (3 cr; prereq 160)
Lect VI M, 302ME
Lab VII-IX MW, 302ME
- 162 **Heating, Ventilation, Air Conditioning Design** (3 cr; prereq 161)
Lect VI M, 114ME
Lab VII-IX MW, 208ME
- 169 **Heating, Ventilation Lab** (2 cr; prereq 35, 160 or concur regis)
VI-IX F, 358ME
- 180 **Refrigeration** (3 cr; prereq 132, 160 or concur regis)
IV MWF, 114ME
- 181 **Adv Refrigeration** (3 cr; prereq 180)
I MWF, 202ME
- 182 **Refrigeration Design** (3 cr; prereq 180)
Lect VI M, 321 ME
Lab VII-IX MW, 325ME
- 189 **Refrigeration Lab** (2 cr; prereq 180 or concur regis)
VI-IX F, 362ME
- 190 **Seminar** (1 cr; prereq sr)
V M, 214ME
- 191 **Seminar** (1 cr; prereq 190)
V W, 114ME

- 192 **Seminar** (1 cr; prereq 191)
—1, I M, 302ME
—2, I F, 214ME
—3, VI T, 214ME
- 194 **Adv Engineering Probs** (2-4 cr; prereq sr with C+ aver, cons div chief)
Ar
- 195 **Inspection Trip** (1 cr)
Ar
- 196 **Inventions and Patents** (3 cr; prereq* 121)
II MWF, 315ME, Kemler
- 198 **Industrial Instrumentation, Automatic Control** (3 cr; prereq sr)
Lect V TTh, 321ME, LaJoy
—1, Lab I-III T, 359ME
—2, Lab VII-IX Th, 359ME
- 226 **Adv Applied Dynamics** (3 cr; prereq 225)
III MWF, 202ME, Young
- 234 **Convection** (3 cr; prereq 233)
II MWF, 208ME, Eckert
- 255 **Thermal Jets, Rockets** (3 cr; prereq 134, 157)
VII MWF, 202ME, Hall, Murphy
- 267 **Applied Heating, Ventilation, Air Conditioning** (3 cr; prereq* 160)
IV MWF, 202ME, Algren
- 282 **Reverse Applications of Refrigeration: Heat Pump** (3 cr; prereq 180)
VI MWF, 202ME, Jordan
- 292 **Mechanical Engineering Research** (ar cr; prereq cons div chief)
Ar
- 298 **Adv Instrumentation, Automatic Control** (3 cr; prereq 198)
Ar, LaJoy

MINES AND METALLURGY

Metallography (MET)

- 155 **Metallography** (4 cr; prereq 154)
Lect I MWF, 315AH, Jerabek
Lab VI Th, 315AH, VII-IX Th, 307AH
- 156 **Metallography for Mechanical, Mining, Petroleum Engineers** (3 cr)
Lect II TTh, 315AH, Mackay
—1, Lab VI-VII T, 307AH
—2, Lab VIII-IX T, 307AH
—3, Lab VI-VII W, 307AH
—4, Lab ar
- 160 **Metallography** (3 cr; prereq AnCh 1, 2)
Lect I WF, 111AH, Mackay
—1, Lab VI-VII T, 307AH
—2, Lab VIII-IX T, 307AH
—3, Lab VI-VII W, 307AH
—4, Lab ar
- 162 **Adv Metallography** (3 cr; prereq 152, 156, or 160)
Lect III TTh, 315AH, Mackay
Lab VI-VIII F, 307AH
- 165 **Adv Metallography** (3 cr; prereq 6 cr)
Lect III MWF, 306AH, Dowdell
Lab VI-VIII F, 307AH

- 168 **Laboratory** (1-3 cr; prereq 155)
Ar, Dowdell, Jerabek
- 172 **Special Probs in Metallography** (1-3 cr;
prereq Met E sr)
Ar, Dowdell, Jerabek
- 206 **Seminar: Metallography** (Ar cr)
IV T, 109AH, Jerabek

Metallurgy (MET)

- 12 **Metallurgy of Steel** (3 cr; prereq 11)
IV MWF, 108AH, Martin
- 108 **Nonferrous Metallurgy** (3 cr; prereq 107)
III MWF, 108AH, Bitsianes
- 112 **Mineral Dressing** (3 cr; prereq 111)
Lect III TTh, 202AH, Cooke
—1, Lab VI, VIII T, 203AH, VII T, 202AH
—2, Lab VI, VIII Th, 203AH, VII Th, 202AH
- 123 **Adv Mineral Dressing** (3 cr; prereq 122)
Lect VI-VII M, 109AH, Cooke
Lab VIII M
- 126 **Special Probs in Mineral Dressing** (ar cr;
prereq 125)
Ar, Cooke
- 136 **Adv Metallurgy of Steel** (4 cr; prereq 135)
Lect II MWF, 108AH, Martin
Lab VI-IX W, 6AH, Bitsianes
- 143 **Special Probs** (3 cr; prereq 142)
Ar, Bitsianes
- 175 **Study, Metallurgical Operations in Important Iron, Steel Centers** (3 cr)
Inspection trip during spring vacation

Mining Engineering (MIN)

- 13 **Surveying** (2 cr; prereq MM 12)
II MWF, 111AH, Heilig
- 14 **Surveying Field Work** (5 cr; prereq 12)
Lab V-IX MTWF, 303AH, Heilig, Hartman
- 113 **Elements of Mining** (3 cr; prereq 112)
I MTThF, 202, 205AH, Pfeider
- 122 **Mine, Petroleum Plant Design** (3 cr; prereq
Hyd 102, ME 131, EE 41)
Lect II T, 205AH, Hartman
Lab II-III MWF
- 143 **Coal Mining** (3 cr; prereq 113)
Lect IV MTWF, 202AH, Yardley
- 145 **Adv Mining** (4 cr; prereq 144)
Lab VI-IX M, VI-VIII WF, 205AH, Pfeider
- 153 **Special Probs in Mining** (ar cr; prereq 152)
Ar, Pfeider

Petroleum Engineering (PETE)

- 131 **Petroleum Refining** (2 cr; prereq InCh 12,
Phys 7)
Lect III TTh, 109AH, Lacabanne
- 135 **Study of Oil Well Drilling** (3 cr)
Inspection trip during spring vacation,
Lacabanne
- 138 **Oil Field Mapping** (2 cr; prereq Min 14,
cons instr)
VI-VIII WF, 303AH, Lacabanne
- 145 **Adv Petroleum Engineering** (4 cr; prereq
144)
Lab VI-IX M, VI-VIII WF, 205AH, Pfeider
- 154 **Petroleum Production Technology** (3 cr;
prereq 153)
Lect I Th, 109AH, Lacabanne
Lab ar, Yardley

TECHNICAL AID (TA)

- 13 **Engineering Drafting** (5 cr; prereq 12)
—1, VII-IX MTWThF, 18E
—2, VII-IX MTWThF, 101E
- 15 **Production Illustration** (5 cr; prereq 14)
I-III MTWThF, 101E
- 23 **Applied Mathematics** (6 cr; prereq 22)
I-II MTWThF, 150ChE
- 26 **Applied Mathematics** (6 cr; prereq 25)
V-VI MTWThF, 15AE
- 27 **Engineering Probs** (3 cr; prereq 25)
VII MWF, 106E
- 36 **Technical Writing** (3 cr; prereq 35)
—1, III MWF, 154ChE
—2, III MWF, 158ChE
- 75 **Industrial Electronics** (3 cr; prereq 73)
Ar
- 76 **Industrial Electronics Lab** (2 cr; prereq 74,
concur regis 75)
Ar
- 82 **Machine Tool Utilization** (2 cr; prereq 81)
Lect III TTh, 114ME
—1, Lab IV-V MW, 171ME
—2, Lab IV-V TF, 171ME
- 85 **Engineering Materials** (2 cr)
VII TTh, 202ME
- 85A **Shop Practice, Machine Shop** (2 cr; pre-
req 84A)
VII TTh, 202ME
- 87 **Industrial, Supervisory Relations** (3 cr;
prereq 86)
III MWF, 110ME

COLLEGE OF MEDICAL SCIENCES**ANATOMY (ANAT)**

- 4 **Elem Anatomy** (5 cr; prereq regis med
tech, 5 yr nurs)
I MTWF, 102 IA, Schaar
Lab VIII-IX TTh, 301, 302, 303 IA

- 5 **Elem Anatomy for Students of Pharmacy**
(5 cr)
VI MTWTh, 304 IA, Cornwell
Lab VII-VIII MW, 301, 302, 303 IA
- 57 **Elem Anatomy** (4 cr; prereq phys educ
maj)
III-IV MWF, 304 IA, O'Phelan

- 102 Anatomy of Head, Neck (6 cr; prereq 59; or grad, 59)
VI MWF, 15 Owre, Hartmann
Lab VII-IX MWF 306, 307, 308 IA
- 104s-su Human Histology (4 cr; prereq 103)
Lect VI TW, 102 IA, Williams
Dem I MT, 304 IA, Williams
-1, Lab I-III T
-2, Lab I-III M
- 111s-su Human Neurology (6 cr; prereq regis 1st yr med, 103, 107 or grad, 103, 107 or Zool 150)
Lect VI MF, 102 IA, Rasmussen
-1, Lab II-III ThF
-2, Lab II-III W, VII-VIII F
- 203 Research: Anatomy (ar cr)
Ar
- 207 Anatomical Seminar (1 cr)
Ar

BACTERIOLOGY (BACT)

- 53 Gen Bacteriology (5 cr; prereq* soph, C+ aver in prereq courses, 10 cr chem, 4 cr biol sci)
Lect VII MWF, 129MH, Staff
Lab VIII-IX MWF, 201MH
- 100 Bacteriology for Dental Students (6 cr; prereq regis 1st yr dent; or grad)
Lect I TThS, 214MH, Staff
Lab II-IV TThS, 201MH
- 103 Soil Microbiology (4 cr; prereq 53, 8 cr org chem)
Lect I MWF, 204So, Schmidt
-1, Lab II MF
-2, Lab III MF
- 115 The Fungi Imperfecti (3 cr; prereq 112)
Lect I WF, 214MH, Roth
Lab II-III WF, 201MH
- 116 Immunology (3 cr; prereq 102 or 105)
Lect VI TTh, 214MH, Watson
Lab VII-VIII TTh, 201MH
- 123 Bacterial Metabolism (3 cr; prereq 121, 122, introd biochem)
Ar
- 201 Research: Bacteriology, Immunology (ar cr)
Ar, Staff
- 203 Seminar (1 cr)
IX Th, 214MH, Staff

BIOPHYSICS (BPHY)

- 138 Seminar: Gen Physiology, Biophysics (ar cr)
Ar, Staff
- 170 Probs: Biophysics (ar cr)
Ar, Stenstrom
- 204 Research: Biophysics, Physiology of Radiation (ar cr)
Ar, Stenstrom
- 221 Research: Biophysics (ar cr)
Ar, Schmitt
- 223 Research: Biophysics (ar cr)
Ar, Schmitt

CANCER BIOLOGY (BIOL)

- 140 Seminar: Cancer Biology (1 cr)
Ar, Bittner
- 141 Probs: Cancer Biology (ar cr)
Ar, Bittner
- 207 Research: Cancer Biology (ar cr)
Ar, Bittner

MEDICAL TECHNOLOGY (MEDT)

- 61 Introd Medical Technology (4 cr; prereq regis med tech)
Ar, Evans, others
- 101 Methods, Clinical Orientation (ar cr; prereq concur regis 102)
I T, Evans, others
- 102 Sr Practical Training (see col bul)
Ar, Evans, others

MEDICINE (MED)

- 102s-su Clinical Lab Medicine (5 cr; prereq regis 2nd yr med, PhCh 100, Path 101, or concur regis)
Lect I MTF, PoHAMph, Evans, others
-1, Lab VI-VIII W
-2, Lab II-IV W
- 104s-su Introd Internal Medicine (2 cr; prereq regis 3rd yr med, 101, 102)
8:00-8:50 am T, ToddAmph, Hosp
- 111 Clinical Clerkship: Medicine (6 cr; prereq regis 3rd yr med, cons instr)
- 112 Sr Clerkship: Internal Medicine (6 cr; prereq regis 4th yr med)
- 124 Sr Clerkship: Dermatology (2 cr; prereq regis 4th yr med)
- 124x Sr Clerkship: Dermatology (2 cr; prereq regis 4th yr med)
- 201s-su Clinical Medicine (ar cr)
Ar, Watson, others
- 202s-su Diseases of Cardiovascular Apparatus (ar cr)
Ar, Fahr
- 203s-su Research: Medicine (ar cr)
Ar, Watson, others
- 205s-su Tuberculosis (ar cr)
Ar, Myers
- 206s-su Clinical Conference (1 cr)
Ar, Watson, Ebert, others
- 207s-su Clinical Pathological Conference (1 cr)
Ar, Bell, Watson, Ebert, others
- 208s-su Clinical Radiological Conference (1 cr)
Ar, Rigler, Watson, Ebert, others
- 209s-su Psychosomatic Medicine (1 cr)
Ar, Hastings
- 210s-su Infectious Disease Seminar (1 cr)
Ar, Spink
- 211s-su Electrocardiographic Conference (1 cr)
Ar
- 225s-su Clinical Dermatology, Syphilology (ar cr)
Ar, Michelson, others
- 226s-su Dermatology, Syphilology (ar cr)
Ar, Michelson, others

- 227s-su Histopathology of Skin (ar cr)
Ar, Michelson, others
- 228s-su Research: Dermatology, Syphilology (ar cr)
Ar, Michelson, others
- 235s-su Adv Clinical Lab Medicine (ar cr; pre-req Anat 165, 166)
Ar, Evans, others
- 236s-su Research on Clinical Lab Probs (ar cr)
Ar, Evans, others

NURSING (NURS)

- 17A Introd Clinical Nursing (7 cr)
Lect II-III MW, II TF, PoHAMph, Love
I Th, 2309PoH
Lab ar
- 37A Maternal, Child Nursing (12 cr)
Ar, Robertson
- 37B Maternal, Child Nursing (12 cr; prereq 37A)
VII-VIII MWF, 2317PoH, Gautefald
- 57A Medical, Surgical Nursing (12 cr)
IV, VI-VII MTWTh, VIII TTh, PoHAMph,
Brennan, Reif
- 67 Nursing Care of Neuropsychiatric Patients (8 cr)
Ar, Anderson
- 77A Nursing in the Operating Room (6 cr)
Ar, Skooglun
- 77B Gynecologic Nursing (4 cr)
Ar, Pike
- 77C Orthopedic Nursing (2 cr)
Ar, Hinman
- 79 Tuberculosis Nursing (3 cr)
Ar, Einerson
- 87A Public Health Field Experience (10 cr)
Ar, Griffin, Burns
- 87B Rural Nursing Experience (5 cr)
Ar, Lysen
- 97A Medical, Surgical Nursing (7 cr)
Ar, Sobotka
- 97B Nursing in Outpatient Dept (5 cr)
Ar, Schey
- 106 Neuropsychiatric Nursing (4 cr)
VII-VIII T, VI-VII Th, 2317PoH, Anderson
- 151C Adv Medical Nursing (6 cr, †151A,B,C;
prereq cons instr)
Ar, Coe
- 152C Adv Obstetric Nursing (6 cr, †152A,B,C;
prereq cons instr)
Ar, Pike
- 153C Adv Operating Room Nursing (6 cr,
†153A,B,C; prereq cons instr)
Ar, Hinman
- 154C Adv Pediatric Nursing (6 cr, †154A,B,C;
prereq cons instr)
Ar, Davidson
- 155C Adv Psychiatric Nursing (6 cr, †155A,B,C;
prereq cons instr)
Ar, Linehan
- 157C Adv Surgical Nursing (6 cr, †157A,B,C;
prereq cons instr)
Ar, Hinman

- 192 Psychiatric Nursing (3 cr; prereq cons instr)
Ar, Black
- 199D Field Experience: Nursing Service Admin (15 cr)
Ar, Goodale

OBSTETRICS AND GYNECOLOGY (OBST)

- 120 Obstetrics (2 cr; prereq regis 4th yr med)
8:00-8:50 T, Eustis Amph, Hosp, McKelvey
- 121 Obstetrics (1 cr; prereq 120)
8:00-8:50 T, Eustis Amph, Hosp, McKelvey
- 123 Gynecology (1 cr; prereq regis 4th yr med)
8:00-8:50 T, Eustis Amph, Hosp, McKelvey
- 124s-su Introd Obstetrics, Gynecology (1 cr; prereq regis 3rd yr med)
8:00-8:50 M (spring), 8:00-8:50 MW (summer), Eustis Amph, Hosp, McKelvey, others
- 135 Clinical Clerkship in Obstetrics, Gynecology (6 cr)
Ar, McKelvey
- 135x Clinical Clerkship in Obstetrics, Gynecology (6 cr)
Ar, Lang
- 203 Adv Obstetrics, Gynecology (ar cr)
Ar
- 207 Adv Obstetrics, Gynecology (ar cr)
Ar
- 211 Adv Obstetrics, Gynecology (ar cr)
Ar

OPHTHALMOLOGY AND OTOLARYNGOLOGY (OO)

- 100 Ophthalmology (2 cr; primarily for 4th yr med)
8:00-8:50 am MTh, Eustis Amph, Hosp, McKelvey
- 101 Otology (1 cr; prereq regis 4th yr med; or grad)
8:00-8:50 am MTh, Eustis Amph, Hosp, McKelvey
- 102 Rhinology (1 cr; prereq regis 4th yr med)
8:00-8:50 am MTh, Eustis Amph, Hosp, McKelvey
- 103 Laryngology (1 cr; prereq regis 4th yr med; or grad)
8:00-8:50 am MTh, Eustis Amph, Hosp, McKelvey
- 104 Clinic, Conferences: Diseases of Ear (2 cr)
Ar
- 105 Clinic, Conferences: Diseases of Nose, Throat (2 cr)
Ar
- 106 Clerkship: Diseases of Eye (2 cr)
Ar
- 201 Adv Refraction (3 cr)
Ar, Tracht
- 202 Clinical Ophthalmology (6 cr)
Ar, Staff

- 206 Surgery of Eye (3 cr)
Ar, Staff
- 209 Neuro-ophthalmoscopy (1 cr)
Ar, Baker, others
- 214 Histology of Eye (2 cr)
Ar, Walsh
- 230 Clinical Otolaryngology (3 cr)
Ar, Staff
- 231 Clinical Rhinology, Laryngology (3 cr)
Ar, Staff
- 232 Surgery of Ear, Nose, Throat (3 cr)
Ar, Staff
- 238 Pathology of Ear, Nose, Throat (2 cr)
Ar, Hilger
- 241 Seminar: Otolaryngology (1 cr)
Ar, Staff

PATHOLOGY (PATH)

- 100 Pathology for Students in Dentistry (8 cr;
prereq regis dent)
Lect I MTWThF, 104IA, Staff
Lab II-III MWF, 106-107-108 IA, VII-IX T,
113 IA
- 104 Autopsies (ar cr; prereq regis 3rd, 4th yr
med or grad, 102)
Ar, Staff
- 107a Surgical Pathology (3 cr; prereq 102)
Ar, Hebbel, McCartney
- 107d Diseases of Liver (3 cr; prereq 102)
Lect VII TTh, 104 IA, McCartney
Dem VIII TTh, 104 IA
- 110 Seminar: Pathology (1 cr; prereq 102)
V M, 104 IA, Staff
- 111 Conference on Autopsies (1 cr; prereq 102)
V T, 104 IA, Dawson
- 201 Research (ar cr)
Ar, Staff

PEDIATRICS (PED)

- 122s-su Diseases of Infancy, Childhood, Their
Treatment (2 cr; prereq regis 3rd yr med,
121)
8:00-8:50 am W, Eustis Amph, Hosp,
McQuarrie, others
- 124 Junior Clinical Clerkship in Pediatrics
(6 cr)
- 135 Sr Clinical Clerkship in Pediatrics (3 cr)
Ar
- 135a Allergy Clinic
Ar
- 150 Physiology, Diseases of Newborn (1 cr)
Ar, Adams
- 152 Fundamental Prin Nutrition, Metabolism
Applied to Children (1 cr)
Ar, McQuarrie, May, Ziegler, Ulstrom
- 154 Endocrinology Applied to Pediatrics (1 cr)
Ar, McQuarrie, Ulstrom
- 156 Adv Study of Noncontagious Diseases (1 cr)
Ar, McQuarrie, Top, Thomas, May, Adams,
Good, Huenekens, Engel
- 158 Adv Study of Contagious Diseases (1 cr)
Ar, Top, Stoesser, Platou, Seham

- 160 Allergic Disorders in Childhood (1 cr)
1:30-3:00 W, Stoesser, Siegel
- 162 Pediatric Psychiatry (1 cr)
III-IV TF, Jensen, Benton, Quast
- 163 Hematology of Infancy, Childhood (1 cr)
IX T, May, Nelson
- 164 Rare, Unusual Diseases of Infancy, Child-
hood (1 cr)
Ar, McQuarrie, Platou
- 166 Weekly Seminar for Basic Subjects Related
to Pediatrics (1 cr)
IX M, Ziegler
- 167 Weekly Seminar for Review of Current
Literature (1 cr)
Ar, McQuarrie, others
- 168 Speech Disturbances in Childhood (1 cr)
Ar, Jensen, Brown, Stenswick, Quast
- 170 Rheumatic Infection, Heart Diseases in
Childhood (1 cr)
Ar, Top, Thomas, Adams, Dwan, Good
- 202 Pediatric Clinic (1-7 cr)
Ar, McQuarrie, Stoesser, Adams, Jensen,
May, Ulstrom, Engel, Brown, Siegel
- 204 Residency in Pediatrics (1-7 cr)
Ar, McQuarrie, Huenekens, Platou, Seham,
Top, Thomas, Adams, Jensen, May, Good,
Richdorf
- 208 Pediatric Research (3-7 cr)
Ar, McQuarrie, Top, Thomas, May, Jensen,
Adams, Good, Ulstrom, Ziegler, others

PHARMACOLOGY (PHCL)

- 10 Pharmacology for Nursing Students (2 cr,
†9-10; prereq 9)
VI Th, 113 Owre, Cranston
- 101 Intro Pharmacology (2 cr; prereq regis
vet med, Phsl 107; or grad, Phsl 107)
II WF, 103VetA, Stowe, Hammond
- 102s-su Gen Experimental Pharmacology (9 cr;
prereq regis 2nd yr med, 101; or grad,
101)
Lect II MTF, III Th, 15 Owre, IV M,
214MH, Bieter
—1, Lab I-III W, III T
—2, Lab VI-VIII W, III F
- 106 Gen Pharmacology (2 cr; prereq regis
pharm or 3rd yr dent, 105; or grad, 106)
1:00-2:00 TTh, 15 Owre, Wright
- 108 Prescription Writing (1 cr; prereq regis
3rd yr dent, pharmacy, med, 102 or 106;
or grad, 102 or 106)
1:00-2:00 F, 111 Owre, Wright
- 109 Pharmacological Probs (ar cr; prereq 102)
Ar, Staff
- 110 Toxicology (2-5 cr; prereq 102)
Ar, Wright
- 111 Adv Toxicology (3 cr; prereq 110 or concur
regis)
Ar, Wright
- 112 Spectrochemical Toxicology (3 cr; prereq
110)
Ar, Wright

- 123 Special Topics (ar cr)
Ar, Staff
- 124 Pharmacology of Special Systems (ar cr)
Ar, Staff
- 203 Research: Pharmacology (ar cr; prereq 102, cons instr)
Ar, Staff
- 204 Adv Pharmacology (1 cr; prereq 101, cons instr)
Ar, Staff
- 205 Gen Discussions in Pharmacology (1 cr; prereq 101 or 102, cons instr)
Ar, Staff

PHYSIOLOGICAL CHEMISTRY (PHCH)

- 50 Physiological Chemistry (4 cr, \$100-101, primarily for phys educ, dent hyg, nurs students; prereq inorg chem)
VI MTWTh, 129MH, Carr
- 103 Physiological Chemistry (6 cr; prereq 102)
—1, Lect IV, VI TTh, 12 Owre, Staff
—2, Lect IV, VI TTh, 111 Owre, Frame
—1, Lab VI-IX TTh, 310MH
—2, Lab I-III TTh, 310MH
- 153 Probs in Physiological Chemistry (ar cr; prereq 101)
Ar, Staff
- 200 Seminar: Physiological Chemistry (1 cr)
V Th, 214MH, Staff
- 205 Research: Physiological Chemistry (ar cr)
Ar, Staff
- 208 Adv Lab Technique (3 cr; prereq 101)
IX MWF, 214MH, Staff
- 212 Histochemistry Lab (ar cr; prereq 101, cons instr)
Ar, Click

PHYSIOLOGY (PHSL)

- 4 Human Physiology (4 cr, \$106-107; prereq regis HE, pharmacy, 1 qtr zool, 1 qtr chem)
VII-VIII TTh, 214MH
- 106-107s-su Human Physiology (10 cr, \$4, 60, 101, \$106-107; prereq regis 1st yr med, org chem, zool, neuroanatomy; or grad, org chem, zool)
Lect IV MTWThF, VII M, 15 Owre, Visscher, others
Conf VI Th
Dem VIII-IX W, 129MH
—1, Lab II-III MW, VII-VIII F
—2, Lab II-III TThF
- 113 Probs in Physiology (ar cr; prereq 107)
Ar
- 114a Seminar: Physiology (ar cr; prereq 106-107)
Ar, Visscher
- 114b Seminar: Physiology (ar cr; prereq 106-107)
Ar, Visscher

- 114c Seminar: Physiology (ar cr; prereq 106-107)
12:00-1:30 T, 129MH, Lifson
- 201 Seminar: Physiology (ar cr)
V M, 214MH, Staff
- 202 Readings: Physiology (ar cr)
Ar
- 203 Research: Physiology (ar cr)
Ar

PSYCHIATRY AND NEUROLOGY (NPSY)

- 102 Psychiatry (1 cr; prereq regis 3rd yr med)
8:00-8:50 am WFS, Todd Amph, Hosp, Hathaway
- 103s-su Junior Didactic Clerkship: Psychiatry, Neurology (2 cr)
Ar, Staff
- 103xs-su Junior Clinical Clerkship: Psychiatry, Neurology (4 cr)
Ar, Staff
- 105 Psychiatric, Neurologic Clinic (1 cr; prereq regis 4th yr med)
8:00-8:50 S, Eustis Amph, Hosp, Hastings, Baker, others
- 120s-su Psychosomatics (1 cr; prereq regis 1st yr med)
VII Th, Eustis Amph, Hosp, Hastings
- 145 Reading in Psychiatry (ar cr)
Ar, Hastings
- 145x Reading in Neurology (ar cr)
Ar, Baker
- 208 Clinical Neurology (ar cr)
Ar, Baker
- 208x Clinical Psychiatry (ar cr)
Ar, Hastings
- 208y Clinical Child Psychiatry (ar cr)
Ar, Staff
- 209 Research: Neurology (ar cr)
Ar, Baker
- 212 Survey of Neuropathology (1 cr)
Ar, Tichy
- 214 Psychiatry of Childhood (1 cr)
Ar, Jensen
- 215 Seminar: Application of Psychological Methods (ar cr)
Ar, Hathaway
- 219 Personality Structure, Normal, Abnormal (1 cr)
Ar, Hathaway
- 220 Adv Clinical Neurology (ar cr)
Ar, Baker
- 221 Psychometric Clerkship (2 cr)
Ar, Hathaway, Schofield
- 225 Neuro-ophthalmology (1 cr)
Ar, Baker
- 226 Neurological-Neurosurgical Conference (1 cr)
Ar, Baker
- 227 Clinical Seminar for Psychologists (1 cr)
Ar Schiele, Schofield
- 228 Research: Neuropathology (ar cr)
Ar, Baker

- 231 Applied Electroencephalography, Myography (2 cr)
Ar, Baker, Brown
- 232 Applied Neurotoxicology (2 cr)
Ar, Baker
- 233 Applied Neuropathology (1 cr)
Ar, Baker
- 236 Normal Personality Development, Psychopathology (1 cr)
Ar, Challman
- 237 Psychoanalytic Therapy (1 cr)
Ar, Lippman
- 240 Neuropathology Conference (1 cr)
Ar, Baker
- 243 Prolonged Psychotherapy (1 cr)
Ar, Staff
- 244 Seminar: Psychosomatic Medicine (1 cr; prereq MD degree, cons instr)
Ar, Aldrich
- 245 Case Conference for Psychologists (ar cr; prereq clinical psy)
Ar, Hathaway
- 247 Neurological Speech Disorders (1 cr; prereq MD degree)
Ar, Schuell
- 67 Field Work: Urban Nursing (ar cr; prereq regis PH nurs, 53 or 100, 62)
Ar, Taylor, Sandve
- 69 Nursing in Health Programs for School Age Children (3 cr; prereq 53 or 100, 62, 63 or concur regis or cons instr)
IV MWF, 129MH, Field
- 70 Practice Teaching Home Nursing or Child Care for Public Health Nurses (ar cr; prereq* 67, Ed 81)
Ar, Sandve
- 90s-su Statistics in Medicine (2 cr; prereq* regis 2nd yr med)
III M, VII F, 12 Owre, Treloar
-1, Lab 2:30-4:00 M
-2, Lab 3:30-5:00 F
- 100s-su Elements of Preventive Medicine, Public Health (6 cr for med, 5 cr for other students; prereq 3 or 50, courses in bact)
-1, Lect IV TThF, 214MH, I Th, 129MH, Anderson (for med students)
-2, Lect II MWF, 129MH, Anderson, Thomson
-1, Rec III TTh, 12 Owre
-2, Rec VI TTh, 55ForH

PUBLIC HEALTH (PH)

- 3 Personal Health (2 cr, §GC 10C)
-1, VI MW, BuAud, Thomson
-2, VI TTh, NHAud, Thomson
- 52a Health Care of the Family (2 cr, §4, 50, or 51, concur regis 52b, for HE students; prereq Bact 53, Phsl 4)
VIII MW, 214MH, Todd
- 52b Home Nursing, Family Care (1 cr; prereq concur regis 52a)
-1, VII-VIII T, 01MeH, Sandve
-2, VII-VIII Th, 01MeH, Sandve
- 58 Maternal, Child Hygiene (3 cr; prereq regis nurs, 53 or 100, 62)
VIII MWF, 12 Owre, Boynton
- 59 Health of School Child (3 cr; prereq 3, 4; or 3, 51; or GC 10C, 4; or GC 10C, 51; or 50, or 52, or 100)
VII MWF, BuAud, Anderson, Thomson
- 60 Tuberculosis, Its Control (2 cr; prereq regis nurs, others cons instr, 4, or 50, or 51, or 52, or 53 or 100, 62)
IV TS, 113 Owre, Myers
- 63 Prin Public Health Nursing II (5 cr, †62-63; prereq regis PH nurs, others cons instr, 62, 53 or 100 or concur regis)
VI-VII MW, VI F, 214MH, Taylor
- 64 Cancer Nursing, Nursing in Other Chronic Diseases (3 cr; prereq regis PH nurs, others cons instr)
IV TThS, 304 IA, Hauser
- 65 Field Work in School Nursing (ar cr; prereq regis PH nurs, 53 or 100, 62, 67)
Ar, Taylor, Sandve
- 66 Field Work: Rural Nursing (ar cr; prereq regis PH nurs, 53 or 100, 62, 67)
Ar, Taylor, Sandve
- 101 Public Health Admin, Field Work (2 cr; prereq regis 4th yr med)
Ar, Thomson
- 102 Environmental Sanitation I (3 cr; prereq sr, 50 or 51 or 53 or 100 or concur regis or cons instr)
I TThS, 15 Owre, Pierce, Olson
- 103 Public Health Bacteriology (ar cr; prereq Bact 102, 116, cons instr)
II-III MWF, SBHLab, Bauer
- 110 Biometric Principles (3 cr; prereq sr, 18 cr biol sci or math through anal geom, concur regis 111)
II MWF, 214MH, Erickson
- 111 Biostatistics Lab (2 cr; prereq concur regis 110)
-1, III-IV MWF, 118MH
-2, VI-VII MWF, 118MH
-3, III-IV TThS, 118MH
- 113 Sewage, Excreta, Waste Disposal (4 cr, §114; prereq 102, 100 or 104)
Ar, Bosch, Pierce, Olson
- 116 Public Health Engineering Admin (2 cr, §114; prereq 102, 100 or 104, 106, two of following 112, 113, 115)
Ar, Bosch
- 119 Field Practice in Environmental Sanitation (ar cr; prereq cons instr)
Ar
- 120 Correlation Analysis (3 cr; prereq 110, concur regis 121)
III MWF, 129MH, Elveback
- 121 Correlation Lab (2 cr; prereq concur regis 120)
-1, I-II MWF, 118MH, Elveback
-2, I-II TThS, 118MH, Elveback
-3, VII-IX TTh, 118MH, Elveback

- 122 Public Health Admin Probs (3 cr; prereq 106)
II TThS, 113 Owre, Anderson
- 123 Topics in Public Health (ar cr; prereq cons instr)
Ar, Staff
- 125 Community Health Education Program (3 cr; prereq 53 or 100, or 104 or 106 or concur regis 106)
III TThS, 111 Owre, Grout
- 129 Field Work in Industrial Nursing (ar cr; prereq 67)
Ar, Taylor, Sandve
- 133 Mental Hygiene (3 cr; prereq 62 or PH nurs exper)
I MWF, 129MH, Woods
- 135 Conservation of Hearing (1 cr; prereq 53 or 100, 62 or concur regis)
I S, 129MH, Boies, others
- 136 Sight Conservation (1 cr; prereq 53 or 100, 62 or concur regis)
I Th, 12 Owre, Hansen, others
- 137 Dental Health (1 cr; prereq 53 or 100, 62 or concur regis)
I T, 129MH, Jordan
- 138 Field Work in Child Hygiene (ar cr; prereq sr, cons instr)
Ar, Spock, others
- 139 Field Work in Mental Hygiene (ar cr; prereq cons instr)
Ar, von Bergen
- 141 Social, Economic Aspects of Medical Care (3 cr; prereq cons instr)
IV TThS, 104 IA, Mickey
- 142 Medical Economics (2 cr; prereq regis 4th yr med)
VIII MF, 113 Owre, Mickey
- 152 Industrial Hygiene Engineering (3 cr; prereq cons instr)
Ar, Pierce
- 153 The Hospital, the Community (1 cr; prereq cons instr)
IV M, 105TSP, Stephan, Hamilton
- 164 Prin Organization, Mgt of Hospitals (6 cr; prereq 163)
VI-VII TWThF, 105TSP, Stephan, Hamilton
- 167 Mgt Probs in Hospital Administration (4 cr; prereq 163, concur regis 164)
II-III MWF, VI-VII M, II TTh, 105TSP, Hamilton
- 171 Probs in Public Health Nursing (ar cr; prereq* 170)
Ar, Taylor
- 173 Field Work in Supervision in Public Health Nursing (ar cr, for PH nurs; prereq* 170)
Ar, Taylor
- 174 Supervision Lab (ar cr, for PH nurs)
Ar, Taylor
- 181 Prin, Methods in Community Health Education (ar cr; prereq cons instr)
Ar, Grout

- 190 Field Work in Community Health Education Program (ar cr; prereq 125, 181, 227, see PH bul)
Ar, Grout, others
- 200 Research (ar cr)
Ar, Staff
- 201 Topics in Biometry (ar cr; prereq 120, 130, cons instr)
Ar, Treloar, others
- 210 Seminar: Public Health (ar cr)
IX-X, M, 15 Owre, Staff
- 215 Maternal, Child Health (ar cr, for physicians; prereq cons instr)
Ar, Boynton
- 220 Reading in Probs of Physiological Hygiene (ar cr; prereq cons instr)
Ar, Keys, others
- 227 Probs in Community Health Education Program (ar cr; prereq cons instr)
Ar, Grout, others

RADIOLOGY AND PHYSICAL MEDICINE

Physical Medicine (PMED)

- 55 Process of Rehabilitation (2 cr; prereq regis OT)
Ar
- 61 Theory, Technique of Physical Medicine Applied to Medical Sciences (5 cr; prereq regis PT, OT)
II-III M, VII M, II W, V F, 142ChE, Staff
- 63 Jr Clinic in Physical Medicine (1 cr; prereq regis PT, OT)
Ar, Hosp Amph
- 73 Theory of Occupational Therapy (2 cr; prereq regis OT)
Ar, Hansen
- 74 Therapeutic Recreation (1 cr; prereq regis OT)
Ar, Hansen
- 77 Orthopedics for Occupational Therapists (3 cr; prereq regis OT)
Ar, Johnson, Mahan
- 78 Prin, Practice of Occupational Therapy (3 cr; prereq regis OT)
Ar, Affiliated hospitals
- 83 Theory, Techniques of Muscle Function, Measurements, Tests (5 cr; prereq regis med, PT, OT)
Lect II TTh, 132ChE, Gerischer
Lab III-IV TTh, II-III F, 132ChE
- 90 Conference (1 cr; prereq regis PT)
IX F, 132ChE, Kottke
- 91 Clinical Practice (18 cr; prereq regis PT)
Ar, Affiliated hospitals, Overmann
- 93 Preliminary Hospital Practice (3 cr)
Ar
- 96 Clinical Training (18 cr; prereq regis OT)
Ar, Affiliated hospitals, Hansen
- 103 Physical Therapy Clinic (ar cr)
Ar

- 203 Poliomyelitis Clinic (ar cr; for physicians)
Ar
- 204 Peripheral Vascular Disease Clinic (ar cr;
for physicians)
Clinic ar
- 210 Research: Physical Medicine (ar cr)
Ar
- 220 Seminar: Physical Medicine (ar cr)
Ar

Radiology (RAD)

- 102 X-Ray Conference (1 cr)
5:00-6:00 T, Eustis Amph, Hosp, Rigler
- 104 Roentgen, Radium Therapy (1 cr)
4:00-5:00 T, Eustis Amph, Hosp, Stenstrom
- 107 Biophysics (1 cr; prereq regis 2nd yr med)
VI F, Eustis Amph, Hosp, Stenstrom
- 111 Medical Roentgenologic Conference for
Medical Clerks (1 cr)
9:00-10:00 am M, Todd Amph, Hosp, Rigler
- 121 Roentgen Diagnosis, Radiation Therapy (2
cr; prereq regis 3rd yr med)
8:00-8:50 am F, Todd Amph, Hosp, Rigler,
Stenstrom
- 124 Pediatric-Roentgenologic Conference for
Pediatric Clerks (1 cr)
9:00-10:00 am T, Eustis Amph, Hosp, Rigler
- 127 Fluoroscopy of Thorax (1 cr; prereq regis
4th yr med)
1:00-3:00 MF, VCHH
- 137 Surgical Roentgenologic Conference for
Surgical Clerks (1 cr)
9:00-10:00 am S, Todd Amph, Hosp, Rigler
- 163a Neurosurgical-Roentgenologic Conference
for Neurosurgical Clerks (1 cr)
1:00-2:00 F, Todd Amph, Hosp, Peterson
- 208 Seminar: Radiology (1 cr)
5:00-6:00 Th, Eustis Amph, Hosp, Rigler,
Stenstrom
- 213 Roentgen Diagnosis of Pulmonary Diseases
(ar cr)
- 215 Roentgen Diagnosis of Diseases of Gall-
bladder, Urinary Tract (ar cr)
- 216 Roentgen Diagnosis of Traumatic Lesions
of Skeleton (ar cr)
- 220 Urologic-Roentgenologic Conference for
Graduate Students (1 cr)
5:00-6:00 M, Eustis Amph, Hosp
- 236 Radio Isotope Seminar (1 cr)
V W, 111 Owre
- 240 Radiation Therapy Conference (1 cr)
4:00-5:00 Th, Eustis Amph, Hosp, Stenstrom

SURGERY (SURG)

- 121s-su Prin Surgery (3 cr; prereq regis 2nd
yr med)
VI MTh (spring) VI MThF (summer),
Eustis Amph, Hosp, Varco, others
- 122 Basic Prin Involved in Diagnosis, Treat-
ment, Prognosis of Fractures, Disloca-
tions (1 cr; prereq regis 3rd yr med)
8:00-8:50 am Th, Todd Amph, Hosp, Wan-
gensteen, others

- 129 Surgical Clinics for Juniors (1 cr; prereq
regis 3rd yr med)
8:00-8:50 am Th, Todd Amph, Hosp, Wan-
gensteen, others
- 135a Clinical Pathology of Tumors (ar cr)
Ar
- 135b Reading Course (ar cr)
Ar
- 135c Medical-Surgical Pathological Conference
(ar cr)
Ar
- 135d Roentgenological-Surgical Conference (ar
cr)
Ar
- 135e Surgical Ward Conference (ar cr)
Ar
- 135f Outpatient Surgical Clinic, Gen Surgery,
Proctology (ar cr)
Ar
- 135g Applied Surgical Anatomy (ar cr)
Ar
- 135k Physiological-Surgical Conference (0 cr)
Ar
- 135l Anesthetics (ar cr)
Ar
- 137 Prin Cancer Therapy (1 cr; prereq regis
4th yr med)
8:00-8:50 am F, Eustis Amph, Hosp, Staff
- 140 Orthopedic Surgery in Children (1 cr; pre-
req regis 4th yr med)
7:30-9:20 W, Gillette Hosp, Cole, others
- 142 Lectures in Orthopedic Surgery (1 cr;
prereq regis 4th yr med)
7:30-9:20 W, Gillette Hosp, Cole, others
- 163 Clinical Clerkship: Neurosurgery
- 167 Probs in Experimental Surgery (ar cr)
- 169 Diagnostic Bedside Surgical Clinic (ar cr)
- 200 Outpatient Clinic in Surgery (1 cr)
- 202 Applied Surgical Anatomy on Cadaver (1
cr)
- 203 Proctoscopy, Sigmoidoscopy (1 cr)
Ar, Bernstein, others
- 204 Tumor Clinic (1 cr)
Ar, Hay, Kremen, others
- 205 Surgical Diagnosis (1 cr)
Ar, Wangensteen, others
- 208 Surgical Service (1 cr)
Ar, Wangensteen, others
- 211 Operative Surgery (1 cr)
Ar, Wangensteen, others
- 214 Surgical Ward Conference (1 cr)
Ar, Wangensteen, others
- 215 Roentgenological-Surgical Conference (1 cr)
Ar, Wangensteen, others
- 216 Surgical Research (4 cr)
Ar, Wangensteen, others
- 217 Surgical Seminar (1 cr)
Ar, Wangensteen, others
- 218 Medical Surgical Pathological Conference
(1 cr)
Ar, Wangensteen, others
- 245 Surgical Literature Conference (1 cr)
8:45 am W, Wangensteen, staff
- 250 Urological Surgery (ar cr)

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|--|---|
| 251 Cystoscopy, Urological Diagnosis (ar cr) | 308 Neurosurgical Service (ar cr) |
| 252 Urological Conference (ar cr) | 311 Operative Neurosurgical Surgery (ar cr) |
| 253 Research: Urology (ar cr) | 316 Neurosurgical Research (3 cr) |
| 265 Regional Anesthesia (4 cr) | 318 Neurosurgical Conference (ar cr) |
| 266 Gen Anesthesia (12 cr) | 405 Orthopedic Diagnosis (1 cr) |
| 267 Pre-, Post-operative Evaluation (2 cr) | 408 Orthopedic Service (1 cr) |
| 268 Research: Anesthesia (ar cr) | 411 Orthopedic Operative Surgery (1 cr) |
| 269 Seminar: Anesthesia (2 cr) | 416 Orthopedic Research (1 cr) |
| 305 Neurosurgical Diagnosis (ar cr) | |

COLLEGE OF PHARMACY

PHARMACEUTICAL CHEMISTRY (PHMC)

- 53 Pharmaceutical Biochemistry (5 cr; prereq sr, OrCh 62)
Lect I MWF, 202WuH, DiGangi
—1, Lab VII-IX T, II-IV F, 1WuH, DiGangi
—2, Lab II-IV MW, 1WuH, DiGangi
- 163 Organic Pharmaceutical Products (3 cr; prereq jr, 162)
II TTh, IV F, 202WuH, Gisvold
- 201 Pharmaceutical Chemistry Seminar (1 cr)
Ar, Gisvold
- 207 Chemistry of Medicinal Products (3-6 cr; prereq* 163, OrCh 2)
Ar, Soine
- 209 Alkaloids (3-5 cr; prereq* 163)
Ar, Soine
- 211 Terpenes, Carotinoids, Tannins, Anthocyanins (3-5 cr; prereq* 163)
Ar, DiGangi
- 213 Special Probs (ar cr; prereq* 163)
Ar, Rogers, Hadley, Netz, Soine, DiGangi
- 214 Research: Pharmaceutical Chemistry (ar cr)
Ar, Rogers, Hadley, Netz, Soine, DiGangi

PHARMACOGNOSY (PHCG)

- 3 Vegetable Drug Histology, Microscopy (3 cr; prereq soph, 2)
Lect II WF, 202WuH, Fischer
—1, Lab I-III T, 104WuH
—2, Lab I-III Th, 104WuH
- 57 Antibiotics, Glandular Products (3 cr; prereq jr, 2, Phsl 4)
III TTh, IV W, 202WuH, White
- 164 Insecticides, Fungicides (3 cr; prereq 56)
VII M, II TTh, 104WuH, Fischer
- 203 Adv Pharmacognosy (3-5 cr; prereq 56, 57)
Ar, Fischer

- 204 Research: Pharmacognosy (ar cr)
Ar, Fischer, White
- 211 Adv Experimental Drug Testing Techniques (ar cr)
Ar, 8WuH, White

PHARMACY (PHCY)

- 3 Pharmaceutical Calculations (3 cr; prereq soph)
II M, V W, VII Th, 202WuH, Netz
- 56 Pharmaceutical Preparations (5 cr; prereq jr 55)
Lect IV MTTh, 202WuH, Hadley
—1, Lab I-III M, VI-VIII Th, 302WuH
—2, Lab I-III WF, 302WuH
- 60 Prescription Compounding (4 cr; prereq sr, 59)
Lect VII WF, VIII W, 202WuH, Netz
—1, Lab II-IV MW, 205WuH, Netz, Miller
—2, Lab VII-IX T, II-IV F, 205WuH, Netz, Miller
- 64 Pharmaceutical Jurisprudence (2 cr; prereq sr)
I TTh, 202WuH, Bachelдор
- 67 Pharmaceutical Manufacturing (3 cr; prereq sr, 66)
Lect VII M, 201WuH, Miller
Lab II-IV TTh, 2WuH, Miller
- 69 Hospital Pharmacy (3 cr; prereq sr, 68)
Lect VII M, Ar, Bruce
Lab II-IV TTh, 114Hosp, Bruce
- 71 Pharmaceutical Specialties (3 cr; prereq sr, PhmC 163)
VI MWF, 202WuH, Soine
- 73 Special Probs (ar cr; prereq sr, 56, PhmC 163)
Ar, Netz, Hadley, Miller

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AMST)

- 92 Proseminar: American Studies (2 cr; prereq sr, cons instr)
VIII-IX T, 103F, Bowron
- 202 Introd American Studies (2 cr; prereq MA cand in Amer stud)
VIII-IX T, 4F, Sibley
- 212 Seminar: American Studies (3 cr; prereq cons instr)
VIII-IX T, 108F, Smith
- 252 Readings: American Civilization (ar cr; prereq cons dept chair)
Ar

ANTHROPOLOGY (ANTH)

- 2 Introd World Ethnology (5 cr)
VII MTWThF, 55ForH, Spencer
- 56 Primitive Science (3 cr)
III MWF, 15ForH, Wallis
- 116 Indians of the Southwest (3 cr)
III TThS, 15ForH, Spier
- 118 Indian Civilizations of Mexico, Central America (3 cr)
IV MWF, 15ForH, Spier
- 119 Contact of Cultures (3 cr)
II MWF, 15ForH, Wallis
- 124 Probs: Anthropology (ar cr; prereq* 123)
Ar
- 128 Races, Cultures of Japan (3 cr)
VI MWF, 15ForH, Spencer
- 129 Economic Activities in Primitive Culture (3 cr)
II TThS, 15ForH, Spier
- 161 Primitive Religion (3 cr)
VII MWF, 15ForH, Wallis
- 206 Seminar: Anthropology (3 cr)
VIII-IX Th, 346ForH
- 253 Seminar: Culture, Personality (3 cr; prereq MD degree)
Ar, Spencer

ART (ART)

- 1 Prin Art (4 cr)
Lect III MWF, NHAud, Torbert, others
—1, Lab I-II M, 203TSF
—2, Lab I-II T, 203TSF
—3, Lab III-IV T, 203TSF
—4, Lab V-VI T, 203TSF
—5, Lab IX-X T, 203TSF
—6, Lab I-II W, 203TSF
—7, Lab I-II Th, 203TSF
—8, Lab III-IV Th, 203TSF
—9, Lab V-VI Th, 203TSF
—10, Lab I-II F, 203TSF
- 3 Elements of Art Criticism (3 cr; prereq 2)
III MWF, 207bJ, Eitner
- 10 Photography (3 cr; prereq soph)
Lect V T, 308MurH, Downs
Lab II-III WF, 20MurH

- 23 Drawing, Design I (5 cr; prereq 1 or concur regis)
—1, I-III MWF, 104J, Collins
—2, VII-IX MWF, 104J, Young
- 23A Drawing, Painting I (2 cr)
II-IV T, II-III Th, 417E, Young (architects only)
- 24 Drawing, Design I (5 cr; prereq 1 or concur regis)
IV-VI MWF, 104J, Downs
- 24A Drawing, Painting I (2 cr; architects only)
II-IV T, II-III Th, 417E, Young
- 25 Drawing, Design I (5 cr; prereq 23)
VI-VIII MWF, 2J, Frazier
- 30 Elements of Drawing (2 cr)
—1, III-IV MW, 207aJ, Doseff
—2, VI-VII TTh, 207aJ, Quirt
—3, VI-VII MW, 207aJ, Rollins
- 31 Elements of Drawing (2 cr; prereq 30)
—1, III-IV MW, 207aJ, Doseff
—2, VI-VII TTh, 207aJ, Quirt
—3, VI-VII MW, 207aJ, Rollins
- 33 Textile Design: Weaving (3 cr; prereq 23)
VI-VII MWF, 4J, Berglund
- 40 Sculpture I (3 cr; prereq 1)
—1, VI-VIII MW, 24F, Rood
—2, VI-VIII TTh, 405E, Tovish
- 41 Sculpture I (3 cr; prereq 40)
—1, VI-VIII MW, 24F, Rood
—2, VI-VIII TTh, 405E, Tovish
- 42 Sculpture I (3 cr; prereq 40)
—1, VI-VIII MW, 24F, Rood
—2, VI-VIII TTh, 205E, Tovish
- 48 Romanesque, Gothic Art (3 cr; prereq 1)
IV MWF, 207bJ, Eitner
- 52 Pictorial Design (3 cr; prereq 51)
VI-VIII TTh, 104J, Booth
- 53 Design II (3 cr; prereq 24, 25)
VI-VII MWF, 11J, Morton
- 54 Design II (3 cr; prereq 53)
VI-VII MWF, 11J, Morton
- 55 Design II (3 cr; prereq 23, 24, 25)
I-III TTh, 104J, Collins
- 58 Renaissance, Baroque Art 1650-1800 (3 cr; prereq* 1)
II MWF, 207bJ, Thomas
- 60 Drawing, Painting II (3 cr; prereq* 31 or 24)
—1, II-III MWF, 200aJ, Rollins
—2, IV-V MWF, 200aJ, Rollins
—3, VI-VIII MW, 417E, Doseff
—4, VI-VIII TTh, 417E, Doseff
- 60A Drawing, Painting II (2 cr; prereq 21, architects only)
IV-V Th, II-IV S, 417E, Arnest, Tovish
- 61 Drawing, Painting II (3 cr; prereq 60)
—1, II-III MWF, 200aJ, Rollins
—2, IV-V MWF, 200aJ, Rollins
—3, VI-VIII MW, 417E, Doseff
—4, VI-VIII TTh, 417E, Doseff
- 61A Drawing, Painting II (2 cr; prereq 60A)
IV-V Th, II-IV S, 417E, Arnest, Tovish

- 62 **Drawing, Painting II** (3 cr; prereq 61)
 —1, II-III MWF, 200aJ, Rollins
 —2, IV-V MWF, 200aJ, Rollins
 —3, VI-VIII MW, 417E, Doseff
 —4, VI-VIII TTh, 417E, Doseff
- 62A **Drawing, Painting II** (2 cr; prereq 61A)
 IV-V Th, II-IV S, 417E, Arnest, Tovish
- 65 Use of Drawing, Painting, Design in Commerce, Industry (5 cr; prereq 64)
 VII-IX MWF, 203TSE, Torbert
- 68 Modern Art: Contemporary Art in Europe, America (3 cr; prereq* 1)
 VII MWF, 207bJ, Eitner
- 70 **Drawing, Painting III** (3 cr; prereq 62)
 —1, III-V MW, 200bJ, Booth
 —2, I-III TTh, 200aJ, Arnest
 —3, I-IV S and ar, 200bJ, Quirt
- 71 **Drawing, Painting III** (3 cr; prereq 70)
 —1, III-V MW, 200bJ, Booth
 —2, I-III TTh, 200aJ, Arnest
 —3, I-IV S and ar, 200bJ, Quirt
- 72 **Drawing, Painting III** (3 cr; prereq 71)
 —1, III-V MW, 200bJ, Booth
 —2, I-III TTh, 200aJ, Arnest
 —3, I-IV S and ar, 200bJ, Quirt
- 75 Presentation Techniques (3 cr; prereq 74)
 I-III TTh, 104J, Collins
- 78 **Art of China** (3 cr; prereq 1; or 9 cr lit or hist, cons instr)
 I MWF, 207bJ, Thomas
- 80 **Sculpture II** (3 cr; prereq 42)
 —1, VI-VIII MW, 24F, Rood
 —2, VI-VIII TTh, 405E, Tovish
- 81 **Sculpture II** (3 cr; prereq 80)
 —1, VI-VIII MW, 24F, Rood
 —2, VI-VIII TTh, 405E, Tovish
- 82 **Sculpture II** (3 cr; prereq 81)
 —1, VI-VIII MW, 24F, Rood
 —2, VI-VIII TTh, 405E, Tovish
- 85 **Design, Photography** (3 cr; prereq 84)
 VI-VIII WF, 104J, Liebling
- 89 **Textile Design: Weaving** (3 cr; prereq 88)
 VIII-IX MWF, 4J, Berglund
- 90 **Printmaking** (3 cr; prereq* 62)
 —1, II-IV MW, 203J, Myers
 —2, VI-VIII MW, 203J, Myers
 —3, VI-VIII TTh, 203J, Myers
- 91 **Printmaking** (3 cr; prereq 90)
 —1, II-IV MW, 203J, Myers
 —2, VI-VIII MW, 203J, Myers
 —3, VI-VIII TTh, 203J, Myers
- 92 **Printmaking** (3 cr; prereq 91)
 —1, II-IV MW, 203J, Myers
 —2, VI-VIII MW, 203J, Myers
 —3, VI-VIII TTh, 203J, Myers
- 93 **Ceramic Processes** (3 cr; prereq* 25, or 42)
 III-IV MWF, 10J, Frazier
- 94 **Ceramic Design** (3 cr; prereq 93)
 III-IV MWF, 10J, Frazier
- 95 **Ceramic Design** (3 cr; prereq 93)
 III-IV MWF, 10J, Frazier
- 99 **Leather, Tooling, Bookbinding** (3 cr; prereq cons instr)
 II-III MWF, 2J, Berglund
- 101 **Ceramic Sculpture** (3 cr; prereq 93)
 III-IV MWF, 10J, Frazier
- 102 **Ceramic Sculpture** (3 cr; prereq 101)
 III-IV MWF, 10J, Frazier
- 103 **Design in Industry** (3 cr; prereq 54, 55)
 Ar, Staff
- 104 **Design in Industry** (3 cr; prereq 103)
 Ar, Staff
- 105 **Design in Industry** (3 cr; prereq 104)
 Ar, Staff
- 108 **Romanesque, Gothic Art** (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr)
 IV MWF, 207bJ, Eitner
- 110 **Adv Drawing** (3 cr; prereq 62)
 VI-VIII TTh, 200aJ, Arnest
- 111 **Adv Drawing** (3 cr; prereq 110)
 VI-VIII TTh, 200aJ, Arnest
- 112 **Adv Drawing** (3 cr; prereq 111)
 VI-VIII TTh, 200aJ, Arnest
- 118 **High Renaissance in Italy, the North** (3 cr; prereq 9 cr art hist, or 9 cr lit or hist, cons instr)
 V MWF, 207bJ, Thomas
- 123 **Adv Photography** (3 cr; prereq 54, 55)
 VII-IX MW, 104J, Downs
- 124 **Adv Photography** (3 cr; prereq 123)
 VII-IX MW, 104J, Downs
- 125 **Adv Photography** (3 cr; prereq 124)
 VII-IX MW, 104J, Downs
- 128 **Art of 18th Century Europe** (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr)
 III TTh and ar, 207bJ, Liljegren
- 138 **Art in United States** (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr)
 VIII MWF, 207bJ, Tselos
- 140 **Metal Sculpture, Jewelry** (3 cr; prereq* 55)
 —1, III-IV MWF, 11J, Morton
 —2, I-II MWF, 11J, Morton
- 141 **Metal Sculpture, Jewelry** (3 cr; prereq* 140)
 —1, III-IV MWF, 11J, Morton
 —2, I-II MWF, 11J, Morton
- 142 **Metal Sculpture, Jewelry** (3 cr; prereq 141)
 —1, III-IV MWF, 11J, Morton
 —2, I-II MWF, 11J, Morton
- 148 **Modern Architecture 1900-1950** (3 cr; prereq 1, 9 cr art hist; or 1, 9 cr lit or hist, cons instr)
 VI MWF, 207bJ, Tselos
- 150 **Probs in Painting** (ar cr; prereq 72, cons instr)
 —1, III-V MW, 200bJ, Booth
 —2, I-III TTh, 200aJ, Arnest
 —3, I-IV S and ar, 200bJ, Quirt
- 151 **Probs in Painting** (ar cr; prereq 150)
 —1, III-V MW, 200bJ, Booth
 —2, I-III TTh, 200aJ, Arnest
 —3, I-IV S and ar, 200bJ, Quirt
- 152 **Probs in Painting** (ar cr; prereq 151)
 —1, III-V MW, 200bJ, Booth
 —2, I-III TTh, 200aJ, Arnest
 —3, I-IV S and ar, 200bJ, Quirt

- 158A 20th Century European, American Painting (3 cr; prereq 1, 9 cr art hist; or 1, 9 cr hist or lit, cons instr)
II MWF, 316NMA, Arnason
- 178 Scandinavian Art (3 cr; prereq 9 cr hist of art; or 9 cr hist or lit, cons instr)
VI TTh and ar, 207bJ, Liljegen
- 180 Probs: Sculpture (ar cr; prereq* 82, 102 or 142)
Ar, 24F, Rood, Tovish
- 181 Probs: Sculpture (ar cr; prereq 180)
Ar, 24F, Rood, Tovish
- 182 Probs: Sculpture (ar cr; prereq 181)
Ar, 24F, Rood, Tovish
- 190 Probs: Printmaking (ar cr; prereq* 92)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 191 Probs: Printmaking (ar cr; prereq 190)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 192 Probs: Printmaking (ar cr; prereq 191)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 193 Adv Probs: Design (3 cr; prereq* one design course above 53, 54, 55)
Ar, Staff
- 194 Adv Probs: Design (3 cr; prereq 193)
Ar, Staff
- 195 Adv Probs: Design (3 cr; prereq 194)
Ar, Staff
- 196 Readings: Art History, Criticism (3 cr; prereq cons instr)
Ar, Staff
- 197 Readings: Art History, Criticism (3 cr; prereq cons instr)
Ar, Staff
- 198 Readings: Art History, Criticism (3 cr; prereq cons instr)
Ar, Staff
- 200 Adv Probs: Studio Work (ar cr; prereq cons instr)
Ar, Staff
- 201 Adv Probs: Studio Work (ar cr; prereq cons instr)
Ar, Staff
- 202 Adv Probs: Studio Work (ar cr; prereq cons instr)
Ar, Staff
- 206 Seminar: European, American Architecture (3 cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 207 Seminar: European, American Architecture (3 cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 208 Seminar: European, American Architecture (3 cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 216 Seminar: European, American Painting (3 cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 217 Seminar: European, American Painting (3 cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 218 Seminar: European, American Painting (3 cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 236 Seminar: Probs in Art History, Criticism (ar cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 237 Seminar: Probs in Art History, Criticism (ar cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 238 Seminar: Probs in Art History, Criticism (ar cr; prereq cons instr)
Ar, Arnason, Tselos, others
- 250 Thesis Seminar (ar cr; prereq cons grad advis)
Ar, Booth, Arnest
- 251 Thesis Seminar (ar cr; prereq cons grad advis)
Ar, Booth, Arnest
- 252 Thesis Seminar (ar cr; prereq cons grad advis)
Ar, Booth, Arnest

ASTRONOMY (AST)

- 11 Descriptive Astronomy (5 cr, \$51)
IV MTWF, 166Ph, Luyten
- 53 Stellar Astronomy (3 cr; prereq 51 or 11, Math 6, cons instr)
II MWF, 358Ph

BOTANY (BOT)

- 3 Gen Botany (3 cr)
—1, Lect III TTh, 06Bo, Hall
—2, Lect VI TTh, 06Bo, Hall
—1, Lab III-IV TTh, 1,4,5Bo
—2, Lab V-VI TTh, 1,4,5Bo
—3, Lab VII-VIII TTh, 1,4,5Bo
—4, Lab III-IV WF, 1,4,5Bo
—5, Lab V-VI WF, 1,4,5Bo
—6, Lab VII-VIII WF, 1Bo
- 10 Minnesota Plant Life (3 cr)
Lect VII WF, 5Bo, Moir
Lab VII-VIII M, 5Bo
- 51 Gen Plant Physiology (4 cr; prereq 3 or 5 or NSci 9, 2 qtr inorg chem)
Lect VI MW, 110Bo, Frenkel
—1, Lab III-IV MW, 104Bo
—2, Lab VII-VIII MW, 104Bo
Conf VI F, 110Bo
- 52 Elem Taxonomy (3 cr; prereq 3 or 5 or NSci 9)
VI-VIII MW, 401Bo, Morley
- 54 Survey of Plant Kingdom (5 cr; prereq 3 or 5 or NSci 9)
II-IV MWF, 4Bo, Abbe
- 107 Survey of Angiosperm Families II: Higher Angiosperms (3 cr; prereq 106)
II-IV TTh, 401Bo, Morley

- 115 Minnesota Spring Flora (3 cr; prereq* 52 or 176)
VI-VIII TTh, 401Bo, Ownbey
- 123 **Research Methods in Histology** (3-5 cr; prereq 3 or 5, 121 or 125, cons instr)
Lect III MWF, 209Bo, Abbe
Lab ar, Abbe, Hansen
- 128 **Introd Paleobotany** (3 cr; prereq* 54)
VI-VII MWF, 4Bo, Hall
- 133 **Ecological Plant Geography** (5 cr; prereq 50 or 130 or For 3, 4)
VI-VIII MWF, 214Bo, Lawrence
- 137 **Experimental Ecology** (5 cr; prereq 18 cr pl sci incl 50 or 130; 51, cons instr)
I-III TThS, IV S, 214Bo, Hulbert
- 165 **Introd Pollen Analysis** (3 cr; prereq cons instr)
VI-VII MWF, 202Bo, Dahl
- 178 **Nitrogen Metabolism of Plants** (3 cr; prereq* sr, 51 or 140, 20 cr chem or biochem, PCh 103 or 108)
8:30-9:45 am TTh, 110Bo, Brown, Frenkel
- 181 **Adv Physiology Lab** (2 cr; prereq sr, 178 or concur regis)
VI-X T or Th, 104Bo, Brown, Frenkel
- 199 **Problems** (1-5 cr; prereq 20 cr nat sci, cons instr)
Ar
- 203 **Research Probs: Morphology of Vascular Plants** (ar cr)
Ar
- 207 **Research Probs: Taxonomy, Floristic Plant Geography** (ar cr)
Ar
- 211 **Research Probs: Paleobotany** (ar cr)
Ar
- 223 **Research Probs: Ecology** (ar cr)
Ar
- 227 **Research Probs: Plant Physiology** (ar cr)
Ar
- 231 **Research Probs: Cytology** (ar cr)
Ar
- 242 **Seminar: Morphology** (1 cr)
Ar
- 245 **Seminar: Taxonomy** (1 cr)
Ar
- 248 **Seminar: Paleobotany** (1 cr)
Ar
- 251 **Seminar: Ecology** (1 cr)
Ar
- 254 **Seminar: Plant Physiology** (1 cr)
Ar
- 257 **Seminar: Cytology** (1 cr)
Ar

CLASSICS

Classics (CLAS)

- 24 **Technical Terms of Science, Medicine, Humanities** (3 cr; prereq soph)
IV MWF, 6F, Swanson
- 193 **Classical Literary Traditions** (3 cr; prereq 9 cr Engl above C or foreign lit)
IV MWF, 109F, DeWitt

Greek (GRK)

- 3 **Selections from Attic Prose** (5 cr; prereq 2)
II MTWThF, 103F, McDonald
- 53 **Plato: Apology, Selections** (3 cr; prereq 3)
I MWF, 108F, Anderson
- 73 **New Testament** (3 cr; prereq any two of 51, 52, 53)
Ar, Anderson
- 173 **Reading** (3 cr; prereq cons dept)
Ar, Swanson
- 203 **Seminar: Greek Literary Bibliography, Criticism** (3 cr)
VIII, IX Th, 103F, Swanson

Latin (LAT)

- 3 **Intermed Latin** (5 cr; prereq 2 or 1 yr high school Lat)
IV MTWThF, 103F, Forbes
- 73 **Prose Composition** (2 cr; prereq* 3 or 4 yr high school Lat)
IV MW, 108F, McDonald
- 83 **Latin Literature** (3 cr; prereq* 40 or 4 yr high school Lat)
II MWF, 108F, Forbes
- 133 **Vulgar Latin** (3 cr; prereq cons instr)
III MWF, 103F, Swanson
- 173 **Reading** (3 cr; prereq cons dept)
VI MWF, 103F, McDonald

ENGLISH

Composition (COMP)

- 4 **Freshman Composition** (3 cr; prereq assign to category 1, 2, or 3)
-1, II MWF, 6F
-2, VII MWF, 5F
- 5 **Freshman Composition** (3 cr; prereq 4)
-1, V MWF, 306F
-2, VIII MWF, 206F
- 6 **Freshman Composition** (3 cr; prereq 5)
-1, I MWF, 218F
-2, II MWF, 253TSF
-3, III MWF, 311F
-4, IV MWF, 213F
-5, V MWF, 303F
-6, VI MWF, 5F
- 27 **Adv Writing** (3 cr; prereq see col bul)
-1, I MWF, 107F
-2, II MWF, 227F
-3, III MWF, 205F (legal sec)
-4, IV MWF, 209½F
- 28 **Adv Writing** (3 cr; prereq see col bul)
-1, II MWF, 213F
-2, II MWF, 205F
-3, III MWF, 107F
-4, V MWF, 107F
- 29 **Adv Writing** (3 cr; prereq 27)
II MWF, 114F
- 58 **Business Reports, Letters** (3 cr; prereq 6 or Comm 3 or Emgl C or exempt, regis BA or cons instr)
-1, II MWF, 5F
-2, III MWF, 5F
-3, IV MWF, 5F

- 103 **Writing Fiction** (3 cr; prereq* 6 cr above 50, or grad)
 —1, VIII-IX M, 304F
 —2, VIII-IX W, 6F, Ross
- 104 **Writing Poetry** (3 cr; prereq* 6 cr above 50, or Engl 121, or grad)
 VIII-IX Th, 108F, Unger
- 202 **Seminar: Writing** (3 cr; prereq 200)
 VIII-IX T, 205F, Tate
 Workshop VIII-IX W, 304F, Tate

English (ENG)

- A Freshman English** (5 cr; prereq assign to category 1 or 2)
 II MTWThF, 311½F
- B Freshman English** (5 cr; prereq A)
 I MTWThF, 311½F
- C Freshman English** (5 cr; prereq B)
 —1, I MTWThF, 206F
 —2, II MTWThF, 206F
 —3, III MTWThF, 303F
 —4, IV MTWThF, 11F
 —5, V MTWThF, 204F
 —6, VI MTWThF, 207F
- 23 **Introductory Literature** (5 cr; prereq C or Comp 6 or Comm 3 or exempt)
 —1, III MTWThF, 301F, Moore
 —2, IV MTWThF, 301F, Montgomery
 —3, VI MTWThF, 206F, Buckley
- 39 **Modern Literature** (3 cr; prereq soph, C or Comp 6 or Comm 3 or exempt)
 VII MWF, 308F, O'Connor
- 55 **Shakespeare: Comedies** (3 cr; prereq see col bul)
 —1, II MWF, 107F, Atkins
 —2, VI MWF, 209½F, Tuve
- 56 **Shakespeare: Tragedies** (3 cr; prereq see col bul)
 —1, III MWF, 110F, Hessler
 —2, VI MWF, 311F, Unger
- 74 **American Literature** (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
 III MWF, 2F, McDowell
- 75 **Chaucer** (4 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
 IV MTWTh, 107F
- 99 **Independent Reading** (3 cr; prereq 98)
 Ar, Hessler
- 100 **Old English** (4 cr; prereq 6 cr above C)
 II MTWF, 308F, Armstrong
- 103 **Beowulf** (3 cr; prereq 100)
 I MWF, 305F, Armstrong
- 106 **Whitman, Mark Twain** (3 cr; prereq 6 cr above C)
 III MWF, 207F, Marx
- 113 **American Short Story** (3 cr; prereq 6 cr above C)
 IV MWF, 303F, Booth
- 125 **Technique of the Novel** (3 cr; prereq sr, 124)
 VIII-IX T, 204F, Unger
- 129 **Modern Drama: 1880 to Present** (3 cr; prereq 55-56 or 127)
 IV MWF, 204F, Coxe
- 131 **English Poetry 1832-1914** (3 cr; prereq 130)
 III MWF, 204F, Montgomery
- 134 **Origins of American Naturalism** (3 cr; prereq 6 cr above C)
 VI MWF, 305F, Bowron
- 136 **Adv Shakespeare** (4 cr; prereq 55-56)
 IV MTWF, 207F, Brown
- 139 **19th Century English Literature** (3 cr; prereq 138)
 II TThS, 303F, Erdman
- 149 **English Literature: Middle Ages Exclusive of Chaucer** (3 cr; prereq 148)
 VII MWF, 204F, Clark
- 151 **Recent Poetry** (4 cr; prereq 6 cr above C)
 VII MTWTh, 110F, Jackson
- 162 **Milton** (3 cr; prereq 21-22 or 55-56)
 II MWF, 303F, Tuve
- 166 **Historical Backgrounds of Modern English** (3 cr; prereq 165)
 VI MWF, 205F, Spicer
- 175 **Chaucer** (4 cr, §75; prereq 100 or concur regis)
 IV MTWTh, 3F, Jackson
- 181 **Recent Trends in Literary Criticism** (3 cr; prereq 6 cr above C)
 I MWF, 204F, O'Connor
- 186 **Interpretation of Drama** (3 cr; prereq 185)
 VII-VIII W, 101F, Coxe
- 189 **18th Century Literature** (3 cr; prereq 6 cr above C)
 II MWF, 207F, Monk
- 199 **17th Century Literature** (3 cr; prereq 198)
 III MWF, 206F, Monk
- 201 **Adv Chaucer** (3 cr; prereq 75, sr, cons dept)
 VI MWF, 303F, Clark
- 207 **Dr Johnson, His Circle** (3 cr; prereq grad, sr, cons dept)
 IV MWF, 304F, Moore
- 227 **Elizabethan Drama** (3 cr; prereq 136 or 152 or 170)
 VIII-IX T, 312Lib, Brown
- 242 **The Canterbury Tales** (3 cr)
 IX-X Th, 312Lib, Clark
- 255 **American Romanticism I: New England** (3 cr; prereq cons instr)
 IX-X W, 4F, McDowell
- 257 **Spenser, Milton** (3 cr; prereq see col bul)
 VIII-IX M, 108F, Tuve
- 264 **19th Century Novel II** (3 cr)
 IX-X F, 339 Lib, Booth
- 279 **American Realism** (3 cr; prereq cons instr)
 VIII-IX Th, 304F, Booth
- 286 **Dryden: His Age** (3 cr)
 VIII-IX T, 304F, Monk
- 289 **Studies in Victorian Literature** (3 cr)
 VIII-IX W, 205F, Erdman
- 292 **Studies in Critical Theory** (3 cr)
 VII-VIII Th, 205F, Tate
- 299 **Independent Reading** (3 cr; prereq MA degree or equiv)
 Ar, Grad staff

GENERAL STUDIES

Communication (COMM)

- 1 **Communication** (4 cr; prereq assign to category 1, 2, or 3)
II MTWF, 8TNM
- 2 **Communication** (4 cr; prereq 1)
-1, I MTWF, 107TNM
-2, V MTWF, 106TNM
- 3 **Communication** (4 cr; prereq 2)
-1, I MTWF, 8TNM
-2, II MTWF, 114TNM
-3, III MTWF, 114TNM
-4, IV MTWF, 114TNM
-5, V MTWF, 114TNM
-6, VI MTWF, 114TNM
-7, VII MTWF, 114TNM

Family Life (FL)

- 1 **Preparation for Marriage** (3 cr)
-1, II MWF, 107TNM, Dyer, Hansen, Neubeck, others
-2, V MWF, 107TNM
-3, VII MWF, 107TNM
- 15 **The Home: Its Furnishings** (3 cr)
VI MWF, 206WeH, Ludwig
- 20 **Consumer Education** (3 cr)
I MWF, 115Psy, Heimerl
- 25 **Child Development, Adjustment** (3 cr)
III MWF, 202Pt, Erieland

Humanities (HUM)

- 1 **Humanities in Modern World I** (5 cr)
-1, III MTWThF, 113JohH, Ramsland
-2, V MTWThF, 115JohH, Rosenfeld
- 2 **Humanities in Modern World II** (5 cr; prereq 1)
-1, I MTWThF, 122JohH, Keeler
-2, II MTWThF, 114JohH, Gudas
-3, VI MTWThF, 122JohH, Rosenfeld
-4, IV MTWThF, 115JohH, Taylor
- 3 **Humanities in Modern World III** (5 cr; prereq 2)
-1, I MTWThF, 308F, Kwiat
-2, II MTWThF, 321F, Coxé
-3, II MTWThF, 301F, D K Smith
-4, III MTWThF, 20ForH, Blum
-5, III MTWThF, 107TNM, Shirey
-6, III-IV TTh, 1 hr ar, 122JohH, Ross
-7, V MTWThF, 113JohH, Nelsen
-8, VI MTWThF, 113JohH, Bryan
- 4 **Humanities in Modern World IV** (5 cr; prereq 1 or 2 or 3)
IV MTWThF, 114JohH, Livingston
- 13 **Renaissance Heritage** (5 cr)
III MTWThF, 114JohH, Livingston
- 23 **American Life III** (3 cr)
-1, II MWF, 9F, Kwiat
-2, III MWF, 9F, Chambers
-3, IV MWF, 9F, Cronin
-4, VII MWF, 9F, Elbers

- 53 **Humanities in Modern World** (5 cr, §3)
-1, III MTWThF, 85ForH, Wood
-2, V MTWThF, 80ForH, Bowditch
-3, VI MTWThF, 115JohH, Ames
- 63 **Renaissance Heritage** (5 cr, §13)
-1, II MTWThF, 115JohH, Ames
-2, III MTWThF, 115JohH, Shaw
- 73 **Humanities in United States** (3 cr, §23)
VII MWF, 6F, Marx
- 133 **Proseminar** (2 cr; prereq sr)
IX-X W, 105JohH, Ross

Natural Science (NSCI)

- 3 **Orientation in Natural Sciences** (5 cr; prereq 2)
II MTWThF, 166Ph, Graubard
- 6 **Physical World** (4 cr; prereq 5)
Lect IV MWF, 110P, Lewis
-1, Lab VI-VII M, 22P
-2, Lab VI-VII W, 22P
-3, Lab III-IV T, 22P
- 9 **Gen Biology** (4 cr, §7-8-9; prereq 8)
Lect V WF, 06Bo, Merrell
-1, Lab I-II MF
-2, Lab I-II TTh
-3, Lab IX-X MF
- 173 **Development of the Sciences** (3 cr; prereq* 172)
IV MWF, 241Ph, Graubard

Personal Orientation (PO)

- 1 **How to Study** (2 cr)
-1, I MWF, 106TNM, Harrell
-2, II MWF, 106TNM, Harrell
-3, VI MWF, 106TNM, Christensen
-4, VII MWF, 106TNM, Christensen
- 11 **Choosing a Vocation** (2 cr)
II TTh, 107F, Hewer

Social Science (SSCI)

- 1 **Intro Social Science** (4 cr)
-1, II MWF and ar, 315AH, Kroeger
-2, III MWF and ar, 225C, Cooperman
-3, IV MWF and ar, 122JohH, Miller
- 2 **Intro Social Science** (4 cr; prereq 1)
-1, I MWF and ar, 113JohH, Nelson
-2, II MWF and ar, 113JohH, Nelson
-3, II MWF and ar, 85ForH, Raniele
-4, III MWF and ar, 80ForH, Rozenal
-5, IV MWF and ar, 113JohH, Nelson
- 3 **Intro Social Science** (4 cr; prereq 2)
-1, II MWF and ar, 50ChE, Calhoun
-2, III MWF and ar, 50ChE, Calhoun
-3, III MWF and ar, 315AH, Petter
-4, IV MWF and ar, 315AH, Petter
-5, V MWF and ar, 122JohH, Calhoun
-6, VI MWF and ar, 185ForH
-7, III-IV TTh, 80ForH, Naftalin
- 13 **Int'l Relations** (3 cr)
III MWF, 122JohH, Turner

GEOGRAPHY (GEOG)

- 1 Physical Resources** (5 cr, §old 11)
Lect II MWF, 18ME, Borchert
-1, I MW, 261ForH
-2, I TTh, 261ForH
-3, II TTh, 261ForH
-4, III WF, 261ForH
-5, V TTh, 261ForH
-6, VI TTh, 261ForH
- 4 Human Geography** (5 cr, §old 45)
Lect III MWF, 155ForH, Broek
-1, II MW, 261ForH
-2, III TTh, 261ForH
-3, IV MW, 261ForH
-4, IV TTh, 261ForH
-5, V MW, 261ForH
-6, VI WF, 261ForH
- 41 Commercial Production** (5 cr)
Lect IV MWThF, 55ForH, Laycock
-1, I F, 261ForH
-2, II F, 261ForH
-3, III M, 261ForH
-4, VI M, 261ForH
- 47 Minnesota** (3 cr; prereq* 5 cr)
I MWF, 285ForH, Kress
- 90 Readings** (ar cr; prereq 12 cr, cons instr)
Ar
- 101 Western, Central Europe** (3 cr; prereq* 5 cr)
II MWF, 285ForH, East
- 110 South America** (3 cr; prereq* 5 cr)
VII MWF, 285ForH, Borchert
- 117 Middle East** (3 cr; prereq* 5 cr)
IV MWF, 285ForH, Sopher
- 139 Adv Cartography** (3 cr; prereq 138)
V-VI TTh, 275ForH, Sopher
- 160 Development of Geographic Thought** (3 cr, §old 155; prereq sr, 15 cr)
VII MWF, 261ForH, Broek
- 170 Field Course** (3 cr; prereq sr, 15 cr)
Ar, East, Borchert, Sopher
- 253 Seminar: Historical Geography of Europe** (ar cr)
VIII-IX Th
- 301 Research Probs** (ar cr)
Ar

GEOLOGY (GEOL)

- A Gen Geology Lab** (2 cr; prereq 1 or concur regis)
-1, I-II TTh, 22P
-2, VI-VII TTh, 22P
- B Gen Geology Lab** (2 cr; prereq A)
-1, I-II MW, 22P
-2, VIII-IX TTh, 22P
- 1 Gen Geology** (3 cr, 1-2 except forestry students)
-1, II MWF, 210P
-2, VI MWF, 110P
- 2 Gen Geology** (3 cr, †1-2; prereq 1)
-1, IV MWF, 2P
-2, VII MWF, 210P

- 8 Earth Features, Their Meaning** (5 cr, §1, NSci 6)
II MTWThF, 2P, Thiel
- 25 Rock Study** (2 cr; prereq soph, 24)
Lect I T, 210P, Goldich
Rec I Th, 210P, Goldich
-1, Lab VI-VII T, 200P
-2, Lab VIII-IX T, 200P
- 61 Blowpipe Analysis** (3 cr; prereq 24)
Lab ar, 100P, Gruner
- 104 Micropaleontology** (3 cr; prereq 103)
Ar, Swain
- 109 Adv Invertebrate Paleontology** (3 cr; prereq 108)
VIII-IX F, Ar, Bell
- 112 Petroleum Geology** (3 cr; prereq sr, 125, 151)
I MWF, 110P, Swain
- 114 Minnesota, Adjoining Areas** (3 cr; prereq 25)
IV MWF, 210P, Thiel
- 120 Glacial Geology** (3 cr; prereq A, 2)
II MWF, 220P, Wright
- 132 Petrology** (4 cr; prereq 131)
Lect III MW, 210P, Goldich
Rec III F, 210P
Lab VI-VII WF, 200P
- 137 Prin Chemical Geology** (3 cr; prereq 25)
Ar, Gruner
- 140 Applied Petrography** (3 cr; prereq 131)
Lect and lab ar, Goldich
- 141 Applied Petrography** (3 cr; prereq 140)
Lect ar, Goldich
Lab VIII-IX MW, 200P
- 145 Aerial Photographs** (3 cr; prereq A, 2)
VI-VIII TTh, 220P, Wright
- 152 Stratigraphy** (3 cr; prereq 151)
II MWF, 110P, Bell
- 167 Mineralography** (3 cr; prereq 166)
Ar, Schwartz
- 170 Geologic Probs** (ar cr; prereq cons maj advis)
Ar
- 216 Mining Geology** (3 cr)
Ar, Schwartz

GERMAN (GERM)

- 1 Bgn German** (5 cr)
-1, I MTWThF, 207F
-2, II MTWThF, 209½F
- 2 Bgn German** (5 cr; prereq 1 or 1 yr high school Ger)
-1, I MTWThF, 209½F
-2, II MTWThF, 3F
- 3 Bgn German** (5 cr; prereq 2 or 2 yr high school Ger)
-1, I MTWThF, 209F
-2, II MTWThF, 209F
-3, III MTWThF, 209F
-4, IV MTWThF, 209F
-5, V MTWThF, 209F
- 3b Bgn Reading** (5 cr; prereq 2b)
II MTWThF, 2F

- 4 **Intermed German** (5 cr; prereq 3 or 3a or 3b, or 3 yr high school Ger)
 —1, III MTWThF, 209½F
 —2, VII MTWThF, 209F
- 20 **Reading, Speaking** (5 cr; prereq 4)
 III MTWThF, 108F, Wangsness
- 26 **Chemical German** (3 cr; prereq 25, for chemists, miners)
 II MWF, 115C, Prottegeier
- 29 **Chemical Prose** (3 cr; prereq 28; for chem, min, pharm students)
 II MWF, 304F
- 33 **Medical German** (5 cr; prereq 3, 3a or 3b, for premed students)
 II MTWThF, 204F
- 43 **Reading German Chemical Periodicals** (2 cr; prereq 42)
 I TTh, 208F
- 52 **Composition** (2 cr; prereq 51)
 VI MF, 208F, Downs
- 55 **Conversation** (2 cr; prereq 54)
 VI TTh, 208F, Menze
- 58 **Pronunciation** (2 cr; prereq 4)
 III TTh, 208F, Downs
- 59 **Pronunciation, Diction** (1-2 cr; prereq 3, cand for German play)
 Ar
- 61 **Lyrics, Ballads** (3 cr; prereq 3 cr above 59)
 II MWF, 302F, Pfeiffer
- 65 **Modern Drama** (3 cr; prereq 3 cr above 59)
 IV MWF, 208F, Ramras
- 72 **Survey of Literature** (3 cr; prereq 71)
 III MWF, 208F, Pfeiffer
- 75 **Classics in Translation** (2 cr; prereq 74)
 VII MF, 208F, Pfeiffer
- 77 **Faust I** (3 cr; prereq 63, 3 addtl cr above 59)
 VII MWF, 209½F, Wood
- 92 **German Civilization, Culture** (3 cr; prereq 91)
 II MWF, 208F, Wood
- 145 **Classical Period: Goethe** (3 cr; prereq 144)
 VII-IX Th, 208F, Ramras
- 162 **Lyric Poetry** (3 cr; prereq sr, 161)
 VIII-IX F, 208F, Wood
- 168 **History of German Literature** (1 cr; prereq 167)
 VIII-IX M, 208F
- 175 **German, French Literary Relations** 17th, 18th, 19th, 20th Centuries (3 cr; prereq sr, 174)
 VIII-IX T, 208F, Pfeiffer
- 194 **Old Saxon** (3 cr; prereq sr, 113)
 VIII-IX W, 208F, Downs

HISTORY (HIST)

- 2 **Civilization of Modern World** (3 cr)
 Lect II MW, 4ME, Bowditch
 —1, II Th, 75ForH
 —2, II F, 30ForH
 —3, II F, 215E

- 4, III F, 60ForH
 —5, IV Th, 75ForH
 —6, I Th, 75ForH
- 3 **Civilization of Modern World** (3 cr)
 Lect II TTh, BuAud, Bowditch
 —1, I M, 70ForH
 —2, I T, 60ForH
 —3, I W, 70ForH
 —4, I Th, 60ForH
 —5, II M, 60ForH
 —6, II W, 60ForH
 —7, II F, 60ForH
 —8, II F, 50ForH
 —9, III T, 60ForH
 —10, III W, 60ForH
 —11, III Th, 60ForH
 —12, IV T, 60ForH
 —13, IV Th, 60ForH
 —14, IV Th, 170ForH
 —15, VI Th, 70ForH
 —16, VII M, 70ForH
- 6 **English History** (3 cr)
 Lect II MW, 55ForH, Burt
 —1, I Th, 70ForH
 —2, II T, 75ForH
 —3, II Th, 70ForH
 —4, III T, 70ForH
 —5, III Th, 75ForH
- 13 **Medieval History** (3 cr; prereq* maj music or art)
 IV MWF, 115ForH, Thompson
- 16 **Ancient Civilization** (3 cr)
 VII TWTh, 180ForH, Jones
- 16a **Ancient Civilization with Readings** (5 cr)
 VII MTWThF, 180ForH, Jones
- 17 **Modern Economic, Social Probs** (5 cr; prereq 3rd qtr fresh)
 Lect II TThS, 180ForH, Heaton
 —1, III T, 40ForH
 —2, III Th, 40ForH
- 22 **American History** (3 cr; prereq soph)
 —1, Lect II TTh, NHAud, Osgood
 —2, Lect VIII TTh, 155ForH, Osgood
 —1, II F, 40ForH
 —2, IV T, 75ForH
 —3, IV Th, 70ForH
 —4, IV F, 40ForH
 —5, VI W, 70ForH
 —6, VI F, 70ForH
 —7, VII F, 70ForH
 —8, VII M, 40ForH
 —9, II M, 75ForH
- 52 **Ancient Civilization** (3 cr, §16)
 VII TWTh, 180ForH, Jones
- 54 **Civilization of Modern World** (3 cr, §2)
 Lect II MW, 4ME, Bowditch
 —1, I F, 70ForH
 —2, II F, 55ForH
- 55 **Civilization of Modern World** (3 cr, §3)
 Lect II TTh, BuAud, Bowditch
 —1, VII Th, 40ForH
 —2, II F, 75ForH
 —3, III F, 70ForH

- 58 English History (3 cr, §6)
Lect II MW, 55ForH, Burt
Quiz II F, 70ForH
- 61 American History (3 cr, §22)
—1, Lect II TTh, NHAud, Osgood
—2, Lect VIII TTh, 155ForH, Osgood
—1, IV T, 70ForH
—2, III Th, 70ForH
—3, VII T, 70ForH
—4, VII Th, 75ForH
- 67a Renaissance, Reformation (3 cr)
III MWF, 115ForH, Krey
- 69 American History since 1900 (3 cr)
VII MWF, 20ForH, Chambers
- 72 English Constitutional History (3 cr; pre-
req see col bul)
—1, I MWF, 115ForH, Thompson
—2, I MWF, 180ForH, Willson
- 78 Canadian History (3 cr)
III TThS, 130ForH, Burt
- 88 American Colonies (3 cr)
II MWF, 185ForH, Tyler
- 89 Economic History of Modern War (3 cr)
VI MWF, 170ForH, Bowditch
- 92 American West (3 cr)
III TThS, 185ForH, Osgood
- 95 American Diplomatic History (3 cr)
VI MWF, 180ForH, Beatty
- 99 Minnesota, the Northwest (3 cr)
III MWF, 180ForH, Jordan
- 102 History of Ancient Near East (3 cr)
I TThS, 160ForH, Jones
- 105a Renaissance, Reformation (3 cr)
III MWF, 115ForH, Krey
- 108 Continental Europe (3 cr)
IV MWF, 160ForH, Steefel
- 111 Europe in 20th Century (3 cr)
I MWF, 155ForH, Deutsch
- 114 Economic History of Europe (3 cr)
II TThS, 170ForH, Heaton
- 118 World War II (3 cr)
VI MWF, 12F, Kolehmainen
- 118a Scandinavia during World War II (3 cr;
prereq* 106a-107a-108a or 122-123-124)
Ar
- 124 History of Scandinavian Countries (3 cr)
III MWF, 12F, Lindberg
- 127 Russia (3 cr)
IV MWF, 180ForH, Anderson
- 127a Eastern Europe, Middle East in 19th, 20th
Centuries (3 cr; prereq 1-2-3)
III MWF, 170ForH, Anderson
- 130 Modern England: 1642 to 1714 (3 cr)
II MWF, 170ForH, Willson
- 136 World War II (3 cr)
II MWF, NHAud, Deutsch
- 145 American Folklore (3 cr)
I MWF, 185ForH, Jordan
- 148 American Economic, Social History (3 cr)
II TThS, 150ForH, Kohlmeyer
- 151 Social Intellectual History of United States
(3 cr)
III MWF, 185ForH, Tyler
- 156 Canadian History, Canadian-American Re-
lations (3 cr)
III TThS, 130ForH, Burt
- 159 Latin-American History (3 cr)
IV MWF, 170ForH, Beatty
- 169 Readings in Works of Great Historians (3
cr; prereq sr)
VIII-IX M, 170ForH, Steefel
- 172 Readings in Ancient History (3 cr, †170-
171-172; prereq sr)
Ar, Jones
- 175 Readings in Medieval, Renaissance History
(3 cr, †173-174-175; prereq sr)
VIII-IX W, 244ForH, Krey
- 175a Selected Readings in Medieval English
History (3 cr)
VI-VII Th, 170ForH, Thompson
- 178 Readings in 17th Century French (3 cr,
†176-177-178; prereq sr, knowl French)
Ar, Lindberg
- 178a Russian History (3 cr, †176a-177a-178a;
prereq* sr, 125-126-127, knowl Russian,
German, or French)
VII-VIII M, 244ForH, Anderson
- 178b Scandinavian History (3 cr, †176b-177b-
178b; prereq sr)
Ar, Lindberg
- 178c Recent European History (3 cr, †176c-177c-
178c; prereq* sr, course in 20th century
Europe)
VI-VII W, 244ForH, Deutsch
- 181 Readings in European Economic History
since 1700 (3 cr, †179-180-181; prereq sr)
VI-VII T, 356ForH, Heaton
- 184 Readings in English History: Tudor, Stuart
Periods (3 cr, †182-183-184; prereq sr)
VIII-IX Th, 301Lib, Willson
- 187 Early American Social, Intellectual His-
tory (3 cr, †185-186-187; prereq sr)
VI-VII Th, 249ForH, Tyler
- 187a West in American History (3 cr, †185a-
186a-187a; prereq sr)
VIII-IX M, 130ForH, Osgood
- 187b American Diplomatic History (3 cr, †185b-
186b-187b; prereq sr)
VI-VII T, 420MurH, Beatty
- 187c Third Party Movements since Civil War
(3 cr, †185c-186c-187c; prereq sr)
VI-VII T, 312Lib, Stephenson
- 187d Readings in 19th Century American His-
tory (3 cr; prereq sr)
VIII-IX W, 175ForH, Jordan
- 193 Readings in Canadian History (3 cr; prereq
sr)
VIII-IX T, 244ForH, Burt
- 206 Seminar: Medieval History (3 cr; prereq
knowl of Latin)
VIII-IX F, 312Lib, Krey
- 210a Seminar: American History (3 cr, †208a-
209a-210a)
VIII-IX F, 244ForH, Osgood
- 210b Seminar: American History (3 cr, †208b-
209b-210b)
VII-VIII F, 130ForH, Stephenson

- 223 Seminar: Economic History (3 cr, †221-222-223)
VI-VII Th, 356ForH, Heaton
- 226 Seminar: Modern European History (3 cr, †224-225-226; prereq* French or German)
Ar, Steefel
- 232 Seminar: Ancient History (3 cr, †230-231-232)
VIII-IX F, Jones

JOURNALISM (JOUR)

- 10 **Photography** (3 cr; prereq soph, jour maj)
Lect V T, 308MurH, Liebling
Lab VI-IX M, 20MurH
- 14 **Newspaper Reporting** (3 cr; prereq see col bul)
—1, III-IV MWF, 212MurH, Jensen
—2, I-II TThS, 212MurH, Park
- 15 **Newspaper Reporting** (3 cr; prereq see col bul)
—1, I-II MWF, 212MurH, Jensen
—2, VI-VII MWF, 212MurH, Herington
—3, VI-VIII TTh, 212MurH, Charnley
- 18 **Prin Advertising** (3 cr; prereq soph, 13 with C aver, Comp 27-28 or concur regis)
III TThS, 308MurH, Seehafer
- 51 **News Editing** (3 cr; prereq 15 or B aver in 13-14; or 13, 18 for adver maj)
Lect V T, 311MurH, Swanson
—1, Lab I-II TTh, 206MurH, Herington
—2, Lab VIII-IX MW, 207MurH, Herington
- 52 **News Editing** (3 cr; prereq 51, 55)
Lect V T, 105MurH, Emery
—1, Lab III-IV MF, 206MurH
—2, Lab VI-VII WF, 206MurH
—3, Lab VIII-IX MW, 206MurH, Jensen
—4, Lab VIII-IX TTh, 206MurH, Jensen
- 55 **Advertising, Newspaper Typography** (3 cr; prereq jour maj, sr col stand; for others, 11 or 13, 41)
Lect V Th, 302MurH, Barnhart
—1, Lab VIII-IX MW, 315MurH
Lect V Th, 105MurH, Wilson
—2, Lab I-II TTh, 315MurH
—3, Lab VI-VII MW, 315MurH
- 59 **Typography Workshop** (2 cr; prereq 55, cons instr)
Ar, 315MurH, Wilson
- 65 **Graphic Arts** (3 cr; prereq cons maj advis)
IV MWF, 105MurH, Wilson
- 66 **Pictorial Journalism** (3 cr; prereq 10, 13, cons instr)
Lect VIII M, 311MurH, Kildow
Lab VIII-IX WF, 20MurH
- 67 **Radio News Writing** (3 cr; prereq 15)
Lect VII WF, 302MurH, Haskins
Lab III-IV Ar, 207MurH
- 68 **Probs in Radio Writing** (3 cr; prereq see col bul)
VI MWF, 302MurH, Charnley
- 69 **Newspaper, Magazine Articles** (3 cr; prereq 41)
II TTh, hr ar, 311MurH, Ford
- 73 **Magazine Writing, Editing** (3 cr; prereq 15 or 18)
—1, I MWF, 311MurH, Kildow
—2, VI MWF, 311MurH
- 82 **Supervision of School Publications** (3 cr; prereq 41 or 51)
VII MWF, 311MurH, Kildow
- 86 **Advertising Copy Writing** (3 cr; prereq 41 or 51, and 55, 65)
III MWF, 308MurH, Seehafer
- 90 **Mass Communications, the News** (3 cr, no jour maj)
III MWF, 105MurH, Charnley
- 94 **Newspaper Advertising** (3 cr; prereq 51, 55; or 41, 55, cons instr)
III TTh, hr ar, 311MurH, Gerald
- 95 **Circulation, Newspaper Mgt** (3 cr; prereq 51)
II TThS, 105MurH, Barnhart
- 101 **Reporting Public Affairs** (3 cr; prereq sr, 51)
III MWF, 311MurH, Herington
- 103 **Literary Aspects of Journalism** (3 cr; prereq cons instr)
IV MWF, 311MurH, Ford
- 104 **Adv Newspaper Advertising** (3 cr; prereq 51, 94, cons instr)
II MWF, 105MurH, Barnhart
- 110 **History of Journalism** (3 cr; prereq 109)
—1, II MWF, 308MurH, Ford
—2, II MWF, 311MurH, Emery
- 115 **Communication Media Analysis** (3 cr; prereq 51, cons instr; or Econ 5 or Psy 70, cons instr)
II MWF, 420MurH, Swanson
- 118A **Selected Topics: Adv Reporting of Public Affairs** (3 cr; prereq sr, 101, cons instr)
VI-IX MW, Ar
- 118B **Selected Topics: Projects in Media Analysis** (3 cr; prereq sr, 115, cons instr)
VIII-IX TF, 405MurH, Swanson
- 118C **Selected Topics: Readings in Journalism** (3 cr; prereq sr, jour maj with B aver, cons instr)
Ar, Casey
- 142 **Current Communications Probs** (3 cr; prereq sr, 51)
Lect VI-VII TTh, 105MurH, Casey
—1, VI-VII TTh, 302MurH, Casey
—2, VI-VII TTh, 308MurH, Park
—3, VI-VII TTh, 311MurH, Seehafer
—4, VI-VII TTh, 405MurH
- 150 **Public Relations in Community Services** (2 cr, †78; prereq sr, cons maj advis and instr)
VIII-IX Th, 405MurH, Emery
- 177 **Freedom of Press, Communications Law** (3 cr; prereq* 51)
IV MWF, 308MurH, Gerald
- 205 **Topics in Int'l News Communication** (3 cr; prereq cons dir of school)
Ar, 405MurH, Casey, Park

LINGUISTICS

Chinese (CHIN)

- 3 Bgn Chinese (5 cr; prereq 2)
V MTWThF, 108F, Mather
- 53 Intermed Chinese (3 cr; prereq 52)
IV TTh, ar, 12F, Mather
- 103 Adv Chinese (2 cr; prereq 102)
III TTh, 108F, Mather
- 110 Chinese Literature in Translation (3 cr;
prereq 8 cr lit)
VII MWF, 302F, Mather

Japanese (JAP)

- 3 Bgn Japanese (5 cr; prereq 2)
V MTWThF, 307F, Brower
- 53 Adv Japanese (3 cr; prereq 52)
VIII MWF, 307F, Brower
- 58 Composition (2 cr; prereq 57)
II TTh, 307F, Brower
- 63 Adv Japanese Reading (3 cr; prereq 62)
III MWF, 307F, Brower
- 92 Japanese Literature in Translation (3 cr;
prereq* 6 cr in lit or cons instr)
VII MWF, 307F, Brower

Linguistics (LING)

- 115 Old Church Slavick (3 cr; prereq 114)
II-III S, 302F, Magner
- 123 Intro Arabick (3 cr; prereq 122)
I MWF, 302F, Irving
- 129 Readings in Sanskrit (3 cr; prereq 128)
VII TTh, 302F, Magner
- 151 Honors Course (1-3 cr; prereq cons instr)
Ar

Russian (RUSS)

- 3 Intermed Russian (5 cr; prereq 2)
—1, V MTWThF, 302F, Magner
—2, VII MTWThF, 2F, Niemi
- 53 Adv Russian (3 cr; prereq 52)
VII WF, VI Th, 103F, Magner
- 58 Conversation (3 cr; prereq 57)
VIII-IX TTh, 12F, Blinoff
- 63 Composition (2 cr; prereq 62)
I MF, 10F, Blinoff
- 73 Rapid Reading of Russian Literature (3 cr;
prereq 72)
VI MWF, 6F, Niemi
- 76 Russian Civilization (3 cr; prereq 10 cr in
hist or lit)
V MWF, 6F, Blinoff
- 103 Russian Literature (3 cr; prereq 102)
V MWF, 304F, Niemi
- 133 Adv Interpretation: Pushkin to Tolstoy (3
cr; prereq 132)
Ar, Niemi

MATHEMATICS (MATH)

- 1 Higher Algebra (5 cr; prereq see col bul)
—1, I MTWThF, 301F
—2, V MTWThF, 301F

- 6 Trigonometry (5 cr; prereq plane geom
and 1)
—1, I MTWThF, 104F
—2, V MTWThF, 104F
—3, VI MTWThF, 113F
- 7 College Algebra (5 cr, §8 or 15; prereq 6
or high school trig with cons dept chrm
following placement test)
—1, III MTWThF, 104F
—2, VI MTWThF, 102F
- 8 Commerce Algebra (5 cr, §7 or 15; prereq 1)
V MTWThF, 114F
- 16 Elem Mathematical Analysis (5 cr; prereq
15)
—1, I MTWThF, 105F
—2, V MTWThF, 101F
- 20 Mathematics of Investment (5 cr; prereq
8, or 6, 7, or 15, 16)
I MTWThF, 109F
- 30 Analytic Geometry (5 cr; prereq 6, 7 or
6, 8, or 15, 16)
—1, II MTWThF, 104F
—2, VII MTWThF, 104F
- 50 Calculus I (5 cr; prereq 30)
—1, II MTWThF, 105F
—2, VI MTWThF, 104F
- 51 Calculus II (5 cr; prereq 50)
—1, IV MTWThF, 104F
—2, I MTWThF, 101F
- 52 Intermed Calculus (5 cr; prereq 51)
—1, III MTWThF, 105F
—2, VI MTWThF, 101F
- 108 Adv Calculus (3 cr; prereq 107)
V MWF, 105F, Loud
- 110 Tutorial Course: Adv Mathematics (ar cr;
prereq 51)
Ar
- 120 Matrices, Groups (3 cr; prereq 119)
III MWF, 102F, Nering
- 123 Mathematical Theory of Statistics (3 cr;
prereq 122)
IV MWF, 105F, Hart
- 140 Projective Geometry (3 cr; prereq* 51)
VI MWF, 105F, Carlson
- 146 Fourier Series, Orthogonal Functions (3 cr;
prereq 145)
IV TThS, 105F, Cameron
- 159 Methods of Applied Mathematics (3 cr;
prereq 153)
II TThS, 109F, Donsker
- 176 Intermed Differential Equations (3 cr; pre-
req 106)
II MWF, 113F, Hatfield
- 205 Adv Topics in Mathematical Statistics (3
cr; prereq 204)
VII MWF, 105F, Donsker
- 208 Theory of Functions (3 cr; prereq 207)
II MWF, 102F, Hart
- 220 Algebraic Topology (3 cr; prereq 120 or
170 or equiv, 213)
II MWF, 109F, Gelbaum
- 253 Linear Spaces (3 cr; prereq 252)
IV MWF, 102F, Olmsted

- 257 Seminar: Integration in Function Space (3 cr; prereq 247)
II TThS, 102F, Cameron

MUSIC (MUS)

- C Piano (no cr; prereq B)
Ar, 107ScH
- F Voice (no cr; prereq E)
Ar, 107ScH
- 1 Fundamentals of Music (2 cr; for non-music maj)
V MTWTh, 4ScH, Berryman
- 2T Music Theory (3 cr; prereq I T)
VI MTWThF, 103ScH, George
- 3T Music Theory (3 cr; prereq 2T)
—1, I MTWThF, 3ScH, George
—2, III MTWThF, 3ScH, Fetler
—3, VII MTWThF, 3ScH, Fetler
- 5T Music Theory (4 cr; prereq 4T)
V MTWThF, 103ScH, Malcolm
- 6T Music Theory (4 cr; prereq 5T)
—1, I MTWThF, 103ScH, Malcolm
—2, III MTWThF, 103ScH, Malcolm
—3, IV MTWThF, 3ScH, Malcolm
- 10 Introd Music (4 cr)
VI MTWThF, 4ScH, Jung
- 11 Piano: Individual Lessons (2-4 cr; prereq entr exam, see col bul)
VIII Th, hr ar, ScHAud, Kendall, Rymer, McConkie, Stephens
- 11C Piano: Class Lessons (2 cr; prereq cons instr)
—1, VI TTh, 204ScH, VIII Th, ScHAud, McConkie
—2, III TTh, 204ScH, VIII Th, ScHAud, McConkie
—3, II TTh, 208ScH, VIII Th, ScHAud, Kendall
—4, VI TTh, 208ScH, VIII Th, ScHAud, Kendall
- 12 Voice: Individual Lessons (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Birnbach, Hull, Schuessler
- 12C Voice: Class Lessons (2 cr; prereq cons instr)
—1, III MW, 205ScH, VIII Th, ScHAud, Rosewall
—2, IV MW, 205ScH, VIII Th, ScHAud, Rosewall
—3, VI MW, 205ScH, VIII Th, ScHAud, Rosewall
—4, VII MW, 205ScH, VIII Th, ScHAud, Rosewall
—5, III TTh, 205ScH, VIII Th, ScHAud, Rosewall
—6, IV TTh, 205ScH, VIII Th, ScHAud, Rosewall
—7, VI TTh, 205ScH, VIII Th, ScHAud, Rosewall
—8, VII TTh, 205ScH, VIII Th, ScHAud, Rosewall
—9, 6:20 TTh, 205ScH, VIII Th, ScHAud, Rosewall
- 13 Violin (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Cullen, Druian, Scheurer
- 14 Viola (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Barton
- 15 Cello (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Meltzer
- 16 Double Bass (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Fitch
- 17 Flute (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Winkler
- 18 Oboe (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Angelucci
- 19 Clarinet or Saxophone (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Handlon, Thalín, Fitch
- 20 Bassoon (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Santucci
- 21 Trumpet (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, MacKay
- 22 French Horn (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Linder
- 23 Trombone (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, MacKay
- 24 Tuba (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, MacKay
- 25 Percussion (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Denecke
- 26 Harp (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Trobaugh
- 27 Organ (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Berryman, Jennings
- 33 Music Literature (2 cr)
II MWF, ScHAud, Ivory
- 36 History of Music (2 cr; prereq soph)
II MTWThF, 4ScH, Downes
- 39 Keyboard Harmony (1 cr; prereq 38)
II TTh, 3ScH, Jennings
- 42 Orchestra (1 cr; prereq cons dir)
—1, 7:30 pm T, 4NMA, Samuel
—2, VIII-IX F, 4NMA, Samuel
- 45 University Chorus (1 cr, †43-44-45; prereq cons dir)
—1, IV MW, 4.5NMA, 7:30 T, NHAud, Aliferis
—2, VIII MW, 5NMA, NHAud, 7:30 T, NHAud, Aliferis
- 45SP St Paul Campus Chorus (1 cr)
4:30-5:30 TTh, 102Hr, Rymer

- 48 Concert Band (1 cr; prereq cons dir)
—1, IX MTTh, 4NMA, Prescott
—2, IX MWF, 5NMA, Prescott
- 55 Romantic Movement (2 cr; prereq 54)
VII WF, 104ScH, Kendall
- 62 Instrumental Ensemble (2 cr; prereq 61)
VI MWF, 104ScH, Stephens, Ivory
- 65 Vocal Ensemble (2 cr; prereq 64)
VIII MWF, 104ScH, Hull
- 68 The Chamber Singers (2 cr; prereq 67)
VII MWF, NHAud, 4NMA, Aliferis
- 72 Normal Piano (2 cr; prereq 71)
I MWF, 104ScH, Kendall
- 79 Composition (2 cr; prereq 78)
VII-VIII W, 2Sch, George
- 82 Adv Normal Piano (2 cr; prereq 81)
VIII-IX M, 2,4,103ScH, Kendall
- 92 Adv Instrumental Ensemble (2 cr; prereq 91)
VI MWF, 104ScH, Stephens, Ivory
- 95 Improvisation (1 cr; prereq 94)
II TTh, SchAud, Berryman
- 99 Counterpoint (2 cr; prereq 98)
IV MWF, 103ScH, Fetler
- 106 American Music (2 cr; prereq 105)
III TTh, 104ScH, Oberg
- 123 Adv Harmony (2 cr; prereq 122)
II TTh, 2Sch, George
- 126 History of Opera (3 cr; prereq 125)
VI MWF, 3Sch, Downes
- 129 Composition (2 cr; prereq 128)
Ar, Fetler
- 136 History of Church Music (2 cr; prereq 135)
IX TTh, 104ScH, Berryman
- 143 Orchestration (2 cr; prereq 142)
II WF, 3Sch, Aliferis
- 146 Bach Through Beethoven (3 cr; prereq 145)
VI-VII TTh, 104ScH, Downes
- 166 Music in the Baroque Era (2 cr; prereq 165)
II MWF, 2Sch, McConkie
- 199 Adv Counterpoint (2 cr; prereq 198)
IV TTh, 103ScH, Fetler
- 204 Graduate Applied Music (3 cr; prereq placement test by Music dept)
Ar
- 211 Adv Topics in Musical Analysis (3 cr; prereq 76)
II MWF, 104ScH, Oberg
- 212 Special Probs in Music (3-9 cr; prereq 202 or 211)
Ar, Oberg
- 229 Graduate Composition (3 cr)
Ar, Aliferis
- 3 Ethics (5 cr, §3A; prereq* soph)
—1, IV MTWThF, 206WeH, Holmer
—2, VII MTWThF, 310JohH, Wiggins
- 3A Selected Probs of Ethics (3 cr, §3; prereq* soph)
VI MWF, 202WeH, Wiggins
- 4 Introd Philosophy of Art (4 cr; prereq Art 1 or Mus 10)
III MTThF, 310JohH, Terrell
- 52 Gen History of Philosophy (5 cr)
II MTWThF, 202WeH, Shaw
- 73 Philosophy of Law (3 cr; prereq soph, 6 cr)
III MWF, 313JohH, Wiggins
- 83 Science, Civilization (3 cr; prereq* sr)
IV MWF, 313JohH, Brodbeck
- 112 Kant (3 cr; prereq* 52)
IV MWF, 310JohH, Sellars
- 115A 19th Century Thought (3 cr; prereq jr, cons instr)
VI MWF, 310JohH, Brodbeck
- 119 Readings in Recent Philosophy (3 cr; prereq 118)
Ar, Holmer
- 124 Modern Indian Thought (3 cr)
IV MWF, 202WeH, Datta
- 135 Philosophy of Modern Literature (3 cr)
VII MWF, 314JohH, Terrell
- 153 Philosophy of Science (4 cr; prereq* 2)
II MTThF, 122JohH, Feigl
- 155 Metaphysics (5 cr; prereq* 50 or 51 or 52)
VII MTWThF, 105JohH, Conger
- 164 Ethical Theory (3 cr; prereq* 50 or 51 or 52)
III MWF, 314JohH, Sellars
- 182 Philosophy of Religion (3 cr; prereq 6 cr)
VIII MWF, 202WeH, Conger
- 193 Seminar: Philosophy (3 cr; prereq 192)
Ar, Conger, Feigl, Sellars, others
- 207 Seminar: Comparative Philosophy (3 cr; prereq 206)
2:00 pm W, 104WeH, Datta
- 212 Seminar: Moral Philosophy (3 cr; prereq 164, cons instr)
VII-IX T, 104WeH, Sellars
- 232 Adv History of Philosophy (3 cr; prereq see col bul)
1:30-2:50 TTh, 6F, Hospers
- 242 Seminar: Philosophy of Physical Sciences (3 cr; prereq cons instr)
VIII-IX Th, 104WeH, Feigl
- 252 Seminar: Philosophy of Social Sciences (3 cr; prereq cons instr)
VIII-IX M, 104WeH, Feigl

PHILOSOPHY (PHIL)

- 1 Probs of Philosophy (5 cr, §1A; prereq* soph)
—1, I MTWThF, 202WeH, Hospers
—2, V MTWThF, 202WeH, Terrell
- 2 Logic (5 cr, §2A; prereq* soph)
—1, Lect II MTWThF, 310JohH, Brodbeck
—2, Lect III MWF, Quiz III TTh or IV TTh, 202WeH, Hospers

PHYSICS (PHYS)

- 3 Introd Physical Science (3 cr; prereq 2)
III MWF, 150Ph, Wall
- 3a Introd Physical Science with Lab (4 cr; prereq 2a)
III MWF, 150Ph, Wall

- 4 Gen Physics (5 cr; prereq see col bul)
III MTWThF, 166Ph
- 6 Gen Physics (5 cr; prereq 5)
I MTWThF, 166Ph, Buchta
- 7 Gen Physics (5 cr; prereq regis in anal
geom)
—1, IV MTWThF, 150Ph
—2, VI MTWF, VIII Th, 150Ph
- 9 Gen Physics (5 cr; prereq 8)
II MTWThF, 150Ph, Collins
- 50 Gen Physics (5 cr; prereq 9)
—1, IV MTWThF, 133Ph, Freier
—2, VI MTWF, VIII Th, 133Ph, Wall
- 105 Theoretical Physics (5 cr; prereq 103)
I MTWThF, 133Ph, Nier
- 111 Modern Physics (3 cr; prereq 109)
VI MWF, 166Ph, Collins
- 122 Exper Nuclear Physics II (3 cr; prereq*
121, 146)
VI-IX TTh, 250Ph, Blair
- 136 Spectrum Analysis (3 cr; prereq 15 cr)
VII-IX TTh, 348Ph, Valasek
- 185 Atomistics, Elem Quantum Mechanics (3
cr; prereq 183)
IV MWF, 145Ph, Williams
- 193 Introd Mathematical Physics (3 cr; prereq
192)
III MWF, 145Ph, Hill
- 209 Electrodynamics, Theoretical Optics (3 cr)
III MWF, 143Ph, Teng
- 212 Quantum Mechanics (3 cr)
VII MWF, 143Ph, Teng
- 218 Seminar: Contemporary Theoretical Physics
(3 cr)
Ar, Critchfield, Ney, Winckler
- 230 Adv Nuclear Theory (3 cr)
VI MWF, 145Ph, Hill
- POLITICAL SCIENCE (POL)**
- B State in Modern World (3 cr, †A-B, §15;
prereq A)
II MWF, 20ForH, Turner
- C State in Modern World (3 cr, §7; prereq B)
III MWF, 55ForH, Lippincott
- 2 American Govt, Politics (3 cr, †1-2, §5;
prereq 1)
I MWF, 55ForH, Hein
- 3 American Govt, Politics (3 cr; prereq 2)
—1, IV MWF, 155ForH, Christensen
—2, I TThS, 85ForH, Warp
- 5 American Govt, Politics (5 cr, §1-2)
VI MTWThF, 155ForH, Taylor
- 25 World Politics (3 cr)
VI MWF, 55ForH, Mills
- 53 Field Work in Govt, Politics (3 cr; prereq
52)
VI-VII T, 75ForH, Naftalin
- 85 Probs of World Politics (3 cr; prereq* 25
or Hist 1-2-3)
II MWF, 240ChE, Mills
- 93 Honors Work in Selected Fields (ar cr;
prereq 92)
Ar
- 97 American, European Colonies Today (3 cr;
prereq* 6 cr)
III MWF, 120ForH, Mills
- 103 Prin American Constitution III (3 cr; pre-
req 101 or 102)
III MWF, 175ForH, Anderson
- 117 Local Govt (3 cr, †116-117; prereq* 116)
I MWF, 150ForH, Anderson
- 122 Municipal Probs (3 cr; prereq* 121)
II TThS, Ludwig
- 127 Govt, Economic Order (3 cr; prereq 126)
IV TThS, 150ForH, Warp
- 133 Public Admin: Financial (3 cr; prereq*
131)
II MWF, 115ForH, Short
- 143 Govt of USSR, Adjacent States (3 cr; pre-
req 6 cr)
VI MWF, 240ChE, Turner
- 156 Govt, Int'l Relations in Latin America (3
cr; prereq* 6 cr)
II MWF, 180ForH, Christensen
- 162 Recent Political Thought (3 cr; prereq*
6 cr; or 12 cr soc sci)
III TThS, 155ForH, Sibley
- 166 Political Thought: Early Modern (3 cr;
prereq* 6 cr; or 12 cr soc sci)
IV TThS, 85ForH, Sibley
- 168-169 Political Behavior (4½ cr)
1:00-3:30 MF, 366ForH, McClosky
- 177 Conduct of American Foreign Relations (3
cr; prereq 176)
III TThS, 170ForH, McLaughlin
- 182 Int'l Law (3 cr; prereq* 181)
I TThS, 175ForH, McLaughlin
- 186 Int'l Organization III (3 cr; prereq* 6 cr)
I MWF, 120ForH, Levi
- 194 Far East in Int'l Relations (3 cr; prereq*
6 cr)
IV MWF, 150ForH, Quigley
- 205 Seminar: Public Law (3 cr, †204-205; prereq
204)
1:00-2:20 TTh, 366ForH, Warp
- 212 Seminar: Public Admin (3 cr, †210-211-212;
prereq cons staff)
VIII-IX TTh, 13Lib, Short
- 218 Seminar: Comparative European Govt (3
cr; prereq* 12 cr)
IV-V M, 356ForH, Levi
- 227 Readings in Classics of Politics (3 cr; pre-
req* 12 cr incl 6 cr pol theory)
VIII-IX TTh, 366ForH, Lippincott
- 240 Int'l Law, Diplomacy III (3 cr; prereq* sr,
181, cons instr)
VIII-IX F, 366ForH, McLaughlin
- 244 Colonization, Imperialism (3 cr; prereq*
196) IX-X W, 346 ForH, Mills
- 247 Seminar: Far Eastern Govt, Politics (3 cr;
prereq 153-154)
VII-VIII W, 366ForH, Quigley
- 249 Seminar: Int'l Organization (3 cr; prereq
cons instr)
IV-V F, 356ForH, Levi

PSYCHOLOGY (PSY)

- A Elem Psychology (5 cr, §1-2, GC 41; prereq see col bul)
11:30-1:00 MWF, BuAud, Longstaff
- 1-2 Gen Psychology (6 cr; prereq soph)
IV MTWThF, NHAud, Russell
- 2 Gen Psychology (3 cr, †1-2, §A or GC 41; prereq 1)
—1, II MWF, BuAud, MacCorquodale
—2, VIII MWF, MurHAud, Heron
- 3 Psychology Applied to Daily Life (3 cr; prereq 2)
III MWF, BuAud, Longstaff
- 4-5 Introd Lab Psychology (4 cr; prereq 1-2 or concur regis)
—1, V-VI MTThF, 211Psy, Tinker, others
—2, VII-VIII MTThF, 211Psy
—3, I-II TThFS, 211Psy
- 5 Psychology Lab (2 cr, †4-5; prereq 4)
—1, I-II MW, 211Psy, Tinker, others
—2, IX-X TTh, 211Psy
- 52 Genetic Psychology (3 cr; prereq 2)
IV MWF, 5Lib, Heron
- 55 Psychology of Sensation (3 cr; prereq 2)
IV MWF, 211Psy, Tinker
- 70 Prin Psychological Measurement (3 cr; prereq 2, 5)
VI MWF, 115Psy, Clark
- 86 Biographical Psychology (3 cr; prereq sr, 12 cr)
III MWF, 115Psy, Elliott
- 92 Readings in Psychology (ar cr; prereq 2, 3 addtl cr, cons instr)
Ar
- 103 Experimental Psychology (3 cr; prereq 102)
Lect VII M
Lab VII-VIII WF, Tinker
- 125-126 Psychology of Individual Differences (3 cr; prereq sr, 2, 5 or 5 cr stat)
II MTWThFS, 115Psy, Jenkins
- 127 Projects in Individual Differences (3 cr; prereq sr, 126)
Ar
- 130 Vocational, Occupational Psychology (3 cr; prereq 9 cr)
Lect IV TTh, 211Psy, Paterson
—1, Lab V-VI W, 211Psy
—2, Lab VII-VIII W, 211Psy
- 137 Occupational Counseling (2 cr; prereq sr, 130)
VIII-IX M, 115Psy, Kirchner
- 147 Political Psychology (3 cr; prereq 2, 5, 9 cr soc sci)
III TThS, 115Psy, Bird
- 153 Individual Investigations in Animal Psychology (3 cr; prereq 151)
Ar, Heron
- 155 Industrial Psychology (3 cr; prereq 1-2, Math 15-16, or 10 cr stat)
V MWF, 115Psy, Russell, Jenkins
- 168 Research Project in Public Opinion Analysis (3 cr; prereq sr, 167)
Ar, Clark
- 202 History of Psychology I: European (1 cr; †200-201-203; prereq cons instr)
III S, 109Psy, Tinker
- 212 Research Probs (ar cr)
Ar
- 219 Psychology of Personality (3 cr; prereq* abnor psy, maj in psy)
Ar, Rosen
- 222 Personality, Its Structure, Dynamics (2 cr, †220-221-222; prereq 172, 219 and 86, 246, 286, cons instr)
Ar, Meehl
- 232 Field Work in Psychometrics, Applied Psychology (ar cr; prereq cons instr)
Ar
- 237 Clinical Practice in Student Counseling Bureau (ar cr; prereq cons instr)
Ar, Berdie
- 242 Seminar: Student Personnel Work (1 cr; prereq cons instr)
Ar, Williamson
- 246 Adv Abnormal Psychology (3 cr; prereq 145, 171)
IV MWF, 115Psy, Bird
- 252 Topics in Psychology (ar cr)
Ar
- 259 Lab Seminar in Group Dynamics (3 cr; prereq one yr grad work, cons instr)
III TTh, Schachter
- 262 Seminar: Applications of Psychological Methods to Study of Psychiatry (1 cr; prereq cons instr)
Ar, Hathaway
- 270 Adv Psychological Measurement (3 cr)
VI MWF, 115Psy, Clark
- 273 Seminar: Recent Literature of Psychology (1 cr; prereq cons instr)
Ar, MacCorquodale
- 274 Preclinical Practicum in Clinical Psychology (2 cr; prereq maj clinical psy, 172, 291 or concur regis)
Ar, Schofield
- 286 Adv Biographical Psychology (3 cr)
III MWF, 115Psy, Elliott
- 297 Seminar: Individual Differences, Applied Psychology (1 cr; prereq cons instr)
VIII-IX alt W, Paterson

ROMANCE LANGUAGES

French (FREN)

- 1 Bgn French (5 cr, §1a)
—1, III MTWThF, 201F
—2, VII MTWThF, 201F
- 2 Bgn French (5 cr, §2a; prereq 1, or 1 yr high school French)
—1, III MTWThF, 226F
—2, VII MTWThF, 226F
- 3 Intermed French (5 cr, §3a; prereq 2, or 2 yr high school French)
—1, I MTWThF, 202F
—2, IV MTWThF, 226F

3a Intermed French: Conversational Section
(5 cr, §3; prereq 2a)

Dem III MTWThF, 227F

—1, Lab VI MTWThF, 4F

—2, Lab VII MTWThF, 4F

4 Intermed French (5 cr; prereq 3 or 3a or
3 yr high school French)
III MTWThF, 202F**20 Oral, Written French** (5 cr; prereq* 4 or
4 yr high school French)
VI MTWThF, 201F**52 Pronunciation, Diction** (1-2 cr; prereq 4,
cand for French play)
Ar, Nahas**55 Conversation** (3 cr; prereq 54)
VI MWF, 203F, Desgranges, Nahas**65 Adv Conversation** (3 cr; prereq 64)
VII MWF, 203F, Blinoff**72 Survey of French Literature** (3 cr, §73-74;
prereq 71)
IV MWF, 201F, Clefthon**74 Survey of French Literature** (5 cr, §70-71-
72; prereq 73)
III MTWThF, 304F, Brackney**77 French Civilization, Culture** (3 cr; prereq
76)
III MWF, 6F, Blinoff**105 Syntax, Composition** (1 cr; prereq 104)
VI F, 200F**107 Cours de Style** (3 cr; prereq* 64)
Ar, Blinoff**112 19th Century Poetry** (3 cr; prereq 72 or 74)
II MWF, 201F, Clefthon**117 17th Century Literature** (3 cr; prereq 116)
IV MWF, 307F, Desgranges**120 18th Century Literature** (3 cr; prereq 72 or
74, cons instr)
IV TTh, V Th, 201F, Sirich**173 History of French Language** (1 cr, †171-
172-173; prereq 172)
VIII Th, 307F, Brackney**183 Movement of Ideas in French Literature**
(3 cr; prereq 72 or 74, cons instr)
IX-X W, hr ar, 301Lib, Desgranges**203 Old French Phonology, Morphology** (2 cr)
IX-X Th, 307F, Brackney**206 Readings in Old French Literature** (2 cr)
VIII-IX T, 307F, Brackney**209 Old Provençal** (2 cr)
Ar, Brackney**Italian (ITAL)****3 Intermed Italian** (4 cr; prereq 2 with grade
C)

IV MTWF, 302F, Nissen

74 Petrarch (3 cr; prereq 3 or 4; 1-2 for stu-
dents bgn Ital in sr col with cons instr)
III TTh, IV T, 302F, Nissen**164 Dante in English** (3 cr; prereq cons instr)
III MWF, 302F, Nissen**Portuguese (PORT)****3 Intermed Portuguese** (5 cr; prereq 2)
VII MTWThF, 202F, Luckey**71 Brazilian Literature, Culture in English** (3
cr; prereq 70)
Ar, Luckey**Spanish (SPAN)****1 Bgn Spanish** (5 cr, §1a)

—1, II MTWThF, 202F

—2, VII MTWThF, 3F

2 Bgn Spanish (5 cr, §2a; prereq 1 or 1 yr
high school Span)

—1, III MTWThF, 8F

—2, VII MTWThF, 102F

3 Intermed Spanish (5 cr, §3a; prereq 2 or
2 yr high school Span)

—1, I MTWThF, 226F

—2, IV MTWThF, 227F

3a Intermed Spanish: Conversation Section
(5 cr, §3; prereq 2a)

Dem II MTWThF, 10F, Cuneo

Lab VII MTWThF, 108F

4 Intermed Spanish (5 cr; prereq 3 or 3a or
3 yr high school Span)
II MTWThF, 8F**20 Oral, Written Spanish** (5 cr; prereq* 4 or
4 yr high school Span)
III MTWThF, 101F**39 Shorthand, Technical Vocabulary** (3 cr;
prereq 38)
Ar**55 Conversation** (3 cr; prereq 54)
III MWF, 203F**56 Phonetics, Diction** (3 cr; prereq 53 or 20)
Lect IV TTh, lab VII TTh, 203F, LeFort**57 Commercial Spanish** (5 cr; prereq 53 or 20)
VII MTWThF, 109F, Cuneo**62 Adv Conversation** (3 cr; prereq 61)
II MWF, 307F, LeFort**67 Literature of Spain** (3 cr, §68-69; prereq
66)
VI MWF, 108F, Grismer**69 Survey of Literature of Spain** (5 cr, §65-
66-67; prereq 68)
VI MTWThF, 307F, Luckey**72 Latin-American Civilization, Culture** (3 cr;
prereq 71)
—1, III TThS, 203F, Cuneo

—2, IV MWF, 203F, LeFort

76 Literature of Spanish America (3 cr; pre-
req 75)
II MWF, 226F, Irving**105 Syntax, Composition** (1 cr; prereq 104)
IV T, 307F, Irving**117 17th Century Literature** (3 cr; prereq 116)
VII MWF, 205F, Grismer**142 Contemporary Latin-American Literature** (3
cr; prereq 141)
VIII MWF, 302F, LeFort**176 Contemporary Spanish Literature** (3 cr;
prereq 175)
IV MWF, 205F, Floripe

- 246 Readings in Old Spanish Literature (2 cr)
IX-X T, 203F, Irving

SCANDINAVIAN (SCAN)

- 3 Intermed Norwegian (5 cred; prereq 2)
VI MTWThF, 10F, Eikaas
- 6 Adv Norwegian (3 cr; prereq 5)
VII MWF, 10F, Eikaas
- 9 Intermed Swedish (5 cr; prereq 8)
II MTWThF, 11F, Lorenzen
- 12 Adv Swedish (3 cr; prereq 11)
III MWF, 10F, Lorenzen
- 61 Norwegian Conversation (3 cr; prereq 3)
Ar, Eikaas
- 71 Swedish Conversation (3 cr; prereq 12)
Ar, Lorenzen
- 162 Scandinavian Novel II (3 cr; prereq 6 or
12, or 8 cr lit, no knowl Scan lang)
II MWF, 12F, Gustafson
- 173 Contemporary Scandinavian Theater (3 cr;
prereq 6 or 12, or 8 cr lit, no knowl Scan
lang)
IV MWF, 12F, Gustafson
- 193 Readings in Scandinavian Literature (3 cr;
prereq 192)
Ar, Gustafson
- 217 Studies in Scandinavian Romanticism (3 cr)
Ar, Gustafson
- 223 Dramatic Interpretative Probs in Strind-
berg (3 cr)
Ar

SOCIAL WORK (SW)

- 207 Topics in Social Work (ar cr)
Ar, Staff
- 209 Seminar: Social Agencies, Institutions (ar
cr)
Ar, Stinson
- 212 Initial Field Training in Social Work (ar
cr; prereq 220 or 282A, concur regis)
Ar, Staff
- 217 Adv Field Training in Social Work (ar cr;
prereq 221 or 282B)
Ar, Staff
- 221 Case Work II (2 cr; prereq 220, plus 211, 236
or concur regis)
—1, II-III T, 175ForH, Connery
—2, II-III Th, 175ForH, Connery
- 225 Seminar: Family Case Work (2 cr; prereq*
221)
VI-VII T, 467ForH, Boehm
- 235 Introd Psychiatry (2 cr)
VII-VIII Th, 115ForH, Anderson
- 239 Seminar: Psychiatric Social Work (2 cr;
prereq 230, 235, 236)
IX-X Th, 175ForH, Lippman
- 259 Seminar: Medical Social Work (ar cr;
prereq 222 or concur regis)
VI-VII T, 457ForH, Mueller
- 262 Prin School Social Work (2 cr; prereq 221)
IX-X T, 467ForH, Laabs

- 266 Seminar: Child Welfare (ar cr)
IX-X Th, 467ForH, Boehm
- 269 Seminar: Public Welfare Admin (ar cr;
prereq 268)
IX-X W, 457ForH, Kidneigh
- 275 Prin Admin Applied to Social Work (3 cr)
I TThS, 115ForH, Kidneigh
- 280 Community Organization (2 cr; prereq*
220, 282A)
II-III S, 115ForH, Kidneigh
- 282A Prin Group Work I (3 cr)
IV-V TTh, 115ForH, Konopka
- 284 Use of Program in Groups II (1 cr; prereq
282A)
VI-VII Th, 467ForH, Pernel
- 285 Group Work III (2 cr; prereq 282B)
II-III Th, 160ForH, Konopka
- 289 Seminar: Group Work (ar cr)
VI-VII T, 447ForH, Konopka
- 293 Special Studies in Social Work (ar cr)
Ar, Staff
- 299 Seminar: Recent Research in Social Work
(ar cr)
Ar, Stinson
- 300 Gen Seminar: Social Work (ar cr)
VI-VII F, 467ForH, Kidneigh, Stinson

SOCIOLOGY (SOC)

- 1 Introd Sociology (3 cr)
II MWF, BoAud, Martindale
- 1A Introd Sociology (3 cr, for agric, for,
HE students)
I TThS, 204So, Taves
- 2 Intermed Sociology (3 cr)
I MWF, 20ForH
- 14 Rural Sociology (3 cr)
IV MWF, 80ForH, Taves
- 45 Social Statistics (5 cr)
Lect IV MWF, 85ForH, Johnson
—1, VI-VII MW, 85ForH
—2, VI-VII TTh, 85ForH
- 49 Social Probs (3 cr)
II MWF, 155ForH, Mouratides
- 51 Areas of Social Work (3-4 cr; prereq 50)
II TThS, 140ForH, Yerxa
- 53 Elements of Criminology (3 cr; prereq 1 or
1A)
II MWF, 120ForH, Vold
- 91 Case Method: Study of Human Probs (3
cr; prereq 50 or 51, or cons maj advis)
IV TThS, 155ForH, Yerxa
- 99 Tutorial: Selected Fields (3 cr; prereq 98)
Ar
- 100 Contemporary Penology (3 cr; prereq* 1,
53, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 75ForH, Vold
- 103 Juvenile Courts, Probation (3 cr; prereq 53)
III TThS, 120ForH, Monachesi
- 112 World Population Probs (3 cr)
III MWF, 130ForH, Marshall
- 117 Scandinavian Folk Movements (3 cr; pre-
req* 1)
VII MWF, 12F, Kolehmainen

- 123 Intergroup Relations (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
III TThS, 55ForH, Weinberg
- 140 Social Organization (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
II TThS, 55ForH, Chapin
- 141A The Family (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV TThS, 107AgBot, Johnson
- 145 Urban Sociology (3 cr, §old 7 or 118; prereq 1, 15 cr soc sci)
IV MWF, 140ForH, Caplow
- 161 Rural Community Analysis (3 cr; prereq sr, 1, 15 cr soc sci, cons instr)
VI T, VI-VII Th, 302Hr, Marshall
- 162 Rural Social Institutions (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 185ForH, Nelson
- 172 Backgrounds of Modern Social Thought (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 120ForH, Martindale
- 181 Probs in Rural Social Research (2 cr; prereq* sr, 1, 15 cr soc sci, educ, CW, phil, or psy)
VIII-IX M, 175ForH, Nelson
- 186 Field Work, Lab Training in Social Research (2 cr; prereq 185)
Ar, Monachesi
- 200 Seminar: Research Probs in Criminology (ar cr)
VIII-IX Th, 448ForH, Vold
- 201 Seminar: Social Psychology (ar cr)
VIII-IX T, 448ForH, Weinberg
- 202 Seminar: Research in Urban Sociology (ar cr)
VIII-IX M, 448ForH, Caplow
- 205 Seminar: Social Theory (ar cr)
VI-VII W, 448ForH, Martindale
- 208 Seminar: Statistical Theory, Relation to Social Theory, Practice (ar cr)
VIII-IX F, 448ForH, Chapin
- 211 Seminar: Probs in Population Research (ar cr)
Ar, Marshall
- 217 Seminar: Rural Social Theory (ar cr)
Ar, Nelson
- 234 Seminar: Juvenile Delinquency, Treatment (ar cr)
IX-X T, 346ForH, Monachesi
- 240 Gen Seminar (ar cr)
Ar
- SPEECH AND THEATER ARTS
(SPCH)**
- 1 Fundamentals of Speech (3 cr, †1-2; prereq* soph)
—1, I MWF, 12F, Gilkinson, Smith, others
—2, II MWF, 140ForH
—3, III MWF, 160ForH
—4, IV MWF, 8F
—5, V MWF, 311F
- 2 Fundamentals of Speech (3 cr, †1-2; prereq 1)
—1, I MWF, 3F, Gilkinson, Smith, others
—2, II MWF, 218F
—3, III MWF, 307MNH
—4, IV MWF, 101F
—5, VI MWF, 321F
- 3 Fundamentals of Speech (3 cr; prereq* 2)
—1, II MWF, 307MNH, Gilkinson, Smith, others
—2, III MWF, 150ForH
—3, IV MWF, 305F
—4, VI MWF, 227F
- 5 Fundamentals of Speech (5 cr; prereq* soph)
—1, I MTWThF, 311F, Gilkinson, Smith, others
—2, II MTWThF, 311F
—3, III MTWThF, 140ForH
—4, IV MTWThF, 306F
—5, V MTWThF, 305F
—6, VI MTWThF, 311½F
- 6 Fundamentals of Speech (5 cr; prereq 5)
—1, II MTWThF, 143Ph, Gilkinson, Smith, others
—2, III MTWThF, 311½F
—3, VI MTWThF, 226F
- 9 Freshman Discussion, Debate (1 cr; prereq by petition fresh with C aver)
Ar, Bystrom
- 31 Introd Theater (3 cr; prereq 2 or 5 or concur regis)
II MWF, 19Sch, Whiting
- 33 Bgn Acting (3 cr; prereq 32)
—1, II TThS, 19Sch, Moulton
—2, III MWF, 19Sch, Morgan
- 34 Stagecraft (3 cr; prereq soph, 31)
II T, I-II ThS, 302NH, Walker
- 51 Adv Public Speaking (3 cr; prereq 2 or 5)
III MWF, 3F, Smith
- 57 Speech Writing, Platform Speaking (3 cr; prereq 2 or 5)
III MWF, 305F, Gilkinson
- 61 Personal Development through Speech (3 cr; prereq 2 or 5, Psy 2)
III MWF, 308F, Bryngelson
- 65 Radio, Television Speech (3 cr; prereq 2 or 5)
II MWF, 302MurH, Ziebarth
- 66 Radio Drama (3 cr; prereq 3 or 6; 65 advised)
IV MWF, 302MurH, Morgan
- 67 Phonetics (3 cr; prereq 2 or 5)
I MWF, 306F, Fletcher
- 73 Play Production (3 cr; prereq 72)
IV MWF, 302NH, Graham
- 79 Adv Acting (3 cr; prereq 78)
III MWF, 302NH, Graham
- 81 Interpretative Reading (3 cr; prereq 2 or 5)
VI MWF, 308F, Thompson
- 83 Interpretative Reading (3 cr; prereq 82)
IV MWF, 308F, Thompson
- 92 Stage Lighting (3 cr, §34, 72, 112; prereq 31)
III TThS, IV TS, 302NH, Walker

- 97 Intercollegiate Oratory, Debate (1-3 cr; by petition soph with C aver)
Ar, Howell
- 103 **Argumentation, Persuasion** (3 cr)
—1, III MWF, 306F, Howell
—2, VI MWF, 306F, Smith
- 105 Theory of Reading, Acting (3 cr; prereq 2 or 5, 81-82-83, Psy 2)
III TThS, 306F, Thompson
- 106 Discussion (3 cr; prereq 3 or 6)
VII MWF, 305F, Howell
- 113 Stage Direction (3 cr, §34, 73, 93; prereq 112)
III MWF, Ar, Whiting
- 117 Writing Radio Drama (3 cr; prereq sr, 32, cons instr)
II MWF, 306F, Thompson
- 126 History, Criticism of Public Address (3 cr; prereq 2 or 5, Psy 2)
II TThS, 306F, Gilkinson
- 132 Children's Theater (3 cr; prereq* 31)
VI MWF, 302NH, Graham
- 143 Speech Instrumentation (3 cr; prereq 2 or 5, 67; Psy 2, 5)
VII MWF, 306F, Fletcher
- 155 Lip Reading, Lip Reading Methods (3 cr; prereq* 2 or 5, 61, 67, Psy 2)
IV MWF, 105JohH, Lassman
- 163 Speech Pathology (3 cr; prereq 162)
VI T, VI-VII Th, 306F, Henrikson
- 166 Clinical Methods, Practices in Speech Pathology (3 cr; prereq 163)
VII-VIII W, Ar, 409F, Bryngelson
- 173 History of Theater (3 cr; prereq 2 or 5, 31)
VII T, VI-VII Th, 302NH, Graham
- 183 Readings in Speech (1-3 cr; prereq 2 or 5 and 6 addtl cr, cons instr)
Ar, Staff
- 193 Adv Technical Probs (3 cr; prereq 192)
VIII-IX W, Ar, Whiting
- 201 Gen Seminar (1 cr)
Ar, Gilkinson
- 209 Seminar: Rhetoric, Persuasion (3 cr; prereq 3 or 6, 103, Psy 2, 140, 10 cr soc sci)
Ar, Howell
- 213 Seminar: Dramatic Theory (3 cr; prereq 113, 173 or 176, 9 cr Engl, Fren, or Ger Drama)
Ar, 10ScH, Thompson
- 223 Seminar: Oral Interpretation of Literature (3 cr; prereq 3 or 6, 81-82-83, 105, 122, Psy 74)
Ar
- 233 Seminar: Adv Speech Probs (3 cr; prereq undergrad maj speech, cons instr)
Ar, Gilkinson
- 243 Seminar: Radio Research (2 cr; prereq cons instr)
Ar, Ziebarth
- 251 Seminar: Listening Comprehension (2 cr; prereq undergrad maj in spch, cons instr)
Ar, Nichols

- 263 Seminar: Speech Pathology (3 cr; prereq 2 or 5, 61, 67, 122, 163, Psy 2)
Ar, Henrikson
- 283 Seminar: Organic Disorders of Speech (2 cr)
Ar, Brown
- 293 Research: Special Probs (ar cr)
Ar, Staff

ZOOLOGY (ZOO)

- 3 **General Zoology** (4 cr, §1-2-3; prereq 2)
—1, Lect II TTh, 06Bo, Minnich
—2, Lect IV WF, 06Bo, Minnich
—3, Lect VII TTh, 313Z, Olson
—1, Lab I-II MF, 101Z
—2, Lab III-IV MF, 101, 107Z
—3, Lab V-VI, MF, 101, 107Z
—4, Lab VII-VIII MF, 101, 107Z
—5, Lab III-IV TTh, 101, 107Z
- 50 **Introd Gen Physiology** (5 cr; prereq soph, 3, or 15 cr bot, 10 cr chem)
Lect III TThS, 313Z, Steinbach
—1, Lab IV-V TThS, 18Z
—2, Lab VI-VIII TTh, 18Z
—3, Lab I-II TThS, 18Z
- 53 **Fauna of Central United States** (5 cr; prereq 3)
Lect VIII MWF, 313Z, Eddy
—1, Lab VI-VII MW, VI-IX F, Sub3Z
—2, Lab IX-X MW, VII-X F, Sub3Z
- 58 **Introd Ornithology** (3 cr, §57-58; prereq 57)
Lect VII TTh, 307MNH, Warner
—1, Lab V-VI TTh, 307MNH
—2, Lab VIII-IX TTh, 307MNH
- 81 **Invertebrate Zoology** (3 cr; prereq 3)
Lect II WF, 208Z, Dawson
Lab I-II TTh, 208Z
- 83 **Introd Genetics, Eugenics** (3 cr; prereq 3 or 10 cr bot)
II MWF, 313Z, Merrell
- 102 **Zoological Techniques** (ar cr; prereq grad)
Ar
- 120 **Gen Ecology of Insects** (3 cr; prereq 15 cr zool or ent)
Lect VI TTh, 307CofH, Hodson
Lab VII-VIII TTh, 308CofH
- 127 **Adv Gen Entomology** (3 cr; prereq 126)
Lect I TTh, 211Z, Mickel
Lab I-III S, 401Z
- 140 **Biological Microscopy** (4 cr; prereq sr, 15 cr zool, ent or bot, cons instr)
Lect VI WF, 8CofH, Richards
Lab VII-VIII WF, 8CofH
- 146 **Helminthology** (3 cr; prereq 15 cr, cons instr)
Lect VI TTh, 211Z, Wallace
Lab VIII-IX TTh, 208Z
- 175 **Human Genetics** (3 cr; prereq 83, cons instr)
VIII MWF, 06Bo, Reed

- | | |
|---|--|
| <p>182 Experimental Embryology (5 cr; prereq sr, 50, 59)
Lect III-IV TTh, 323Z, Spratt
Lab ar</p> <p>199 Probs (ar cr; prereq 3, spec reqts)
Ar</p> <p>203 Research: Entomology (ar cr)
Ar</p> <p>213 Research: Ecology (ar cr)
Ar</p> <p>219 Research: Physiology (ar cr)
Ar</p> <p>223 Research: Biophysics (ar cr)
Ar</p> <p>231 Research: Histology (ar cr)
Ar</p> | <p>235 Research: Embryology (ar cr)
Ar</p> <p>239 Research: Cytology (ar cr)
Ar</p> <p>243 Research: Protozoology (ar cr)
Ar</p> <p>253 Research: Genetics (ar cr)
Ar</p> <p>263 Research: Parasitology (ar cr)
Ar</p> <p>293 Gen Seminar (ar cr)
Ar</p> <p>298 Seminar: Special Research Fields (ar cr)
Ar</p> |
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UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE (AIR)

- | | |
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| <p>33 Air Science I (1 cr; prereq 32)
-1, I MWF, 309AE, Callow
-2, II MWF, 309AE, Callow
-3, III MWF, 257TSF, 309AE, Booher, Callow
-4, IV MWF, 257TSF, 309AE, Booher, Callow
-5, V MWF, 309AE, Jurgensen
-6, VI MWF, 257TSF, 309AE, Booher, Jurgensen
-7, VII MWF, 257TSF, 309AE, Booher, Jurgensen
-8, VIII MWF, 309AE, Jurgensen</p> <p>36 Air Science II (1 cr; prereq 35)
-1, I MWF, 9, 305AE, Young
-2, II MWF, 9, 305AE, Young
-3, III MWF, 9, 305AE, Young
-4, IV MWF, 9, 305AE, Young
-5, V MWF, 305AE, Brown
-6, VI MWF, 9, 305AE, Brown
-7, VII MWF, 9, 305AE, Brown
-8, VIII MWF, 305AE, Brown</p> <p>133A Air Science III: Supply, Admin (3 cr; prereq 132A)
-1, I MTWThF, 12A, Kraus
-2, IV MTWThF, 12A, Kraus
-3, VII MTWThF, 12A, Kraus</p> <p>133B Air Science III: Communications (3 cr; prereq 132B)
-1, I MTWThF, 10A, Freund
-2, IV MTWThF, 10A, Freund</p> <p>133C Air Science III: General Technical Training (3 cr; prereq 132C)
-1, III MTWThF, 10A, Grierson
-2, VIII MTWThF, 10A, Grierson</p> <p>133D Air Science III: Flight Operations (3 cr; prereq 132D)
-1, II MTWThF, 12A, Widen
-2, VI MTWThF, 12A, Widen</p> | <p>136A Air Science IV: Supply, Admin (3 cr; prereq 135A)
-1, II MTWThF, 201A, Kraus
-2, III MTWThF, 12A, Kraus
-3, VI MTWThF, 201A, Kraus</p> <p>136B Air Science IV: Communications (3 cr; prereq 135B)
-1, II MTWThF, 10A, Freund
-2, VI MTWThF, 10A, Freund</p> |
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INSTITUTE OF CHILD WELFARE (CW)

- 10 **Introd Child Study** (2 cr; prereq 3rd qtr fresh)
II TTh, 202Pt, Cummings
- 40 **Child Training** (3 cr; prereq soph, Psy 2)
VI TTh, 202Pt, Fuller
- 80 **Child Psychology** (3 cr; prereq Psy 2)
IV MWF, 4ME, Brieland
- 132 **Later Childhood, Adolescence** (3 cr; prereq sr, 12 cr psy)
II MWF, 202Pt, Harris
- 141 **Behavior Probs in Older Children** (2 cr; prereq sr, 12 cr psy, educ psy or soc)
VIII-IX Th, 213NH, Blodgett
- 142 **Psychology of Atypical Children** (3 cr; prereq sr, 12 cr psy)
II TThS, 113JohH, Blodgett
- 152 **Childhood Education** (2 cr; prereq sr, 12 cr psy)
VIII TTh, 5Sh, Fuller
- 166 **Maturity, Aging** (2 cr; prereq sr, 15 cr psy, educ, or soc)
VIII-IX T, 202Pt, Anderson
- 185 **Children in a Changing World** (3 cr; prereq sr, 12 cr psy, educ, or soc)
VI MWF, 202Pt, Templin
- 190 **Use, Interpretation of Tests for Children** (2 cr; prereq sr, 12 cr psy, educ, or soc)
III-IV T, 202Pt, Roff

- 210 Adv Developmental Psychology (3 cr; prereq 130, 131, cons instr)
Ar, Anderson
- 222 Seminar: Current Research (1 cr)
VIII-IX alt W, 202Pt, Roff
- 225 Seminar: Developmental Theory (1 cr; prereq cons instr)
Ar, Anderson
- 226 Seminar: Projective Methods with Children, Adolescents (2 cr; prereq cons instr)
VII-VIII M, 202Pt, Harris
- 227 Multiple Factor Analysis (2 cr; prereq cons instr)
Ar, Roff
- 232 Seminar: Recent Literature (1 cr)
VIII-IX alt W, 202Pt, Anderson
- 234 Research Methods (2-4 cr; prereq sr, 233, 10 cr psy, or educ psy incl stat)
VII-VIII TTh, 204ePt, Roff
- 242 Practicum: Behavior Probs (ar cr; prereq cons instr)
Ar, Harris, Blodgett
- 250 Internship: Professional Work with Children (ar cr; prereq cons instr)
Ar, Anderson
- 262 Seminar: Developmental Research, Practice (2 cr; prereq 1 yr grad study)
Ar, Staff
- 272 Readings: Research in Child Development (ar cr)
Ar, Staff
- 275 Technique: Field Work in Parent Education (ar cr; prereq cons instr)
Ar, Cummings
- 291 Mental Examination of Preschool Child (4 cr; prereq cons instr)
Ar, Blodgett

LIBRARY INSTRUCTION (LIB)

- 1 Use of Books, Libraries (3 cr)
-1, II MWF, 312Lib, Moen
-2, VII MWF, 3Lib, Makivirta
- 61 Library Practice (3 cr; prereq 18 cr or lib exper)
Ar, Bearman, McIntyre
- 79 Medical Reference Work (3 cr)
IV MWF, 316Lib, Kingsley
- 85 Special Probs (1-3 cr; prereq cons dir)
Ar, Shove, Hayner
- 154 Prin Public Library Admin (3 cr; prereq cons instr)
I MWF, 5Lib, Methven
- 155 Admin Probs in College, University Library (3 cr; prereq cons instr)
I MWF, 3Lib, Shove
- 157 School Library Probs (3 cr; prereq*)
II MWF, 3Lib, Hayner
- 164 Reference III (2 cr; prereq 62, 63)
I TTh, 5Lib, Russell

- 172 Prin Probs in Reading Guidance for Adolescents (3 cr; prereq 70)
III MWF, 5Lib, Hayner
- 173 Prin, Probs in Adult Reading Guidance (3 cr; prereq 70)
II MWF, 5Lib, Methven
- 184 Adv Cataloging (3 cr; prereq 81, 82)
III MWF, 3Lib, Simonton
- 257 Seminar: Library Admin (3 cr)
Ar, McDiarmid
- 262 Seminar: Adv Bibliography (3 cr)
Ar, Shove
- 273 Seminar: Library Work with Children, Young People (3 cr)
Ar, Hayner
- 276 Reading Guidance (3 cr)
Ar, Hayner

MILITARY SCIENCE (MIL)

- 3 First Year Basic Course (1 cr; prereq 2)
-1, I M, Armory Gym, Cockrill
-2, II M, Armory Gym
-3, III M, Armory Gym
-4, IV M, Armory Gym
-5, VI M, Armory Gym
-6, VII M, Armory Gym
-7, VIII M, Armory Gym
Drill: Companies A,B,C,D,E,F, VI-VII T
Companies G,H,I,K,L,M, VI-VII Th
- 3G First Year Basic Medical Course (1 cr; prereq 2G)
VII T, 12 Owre
- 3H First Year Basic Dental Course (1 cr; prereq 2H)
Ar
- 3J First Year Basic Pharmaceutical Course (1 cr; prereq 2J)
IV Th, 201WuH, Luehrs
- 6A Antiaircraft Artillery (1 cr; prereq 5A)
-1, III M, 201A, Pully
-2, III M, 116A, Pully
-3, VI M, 116A, Pully
-4, VII M, 201A, Pully
-5, VII M, 116A, Pully
Drill: Companies A,B,C,D,E,F, VI-VII T
Companies G,H,I,K,L,M, VI-VII Th
- 6B Engineers (1 cr; prereq 5B)
-1, III M, 116aA, Aliotta
-2, VI M, 116aA, Aliotta
Drill: Companies A,B,C,D,E,F, VI-VII T
Companies G,H,I,K,L,M, VI-VII Th
- 6C Ordnance (1 cr; prereq 5C)
-1, III M, 105A, Wood
-2, VI M, 105A, Wood
Drill: Companies A,B,C,D,E,F, VI-VII T
Companies G,H,I,K,L,M, VI-VII Th
- 6D Quartermaster (1 cr; prereq 5D)
-1, III M, 159TSF, Sullivan
-2, VI M, 159TSF, Sullivan
-3, VII M, 159TSF, Sullivan
Drill: Companies A,B,C,D,E,F, VI-VII T
Companies G,H,I,K,L,M, VI-VII Th

- 6E Signal Corps** (1 cr; prereq 5E)
 —1, III M, 206A, Copley
 —2, VI M, 206A, Copley
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 6F Transportation** (1 cr; prereq 5F)
 —1, III M, 103A, Bitler
 —2, VI M, 103A, Bitler
 —3, VII M, 103A, Bitler
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 6G Medical Corps** (1 cr; prereq 5G)
 4:00-4:50 Th, 12 Owre
- 6H Dental Corps** (1 cr; prereq 5H)
 Ar
- 6J Pharmaceutical Corps** (1 cr; prereq 5J)
 IV M, 201WuH, Luehrs
- 153A Antiaircraft Artillery** (3 cr; prereq 152A)
 —1, I MWF, 201A, Pully
 —2, IV MWF, 201A, Pully
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 153B Engineers** (3 cr; prereq 152B)
 —1, I MWF, 116aA, Aliotta
 —2, IV MWF, 116aA, Aliotta
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 153C Ordnance** (3 cr; prereq 152C)
 —1, I MWF, 105A, Wood
 —2, IV MWF, 105A, Wood
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 153D Quartermaster** (3 cr; prereq 152D)
 —1, I MWF, 159TSE, Sullivan
 —2, IV MWF, 159TSE, Sullivan
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 153E Signal Corps** (3 cr; prereq 152E)
 —1, I MWF, 206A, Copley
 —2, IV MWF, 206A, Copley
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 153F Transportation** (3 cr; prereq 152F)
 —1, I MWF, 103A, Bitler
 —2, IV MWF, 103A, Bitler
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 153G Medical Corps** (1 cr; prereq 152G)
 3:00-3:50 Th, 12 Owre
- 153H Dental Corps** (1 cr; prereq 152H)
 Ar
- 153J Pharmaceutical Corps** (1 cr; prereq 152J)
 VII T, 201WuH, Luehrs
- 156A Antiaircraft Artillery** (3 cr; prereq 155A)
 —1, II MWF, 116A, Pully
 —2, VIII MWF, 116A, Pully
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 156B Engineers** (3 cr; prereq 155B)
 —1, II MWF, 116A, Aliotta
 —2, VIII MWF, 116A, Aliotta
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 156C Ordnance** (3 cr; prereq 155C)
 —1, II MWF, 116A, Wood
 —2, VIII MWF, 116A, Wood
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 156D Quartermaster** (3 cr; prereq 155D)
 —1, II MWF, 116A, Sullivan
 —2, VIII MWF, 116A, Sullivan
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 156E Signal Corps** (3 cr; prereq 155E)
 —1, II MWF, 116A, Copley
 —2, VIII MWF, 116A, Copley
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 156F Transportation** (3 cr; prereq 155F)
 —1, II MWF, 116A, Bitler
 —2, VIII MWF, 116A, Bitler
 Drill: Companies A,B,C,D,E,F, VI-VII T
 Companies G,H,I,K,L,M, VI-VII Th
- 156G Medical Corps** (1 cr; prereq 155G)
 VIII T, 12 Owre
- 156H Dental Corps** (1 cr; prereq 155H)
 Ar
- 156J Pharmaceutical Corps** (1 cr; prereq 155J)
 IX Th, 201WuH, Luehrs

MORTUARY SCIENCE (MORT)

- 3 Business Methods** (2 cr; prereq soph, Econ 24)
 III MW, 115C, Lund
- 6 Restorative Art** (1 cr; prereq 5)
 —1, VIII-IX T, 100NH, Roman
 —2, VIII-IX Th, 100NH, Roman
- 7 Bacteriology for Embalmers** (4 cr; prereq soph, Zool 3)
 Lect II MWF, 12 Owre, Imagawa
 Lab V-VI MWF, 201MH, Imagawa, others
- 10 Orientation in Funeral Service** (no cr; prereq 9)
 IX W, 209NH, Slater
- 17 Funeral Mgt** (1 cr; prereq 16)
 II F, 259TSE, Slater
- 22 Embalming Theory, Practice** (3 cr; prereq 21)
 Lect I MWF, 259TSE, Slater
- 27 Anatomy for Embalmers** (3 cr; prereq 1)
 Lect I ThS, 102 IA, Swigart
 Lab II-III ThS, 301, 302, 303 IA, Swigart, others
- 28 Pathology for Embalmers** (2 cr; prereq 18)
 Lect VI TTh, 104 IA, Brunson
 Lab V Th, 104 IA, Brunson
- 29 Chemistry for Embalmers** (3 cr)
 Lect VIII MW, 225C, Pervier
 Lab I-IV T, Ar, Pervier, others

NAVAL SCIENCE (NAV)

- 13 **Naval Orientation** (3 cr)
 —1, Lect III MWF, 205A, Tracy
 —2, Lect IV MWF, 205A, Tracy
 —3, Lect VII MWF, 205A, Tracy
 —4, Lect VI MWF, 205A, Tracy
 Lab II Th or VIII T, Tracy
 Drill IV T, Tracy
- 23 **Naval Weapons** (3 cr)
 —1, Lect II MWF, 202A, Wood
 —2, Lect VI MWF, 202A, Wood
 —3, Lect III MWF, 202A, Wood
 Lab II Th, or III T, or IV W, Wood
 Drill IV T, Wood
- 53 **Navigation** (3 cr)
 —1, Lect I-II TTh, 12aA, Filiatraut
 —2, Lect VII-VIII TTh, 12aA
 Lab II Th or VIII T, 12aA, Filiatraut
 Drill IV T, Filiatraut
- 56 **US Military History, Policy** (3 cr)
 Lect ar
 Lab ar, 12aA, Lewis
 Drill IV T, Lewis
- 59 **Basic Supply Afloat** (3 cr; prereq 58)
 Lect II-III TTh, 202A, London
 Lab II Th or VIII T, London
 Drill IV T
- 63 **Naval Justice, Leadership** (3 cr)
 —1, Lect II MWF, 12aA, McGuire
 —2, Lect IV MWF, 12aA, McGuire
 Lab II Th or VIII T, McGuire
 Drill IV T
- 66 **Amphibious Warfare** (3 cr)
 Lect ar, Lewis
 Lab ar
 Drill IV T
- 69 **Navy Supply** (4 cr; prereq NROTC srs only)
 Lect V MTWTh, 202A, London
 Lab VIII T, 202A, London
 Drill IV T

PHYSICAL EDUCATION FOR MEN (PE)

Nonprofessional

- 1C **Sports Education** (1 cr)
 Swimming, Bgn
 —1, II MWF, CH Pool, Boyce
 —2, VII MWF, CH Pool, Thorpe
 —3, III TThS, CH Pool, Boyce
Bowling: Bgn
 —4, II MWF, CMU, Young
 —5, II TThS, CMU, Young
Boxing: Bgn
 —6, VII MWF, Stad N, Chisholm
Handball
 —7, IV MWF, Stad N, Nash, Fisher
Tennis: Bgn
 —8, II MWF, Brain
Golf: Bgn
 —9, II MWF, Stad S, Bolstad
 —10, III MWF, Stad S, Bolstad
 —11, II TThS, Stad S, Bolstad

Adapted Activities

- 12, III MWF, Stad S, Osell
 —13, IV MWF, Stad S, Osell
 —14, VIII MWF, Stad S, Osell
Track: Bgn
 —15, VII MWF, Kelly
Freshmen Sport
 —16, Ar
- 2C **Sports Education** (1 cr)
Swimming: Intermed
 —1, II TThS, CH Pool, Boyce
 —2, VI MWF, CH Pool, Thorpe
 —3, IV MWF, CH Pool, Boyce
Life Saving
 —4, III MWF, CH Pool, Boyce
Swimming: Adv
 —5, IV TThS, CH Pool, Boyce
Boxing: Intermed
 —6, VIII MWF, Stad N, Chisholm
 —7, IX MWF, Stad N, Chisholm
Wrestling: Intermed
 —8, VIII MWF, Stad N, Bartelma
 —9, IX MWF, Stad N, Bartelma
Squash
 —10, IV MWF, Stad N, Nash, Fisher
Gymnastics
 —11, VIII MWF, Gym CH, Ostrander
Weight Lifting
 —12, VIII MWF, Gym CH, Ostrander
Volleyball, Softball
 —13, IV MWF, CH, Nash, Svendsen, Fisher
Archery
 —14, II MWF, CH, Osell
Tennis: Adv
 —15, III MWF, CH, Brain
Fencing
 —16, VIII MWF, Gym CH, Uebel
Square, Folk Dancing
 —17, II MWF, NGW, Bell
Folk Dancing
 —18, VII TTh, NGW, Bell
Ballroom Dancing
 —19, III TTh, 1 hr ar, NGW, Bell
Golf: Intermed
 —20, III TThS, Stad S, Bolstad
 —21, IV MWF, Stad S, Bolstad
Body Building
 —22, VIII MWF, Stad S, Osell
Varsity Sport
 —23, Ar

PHYSICAL EDUCATION FOR WOMEN
(PE)*Nonprofessional*

- Aquatics
Canoeing
 —1, III MWF, 58, 201NGW
 —2, VI TTh, 58, 201NGW
Swimming: Bgn
 —1, IV MWF, 51, 201NGW
 —2, II TTh, 51, 201NGW

CLASS SCHEDULE

Swimming: Adv Bgn
 —1, VI MWF, 51NGW
 —2, III TTh, 51NGW
 Swimming: Intermed
 —1, II MWF, 58NGW
 —2, VIII MWF, 51, 201NGW
 Swimming: Adv Diving
 1, IV MWF, 58NGW
 Swimming: Adv Synchronized
 VIII MWF, 58NGW
 Red Cross Life Saving
 V MWF, 58, 201NGW
 Water Safety Instructor's Course
 VII MWF, 58, 201NGW

Body Building

Indiv Body Building
 III MWF, 153aNGW

Individual, Dual Games

Archery: Elem
 VI TTh, 60NGW
 Archery: Elem, Intermed
 II TTh, 60NGW
 Golf: Elem
 —1, I MWF, 60, 201NGW
 —2, V MWF, 60NGW
 —3, VI MWF, 60, 201NGW
 —4, V TTh, 60, 201NGW
 Golf: Intermed
 —1, VIII MWF, 60NGW
 —2, VII TTh, 60, 201NGW

Golf: Adv

Ar

Riding: Elem

—1, VII Th, 201NGW

—2, VIII Th, 201NGW

Tennis: Elem

—1, I MWF, 151NGW

—2, II MWF, 151NGW

—3, IV MWF, 60NGW

—4, V MWF, 151NGW

—5, I TTh, 151, 201NGW

—6, IV TTh, 60, 201NGW

Tennis: Intermed Adv

—1, III MWF, 151NGW

—2, V TTh, 151NGW

Rhythms

Folk, Square Dance

—1, II MWF, 153NGW

—2, VII TTh, 151NGW

Modern Dance: Elem

—1, IV MWF, 151NGW

—2, VIII MWF, 151NGW

Modern Dance: Intermed Adv

VI MWF, 153, 201NGW

Ballroom Dance: Elem

III TTh, 153NGW

Team Sports

Softball

—1, III MWF, 60NGW

—2, IV TTh, 60, 201NGW

COURSE FEES

All fees are per quarter unless otherwise indicated.

Aeronautical Engineering

\$3.00—lab fee for all soph, jr, sr students in aero engr
4.50 per solo hr—20 (pay at U Airport)
7.50 per dual hr—20 (pay at U Airport)
42.00—46 (no fee for aero engr)

Agricultural Education

\$1.50 per cr—82, 91, 199E

Agricultural Engineering

\$1.00—5, 7, 13, 14, 19, 20, 21, 23, 24, 25, 33, 35, 40, 72
3.00—42
6.00—41, 43

Agronomy

\$2.00—136

Architecture

\$3.00—AD I, AD II, AD III, 40
10.00—AD IV

Art

\$1.00—1, 2, 3, 4, 5, 11, 12
2.00—20, 20A, 21, 21A, 22A, 43, 44, 45, 87, 88, 89, 97, 98, 99, 103, 104, 105, 153, 154, 155, 193, 194, 195
3.00—23A, 24A, 25A, 30, 31, 50, 51, 52, 60, 60A, 61, 61A, 62, 62A, 70, 71, 72, 110, 111, 112, 150, 151, 152, 200, 201, 202
5.00—10, 23, 24, 25, 40, 41, 42, 53, 54, 55, 63, 64, 65, 73, 74, 75, 80, 81, 82, 90, 91, 92, 93, 94, 95, 101, 102, 180, 181, 182, 190, 191, 192
7.50—140, 141, 142, 143, 144, 145
10.00—83, 83A, 84, 84A, 85, 85A, 123, 124, 125
15.00—133, 134, 135

Art Education

\$1.50—17, 18, 19
2.00 per cr—84, 86, 86A, 87, 87A, 88, 88A, 185
2.00—81A, 81B
3.00—56, 57, 58

Astronomy

\$1.00—20

Bacteriology

\$3.00—53, 102, 103, 104, 112, 113, 114, 115, 116, 122, 124

Biological Station

\$5.00 per term, \$10.00 per summer term—lab fee

Botany

\$1.50—1, 2, 3, 50, 51, 52, 53, 54, 112, 113, 114, 115, 118, 119, 121, 127, 130, 132, 134, 137, 165, 194, 195, 196, 197, 198, 199
2.25—4, 5
3.00—120, 123, 154, 173, 174, 175, 179, 180, 181

Business Administration

\$1.00—170, 171
2.00—65, 66, 74, 150, 152

Civil Engineering

\$2.00—51, 52, 53, 137, 146
35.00 per term—23 (summer camp)

Communication

\$1.00—1

Curriculum and Instruction

\$2.00 per cr—all courses

Economics

\$2.50 for one or more courses—32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43

Education

\$2.00 per cr—51A, 51B, 51C, 55A, 55B, 71A, 71B, 71C

Educational Psychology

\$1.00—217, 218
1.50 per cr—142, 143, 144, 150
1.50—216A, 217A, 218A

Electrical Engineering

\$1.00—12, 14, 112, 114, 116, 118, 120, 127, 128, 129
2.00—16, 122, 124, 126, 164, 165, 166

Engineering English

\$1.00—4

Entomology

\$1.50—5, 21, 51, 52, 56, 63, 64, 114, 117,
118, 119, 120, 121, 125, 126, 127, 141,
142, 144, 145, 146, 150, 164, 165, 166,
170, 175, 176, 179
5.00—55, 128, 129, 140, 168, 169, 177

Family Life

\$3.00—14

General College

\$1.00—10A

1.50—22A, 22B, 22C, 22X, 23AX, 23BX,
23CX, 23DX, 24A, 24B, 24C, 24AX,
24BX, 24CX, 25A, 25B, 25C, 25D,
25X, 28, 32A, 32B, 32C, 32D, 32AX,
32BX, 32CX, 33A, 33B, 33C, 33AX,
33BX, 33CX

2.00—23A, 23B, 23C, 23D

2.50—47A

5.00—26A, 26B

Geology

\$1.00—A, B, 23, 24

5.00—175

10.00—100, 115, 150

Home Economics

\$2.00—25

Home Economics Education

\$2.00 per cr—91, 93, 94, 197, 199E

Humanities

\$1.00—1, 11, 21, 51, 61, 71

Hydromechanics

\$2.00—104

Industrial Education

\$1.50 per cr—1, 2, 3, 5, 6, 7, 10, 11, 12,
15, 16, 20, 21, 25, 26

2.00 per cr—50A, 50B, 50C, 70, 75

Journalism

\$1.00 general fee for one or more
courses, excluding Journ 5

2.00 plus general fee—51, 58, 59, 67, 68

3.00 plus general fee—41, 52, 55

5.00 plus general fee—10, 66

Library Science

\$3.75 per cr (max \$45.00)—for all
courses for resident students, exclud-
ing Lib 1

8.50 per cr (max \$100.00)—for all
courses for nonresident students, ex-
cluding Lib 1

Note: Students paying max fee may
take other courses with no college
tuition charge

Mathematics and Mechanics

\$1.00—87, 141

Mechanical Engineering

\$2.00—1, 4, 5, 6, 7, 8, 12, 13, 14, 15, 16,
17, 18, 33, 34, 35, 61, 110, 111, 112,
113, 114, 118, 149, 159, 169, 189, 198

Methods and Student Teaching

\$2.00 per cr—all courses

Modern Language Institute (Summer Session)

\$20 per term—Russian (1a, 2a, or 51,
52, 53)

40.00 per term—French (22, 58, 109);
or German (22, 66, 107); or Spanish
(22, 58, 109)

Mortuary Science

\$1.00—1, 2

1.50—4, 5, 6

3.00—7, 20, 21, 22

Music

\$1.50—10, 31, 32, 33, 34, 35, 36, 50, 51,
52, 53, 54, 55, 56, 57, 58

15.00—Class lessons in 11C, 12C

30.00 for one (no cr) individual lesson
per week—A, B, C, D, E, F

30.00 for one (2 cr), \$60.00 for two (4 cr)
individual lessons per week—11, 12,
13, 14, 15, 16, 17, 18, 19, 20, 21, 22,
23, 24, 25, 26, 27

60.00—204

Music Education

\$1.50 per cr—4, 5, 6, 59, 63, 64, 65

2.00 per cr—50A, 50B, 53, 60, 61, 62

30.00 for one (2 cr), \$60.00 for two (4
cr) lessons per week—225E

Natural Science

\$1.00—1, 2, 3, 4, 5, 6

2.00—7, 8, 9

Physical Education (men)

\$1.00 per cr—1A, 1B, 1C, 2A, 2B, 2C

1.50 per cr—4A, 4B, 4C, 5A, 5B, 5C,
6A, 6B, 6C, 7A, 7B, 7C, 8, 9A, 9B,
60B

2.00 per cr—55, 73, 74, 75

Note: Towel and locker fee for stu-
dents using PE facilities for activity,
\$2.50 per qtr payable at dept. Uni-
forms for class or recreational ac-
tivity, \$2.00 per qtr payable at dept.

Physical Education (women)

\$2.00 per cr—47, 48, 57A, 57B, 90A, 90B, 90C, 94

2.00—50, 51 (or both)

2.50 (max \$5.00 per qtr)—All nonprofessional, 20A, 20B, 20C, 21A, 21B, 21C, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 41A, 41B, 42

Physical Medicine

\$3.00—75

Physics

\$2.00—1a, 2a, 3a, 4, 5, 6, 7, 8, 9, 50, 52, 110, 112, 120, 121, 122, 134, 136, 144, 145, 146, 148, 154

Psychology

\$1.00—4, 5, 135, 136, 137

2.00—130, 290, 291

Public Health

\$1.00 per cr—65, 66, 67, 119, 129, 138, 139, 173, 190

1.00—80, 140, 150

1.50—121, 131

2.00—111

3.00—143, 144, 184, 185, 186, 187, 188

100.00—169

Rhetoric

\$1.00—1, 12, 22, 28, 54, 59

Social Work

\$5.00—210, 211, 212, 215, 216, 217

Soils

\$2.00—108, 111

Speech

\$1.00—1, 2, 3, 5, 6, 51, 55, 56, 57, 61, 65, 67, 81, 82, 83, 141, 142

2.00—31, 32, 33, 34, 66, 71, 72, 73, 78, 79, 91, 92, 93, 111, 112, 113, 131, 132, 133, 143, 153

Technical Aid

\$2.00—80A, 80B, 81, 81A, 81B, 82, 82A, 82B, 83, 83A, 84, 84A, 85A

Zoology

\$1.50—21, 51, 52, 53, 55, 57, 58, 59, 75, 81, 100, 101, 102, 107, 108, 109, 110, 111, 115, 116, 117, 118, 119, 120, 121, 125, 126, 127, 132, 143, 144, 145, 146, 149, 150, 155, 156, 157, 160, 161, 162, 170, 180, 183, 184, 185

2.00—1, 2, 3, 14, 15

3.00—50, 112, 113

3.00 per summer term—1, 2

5.00—128, 129, 140

8.00—182

10.00—22

FEES FOR COURSES REQUIRING DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry and biochemistry cards are \$10.00; all others are \$5.00

The course fees listed below will be charged against your deposit card, together with laboratory, material and breakage, and the unused balance credited to your matriculation deposit at end of the course. You must present your deposit card to be assigned a lab desk. Veterans will receive information from their instructor concerning deposit cards and lab assignments.

Agricultural Biochemistry

\$2.00—2

5.00—103, 110, 117, 118, 129, 130, 131, 132, 133, 202, 203, 212

Analytical Chemistry

\$3.00—1, 2, 7, 9, 96, 97, 98, 101, 102, 103, 104, 105, 106, 107, 108, 109, 122, 123, 127, 131, 132, 134, 138, 140

Chemical Engineering

\$3.00—105, 106, 111, 112, 113, 151, 152, 153, 154, 155, 156, 160, 176, 177, 179

Food Technology

\$5.00—51, 52

Inorganic Chemistry

\$3.00—1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 96, 97, 98, 102, 109, 110

Organic Chemistry

\$3.00—61, 62, 64, 96, 97, 98, 102, 130
10.00—110, 139

Pharmacognosy

\$3.00—55, 56
5.00—162, 163

Pharmacy

\$5.00 deposit required of all soph, jr,
sr students in Pharmacy

Physical Chemistry

\$3.00—96, 97, 98, 104, 105, 106, 107, 108,
110, 111, 112, 113, 132, 133, 134, 211,
212, 213, 231

Physiological Chemistry

\$3.00—100, 101, 102, 103

SPECIAL FEES

Supplement to General Information Bulletin.

Music Practice

\$1.00 per qtr for one, \$2.00 for two, 50
cents for each addtl hr per week—
piano, practice room
.20 per hr—small organ, practice
room
.40 per hour—large organ, practice
room
2.00 per qtr for 10 hrs per week—
practice room for other instruments

Speech and Hearing Clinic—Students

\$5.00 per qtr—spec clinical treatment

**Speech and Hearing Clinic—Nonstu-
dents**

Articulatory cases, per 10 weeks—\$15.00
for 1, \$25.00 for 2, \$30.00 for 3, \$35.00
for 4, \$40.00 for 5 lessons per week

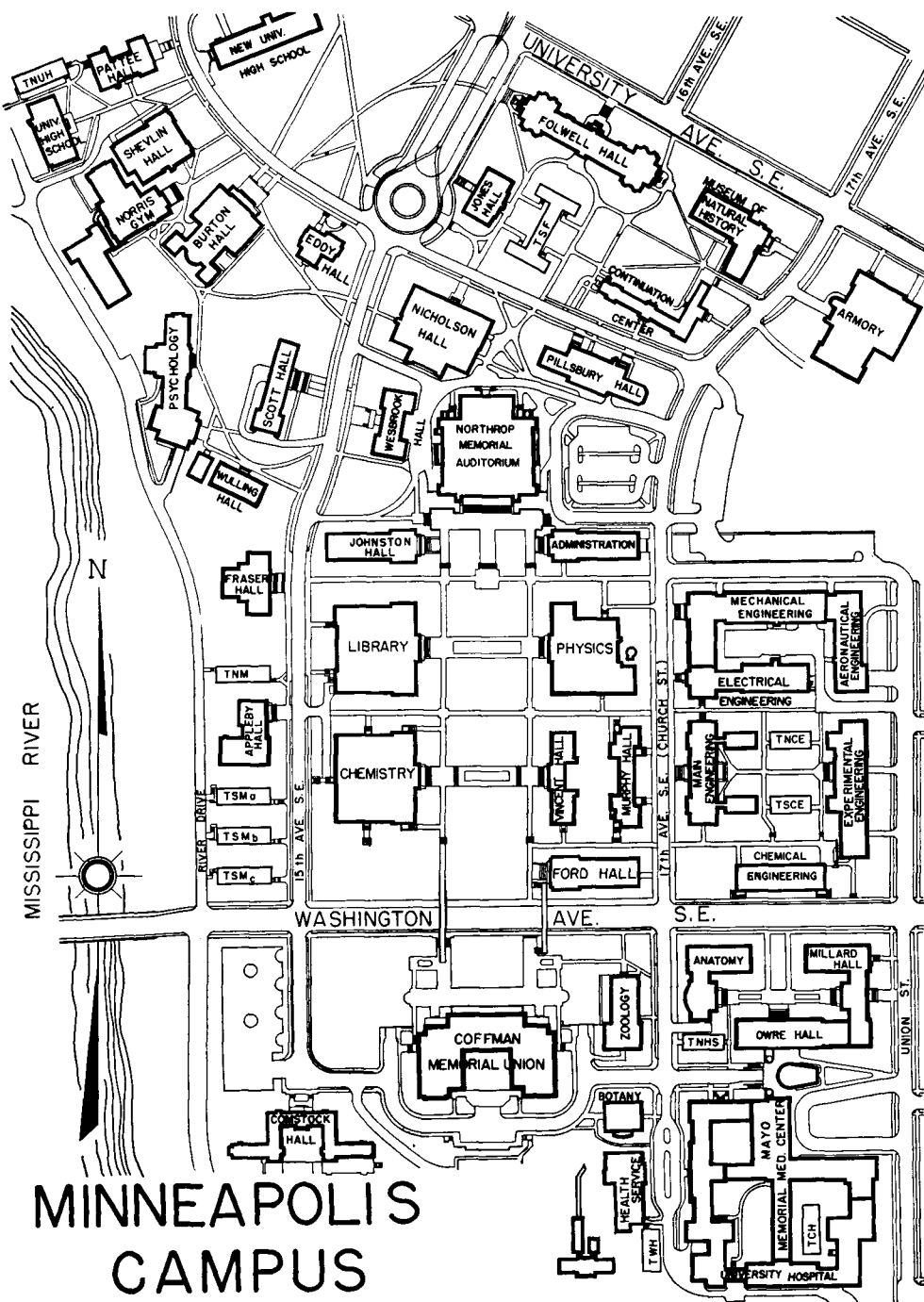
Stuttering, per 7 weeks—\$30.00 for one
qtr time, \$50.00 for half time, \$100.00
for full time remediation

Miscellaneous

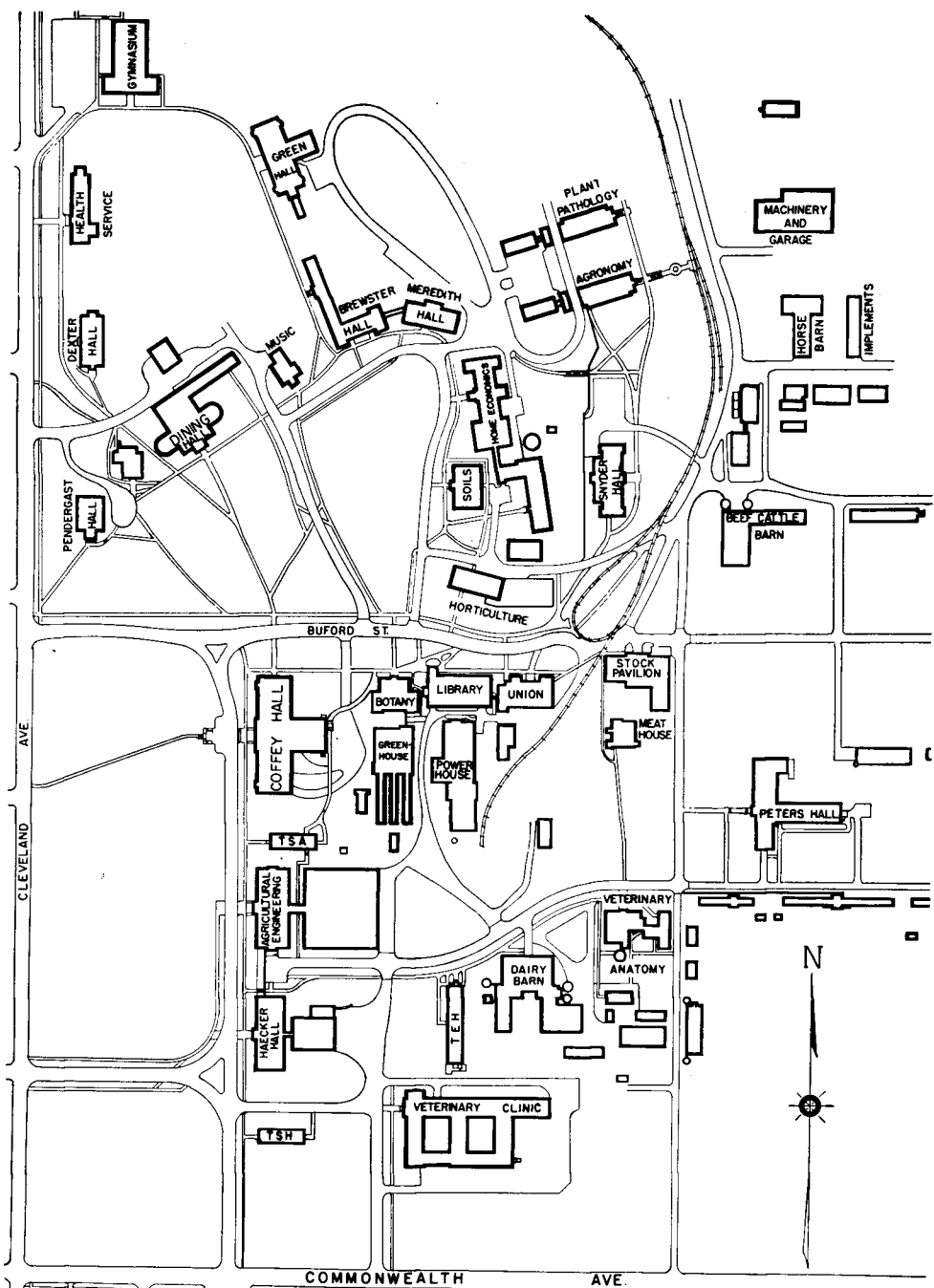
\$2.50—Placement service, required of
degree candidates in IT
10.00—Graduation fee for Technical Aid
certificate
13.85—Duluth Branch incidental fee
15.00—Professional engineering thesis
exam
26.00—Exam to determine adv standing
in Dentistry
35.00—PhD thesis publication

BUILDING ABBREVIATIONS

A, Armory	P, Pillsbury Hall
Adm, Administration	PetH(StP), Peters Hall
AE, Aeronautical Engineering	Ph, Physics
Ag(StP), Agronomy	PoH, Louise M. Powell Hall for Nurses
AgrBot(StP), Agricultural Botany	PP(StP), Plant Pathology
AH, Appleby Hall	Psy, Psychology
Bo, Botany	Pt, Pattee Hall
Bu, Burton Hall	SBH, State Board of Health
C, Chemistry	ScH, Scott Hall
CH, Cooke Hall	ShH, Shevlin Hall
ChE, Chemical Engineering	SnH(StP), Snyder Hall
CofH(StP), Coffey Hall	So(StP), Soils
DCB(StP), Dairy Cattle Barn	TCH, Temporary, Court of Hospitals
E, Main Engineering	TEH(StP), Temporary, East of Haecker
EdH, Eddy Hall	TNCE, Temporary, North Court of Engineering
EE, Electrical Engineering	TNHS, Temporary, North of Health Service
En(StP), Agricultural Engineering	TNM, Temporary, North of Mines (Appleby Hall)
Ex, Experimental Engineering	TNUH, Temporary, North of University High School
F, Folwell Hall	TSA(StP), Temporary, South of Administration (Coffey Hall)
ForH, Ford Hall	TSCE, Temporary, South Court of Engineering
FraH, Fraser Hall	TSF, Temporary, South of Folwell
GH(StP), Green Hall	TSH(StP), Temporary, South of Haecker Hall
Gy(StP), Gymnasium	TSMa, First Temporary, South of Mines (Appleby Hall)
HE(StP), Home Economics	TSMb, Second Temporary, South of Mines (Appleby Hall)
HH(StP), Haecker Hall	TSMc, Third Temporary, South of Mines (Appleby Hall)
HoB(StP), Home Building	TSP, Temporary, South of Powell Hall
Hosp, University Hospitals	TWH, Temporary, West of Hospitals
Hr(StP), Horticulture	UHS, University High School
IA, Institute of Anatomy	VCHH, Variety Club Heart Hospital
J, Jones Hall	VetA, Veterinary Anatomy
JohH, Johnston Hall	VetC, Veterinary Clinic
Lib, Library	VH, Vincent Hall
LsPav(StP), Livestock Pavilion	WeH, Wesbrook Hall
MB(StP), Music Building	WuH, Wulling Hall
ME, Mechanical Engineering	Z, Zoology
MeH(StP), Meredith Hall	
MEx, Mines Experiment Station	
MH, Millard Hall	
MNH, Museum of Natural History	
MSh(StP), Meat Shop	
MurH, Murphy Hall	
NGW, Norris Gymnasium for Women	
NH, Nicholson Hall	
NMA, Northrop Memorial Auditorium	
OSL, Oak Street Laboratories	
Owre, Owre Hall (formerly Medical Sciences)	



MINNEAPOLIS CAMPUS



ST. PAUL CAMPUS



STUDENT'S COPY OF SPRING QUARTER CLASSES

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
I						
II						
III						
IV						
V						

CALENDAR

March

- 20 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
- 27-28 Orientation program; registration and payment of fees for new students in all undergraduate colleges
- 31 Spring quarter classes begin

April

- 4 Last day for registration and payment of fees for the Graduate School and for teachers in service
- 11 Holiday (Good Friday)

May

- 8 Parents Day
- 15 Senate meeting, 3:00 p.m.
- 22 Cap and Gown Day convocation at 11:30 a.m.; IV hour classes excused
- 30 Holiday (Memorial Day)

June

- 7-13 Final examination period
- 8 Baccalaureate service, 3:00 p.m.
- 14 Spring quarter closes
Commencement 8:00 p.m.

STUDENT'S COPY OF SPRING QUARTER CLASSES

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
VI						
VII						HAVE YOU CHECKED ALL SECTION NUMBERS
VIII						
IX						
X						Course—Section Room—Building

MARCH

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

FINAL EXAMINATIONS

Final Examination Schedule—The time of examination is based on the hours and days the class is regularly scheduled during the quarter. For purposes of determining the proper examination time:

- Use the lecture hour rather than the laboratory or recitation periods.
- Use the MWF sequence if scheduled four or more days per week.
- Use the first class hour if scheduled two or more hours a day.

This schedule does not apply to courses offered primarily to students registered in Pharmacy, Law, Medicine, and Dentistry; to classes meeting after 6:00 o'clock p.m.; and to courses numbered 200 and over which have no regularly scheduled classroom.

I	MWF	8:00-10:00	M	June 9	VII	MWF	1:30- 3:30	Th	June 12
I	TThS	10:30-12:30	M	June 9	VII	TTh	4:00- 6:00	Th	June 12
II	MWF	8:00-10:00	W	June 11	VIII	MWF	1:30- 3:30	F	June 13
II	TThS	10:30-12:30	W	June 11	VIII	TTh	4:00- 6:00	F	June 13
III	MWF	8:00-10:00	Th	June 12	IX	MWF	1:30- 3:30	S	June 7
III	TThS	10:30-12:30	Th	June 12	IX	TTh	4:00- 6:00	S	June 7
IV	MWF	8:00-10:00	F	June 13	X	MWF	1:30- 3:30	T	June 10
IV	TThS	10:30-12:30	F	June 13	X	TTh	4:00- 6:00	T	June 10
V	MWF	1:30- 3:30	M	June 9	Classes meeting on Saturdays only:				
V	TTh	4:00- 6:00	M	June 9	I, II	S	10:30-12:30	S	June 7
VI	MWF	1:30- 3:30	W	June 11	III, IV	S	1:30- 3:30	S	June 7
VI	TTh	4:00- 6:00	W	June 11					

Common Examinations—For courses having common examinations, all sections are examined together at one time irrespective of the regularly scheduled hours and days. A list of courses for which common examinations are given will be published in the Official Daily Bulletin.

Length of Examinations—Examinations for classes scheduled four or more days a week may continue into the examination period established for TThS classes provided the instructor notifies the Room Scheduling Office of his intention to do this.

Conflicts—Students shall consult their college office regarding procedure to follow in case of examination conflicts.

Rooms—Examinations are given in the regularly scheduled classroom unless the instructor arranges for and announces a different examination room.

REGISTRATION TALLY PROCEDURE

AGRICULTURE, FORESTRY, HOME ECONOMICS, AND VETERINARY MEDICINE

Tally at 203dCofH for all courses except the following (courses numbered 200 and over are not tallied).

AgEn 21, 107, 113, 172 tallied at 136E
HE 1, 20, 31, 34, 40, 85, 120 tallied at 210JohH for SLA and 203dCofH for all other students
HE 30, 57 tallied at 210JohH
Rhet 47 tallied at 203dCofH for Agric and 210JohH for all other students

BUSINESS ADMINISTRATION

Tally at 107VH for all courses except the following:

BA 183, 198, 199, 259 not tallied
Econ 32, 33, 34, 35, 39, 42, 206, 215, 216, 252 not tallied
Econ 9, 28 tallied at 136E
Econ 10 tallied at 101WuH
Other Econ courses tallied at 210JohH for all students except those registered in the School of Business Administration

EDUCATION

Tally at 206Bu for courses listed below unless otherwise indicated. Other courses are not tallied.

AgEd 56, 82, 91, 104 tallied at 203dCofH
ArEd 17, 18, 19, 58, 81, 84
Ed 55B, 71C
EdC.I. 109, 125
EdPsy 126, 218A
HEd 180
HEEd 90, 91, 92, 93, 94, 95, 192, 193A, 194A, 194B, 195, 197 tallied at 203dCofH
Ind 3, 7, 20, 21
MuEd 6, 53, 60, 61, 62, 67, 68, 104E
PE (women) 25, 54, 58, 60

GENERAL COLLEGE

Tally at 106NH for all courses.

INSTITUTE OF TECHNOLOGY

Tally at 136E for all courses except the following (courses numbered 200 and over are not tallied).

Draw 44, 45 tallied at 210JohH
AnCh 7 tallied at 210JohH
InCh 2 tallied at 203dCofH for Agric, 136E for IT, and 210JohH for all other students
InCh 7, 12 tallied at 101WuH for Pharm, 136E for IT, and 210JohH for all other students
InCh 11 tallied at 136E for IT, and 210JohH for all other students
OrCh 62 tallied at 210JohH

MEDICAL SCIENCES

The courses listed below are tallied as indicated. Other courses are not tallied.

Bact 53 tallied at 203dCofH for Agric, 135 Owre for Nurs, 121MH for PH nurs, 605W Hosp for Med Tech, 209TWH for PT, 101WuH for Pharm, and 210JohH for SLA students
PH 3 tallied at 136E for IT, and 210JohH for SLA students
PH 52b tallied at 203dCofH
PH 111, 121 tallied at 210JohH

PHARMACY

The courses listed below are tallied at 101WuH.

Pharm 67, 69

SCIENCE, LITERATURE, AND THE ARTS

Courses listed below are tallied at 210JohH unless otherwise indicated. Other courses are not tallied.

Art 1, 3, 10, 23, 24, 25, 30, 31, 33, 40, 41, 42, 48, 55, 58, 60, 61, 62, 70, 71, 72, 78, 80, 81, 82, 85, 89, 90, 91, 92, 99, 103, 104, 105, 108, 110, 111, 112, 118, 123, 124, 125, 128, 138, 140, 141, 142, 148, 150, 151, 152, 158A, 178, 180, 181, 182, 190, 191, 192, 193, 194, 195, 196, 197, 198
Art 23A, 24A, 60A, 61A, 62A tallied at 136E
Bot 3 tallied at 101WuH for Pharm, 203dCofH for Agric, and 210JohH for all other students
Bot 52, 123, 165
Comm 1, 2, 3
Comp 6 tallied at 106 Owre for Dent Hyg, 155NH for Mort Sci, 101WuH for Pharm, and 210JohH for all other students
Comp 4, 5, 27, 28, 29, 103
Comp 58 tallied at 107VH
Engl A, B, C, 23, 55, 56, 99
FL 1, 15, 20, 25
Fren 1, 2, 3, 3a, 4
Geog 1, 4, 41, 160
Geol A, B, 1, 2, 104, 141, 167
Geol 25 tallied at 136E for IT, and 210JohH for all other students
Germ 1, 2, 3, 3b, 4
Germ 26, 29, 43 tallied at 136E
Hist 2, 3, 22 tallied at 136E for IT, and 210JohH for all other students
Hist 6, 17, 54, 55, 61, 72
Hum 1, 2, 3, 4, 13, 53 tallied at 136E for IT, and 210JohH for all other students
Hum 23, 63, 73
Jour 10 tallied at 203dCofH for Agric, and 210JohH for all other students
Jour 14, 15, 51, 52, 55, 59, 66, 67, 68, 69, 73, 86, 101, 110, 118A, 118B, 118C, 142, 150
Math 1, 6, 7 tallied at 203dCofH for Agric, and 210JohH for all other students
Math 8, 20 tallied at 107VH for BA, and 210JohH for all other students

Math 16, 30, 50, 51, 52, 108, 120, 123, 140, 146,
159, 178
Mus 2T, 3T, 5T, 6T, 11C, 12C
Mus 45StP tallied at 203dCofH
NSci 3, 6, 9
Phil 1, 2, 3
Phys 7, 9, 50 tallied at 136E
PO 1, 11
Pol 3
Psy 2 tallied at 125 Owre for Nurs, 203dCofH
for Agric, 136E for IT, and 210JohH for all
other students
Psy 4-5, 5, 55, 130
Russ 3
Soc 1A tallied at 203dCofH
Soc 45
Span 1, 2, 3, 3A, 4, 20, 72
Spch 3 tallied at 106 Owre for Dent Hyg. and
210JohH for all other students
Spch 1, 2, 5, 6, 31, 33, 34, 51, 61, 65, 66, 67, 73,
79, 81, 83, 92, 103, 106, 132, 155
SSci 1, 2, 3, 13, tallied at 136E for IT, and
210JohH for all other students

SW 221
Zool 3 tallied at 106 Owre for Dent Hyg, 156NH
for Mort Sci, and 210JohH for all other stu-
dents
Zool 50, 53, 58, 81, 182
Zool 127, 140, 146 tallied at 203dCofH for Agric,
and 210JohH for all other students

UNATTACHED UNIVERSITY
DEPARTMENTS

Air 33, 36, 133A, 133B, 133C, 133D, 136A, 136B
tallied at 1 A
Lib 1 tallied at 210JohH
Mil 3, 6A, 6B, 6C, 6D, 6E, 6F, 153A, 153B, 153C,
153D, 153E, 153F, 156A, 156B, 156C, 156D,
156E, 156F tallied at Armory drill floor
Mort 3, 6, 7, 10, 17, 22, 27, 28, 29 tallied at
156NH
Nav 13, 23, 53, 63 tallied at 203A
PE (men) 1C (sec 4, 5, 8, 9, 10, 11) 2C (sec 14,
15, 16, 19, 20, 21) tallied at 210JohH

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The Bulletin of the
UNIVERSITY of MINNESOTA

Class Schedule
and Registration Instructions
Fall Quarter
1952

including

- Registration instructions
- Final examination schedule
- Courses tallied in college offices
- Registration dates
- Course fees
- Calendar

How to Use the Class Schedule

This bulletin lists hour, day, and room schedules for courses offered by colleges of the University. It also gives information about titles, credits, and prerequisites.

Information not listed or listed "or" should be obtained from the department offering the course.

Registration instructions, course fees, the final examination schedule, the calendar, and building abbreviations used in this bulletin are listed at the back.

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

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

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

Volume LV, Number 26

July 7, 1952

Entered at the post office in Minneapolis as semi-monthly 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.

REGISTRATION INSTRUCTIONS

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

Step 1—Have your program approved by your college office.

This can be done on those days listed for your college on page 4. Supplementary instructions may be issued by the college in which you are registering.

Step 2—Get class reservation cards for courses tallied in the college offices.

Courses tallied in the college offices are listed on pages 113-114. These cards reserve a place for you in those courses.

Step 3—Turn in your Registration Permit, class reservation cards, and approved Registration Blank to your college window in the Office of Admissions and Records to get a fee statement.

Graduate students must first obtain approval of their program from the Graduate School office.

Note: You will not be issued a fee statement if you do not have your registration permit card and necessary class reservation cards, or if your registration blank does not show proper approval by your college.

Step 4—Pay your fees to the bursar.

Fees for all students registered through September 12 are due September 18.

Fees for students registered later are due September 26 for undergraduate and October 3 for graduate students.

If you are a veteran:

First—Have your fee statement approved at the veterans' window in the Office of Admissions and Records for collection from the Veterans Administration (veterans must pay the \$5.00 matriculation fee for new students themselves).

Second—Take it to the bursar to get a receipt.

Third—Present this receipt with your Veterans' Course List to the Bureau of Veterans' Affairs, Shevlin Hall, to obtain books and supplies.

CHANGE OF REGISTRATION

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

WITHDRAWAL FROM THE UNIVERSITY

Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. Veterans must also notify the Bureau of Veterans' Affairs.

COLLEGE OFFICES AND REGISTRATION DATES

Students participating in the program of orientation for new students should register on the date specifically assigned to them for this activity. Other students may register at any time during the period for their college.

Agriculture, Forestry, Home Economics

203d Coffey Hall
August 4-September 26

Business Administration

107 Vincent Hall
New students, September 15-26
Former students, August 4-8, September 25-26

Dental Hygiene

106 Owre Hall
New students, August 25-29, September 15-26
Former students, September 22-26

Dentistry

149 Owre Hall
August 4-September 26

Education

204 Burton Hall
August 4-29, September 22-26

General College

106 Nicholson Hall
August 4-29, September 15-26

Graduate School

316 Johnston Hall
August 4-October 3

Institute of Technology

Architecture and Engineering, 133
Main Engineering Bldg.
Chemistry, 127 Chemistry Bldg.
Mines, Metallurgy, 103 Appleby Hall
New students, August 4-29, September 15-26
Former students, September 22-26*

Law School

204 Fraser Hall
August 4-15, September 15-26

Medical School

136 Owre Hall
New students, September 26
Former students, May 27

Medical Technology

605 West Hospitals
August 4-22, September 15-26

Mortuary Science

156 Nicholson Hall
New students, August 25-29, September 15-26
Former students, September 23

Nursing

125 Owre Hall
New students, September 15-26
Former students, August 4-15, September 22-26

Occupational Therapy

204 Temporary West Hospitals
New students, August 4-22, September 15-26
Former students, August 4-29, September 15-26

Pharmacy

101 Wulling Hall
New students, August 25-29, September 15-26
Former students, August 4-29, September 22-26

Physical Therapy

209 Temporary West Hospitals
August 4-12, September 15-26

Public Health

121 Millard Hall
August 11-22, September 15-26

Science, Literature, Arts

Junior College, 214 Johnston Hall
Senior College, 223 Johnston Hall
Special students, 214 Johnston Hall
August 4-29, September 15-26

University College

223 Johnston Hall
August 4-29, September 15-26

Veterinary Medicine

203d Coffey Hall
September 22-26

***Institute of Technology enrolling numbers:**

Students will register on the day provided for their number: 1-100 September 22, 101-200 September 23, 201-300 September 24, 301-400 September 25, 401-500 September 26.

EXPLANATIONS

Arrangement—Fall quarter course offerings are listed first, followed by winter and spring quarter course offerings. The latter do not include room schedules. They are included here to enable you to plan your program for the entire year at the time of fall registration. When reference is directed back to a fall quarter course, all information shown for that course applies equally to the winter and spring quarter courses unless otherwise indicated.

When section numbers are preceded by a dash (—) you may enroll in any section. Often there is a single lecture hour, with a choice of laboratory or recitation periods. Occasionally there may be a choice of both lecture and laboratory (recitation) periods.

Bold face titles—When enrolling in these courses, you must obtain a class reservation card in the college office in which the course is tallied (see pages 113-114).

Prerequisites—Certain courses require for enrolment therein the completion of or concurrent registration in certain other courses, consent of the instructor, or the possession of some definite qualifications or minimum standing. Work substantially equivalent to courses listed as prerequisites is occasionally accepted in lieu of the prerequisite listed. See your college bulletin for further information.

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

Unless otherwise indicated, courses are numbered as follows: courses primarily for freshmen and sophomores, 1 through 49; for juniors and seniors, 50 through 99; for juniors, seniors, and graduate students, 100 through 199; for graduate students only, 200 and over.

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

<i>Hour</i>	I	II	III	IV	V	VI	VII	VIII	IX	X
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30	4:30	5:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00

A class listed I-II MW meets the first through the second hour Mondays and Wednesdays, the hyphen always indicating *through*. Days of the week are abbreviated M, T, W, Th, F, S.

Symbols—The following symbols are used throughout this bulletin:

* Course may be taken with consent of the instructor irrespective of prerequisites.

† To receive credit for this course, all courses listed after the † must be completed.

§ Credit is not given if the equivalent course listed after the § has been taken for credit.

**COLLEGE OF AGRICULTURE, FORESTRY, HOME ECONOMICS,
AND VETERINARY MEDICINE**

**AGRICULTURAL BIOCHEMISTRY
(AGBI)**

Fall Quarter

- 1** **Intro Organic Chemistry** (5 cr; prereq* soph. 8 cr inorg chem)
II MTWThF, GHAud, Spriestersbach
- 2** **Quantitative Methods** (5 cr; prereq soph. 8 cr inorg chem)
VI-IX MWF, 116SnH, Hill
- 3** **Intro Biochemistry** (3 cr; prereq 1)
I TThS, 113SnH, Segal
- 52** **Biochemistry, Microbiology of Cereal Grains**
(3 cr, §PIPa 52; prereq regis ME—Milling Opt, 5 cr org chem, 9 cr biol)
II TThS, 310SnH, Cuendet
- 118** **Lab Probs in Biochemistry** (3-5 cr; prereq cons instr)
- 119** **Colloids** (3 cr; prereq 3 or 8 cr org chem; Phys. 9 adv)
III MWF, 113SnH, Briggs
- 124** **Vitamins** (3 cr; prereq 6, 119; 123 adv)
II TThS, 113SnH, Schultz
- 129** **Colloids Lab** (2 cr; prereq 2, concur regis 119)
VI-VIII TTh, 202SnH, Briggs
- 202** **Biochemical Micromethods** (3 cr; prereq* 6 cr from 129-133; Bact 53 adv)
VI-IX MW, 208SnH, Boyer
- 203** **Research Probs** (2-5 cr; prereq cons instr)
- 205** **Special Topics: Biochemical Literature** (1-3 cr; prereq cons instr)
- 208** **Seminar: Cereal Chemistry** (1 cr; prereq* 108)
Ar, Geddes
- 213** **Seminar: Dairy Chemistry** (1 cr; prereq 103, cons instr)
Ar, Jenness
- 216** **Seminar: Nutrition, Enzymes** (1 cr; prereq 116, 123, cons instr)
Ar, Schultz, Boyer
- 219** **Seminar: Colloid Chemistry** (1 cr; prereq 119, cons instr)
Ar, Briggs
- 220** **Seminar: Protein Chemistry** (1 cr; prereq 120, cons instr)
Ar, Briggs, Jenness
- 221** **Seminar: Carbohydrate Chemistry** (1 cr; prereq 121, cons instr)
Ar, Smith
- 222** **Seminar: Chemistry of Lipides** (1 cr; prereq 122, cons instr)
Ar, Lundberg
- 224** **Seminar: General** (1 cr)
Ar, 113SnH, Geddes

Winter and Spring Quarters

- 1s See 1f
- 2w See 2f
- 3w See 3f
- 5s **Plant Biochemistry** (3 cr, §105; prereq 3, org chem) I MWF
- 6s **Animal Biochemistry** (3 cr, §106; prereq 3, org chem) II MWF
- 103s **Dairy Chemistry** (3-6 cr; prereq 2, 6)
Lect VI MWF, lab VII-IX MWF
- 105s **Plant Biochemistry** (3 cr, §5; prereq 3, org chem) I MWF
- 106s **Animal Biochemistry** (3 cr, §6; prereq 3, org chem) II MWF
- 108s **Chemistry of Wheat, Wheat Products** (3 cr; prereq 5) IV MWF
- 110s **Flour Lab Methods** (3-5 cr; prereq 2, concur regis 108) VI-IX MWF
- 116w **Adv Animal Nutrition** (3 cr; prereq 6) III TThS
- 117s **Lab Probs in Animal Nutrition** (3 cr; prereq 116, cons instr)
- 118w,s See 118f
- 120w **Proteins** (3 cr; prereq* 119) III MWF
- 121w **Carbohydrates** (3 cr; prereq* 119) II MWF
- 122s **Lipides** (3 cr; prereq* 119) II WF, VI W
- 123s **Enzymes** (3 cr; prereq* 119) III MWF
- 130w **Proteins Lab** (2 cr; prereq 2, concur regis 120) VI-VIII TTh
- 131w **Carbohydrate Lab** (2 cr; prereq 2, concur regis 121) VI-VIII MW
- 132s **Lipides Lab** (2 cr; prereq 2, concur regis 122) VI-VIII MW
- 133s **Enzymes Lab** (2 cr; prereq 2, concur regis 123) VI-VIII TTh
- 203w,s See 203f
- 205w,s See 205f
- 208w,s See 208f
- 213w,s See 213f
- 216w,s See 216f
- 219w,s See 219f
- 220w,s See 220f
- 221w,s See 221f
- 222w,s See 222f
- 224w,s See 224f

AGRICULTURAL ECONOMICS (AGEC)

Fall Quarter

- 1** **Prin Economics I** (3 cr, §1-2; prereq soph. regis agr, for, vet)
—1, I MWF, 100HH, Lowe
—2, III MWF, 109HH, Lowe

- 3 Prin Economics (5 cr; prereq soph, regis HE)
II MTWThF, 109HH, Lowe
- 25 Prin Accounting (4 cr; prereq soph, regis agr, for, HE, vet)
Lect II MWF, 311HH, Dahl
Lab VIII-IX Th, 311HH
- 30 Agricultural Prices (3 cr; prereq 2)
II TThS, 210HH, Cox
- 40 Prin Marketing Organization (3 cr; prereq 2)
I MWF, 210HH, Dahl
- 50 Farm Finance (5 cr; prereq 2, regis agr, for)
IV MTWFS, 311HH, Koller
- 90 Agricultural Statistics (5 cr, \$190)
Lect III TThS, 210HH, Cox
Lab ar
- 110 Economics of Agricultural Production (3 cr; prereq 2)
I TThS, 210HH, Dowell
- 126 Economics of Consumption (3 cr; prereq 2 or 3)
VI MWF, 100HH, Cochrane
- 140 Marketing Organization: Staples (3 cr; prereq 40)
III MWF, 130TSH, Cox
- 144 Cooperative Organization (3 cr; prereq 40)
II TThS, 311HH, Jesness
- 190 Agricultural Statistics (3 cr, \$90)
Lect III TThS, 210HH, Cox
Lab ar
- 221 Farm Organization Studies (3 cr)
Ar, Pond

Winter and Spring Quarters

- 1w See If III MWF
- 2w,s Prin Economics II (5 cr, †1-2; prereq 1) I MTWThF
- 3w,s See 3f
- 8s Rural Economics (3 cr; prereq 2 or 3) II TThS
- 25w See 25f Lect II TThS, lab VIII-IX Th
- 40s See 40f II MWF
- 47s Marketing Accounting (4 cr; prereq 25)
Lect IV MWF, lab VIII-IX F
- 80s Farm Accounting (3 cr) I TThS
- 102w Farm Organization (3 cr; prereq 2) II TThS
- 103s Farm Operation (3 cr; prereq 102) II TThS
- 104s Types of Farming (3 cr; prereq 2) III MWF
- 107s Farm Work Simplification (3 cr; prereq 2) VIII-IX MWF
- 131w Market Prices (3 cr; prereq 30, 40) III TThS
- 141w Marketing Organization: Dairy, Poultry Products (3 cr; prereq 40) II MWF
- 142s Marketing Organization: Fruits, Vegetables (2 cr; prereq 40) III MW

- 143w Marketing Organization: Livestock, Meats (3 cr; prereq 40) III MWF
- 150s Adv Farm Finance (3 cr; prereq 50) 1:45-3:15 TTh
- 170w Land Economics (3 cr; prereq 110) 1:30-3:00 WF
- 172s Economics of World Agriculture (3 cr; prereq* 110) 1:15-2:30 WF
- 191w Adv Agricultural Statistics (3 cr; prereq 90 or 190) IV MWF
- 206w Seminar: Agricultural Policy (3 cr) 4:00-5:15 MW
- 226s Adv Farm Organization (3 cr)
- 235s Methods of Price Analysis (3 cr; prereq 131, 191) 10:00-11:30 TTh
- 241s Seminar: Marketing of Livestock, Live-stock Products (3 cr)

AGRICULTURAL ENGINEERING
(AGEN)

Fall Quarter

- 3 Mechanical Drawing (3 cr)
—1, III-IV MWF, 303En, Christopherson
—2, VI-VII MWF, 303En, Christopherson
- 11 Applied Mathematics (5 cr; prereq plane geom)
II MTWThF, 103En, Flikke
- 19 Elem Surveying (3 cr; prereq 3, 11 or trig)
Lect V T, 217En, Larson
Lab VI-VIII TTh, 305En, Larson
- 24 Agricultural Physics I (4 cr; prereq Math 6)
Lect III MWF, 101En, Hustrulid
—1, Lab VI-VII M, 102En
—2, Lab VI-VII F, 102En
—3, Lab IX-X T, 102En
—4, Lab IX-X Th, 102En
—5, Lab I-II S, 102En
- 35 Household Physics (5 cr)
Lect III TThS, 101En, Hustrulid
—1, Lab I-II TTh, 102En
—2, Lab VI-VII TTh, 102En
- 40 Mechanical Training (3 cr)
I-II MWF, 106, 20En, Dent
- 43 Mechanical Lab (3 cr; prereq regis IT)
I-II TThS, 106, 20En, Dent
- 50 Adv Surveying (3 cr; prereq soph, 19)
Lect V M, 103En, Larson
Lab VI-VIII MW, 305En, Larson
- 52 Elements of Farm Machinery (3 cr; prereq ME 24, regis IT)
Lect VI TTh, 103En, Schwantes, Johnson
Lab VII-IX Th, 49En
- 53 Farm Structures (3 cr; prereq CE 37 or concur regis, MM 128, Econ 9, regis IT)
Lect IV TTh, 303En, Otis
Lab VII-IX T, 303En, Otis
- 60 Soil, Water Control (3 cr; prereq 23, Soil 4)
VI-VIII WF, 305En, Manson

CLASS SCHEDULE

- 63 **Farm Structures Lab** (3 cr; prereq 53 or concur regis, MM 141, regis IT)
I-III TTh, 41, 48En, Otis
- 67 **Rural Sanitation, Water Supply** (3 cr; prereq soph, 23, Soil 4)
II MWF, 101En, Allred
- 70 **Dairy Engineering** (3 cr; prereq 23)
I MWF, 105En, Strait
- 104 **Soil Moisture Relation in Agriculture** (4 cr; prereq Soil 4)
I-IV TTh, 305En, Manson
- 111 **Probs: Soil Water, Bldgs, Power, Rural Electrification** (2-6 cr; prereq cons instr)
- 171 **Design of Agricultural Machinery** (3 cr; prereq 52, ME 121, regis IT)
Lect VII M, 105En, Strait
Lab VIII-X M, VII-IX W, 305En, Strait
- 211 **Adv Probs: Research** (2-6 cr; prereq 111, 112, or 113)

Winter and Spring Quarters

- 3w,s See 3f III-IV MWF
- 6s **Farm Buildings** (3 cr) I MWF
- 7s **Farm Building Construction** (3 cr) Lect VI TTh, lab VII-IX T or VIII-IX Th
- 11w See 11f IV MTWThF
- 12w **Agricultural Machinery** (3 cr; prereq 23)
- 13w **Engines, Tractors** (3 cr; prereq 23) Lect III TTh, lab VI-VIII W
- 18w **Agricultural Automotives** (3 cr; prereq ME 131, regis IT) Lect I TTh, lab VIII-X F
- 19s See 19f Lect VI I, lab VII-IX TTh
- 21s **Elements of Surveying** (5 cr; prereq Draw 3, MM 12, regis IT) VI-X M; VI-IX WF
- 23w **Gen Physics** (5 cr; prereq 11) Lect II MTWF, lab I-II Th; VI-VII Th; IX-X F
- 25w See 24f (prereq 24) Lect I TThS, lab III-IV S; VI-VII M; VI-VII T; VI-VII F; IX-X T
- 31w **Prin Drainage** (3 cr; prereq Soil 4) II MWF
- 32w **Elements of Supplemental Irrigation** (2 cr; prereq Soil 4) III TTh
- 35s See 35f Lect I MWF; III TThS; lab I-II TTh; VI-VII TTh; VI-VII MF
- 36w **Rural Sanitation, Water Supply** (3 cr; prereq Hydr 102, regis IT) III MWF
- 41w,s **Metal Work** (3 cr) I-II TThS(w); VI-VIII TTh(s)
- 42s **Art Metal Work** (3 cr) VI-VIII WF
- 51w **Soil, Water Conservation** (3 cr; prereq 21, Soil 4, Hydr 102 or concur regis, regis IT) IV MWF
- 55w **Electricity in Agriculture** (2 cr; prereq 23) VI TTh
- 61w **Irrigation** (3 cr; prereq 51, regis IT) I MWF
- 73w **Steam Boilers, Heat Engines** (3 cr; prereq 18, ME 131, regis IT) Lect VII MF, lab VII-X W
- 104s See 104f

- 106w **Agricultural Hydrology** (3 cr; prereq* 61 or concur regis, regis IT) VI MWF
- 107s **Drainage, Irrigation, Soil Erosion Control Design** (4 cr; prereq* 61, 106, regis IT) Lect I TTh, lab II-IV TTh
-112w-113s see 111f
- 114s **Buildings, Equipment, Materials, Methods of Construction** (3 cr; prereq 3, 6, 7)
- 124s **Agricultural Machinery, Mechanical Power Mgt** (3 cr; prereq 9 cr agr engr incl 12)
- 125s **Topics in Agricultural Physics** (3 cr; prereq 25, 172, integ calculus)
- 126w **Mgt of Agricultural Machinery** (3 cr; prereq 171, AgEc 102, regis IT)
- 150s **Inspection Trip** (1 cr; prereq sr, regis IT)
- 167w **Adv Farm Structures** (3 cr; prereq 53, 63, ME 160, CE 146, regis IT) Lect IV TTh, lab VII-IX F
- 172s **Applied Electricity** (3 cr; prereq EE 38 or concur regis, regis IT) Lect II MF, lab VII-X W
-212w-213s see 211f

AGRICULTURAL JOURNALISM
(AGJO)

Fall Quarter

- 54 **Editing Agricultural Bulletins** (3 cr; prereq* Jour 15, 52, 69 or 73)
Ar, Swanson

Winter and Spring Quarters

- 53w **Publicity** (3 cr; prereq rhet comm require) I TThS
- 55s **Agricultural Journalism Outlets** (3 cr; prereq* Jour 15, 52, 69 or 73)

AGRONOMY AND PLANT GENETICS
(AGRO)

Fall Quarter

- 1 **Gen Farm Crops** (3 cr)
IV MWF, 202Ag, Dunham
- 23 **Forage Crops** (4 cr; prereq soph, 1)
Lect VI MWF, 202Ag, Schmid
Lab VII MWF, 201Ag
- 31 **Prin Genetics** (4 cr; prereq soph)
Lect I TThS, 202Ag, Lambert
Lab ar
- 123 **Forage Crops** (4 cr)
Lect VI MWF, 202Ag, Schmid
Lab VII MWF, 201Ag
- 126 **Crop Judging** (4 cr; prereq 22)
Ar, Schmid
- 131 **Prin Genetics** (4 cr)
Lect I TThS, 202Ag, Lambert
Lab ar
- 135 **Weed Control** (3 cr; prereq 1, PIPa 3)
VI-VII TTh, 202Ag, Dunham, Heggeness

- 201 Research: Farm Crops (ar cr; prereq 121, 123)
Ar, Schmid, Dunham
- 202 Farm Crops Seminar (1½ cr; prereq 9 cr farm crops)
- 241 Research: Plant Genetics (ar cr)
Ar, Burnham, Rinke, H L Thomas, Lambert
- 242 Seminar: Plant Breeding (1 cr)
- 243 Methods in Plant Breeding (3 cr)
Ar, Myers
- 244 Lab Methods in Plant Breeding (1½-3 cr)
- 245 Adv Genetics (3 cr)
Ar, Burnham
- 249 Adv Genetics, Specialized (2 cr; prereq 245)
Ar, Burnham

Winter and Spring Quarters

- 1s See 1f
- 21w Grain Crops (4 cr; prereq soph, 1) Lect VI MWF, lab VII MWF, VIII W
- 22s Grain, Hay Grading (3 cr; prereq soph, 1) Lab I-II MWF
- 24s Identification, Judging (1 cr; prereq 22 or concur regis) Lab VIII-IX Th
- 31w See 31f
- 52w Production, Grading of Cereal Crops (4 cr; prereq regis ME—Milling Option, 9 cr biol) Lect III MWF, lab III-IV TTh
- 121w Grain Crops (4 cr) Lect VI MWF, lab VII MWF, VIII W
- 122s Grain, Hay Grading (3 cr) Lab I-II MWF
- 131w See 131f
- 132w Farm Crops Plant Breeding (4 cr; prereq 31) VI-VIII TTh
- 133s Pasture Crops, Mgt (4 cr; prereq 23) Lect VI MWF, lab VII MWF
- 134s Seminar: Agronomy (2 cr; prereq sr, 9 cr)
- 136s Introd to Applied Statistics (3 cr) Lect I TTh, lab ar
- 201w,s See 201f
- 202w See 202f
- 203w Adv Studies in Agronomy (3 cr; prereq 121, 123)
- 241w,s See 241f
- 242s See 242f
- 246w Seminar: Genetics (2 cr)
- 247w Cytogenetics (3 cr; prereq Bot 119)
- 248w Applied Statistics (3 cr; prereq PH 110)
- 250w Cytogenetics, Specialized Agronomy (2 cr; prereq 247)

ANIMAL HUSBANDRY (ANHU)

Fall Quarter

- 1 Livestock Production (4 cr)
—1, II MTWThF, Center LsPav, P A Anderson
—2, II MTWThF, West LsPav, R M Anderson

- 53 Adv Meats (3 cr; prereq 52)
VI-VIII TTh, Meat Shop, Aunan
- 56 Livestock Feeding I (3 cr; prereq 1)
III MWF, 200PetH, Hanson
- 58 Market Classes, Grades of Livestock (3 cr; prereq 1)
II T, II-IV Th, 214PetH, Harvey
- 101 Livestock Selection (3 cr; prereq 9)
VI-VII MWF, Center LsPav, R M Anderson
- 116 Prenatal Development of Farm Animals (4 cr; prereq cons instr)
Lect IV MWF, 15PetH, Cummings
Lab III-IV T, 15PetH
- 201 Adv Animal Breeding I (3 cr; prereq 112, PH 110)
Lect III MWF, 108PetH, Winters
Lab VI-VII Th, 108PetH, Rempel
- 208 Seminar: Animal Husbandry (1 cr)
VIII F, 108PetH, Ferrin
- 211 Experimental Methods (3 cr)
IV TThS, 108PetH, Ferrin
- 212 Research: Meats (3-9 cr)
- 213 Research: Animal Husbandry (3-9 cr)

Winter and Spring Quarters

- 1w,s See 1f
- 8w,s Breeds of Livestock (4 cr; prereq soph, 1) III-IV TThS (w,s)
- 9s Livestock Judging (3 cr; prereq 8) III-IV MWF
- 50w Meat Selection, Utilization (3 cr; prereq regis agric, HE) III-IV TThS
- 51w-52s Meats, Meat Products (3 cr; prereq 1) VI-VII MWF(w); VI-VIII TTh(s)
- 57w See 56f (prereq 56) III MWF; IV MWF
- 107s Meat Probs (3 cr; prereq 53) Lect IV TTh, lab VI-VIII F
- 112w Animal Breeding (3 cr; prereq Agro 31) IV MWF
- 113s Livestock Mgt (3 cr; prereq 57, 112) VI-VIII MW
- 114s Artificial Insemination (4 cr; prereq 112, cons instr) Lect IV MWF, lab VI-VIII T or Th
- 203w Adv Animal Breeding II (3 cr; prereq 112, 116) III MWF
- 204s Adv Animal Breeding III (3 cr; prereq 201, 203, PH 130) VI T and VI-IX Th
- 205s Seminar: Animal Breeding (2 cr; prereq 201, 203) III-IV Th
- 206w-207s Adv Livestock Feeding I (3 cr; prereq 57, AgBi 6) VI MWF
- 209w-210s See 208f VIII F (w); II T (s)
- 212s See 212f
- 213w,s See 213f

DAIRY HUSBANDRY (DYHU)

Fall Quarter

- 1 Elements of Dairying (3 cr; prereq entr cr in chem or InCh 1 or 4)
III MWF, 100HH, Combs, Morris, Rudnick

- 2 Elements of Dairying Lab (2 cr; prereq 1 or concur regis)
VII-VIII TTh, 100HH, Thomas, Rudnick
- 101 Milk Production (3 cr; prereq 1)
IV MWF, 210HH, Fitch
- 104 Dairy Stock Selection (3 cr; prereq 9, 101, or concur regis)
VI-VII TTh, 9HH, Hervey
- 105 Seminar I (1 cr; prereq sr, 3 courses in dairy husb)
II F, 210HH, Petersen
- 111 Butter (3 cr; prereq 3, 50)
Lect VI MW, 210HH, Coulter, Thomas
Lab VI-VIII F, 210HH
- 118 Milk Production, Secretion (3 cr; prereq regis 4th yr vet med)
I MWF, 109HH, Petersen
- 202 Research: Dairy Production (ar cr)
- 205 Research: Dairy Manufacturing (ar cr)
- 212 Research: Dairy Bacteriology (ar cr)

Winter and Spring Quarters

- 1s See 1f
- 2s See 2f
- 4s Dairy Products Practice (3 cr; prereq soph, 1)
- 9s Dairy Cattle Judging (1 cr; prereq soph) VI-VIII T; VI-VIII F
- 10w Dairy Products Judging (1 cr; prereq soph, 1) IX-X Th
- 20s Household Microbiology (4 cr; prereq 3rd qtr fresh, cons advis and instr) Lect VI MWF, lab VI-VII W
- 50w Dairy Bacteriology (5 cr, lect only 3 cr; prereq soph, Bact 53, cons instr to take lect only)
- 51s Market Milk (3 cr; prereq 3, 50) Lect IV MW, lab VI-VIII Th
- 52s Dairy Herd Mgt (2 cr; prereq 103) VII-IX TTh
- 103w Dairy Stock Feeding (3 cr; prereq sr, 101, AnHu 56) II TThS
- 106w See 105f (prereq 105) III F
- 110w Ice Cream, Frozen Desserts (3 cr; prereq 1, 3) Lect IV TS, lab VI-VIII T
- 112s Cheese (3 cr; prereq 3, 50) Lect IV TS, lab VI-VIII T
- 113s Technical Control (3 cr; prereq sr, 50, 111 or 112) I-III TTh
- 114w Milk By-products (3 cr; prereq 3) Lect I TTh, lab VI-VIII Th
- 115s Adv Dairy Bacteriology (3 cr; prereq sr, 50, 111 or 112) II-III MWF
- 116s Milk Secretion (3 cr; prereq sr, 9 cr physiol, AgBi 103) I MWF
- 117s Dairy Cattle Breeding (3 cr; prereq 101, 104, Agro 31) III TThS
- 203w-204s See 202f
- 206w-207s See 205f
- 213w-214s See 212f

ENTOMOLOGY AND ECONOMIC ZOOLOGY (ENT)

Fall Quarter

- 5 Economic Entomology (5 cr; prereq soph, Zool 15)
Lect VI MWF, 107AgrBot, Hodson
Lab VII-VIII MWF, 302CofH, Hodson
- 51 Introd Parasitology (5 cr; prereq Zool 15)
Lect VI MWF, 313Z, Wallace
—1, Lab I-II MWF, 208Z
—2, Lab III-IV MWF, 208Z
—3, Lab VII-VIII MWF, 208Z
- 55 Entomological Techniques (3 cr)
Ar, Cook
- 117 Animal Ecology (3 cr; prereq 15 cr zool or ent)
Lect VI-VIII TTh, 211Z, Eddy
Lab VIII TTh, Sub 3Z
- 121 Ichthyology (3 cr; prereq 15 cr zool or ent)
Lect VIII-IX F, 211Z, Eddy
—1, Lab VI-VII MW, Sub 3Z
—2, Lab VIII-IX MW, Sub 3Z
- 125 Adv Gen Entomology (3 cr; prereq 15 cr zool or ent)
Lect I TTh, 211Z, Mickel
Lab I-III S, 402Z
- 128 Insect Physiology (4 cr; prereq sr, 15 cr zool or ent, cons instr)
Lect VI WF, 8CofH, Richards
Lab VII-IX WF, 8CofH, Richards
- 141 Insects in Relation to Plant Diseases (3 cr; prereq 8 cr ent or pl path)
I-II MWF, 302CofH, Christensen, Granovsky
- 144 Medical Entomology (3 cr; prereq 15 cr zool or ent incl 52, cons instr)
Lect VI TTh, 208Z, Barr
Lab VII-VIII TTh, 208Z
- 164 Wildlife Mgt (3 cr; prereq 63, 64, Zool 58, Bot 50, PIPa 53)
Lect III TTh, 100CofH, Marshall
Lab I-III S, 100CofH, Marshall
- 168 Fishery Biology, Mgt (5 cr, 168-169; prereq* Zool 53, 118, 119, 121, Bot 57, PH 110, 111)
Lect VI MWF, 100CofH, Smith
Lab VII-VIII MWF, 100CofH, Smith
- 176 Legal, Regulatory Aspects of Pest Control (3 cr; prereq* 15 cr ent incl 5)
III MWF, 307CofH, Aamodt
- 197 Introd Research (1 or more cr; prereq sr, cons dept)
- 200 Seminar (1 cr)

Winter and Spring Quarters

- 5w,s See 5f
- 21s Prin Beekeeping (3-5 cr) VI-VIII MWF
- 52w Introd Entomology (5 cr; prereq Zool 15) Lect VII MWF, lab V-VI MWF or VIII-IX MWF

- 56w Forest Entomology (5 cr; prereq Zool 15)
Lect VI MWF, lab VII-VIII MWF
- 57s Mill Pests, Their Control (5 cr; prereq
regis ME-Milling Option, 9 cr gen
biol) Lect VI MWF, lab VII-VIII MWF
- 63w Mammalogy (4 cr; prereq Zool 22) Lect
II MWF, lab I-II ThS or IV-V ThS
- 64w Introd Fish, Wildlife Mgt (5 cr; prereq
Zool 3, Bot 50 or For 20) III MTWThF
- 114s Apiculture (3 cr; prereq 9 cr) Lect I MW,
lab ar
- 118w See 117f Lect VI TTh, lab VII-VIII TTh
- 120s Gen Ecology of Insects (3 cr; prereq 117-
118) Lect VI TTh, lab VII-VIII TTh
- 126w-127s See 125f
- 129w See 128f
- 142w See 141f
- 145w Parasitic Protozoa (3 cr; prereq 15 cr
zool, cons instr) Lect VI TTh, lab VII-
VIII TTh
- 146s Helminthology (3 cr; prereq 15 cr zool,
cons instr) Lect VI TTh, lab VII-VIII
TTh
- 150s Introd Aphidology (3 cr; prereq* 52)
- 165w-166s See 164f (prereq 164) I MWF(w);
III TTh, lab ar (s)
- 167s Techniques in Forest Wildlife Mgt (3 cr;
prereq grad, 64) Given at Cloquet
- 169w See 168f
- 170s Fisheries Resources (3 cr; prereq* 168,
169) I-II MW
- 175w Prin Economic Entomology (4 cr; prereq*
15 cr ent incl 5) III MWF
- 197w,s See 197f
- 200w See 200f

FOOD TECHNOLOGY (FOOD)

Fall Quarter

- 101 Food Technology (3 cr; prereq 52, AgBi 3,
Bact 53, course in phys)
II TThS, 116SnH, Geddes, Liener
- 105 Frozen Food Probs (2-4 cr; prereq 104)
Ar, Winter

Winter and Spring Quarters

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

FORESTRY (FOR)

Fall Quarter

- 1A Conservation of Natural Resources (3 cr)
V MWF, GHAud, Hall
- 7 Forest Measurements (3 cr; prereq Math
1, 6)
Lect IV MW, GHAud, Brown
-1, Lab VI-VIII W, 206GH, Brown
-2, Lab II-IV S, 206GH, Brown

- 10 Farm Forestry (3 cr; prereq no forestry
maj)
Lect IV WF, 203GH, Duncan
-1, Lab VI-IX M, 206GH, Duncan
-2, Lab VI-IX T, 203GH, Duncan
- 53 Wood Structure, Identification (3 cr; pre-
req 4)
-1, Lab VI-VIII MW, 211GH, Rees
-2, Lab VI-VIII TTh, 211GH, Rees
- 56 Forest Products (3 cr)
I MWF, 203GH, Kaufert
- 58 Lumber Merchandising, Grading (3 cr;
prereq 53, 54)
III MWF, 201GH, Kemp
- 111 Adv Forest Measurements (3 cr; prereq
sr, 9)
VI-X T, 206GH, Brown
- 114 Mechanical, Physical Properties of Wood
(3 cr; prereq 53, 54, Math 7)
I TThS, 203GH, Rees
- 121 Wood Finishing (3 cr; prereq org chem)
IV MWF, 202GH, Hossfeld
- 123 Introd to Forest Economics, Valuation
(3 cr; prereq AgEc 2)
IV TThS, 201GH, Hall
- 126 Forest Ecology (3 cr; prereq 4)
II MWF, 201GH, Hansen
- 130 Forest Valuation (3 cr; prereq sr, 123)
I MWF, 201GH, Duncan
- 137 Seeding, Planting (3 cr)
Lect II TTh, 201GH, Hansen, Duncan
Lab VI-VIII T, GH Greenhouse, Hansen,
Duncan
- 145 Adv Silviculture (3 cr; prereq sr, 127, 129)
Ar, Hansen
- 146 Forest Aerial Photogrammetry (3 cr; pre-
req* sr, 134)
Ar, Meyer
- 156 Research Methods (2 cr; prereq sr)
Ar, Hossfeld, Hall, Duncan
- 200 Research Probs: Silviculture (ar cr)
- 203 Research Probs: Forest Mgt (ar cr)
- 205 Research Probs: Forest Economics (ar cr)
- 207 Research Probs: Wood Technology (ar cr)
- 213 Research Probs: Forest Utilization (ar cr)
- 218 Research Probs: Forest Measurements,
Photogrammetry (ar cr)
- 223 Seminar (1 cr)
VIII-IX Th, 202GH

Winter and Spring Quarters

- 1w Introd Forestry (3 cr) V MWF
- 4s Dendrology (4 cr) Lect III MWF, lab ar
- 8w-9s See 7f (prereq 7)
- 10s See 10f
- 51s Logging (3 cr) V MWF
- 52s Seasoning (3 cr) I TThS
- 54w See 53f
- 55w Forest Protection (3 cr) IV TThS
- 57w Wood Utilization (3 cr; prereq 53, 54)
I MWF
- 101w Adv Dendrology (3 cr; prereq 4)

- 104w Forest Influences (3 cr; prereq 126) I TThS
 -112w See 111f
 113w Wood Pulp, Paper (3 cr; prereq 53-54, org chem) IX MWF
 -115w See 114f (prereq 114) I-II TThS
 116s Fabrication, Properties of Wood Products (3 cr; prereq 114) VI-VIII MW
 119s Adv Wood Structure (4 cr; prereq sr, 53, 54) Lect IX T, lab VI-VIII TTh
 120s Building Cost Estimating (3 cr)
 124w Introd to Forest Management (3 cr; prereq 123) I MWF
 125s Wood Preservation (3 cr; prereq 53, 54) III TThS
 127w Introd to Silviculture (3 cr; prereq 126) Lect IV TTh, lab I-III S
 128s Field Silviculture I (3 cr; prereq 127) Given at Cloquet
 129s Field Silviculture II (3 cr; prereq 126, 127) Given at Cloquet
 131w Forest Policy (3 cr; prereq grad) I MWF
 133s Forest Mgt, Utilization (4 cr) Given at Cloquet
 134s Forest Inventory, Photographic Interpretation (4 cr; prereq 9)
 136s Forest Economics (3 cr; prereq sr, 123)
 140w Forest Mgt (3 cr; prereq sr, 124) III MWF
 141w Prin Silvics (3 cr; prereq grad, 127) II TThS
 142s Wood Chemistry (3 cr; prereq 53, 54, org chem) II MWF
 143w Forest Recreation (3 cr) IV MWF
 147w Forest Inventory (3 cr; prereq* sr, 134)
 -201w-202s See 200f
 -204w See 203f
 206w Research Probs: Forest Economics (ar cr)
 -208w-209s See 207f
 -214w-215s See 213f
 -219w See 218f
 -224w-225s See 223f
- 17 Personal, Family Living (3 cr; prereq no sr)
 -1, IV MWF, 213HE, Gallagher
 -2, VII MWF, 213HE, Gallagher
 20 Introd Related Art (4 cr, §56; prereq no HE sr)
 -1, II MTWF, 350HE, Myren
 -2, III MTWF, 350HE, Myren
 21 Color, Design I (3 cr; prereq 20) I-II MWF, 359HE
 22 Color, Design II (3 cr; prereq 1, 20)
 -1, III-IV MWF, 342HE
 -2, VI-VIII TTh, 324HE
 23 Adv Design (3 cr; prereq soph, 21) VI-VII MWF, 433HE, Anderson
 25 Design Applied to Crafts (3 cr; prereq 21 or 22) VI-VIII TTh, 433HE, Anderson
 27 Related Art Probs (3 cr; prereq soph, 21)
 -1, III-IV MWF, 359HE, Ludwig
 -2, VI-VII MWF, 359HE, Esteros
 30 Introd Nutrition (2 cr, §31; prereq no HE students) III TTh, 207NH, Gormican
 31 Introd Nutrition (3 cr, §30; prereq no HE sr)
 -1, III MWF, 213HE, Gormican
 -2, 9:00-10:15 TTh, 213HE, Biester
 -3, VI MWF, 213HE, Gormican
 33 Nutrition I (4 cr; prereq soph, AgBi 1, Phsl 4 or concur regis) Lect III MWF, 44HE, Nymon Lab VI-VII T, 254HE
 40 Food Preparation (5 cr; prereq 2 qtrs chem)
 -1, Lect III TTh, 48HE, Jones
 Lab III-IV MWF, 157HE, Jones
 -2, Lect VII TTh, 48HE, Jones
 Lab VI-VII MWF, 157HE, Jones
 -3, Lect VII TTh, 44HE, Gordon
 Lab VI-VII MWF, 57HE, Gordon
 41 Food Mgt, Marketing (5 cr; prereq soph, 31, 40)
 -1, III-IV TTh, III-V WF, 150, 57, 152, 156HE, Asp
 -2, III-IV MW, III-V TTh, 150, 57, 152, 156HE, Trammell
 -3, VII-VIII MTh, VII-IX TW, 150, 57, 152, 156HE, Trammell
 45 Quantity Cookery (6 cr; prereq 41) Lect V TTh, 213HE Lab I-IV TThS, Cafeteria
 46 Cafeteria Experience (3 cr; prereq soph) Lect IV W, Cafeteria
 -1, Lab IV-VI MF, Cafeteria
 -2, Lab IV-VI TTh, Cafeteria
 49 Household Equipment (3 cr; prereq soph, AgEn 35)
 -1, VI-VII MWF, 106HE, Bonnell
 -2, VI-VIII TTh, 106HE, Bonnell
 50 Textiles (3 cr; prereq 1) II-IV TTh, 313HE, Gorham

HOME ECONOMICS (HE)

Fall Quarter

- 1 Choice, Care of Clothing (4 cr, §GC15, not open to HE sr, or men)
 -1, IV MTWF, 350HE, Wolff
 -2, VII MTWF, 350HE, Wolff
 3 Clothing Construction A (3 cr; prereq 1, 3rd qtr fresh)
 -1, I-II MWF, 305HE, Wolff
 -2, III-IV MWF, 304HE
 4 Clothing Construction B (3 cr; prereq soph, 3)
 -1, VI-VII MWF, 304HE
 -2, VI-VIII TTh, 304HE
 6 Institution Experience (3 cr; prereq maj instit mgt, cons instr) Ar, Scholl

- 52 **Introd Textiles** (3 cr; prereq writ permis from jr col office)
VI-VII MWF, 313HE, Gorham
- 53 **Adv Clothing** (3 cr; prereq 4, 50 or concur regis)
VI-VIII TTh, 305HE, Gorham
- 58 **Supervised Retail Training** (4 cr; prereq 21, 22, 50, or concur regis, Psy 2, cons instr)
II TTh, all day S, 360HE, Ludwig
- 64 **Institution Buying** (4 cr; prereq 45, 46, or concur regis)
IV MWF, Cafeteria, Scholl
Field trips 1:00-4:00 F
- 76 **Nutrition** (4 cr, §34 or 170, 171; prereq 30 or 31, 40)
IV MTWF, 44HE, Nymon
- 85 **Home Mgt Principles** (3 cr; prereq 40, 41 adv)
VII MWF, 203HE, Jeary
- 86 **Home Mgt Lab** (4 cr; prereq 85 or concur regis, PH 52a, 52b; 40, 41 adv)
-1, I S and ar, Home Mgt House, Jeary
-2, I S and ar, Home Mgt House
- 98 **Home Economics Extension** (3 cr; prereq sr, HEEd 91 or concur regis)
- 102 **Adv Textiles** (3 cr; prereq 50, AgBi 1, AgEc 3 or concur regis)
VI-VIII TTh, 311, 313HE, Phelps
- 120 **Art History** (3 cr)
VIII MWF, 350HE, Esteros
- 140 **New Developments in Food Preparation** (3 cr; prereq 40, 70 adv)
9:00-10:15 TTh, 44HE, Gordon
- 142 **Experimental Cookery** (3 cr; prereq 40, AgBi 1)
VI TTh, 48HE, VII-VIII TTh, 56HE
- 170 **Family Nutrition** (3 cr; prereq 31, 40, AgBi 1, 3 cr physiol)
II MWF, 44HE, Biester
- 178 **Clinical Probs in Nutrition** (2 cr; prereq 170, 35 or concur regis)
Lect V M, 44HE, Gormican
-1, Lab VI-VIII T, U Hosp, Gormican
-2, Lab VI-VIII Th, U Hosp, Gormican
- 179 **Readings in Nutrition** (2 cr; prereq 170)
II TTh, 48HE, Nymon
- 180 **Home Planning, Furnishings** (5 cr, §GC16, FL 15, HE 24, 57; prereq 27, 49, 120 adv)
VII-VIII MW, VI F, 360HE, Myren
- 209 **Seminar: Textiles, Clothing** (1 cr; prereq cons instr)
Ar, Phelps
- 271 **Prin Human Nutrition** (3 cr; prereq 170, cons instr)
Ar, Leichsenring
- 279 **Seminar: Nutrition** (1 cr; prereq cons instr)
Ar, Biester
- 295 **Home Economics Probs** (1-5 cr; prereq cons instr)
Ar, Leichsenring, Noble, Esteros

- 296 **Home Economics Probs** (1-5 cr; prereq cons instr)
Ar, Leichsenring, Noble, Esteros

Winter and Spring Quarters

- 1w,s See 1f II MTWTh(s); III MTWTh(w)
- 3w,s See 3f III-IV MWF(s); VI-VIII TTh (w,s)
- 4w,s See 4f III-IV MWF(w); VI-VIII TTh (w,s)
- 6w,s See 6f
- 17w,s See 17f
- 20w,s See 20f II MTWF(w); III MTWF(s)
- 21w,s See 21f III-IV MWF(s); VI-VII MWF (w,s); VI-VIII TTh(w,s)
- 22w,s See 22f III-IV MWF
- 24w Probs: Home Planning, Furnishing (5 cr; §GC 16, FL 15, HE 27, 180; prereq soph, 20, 49 adv, not given to textiles and clothing in bus, rel art, HE educ maj)
III-IV MTWF
- 25w,s See 25f VI-VII MWF
- 27w,s See 27f VI-VIII TTh
- 23w Construction and Refinishing of Home Furnishings (3 cr; prereq cons instr)
VI-VIII TTh
- 30s See 30f VI TTh
- 31w,s See 31f II MWF(w); III MWF(s); 10:00-11:15 TTh (w)
- 34s Nutrition Probs (4 cr, §76, or 170, 171; prereq 3rd qtr soph, 31, 40, physiol or human biol) II MTWTh
- 35w Nutrition II (4 cr; prereq soph, 33) Lect II MWF, lab VI-VIII T
- 40w,s See 40f Lect III TTh, lab III-IV MWF (w,s); lect VII TTh, lab VI-VII MWF (w); lect VI TTh, lab VI-VII MWF (s); lect VIII MF, lab VIII-IX TWTh(s)
- 41w,s See 41f III-IV TTh, III-V WF(w,s); III-IV MW, III-V TTh (w,s); VII-VIII MW, VII-IX TTh(w)
- 45w,s See 45f Lect V TTh(w,s), lab I-IV MWF (w); I-IV TThS(w,s)
- 46w,s See 46f
- 49w,s See 49f III-IV MWF(s); VII-VIII MWF (w,s); VI-VIII TTh(w,s)
- 50w,s See 50f III-IV MWF(w,s); VI-VII MWF (w)
- 53w,s See 53f VI-VII MWF
- 56w Applications of Color, Design I (3 cr, §20; prereq no HE students) II-III TTh
- 57s Application of Color and Design II (3 cr, §24 or 180; prereq* 56 or 20, no HE students) II-III TTh, and IV T
- 65s Institution Mgt Probs (3 cr; prereq 64) 10:15-11:35 TTh
- 70w Adv Food Preparation (3 cr; prereq 40, AgBi 1) VI-VIII TTh
- 71s Demonstrations (1 cr; prereq 3rd qtr jr, 41) VI-VIII F
- 79s Selected Probs for Dietitians (3 cr; prereq 170, maj HE) II MWF

- 85w,s See 85f
 86w,s See 86f
 89w Special Probs in Household Equipment (3 cr; prereq 49, AgEn 35, cons instr)
 98w,s Home Economics Extension (3 cr; prereq sr, HEEd 91 or concur regis)
 107w Textile Analysis (3 cr; prereq 50, AgBi 1, 2) VI-VIII MWF
 115w Economic, Social Aspects of Clothing (3 cr; prereq 50, AgEc 3)
 120w,s See 120f
 121w Textile Design (3 cr; prereq 23, 27, 50) III-IV MWF
 122s Adv Interior Design (3 cr; prereq* 27, 120) III-IV TThS
 142w,s See 142f VI-VIII MW(w); VI-VIII TTh(s)
 146s Special Food Probs (3 cr; prereq sr, 142) VI-VIII MW
 170w See 170f III MWF
 171w,s Child Nutrition (3 cr; prereq 170, HEEd 90) III MW (StP) and III F, IV-V one day ar (Mpls)
 173s Nutrition in Disease (4 cr; prereq 170, 35 adv) Lect 9:00-10:15 TTh, lab VI-VII F
 177s Digestion, Metabolism (3 cr; prereq 35) VI-VIII MW
 178w,s See 178f
 179w See 179f V WF
 180w,s See 180f III-IV MTWF(w); VI-VII MWF, VIII MW(s)
 185w Family Relationships (3 cr; prereq* 17, 86, HEEd 90) VI MWF
 186s Probs in Income Mgt (3 cr; prereq* 34, 86) VIII MWF
 202w,s Animal Fibers (2 cr; prereq adv textiles, cons instr)
 204w,s Plant, Other Cellulosic Fibers (2 cr; prereq bot, adv textiles, cons instr)
 208w,s Microanalysis of Textile Fibers (ar cr; prereq bot, zool, adv textiles, cons instr)
 209w,s Seminar: Textiles, Clothing (1 cr; prereq cons instr)
 247s Special Food Probs (3 cr; prereq 142, AgBi 1, cons instr)
 249w Seminar: Foods (1 or 2 cr; prereq cons instr)
 279w,s See 279f
 295w,s-296w,s See 295f-296f

HORTICULTURE (HORT)

Fall Quarter

- 6 Fruit Growing (3 cr)
 II MWF, 102Hr, Brierley
 21 Plant Materials, Fall, Winter Aspects (3 cr; prereq 6 cr bot)
 VI-VIII MW, 8Hr, Widmer
 38 Retail Floriculture (2 cr; prereq maj ornamental hort, soph)
 Ar, Widmer

- 52 Commercial Floriculture, Fall Crops (3 cr; prereq 16, 6 cr bot)
 Lect III TTh, 8Hr, Widmer
 Lab VI-VII T, 8Hr
 60 Prin of Landscape Design (3 cr; prereq 21, 22)
 VI-VIII MF, 107Hr, Phillips
 62 Special Probs in Landscape Design, Composition (2-4 cr; prereq sr, 61)
 Ar, Phillips
 107 Orchard Mgt (3 cr; prereq* 6, hort maj or min)
 III TTh, VI-VII T, 102Hr, Brierley
 135 Potatoes (3 cr; prereq 32, 9 cr bot)
 I TThS, 302Hr, Krantz
 190 Special Probs (2-4 cr; prereq cons instr)
 Ar, Alderman, staff
 193 Horticultural Seminar (1 cr; prereq sr, 9 cr hort)
 IX W, 301Hr, Alderman, staff
 243 Adv Topics in Horticulture (3 cr)
 Ar, Alderman, Brierley, Krantz
 247 Report on Special Horticultural Topics (1-9 cr)
 Ar, Staff
 249 Research: Horticultural Crop Breeding (ar cr)
 Ar, Currence, Krantz, Hutchins, Wilcox

Winter and Spring Quarters

- 1w Gen Horticulture (3 cr) III MWF
 10s Home Floriculture (3 cr) III MWF and hr ar
 16s Greenhouse Mgt (3 cr; prereq 6 cr bot)
 IV TTh, VI-VIII F
 22s Plant Materials, Spring, Summer Aspects (3 cr; prereq 6 cr bot) VI-VIII MW
 32s Vegetable Growing (3 cr; prereq 6 cr bot)
 II MWF
 36w Plant Propagation (3 cr; prereq 6 cr bot)
 III TTh; VI-VIII T
 40s Horticulture Lab (2 cr; prereq* soph, 6)
 VI-IX F
 54s Commercial Floriculture, Spring Crops (3 cr; prereq 16, 6 cr bot) III TTh; VI-VIII T
 61s Prin of Planting Composition (3 cr; prereq* 60) VI-VIII MF
 62w,s See 62f
 110w Horticultural Crop Breeding (3 cr; prereq Agro 31) III TThS
 121w Small Fruit Culture (3 cr; prereq* hort maj or min, 6 or 32, 9 cr bot) II MWF
 138w Vegetable Crops I (3 cr; prereq 32, 9 cr bot) VII MWF
 150s Prin Quality Control (2 cr; prereq* hort or food tech maj or min)
 -191w-192s See 190f
 -194w See 193f
 241w Organization of Horticultural Research (2 cr)
 -244w See 243f

- 247w,s See 247f
 248w Truck Crop Breeding (3 cr; prereq 110
 or Agro 132) IV MWF
 249w,s See 249f

ORIENTATION (ORIE)

Fall Quarter

- 1 College Orientation Lectures (1 cr)
 —1, I T, CofHAud, McFarland
 —2, I W, CofHAud, McFarland

Winter and Spring Quarters

1w,s See 1f, Ar

PLANT PATHOLOGY AND AGRI-
 CULTURAL BOTANY (PLPA)

Fall Quarter

- 1 Plant Pathology (5 cr, §10; prereq soph, 9
 cr pl sci incl 6 in bot)
 Lect VIII MWF, 103, 105PP, Moore
 —1, Lab VI-VII MWF, 103, 105, 106PP
 —2, Lab IX-X MWF, 103, 105, 106PP
 4 Grasses, Sedges (3 cr; prereq soph, 9 cr
 bot)
 Lect III TThS, 106AgrBot, Larson
 Lab IV TS, 106AgrBot
 52 Biochemistry, Microbiology of Cereal Grains
 (3 cr; prereq regis ME-Milling Option,
 5 cr elem org chem, 9 cr gen biol)
 II TThS, 310SnH, C Christensen
 56 Introd Study of Fungi (3 cr; prereq* 9 cr
 bot)
 Lect II MW, 103PP, C Christensen
 Lab II-IV F, 103, 105, 106PP, C Christensen
 103 Physiology of Crop Plants (3 or 5 cr; pre-
 req* 15 cr pl sci)
 IV MWF, 107AgrBot, Heggeness
 105 Mycology (3 or 5 cr; prereq 1 or 10)
 VI-VIII TTh, 103, 105, 110PP, Dossdall
 118 Bacterial Diseases of Plants (3 cr; prereq
 1 or 10)
 III-IV MWF, 103, 105PP, Eide
 120 Adv Plant Pathology (3 cr, §1, 10; prereq*
 14 cr pl sci)
 Lect VIII MWF, 103, 105, 106PP, Moore
 Lab IX-X MWF
 135 Weed Control (3 cr; prereq 3, Agro 1)
 VI-VIII TTh, 202Ag, Heggeness
 141 Insects in Relation to Plant Disease (3 cr;
 prereq 8 cr ent or pl path)
 I-II MWF, 302CofH, J Christensen
 143 Methods (3 cr; prereq 1 or 10)
 III-IV TThS, 103, 105, 106PP, Hart, Moore
 156 Adv Study of Fungi (3 cr, §56; prereq* 9
 cr bot)
 Lect II MW, 103PP, C Christensen
 Lab II-IV F, 103, 105, 106PP

- 163 Practical Applications of Plant Physiology
 (3 cr; prereq* 15 cr pl sci)
 Ar, Landon
 203 Research: Plant Pathology (ar cr)
 Ar, Stakman, staff
 207 Special Probs in Mycology (ar cr; prereq
 105-106-107)
 Ar, Stakman, C Christensen, Dossdall
 213 Seminar (2 cr)
 IX-X T, 401PP, Stakman, staff
 215 Genetics of Plant Pathogens (5 cr; prereq
 1 or 10, Agro 131)
 III-IV MWF, 401PP, Stakman, J Christensen
 216 Physiology of Plant Pathogens (3 or 5 cr)
 Ar, Landon
 251 Seminar: Applied Plant Physiology (1 cr)
 Ar, Landon
 254 Research Probs: Applied Plant Physiology
 (ar cr)
 Ar, Landon
 260 Research Probs: Agricultural Botany (3 or
 5 cr)
 Ar, Stakman, Larson

Winter and Spring Quarters

- 1s See 1f Lect VIII MWF, lab IX-X MWF
 3s Weeds (3 cr; prereq 6 cr bot) III-IV TThS
 9s Seed Technology, Testing (3 cr; prereq
 soph, 9 cr bot) II-III TThS
 10w,s Forest Pathology (5 cr, §1; prereq soph,
 6 cr bot) Lect I MWF, lab I-II TThS(s);
 lect VII MWF, lab VIII-IX MWF(w)
 53s Food Plants of Game Animals (3 cr; pre-
 req 1 yr bot, 1 yr zool) II TThS
 102w Physiology of Seeds (3 cr; prereq* 15 cr
 pl sci) Lect III MW, lab III-IV F
 104w Industrial Mycology (3 cr; prereq 1 or 10
 or 56) Lect II MW, lab II-III F
 -106w-107s See 105f
 111w Diseases of Field Crops (4 cr; prereq 1
 or 10) III-IV TThS
 114w Adv Forest Pathology (3 cr; prereq 1 or
 10) VI-VIII T; VII-VIII Th
 116s Diseases of Fruit Crops (3 cr; prereq 1,
 10, or 120) Lect II MF, lab II-IV W
 119s Prin Plant Disease Control (3 cr; prereq
 1 or 10) III-V TTh
 120w,s See 120f Lect I MWF(s); VII MWF(w);
 VIII MWF(s); lab I-II TThS(s); VIII-
 IX MWF(w); IX-X MWF(s)
 -142w See 141f
 160s Plant Histiochemistry (3 cr; prereq* 15 cr
 pl sci)
 162w Temperature Relations of Crop Plants (3
 cr; prereq* 15 cr pl sci)
 -204w-205s See 203f
 -208w-209s See 207f
 211w History of Plant Pathology (2 cr)
 213w,s See 213f
 217s Ecology of Plant Pathogens (3 cr) Lect
 III-IV W, lab II-IV F

- 218w Prin Plant Pathology (5 cr; prereq 1 or 10, Bact 53, 6 cr in pl path) III-IV MWF
 -252w-253s See 251f
 -255w-256s See 254f
 -261w-262s See 260f

POULTRY HUSBANDRY (POHU)

Fall Quarter

- 52 Poultry Selection (3 cr; prereq 1)
 VII-VIII TTh, 15PetH, Canfield
 55 Special Probs (1-3 cr; prereq 6 cr)
 Ar, Sloan
 154 Poultry Products (3 cr; prereq 1)
 VI-VIII MW, 15PetH, Sloan, Swanson
 214 Research: Poultry Husbandry (ar cr; pre-
 req cons instr)
 215 Research: Poultry Nutrition (ar cr; prereq
 cons instr)
 Ar, Sloan
 216 Research: Poultry Breeding (ar cr; pre-
 req cons instr)
 Ar, Shoffner
 217 Poultry Husbandry Seminar (1 cr)
 Ar, Sloan

Winter and Spring Quarters

- 1w,s Poultry Production (4 cr) II MTWF
 51s Hatchery Mgt (3 cr; prereq 1, Zool 15)
 VI-VII TTh
 55w,s See 55f
 102w Poultry Breeding (4 cr; prereq 1, Agro
 31) I MWF
 153s Poultry Nutrition, Feeding (3 cr; prereq
 1, AgBi 1) IV MWF
 214w,s See 214f
 215w,s See 215f
 216w,s See 216f
 217w,s See 217f

RHETORIC (RHET)

Fall Quarter

- 1-2-3 Communications I, II, III (3 cr per qtr)
 I MWF or I TThS. All entering freshmen
 and students transferring with fewer
 than nine credits of freshman English
 meet in 217En the first period every day
 for the first week for diagnostic tests
 and sectioning. Students who have taken
 Rhetoric 1 or 2 meet in 107En the first
 period September 29
 22 Public Speaking (3 cr; prereq soph, rhet
 comm req)
 -1, II MWF, 312En, Woods
 -2, III MWF, 307En, Nichols
 -3, IV MWF, 307En, Nichols
 -4, VI MWF, 120TSA, Sandquist
 -5, II TThS, 220TSA, Hagen
 -6, III TThS, 312En, Woods

- 28 Play Production (3 cr; prereq soph, rhet
 comm req)
 III MWF, 220TSA, Drake
 31 English Literature I (5 cr; prereq soph,
 rhet comm req)
 III MTWThF, 308En, Thurston
 32 English Literature II (3 cr; prereq soph,
 rhet comm req)
 II TThS, 210TSA, Rosegrant
 33 American Life in American Literature (3
 cr; prereq soph, rhet comm req)
 II MWF, 210TSA, Rodabaugh
 47 Efficient Reading (3 cr)
 -1, VI MWF, 211En, Brown
 -2, VII MWF, 140ForH, Wright
 -3, VIII MWF, 185ForH, Wright
 51 Exposition (3 cr; prereq rhet comm req)
 -1, III MWF, 120TSA, Rosegrant
 -2, IV MWF, 120TSA, Rodabaugh
 -3, VI MWF, 308En, Thurston
 -4, III TThS, 307En, Brown
 54 Adv Public Speaking (3 cr; prereq 22)
 -1, II MWF, 120TSA, Sandquist
 -2, II TThS, 120TSA, Drake
 60 Contemporary Literature (3 cr; prereq rhet
 comm req)
 IV MWF, 312En, Woods
 91 American Speech for Foreign Students (no
 cr)
 VI MWF, 312En, Woods

Winter and Spring Quarters

- 1w,s-2w,s-3w,s See 1f-2f-3f
 22w,s See 22f II MWF; II TThS; III MWF;
 III TThS; IV MWF
 26w,s Original Writing (3 cr; prereq soph, rhet
 comm req) III MWF
 28w See 28f
 31w,s See 31f
 32w,s See 32f
 33w,s See 33f
 47w,s See 47f
 51w,s See 51f
 54w,s See 54f
 59s Adv Play Production (3 cr; prereq* 28)
 III MWF
 60w,s See 60f
 91w,s See 91f

SOILS (SOIL)

Fall Quarter

- 103 Prin Soil Erosion (3 cr; prereq 4)
 II TThS, 204So, MacGregor
 111 Field, Lab Studies of Soils (3 cr; prereq 4)
 Lect VII T, 202So, Arnehan
 Lab VIII-IX T, VII-IX Th
 203 Seminar: Soils (1 cr)
 Ar, Rost

Winter and Spring Quarters

- 4w Soils (3 cr; prereq soph, InCh 2 or 5) II MWF
- 5s Soil Mgt (3 cr; prereq 4) II TThS
- 108w Physical Properties of Soils (3 cr; prereq 4) VI TTh, VII-IX TTh
- 109s Soil Genesis, Classification (3 cr; prereq 108) IV MWF
- 110w Chemistry of Soil (3 cr; prereq 4) I TThS
- 202w,s Research Probs in Soils (2-5 cr)
- 203w See 203f
- 206w Soil Physics (3 cr; prereq 108)
- 207w Adv Soils (3 cr; prereq 1 yr chem) II MWF

VETERINARY MEDICINE (VET)

Fall Quarter

- 50 Anatomy, Physiology, Hygiene of Domestic Animals (3 cr)
I TThS, 103VetA, Sellers
- 101 Veterinary Gross Anatomy (7 cr; prereq regis 1st yr vet med; or grad, cons instr)
Lect VI MWTh, 103VetA, Kitchell, Larson
Lab VII-VIII MWThF, VI-VIII T, 102VetA
- 104 Special Studies in Veterinary Anatomy (1-5 cr; prereq 111, cons instr)
Ar, Kitchell, Weber
- 107 Animal Gross, Microscopic Anatomy (5 cr; prereq* Zool 15)
Lect I MWF, 211VetA, Weber, Kitchell
Lab II-III MWF, 211VetA
- 111 Veterinary Microscopic Anatomy, Embryology (6 cr; prereq regis 1st yr vet med; grad, cons instr)
Lect I MWF, 103VetA, Weber, Bell
Lab II-IV MWF, 204VetA
- 122 Animal Bacteriology (6 cr; prereq 10 cr zool, 13 cr chem)
Lect II MWF, VI M, 217VetS, Pomeroy
Lab III-IV MWF, 321VetS
- 125 Poultry Diseases (3 cr; prereq regis 4th yr vet med or grad with cons instr, 123, 153, 164)
VI TWTh, 125VetC, Pomeroy
- 135 Animal Physiology (8 cr; prereq* 103, 113, PhCh 103)
Lect I MTWThF, VII M, 207TEH, Sellers, Good
Lab II-IV TTh, 103TEH
- 137 Probs in Animal Physiology (ar cr; prereq 135, 136 or Phsl 107)
Ar, Sellers
- 151 Animal Pathology (4 cr; prereq* sr, 103, 113)
Lect VI WF, 217VetS, Sautter, Hilton
Lab VII-IX WF, 218VetS
- 154 Veterinary Clinical Pathology (2 cr; prereq regis 3rd yr vet med or grad, cons instr, 152)
VII M, II S, 217VetS, Rehfeld

- 155 Meat Hygiene (3 cr; prereq regis 4th yr vet med, 153)
VI-IX M, 70VetC, Sautter
- 157 Veterinary Postmortem Pathology (1-3 cr; prereq 153, cons instr)
Ar, Sautter, Kernkamp
- 158 Veterinary Surgical Pathology (1-3 cr; prereq 153, cons instr)
Ar, Sautter, Kernkamp
- 171a Clinical Conferences (½ cr, †171a-171b-171c; prereq regis 3rd yr vet med, grad with cons instr, 170)
VI F, 125VetC, Bartlett
- 171d Clinical Conference (½ cr, †171d-171e-171f; prereq regis 4th yr vet med or grad with cons instr, 170)
VI F, 125VetC, Bartlett
- 172 Animal Surgery (5 cr; prereq 170)
I TWThF, VII M, 217VetS, Arnold
- 177 Large Animal Medicine (5 cr; prereq 170)
I MS, VI MW, VII F, 217VetS, 207TEH, Pritchard, Campbell
- 186 Small Animal Medicine (4 cr; prereq regis 4th yr vet med or grad with cons instr, 185)
I TTh, VII WF, 125VetC, Mather, Low, Clifford
- 188 Clinical, Lab Practice (5 cr; prereq 170)
II-IV MTWThF, III-IV S, 70VetC, Campbell, staff
- 191 Clinical, Lab Practice (5 cr; prereq regis 4th yr vet med or grad with cons instr, 190)
II-IV MTWThFS, 55 VetC, Campbell, others
- 196 Veterinary Radiology (3 cr; prereq regis 4th yr vet med or grad with cons instr, 190)
VII-VIII TTh, 125VetC, Spurrell
- 201 Adv Animal, Poultry Pathology (ar cr; prereq cons instr)
Ar, Fenstermacher, Sautter
- 205 Adv Animal Bacteriology (ar cr; prereq cons instr)
Ar, Pomeroy
- 209 Adv Clinical Technique (ar cr; prereq cons instr)
Ar, Campbell, Hoyt, Mather
- 213 Veterinary Obstetrics, Gynecology (ar cr, cons instr)
Ar, Bartlett
- 217 Seminar: Veterinary Medicine (1 cr)
V Th, 125VetC, Kernkamp
- 230 Research (ar cr)

Winter and Spring Quarters

- 51w-52s See 50f
- 102w See 101f (4 cr) Lect VI WTh, lab VI-VII WTh, VI-VIII F
- 103s See 101f-102w (4 cr) Lect VI MW, lab VI-VIII F, VII-VIII MW
- 104w,s See 104f

- 105w Veterinary Neuroanatomy (3 cr; prereq 1st yr vet med or grad with cons instr, 101, 111)
- 106w Veterinary Surgical Anatomy (1 cr; prereq* 3rd yr vet med) VI-VII M
- 108s See 107f (prereq 107) Lect IV MWF, lab VII-VIII MWF
- 112w See 111f (5 cr) Lect I MW, IV F, lab II-IV MW
- 113s See 111f-112w (4 cr) Lect I MW, lab I-III TTh
- 115w Avian Gross, Microscopic Anatomy (5 cr; prereq 107)
- 119w Seminar: Veterinary Anatomy (1 cr; prereq* 101, 111)
- 121s Animal Bacteriology (5 cr; prereq 10 cr zool, 13 cr chem) Lect II MWF, lab III-IV MWF
- 123w See 122f (4 cr) Lect II MW, lab II-III F, III-IV MW
- 126s Dairy Hygiene (4 cr; prereq 4th yr vet med or grad with cons instr, 123, 179) Lect VI TTh, lab VII-IX TTh
- 127s Veterinary Public Health (2 cr; prereq 4th yr vet med or grad with cons instr, 123, 179) I WF
- 128s Veterinary Public Health Practices (1-2 cr; prereq* 126, 127)
- 136w See 135f (7 cr) Lect I MTWThF, lab II-IV TTh
- 137w,s See 137f
- 140s Seminar: Animal Physiology (2 cr; prereq* 136)
- 143w Veterinary Clinical Pharmacology (3 cr; prereq regis 3rd yr vet med or grad with cons instr, Phcl 105) Lect VI W, VII F, lab VII-IX W
- 152w See 151f (5 cr) Lect VI MWF, lab VII-IX WF
- 153s See 151f-152w (6 cr) Lect I F, VI MWF, lab VII-IX WF
- 157w,s, See 157f
- 158w,s, See 158f
- 161w Animal Parasitology (4 cr; prereq* sr, 103, 113) Lect IV F, VII M, lab VI-VIII TTh
- 162s Animal Parasitology (6 cr; prereq sr, 161) Lect III WF, IV TTh, lab VI-VIII TTh
- 168w Diseases of Fur-Bearing Animals (2 cr; prereq 123, 186, regis 4th yr vet med; grad, cons instr) VII MTh
- 169w Veterinary Jurisprudence, Business Administration (2 cr; prereq regis 4th yr vet med; grad, cons instr) VI TTh
- 170s Veterinary Clinical Diagnosis (4 cr; prereq sr, 136, 151) Lect I W, III MT, lab VII-IX M
- 171bw-171cs See 171af
- 171ew-171fs See 171df
- 173w Special Animal Surgery (5 cr; prereq* regis 3rd yr vet med) Lect VI TTh, VIII F, lab VII-IX TTh
- 174s Adv Animal Surgery (5 cr; prereq 173, regis 3rd yr vet med or grad with cons instr) Lect VI MTWTh, lab VII-IX T
- 178w-179s See 177f I MTWThF
- 180w-181s Infectious Diseases of Domestic Animals (5 cr; prereq regis 4th yr vet med or grad with cons instr, 179) I MTWThF (w); I MTTh, VII MF(s)
- 185s Small Animal Medicine (4 cr) VII MWThF
- 189w-190s See 188f II-III MWF, II-IV TThS(w); II-IV MTWThF(s)
- 192w-193s See 191f
- 194s Veterinary Obstetrics, Probs of Animal Reproduction (3 cr; prereq regis 4th yr vet med or grad with cons instr, 190) VIII MWF
- 195w Veterinary Obstetrics, Probs of Animal Reproduction (5 cr; prereq regis 4th yr vet med or grad with cons instr, 190) Lect VI MW, VII F, labs VII-IX T, VIII-IX F, VII-IX W, VIII-IX F
- 197s Animal Diseases, Poisonous Plants (3 cr; prereq 143, 170, 179, 188, regis 4th yr vet med; grad, cons instr) Lect VI MW, lab VII-IX W
- 201w,s See 201f
- 205w,s See 205f
- 209w,s See 209f
- 213w,s See 213f
- 217w,s See 217f
- 230w,s See 230f
- 240w,s See 240f

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

Fall Quarter

- 51 **Contracts** (3 cr, †51 and 52 or 53; prereq Econ 7)
Lect IV T, 100C, Wright, others
—1, I TTh, 6VH
—2, I TTh, 2VH
—3, II TTh, 113VH
- 4, II TTh, 2VH
—5, III TTh, 205VH
—6, III TTh, 2VH
- 54 **Elem Accounting: Combined Course** (4 cr, §Econ 24, 25)
—1, IV MWThF, 205VH
—2, VI MWThF, 307VH
- 57 **Money, Banking** (3 cr, §Econ 3)
VII MWF, 6VH

- 58 **Elements of Public Finance** (3 cr, §Econ 189, 191-192; prereq Econ 7)
 -1, II MWF, 6VH
 -2, IV MWF, 4VH
- 65 **Analysis of Financial Statements** (3 cr, §139, 151; prereq Econ 26)
 10:30-12:00 TTh, 301VH, Heilman
- 66 **Managerial Costs** (3 cr, §130, 152; prereq Econ 26)
 9:00-10:30 TTh, 4VH, Wheeler
- 70 **Statistics Survey** (3 cr, §Econ 5, Soc 45; prereq Econ 7)
 I MWF, 306VH
- 71 **Transportation Services, Charges I** (3 cr, §Econ 172; prereq Econ 7)
 -1, I MWF, 1 VH, Nightingale, others
 -2, II MWF, 4VH
 -3, VII MWF, 4VH
- 74 **Business Statistics** (3 cr, §112; prereq Econ 5)
 -1, II MWF, 2VH, Gaumnitz, others
 -2, VII MWF, 113VH
- 77 **Survey, Marketing** (3 cr, §Econ 185; prereq Econ 7)
 -1, II MWF, 301VH, Lewis, Holloway
 -2, III MWF, 205VH
 -3, VI MWF, 2VH
- 86 **Survey Office Mgt** (3 cr; prereq Econ 7)
 2:00-3:30 TTh, 301VH, Donaldson
- 89 **Production Mgt** (3 cr, §187; prereq Econ 7)
 -1, I MWF, 301VH, Filipetti, others
 -2, IV MWF, 301VH
- 91 **Tabulating Equipment Lab** (1 cr; prereq Econ 5, 26)
 Lect VI T, 4VH, Leary
 -1, VI Th, 4VH
 -2, VII T, 4VH
 -3, VII Th, 4VH
- 93 **Accounting Lab** (1 cr; prereq Econ 26)
 -1, II-III T, 307VH
 -2, II-III Th, 307VH
- 112 **Time Series Analysis, Quality Control** (3 cr, §74; prereq Econ 5)
 -1, II MWF, 2VH
 -2, VII MWF, 113VH
- 113 **Sales Mgt** (3 cr; prereq 77)
 10:30-12:00 TTh, 6VH, Lewis
- 114 **Retail Store Mgt** (3 cr; prereq 77)
 10:30-12:00 TTh, 4VH, Canoyer
- 115 **Life Insurance** (3 cr; prereq Econ 50)
 9:00-10:30 TTh, 207VH, Williams
- 118 **Auditing Principles, Procedures** (4 cr; prereq 151)
 Lect VI TTh, 306VH, Lund
 Lab VII-VIII TTh, 306VH
- 130 **Managerial Cost Accounting** (3 cr, §66, 152; prereq Econ 26)
 9:00-10:30 TTh, 4VH
- 131 **Distribution Cost Accounting** (2 cr; prereq 153)
 II TTh, 6VH, Ostlund
- 134 **Income Tax Accounting** (4 cr; prereq 151)
 II MTWF, 306VH, Nelson
- 139 **Corporate Statements** (3 cr, §65, 151; prereq Econ 26)
 10:30-12:00 TTh, 301VH
- 150 **Interm Accounting I** (3 cr; prereq Econ 26, Math 20)
 -1, III MWF, 6VH, Heilman, Nelson
 -2, VI MWF, 207VH
- 152 **Cost Accounting** (3 cr, §66, 130; prereq Econ 26)
 IV MWF, 6VH, Ostlund
- 156 **Finance Mgt** (3 cr; prereq Econ 75 or 155)
 II MWF, 205VH, Stehman
- 167 **Introd Industrial Relations** (3 cr; prereq Econ 73 or 161)
 II MWF, 1 VH, Turnbull
- 168 **Adv Personnel Admin** (3 cr; prereq 167)
 IV MWF, 113VH, Heneman
- 173 **Market Analysis, Research** (3 cr; prereq sr, 77, Econ 5)
 I MWF, 2VH, Holloway
- 177 **Foreign Trade** (3 cr; prereq Econ 7)
 VII MWF, 1 VH, Holloway
- 180A **Sr Topics: Accounting** (3 cr; prereq sr, 12 cr in sr col acctg)
 10:30-12:00 TTh, 306VH, Reighard
- 180C **Sr Topics: Marketing** (3 cr; prereq sr, 77)
 -1, 10:30-12:00 TTh, 207VH, Vaile
 -2, 2:00-3:30 TTh, 113VH
- 180D **Sr Topics: Industrial Relations** (3 cr; prereq sr, 167)
 2:00-3:30 TTh, 1 VH, Yoder
- 180E **Sr Topics: Office Mgt** (3 cr; prereq sr, 86)
 IV MWF, 211VH, Donaldson
- 180F **Sr Topics: Statistics** (3 cr; prereq* sr, Econ 123)
 2:00-3:30 TTh, 2VH
- 180G **Sr Topics: Production Mgt** (3 cr; prereq* sr, 89 or 187, factory mgt or ind mgt sequences)
 -1, III MWF, 301VH, Filipetti
 -2, VI MWF, 301VH, Filipetti
- 180I **Sr Topics: Transportation** (3 cr; prereq* sr, 174)
 IV MWF, 307VH, Nightingale
- 183J **Practice Course** (ar cr; prereq cons advis)
- 184 **Scientific Mgt, Industry** (3 cr; prereq sr, 89 or 187)
 VII MWF, 301VH, Filipetti
- 187 **Admin of Production** (3 cr, §89; prereq* grad, Econ 7)
 -1, I MWF, 301VH, Filipetti, others
 -2, IV MWF, 301VH
- 198 **Internship: Public Accounting** (ar cr; prereq cons instr)
- 199 **Internship: Internal Accounting** (ar cr; prereq cons instr)
- 265 **Accounting under Govt Regulation** (3 cr)
 VIII-IX M, 306VH, Heilman

Winter and Spring Quarters

- 51w See 51f 8:30-10:00 TTh
- 52w Agency, Partnership, Corporations (3 cr, §51, 52 or 53; prereq 51) Lect IV T, sec I TTh; II TTh; III TTh

CLASS SCHEDULE

- 53s Sales, Negotiable Instruments (3 cr, †51, 52 or 53; prereq 51) Lect IV T, sec I TTh; II TTh; III TTh
- 54w See 54f II MWThF
- 55w,s See 54f (prereq 54) I MWThF(w); II MWThF(s); IV MWThF(w)
- 56s Property Rights, Obligations (3 cr; prereq 52 or 53) 8:30-10:00 TTh
- 58w,s. See 58f II MWF(w,s); III MWF(s); IV MWF(w); VII MWF(w)
- 65s See 65f
- 66w,s See 66f 9:00-10:30 TTh(w,s); 2:00-3:30 TTh(w)
- 67s Retail Store Mgt for Pharmacy Students (3 cr; prereq Econ 30) VI MWF
- 70w See 70f VI MWF
- 71w,s See 71f I MWF(w); II MWF(s); VI MWF(w,s)
- 74w,s See 74f I MWF(w,s); III MWF(w); IV MWF(s); VII MWF(w)
- 76s Credits, Collections (3 cr; prereq 77) III MWF
- 77w,s. See 77f I MWF(s); II MWF(w); III MWF(s); IV MWF(w); VI MWF(w); VII MWF(s)
- 86s See 86f IV MWF
- 87s Advertising Probs (3 cr, §188; prereq 77, Jour 18, Psy 56, open to jour adv maj) 2:30-4:00 TTh
- 89w,s. See 89f I MWF(w); II MWF(w,s); VI MWF(s)
- 91w,s. See 91f
- 93s See 93f VII-VIII T
- 94w,s Cost Accounting Lab (1 cr; prereq con-cur regis 153) III-IV Th
- 111w Purchasing (3 cr; prereq 77) 9:00-10:30 TTh
- 112w,s See 112f I MWF(w,s); III MWF(w); IV MWF(s); VII MWF(w)
- 113s See 113f
- 114w See 114f
- 116w Fire, Marine Insurance (3 cr; prereq Econ 50) 9:00-10:30 TTh
- 117s Casualty Insurance (3 cr; prereq Econ 50) 9:00-10:30 TTh
- 118s See 118f
- 130w,s See 130f 9:00-10:30 TTh(w,s); 2:00-3:30 TTh(w)
- 133s Standard Costs (3 cr; prereq 153) IV MWF
- 134s See 134f I MTWF
- 135s Auditing, Public Accounting (3 cr; prereq 118) VII MWF
- 139s See 139f
- 141w Real Estate (3 cr; prereq Econ 7) I MWF
- 145s Int'l Finance, Foreign Exchange (3 cr; prereq Econ 64 or 142) IV MWF
- 146w Investments (3 cr; prereq Econ 75 or 155) II MWF
- 148s Securities Market (3 cr; prereq 146, Econ 149) I MWF
- 150w See 150f IV MWF
- 151w,s Interm Accounting II (3 cr, §65, 139; prereq 150) II MWF
- 152w-153s See 152f III MWF
- 153w See 152f (prereq 152) I MWF

- 156s See 156f III MWF
- 158w Governmental Accounting (2 cr; prereq 151) II TTh
- 159w,s Adv Accounting (3 cr; prereq 151) 10:30-12:00 TTh
- 167w,s See 167f II MWF(s); III MWF(w); IV MWF(s); VII MWF(w)
- 170w Methods Analysis, Work Measurement (3 cr; prereq 89 or 187) Lect I TTh, lab VII-IX W
- 173w See 173f VII MWF
- 174w Transportation: Services, Charges II (3 cr; prereq 71 or Econ 172) II MWF
- 177s See 177f VI MWF
- 181Bw-182Bs Sr Topics: Business Finance (3 cr; prereq sr) 2:00-3:30 TTh (w,s)
- 181Cw-182Cs See 180Cf 10:30-12:00 TTh(w); 2:00-3:30 TTh(w,s)
- 181Dw-182Ds See 180Df
- 181Ew-182Es See 180Ef (prereq 180E) IV MWF(w); 2:00-3:30 TTh(s)
- 181Fw-182Fs See 180Ff
- 181Gw-182Gs See 180Gf
- 181Iw-182Is See 180If
- 182Hs Sr Topics: Insurance (3 cr; prereq sr, 6 cr insur) 2:00-3:30 TTh
- 183Jw,s See 183Jf
- 187w,s See 187f I MWF(w); II MWF(w,s); VI MWF(s)
- 188w,s Advertising (3 cr, §87; prereq 77, Psy 56) III MWF(w); VII MWF(s)
- 194s Adv Advertising Procedure (3 cr; prereq 87 or 188) III MWF
- 198w,s See 198f
- 199w,s See 199f
- 211s Seminar: Marketing (3 cr) VIII-IX T
- 258w Seminar: Cost Accounting (3 cr) VIII-IX M
- 264s Seminar: Accounting Theory-Income Determination, Statement Presentation (3 cr) VIII-IX Th
- 281s Seminar: Industrial Mgt (3 cr; prereq 184 or 180G, 182G) VIII-IX W

ECONOMICS (ECON)

Fall Quarter

- 1 Business History (5 cr)
Lect III TTh, 150Ph, Heaton, others
-1, I MWF, 4VH
-2, II MWF, 308MurH
-3, III MWF, 308MurH
-4, IV MWF, 315AH
-5, V MWF, 2VH
-6, VI MWF, 4VH
-7, VII MWF, 120ForH
- 3 Elements of Money, Banking (5 cr, §BA 57; prereq 2nd qtr fresh)
Lect VII TTh, 150Ph, Stehman, others
-1, I MWF, 85ForH
-2, II MWF, 307MNH
-3, III MWF, 211Z
-4, V MWF, 1 VH
-5, VII MWF, 306VH

- 5 **Elements of Statistics** (5 cr, §Soc 45, BA 70; prereq soph)
Lect II TTh, 100C, Kozelka, others
—1, I MTWF, 111C
—2, II MTWF, 85ForH
—3, IV MTWF, 420MurH
—4, VI MTWF, 180ForH
- 6 **Prin Economics** (5 cr, §8, 62; prereq soph)
Lect I TTh, NHAud
—1, I MWF, 420MurH
—2, I MWF, 308MurH
—3, II MWF, 20ForH
—4, III MWF, 85ForH
—5, III MWF, 311MurH
—6, IV MWF, 114JohH
—7, IV MWF, 218P
—8, V MWF, 113VH
—9, VI MWF, 113VH
—10, VII MWF, 185ForH
- 7 **Prin Economics** (5 cr, §9, 63; prereq 6, 3 adv)
—1, II MTWThF, 211Z
—2, VI MTWThF, 115ForH
- 8 **Gen Economics** (3 cr, §6, 62; prereq soph)
—1, I MWF, 311MurH, Filipetti, others
—2, II MWF, 15ForH
—3, VII MWF, 211Z
- 24 **Prin Accounting** (3 cr, §BA 54; prereq 3rd qtr fresh)
—1, I MWF, 307VH, Heilman, others
—2, II MWF, 307VH
—3, III MWF, 307VH
—4, IV MWF, 115C
—5, V MWF, 307VH
—6, VI MWF, 306VH
—7, VII MWF, 307VH
- 25 **Prin Accounting** (3 cr, §BA 55; prereq 24)
III MWF, 306VH
- 26 **Prin Accounting** (3 cr, §BA 55; prereq 25)
—1, II MWF, 420MurH
—2, IV MWF, 306VH
- 28 **Business Law** (3 cr, §BA 51; prereq regis IT, agric, pharm, soph or jr with 6 cr econ, sr)
I MWF, 335EE, Palmer
- 32 **Bgn Typing** (1 cr)
—1, I MTWThF, 209VH, Donaldson, others
—2, VI MTWThF, 211VH
—3, VII MTWThF, 209VH
- 33 **Intern Typing** (1 cr, †33-34; prereq 30 words a min)
IV MTWThF, 209VH, Peterson
- 34 **Typing Procedures** (2 cr, †33-34; prereq soph, 33, 45 words a min)
VI MTWThF, 209VH, Peterson
- 37 **Shorthand** (3 cr, †37-38-39; prereq* soph, 33)
II MTWThF, 209VH, Donaldson
- 40 **Adv Shorthand: Secretarial Procedure** (3 cr, †40-41; prereq* soph, 34, 39)
III MTWThF, 209VH, Peterson
- 50 **Insurance Principles** (3 cr; prereq 7)
—1, IV MWF, 1 VH, Williams
—2, VII MWF, 2VH
- 64 **Economics of Money, Banking** (3 cr, §142; prereq 3, 80)
—1, I MWF, 207VH, Smith, Upgren
—2, III MWF, 113VH
—3, IV MWF, 207VH
- 73 **Manpower Economics, Labor Probs** (3 cr, §161; prereq 7)
Lect II T, 4ME, Yoder, others
—1, I TTh, 113VH
—2, III TTh, 185ForH
—3, VI TTh, 6VH
—4, VII TTh, 6VH
- 75 **Corporation Finance** (3 cr, §155; prereq 3, 7)
—1, 9:00-10:30 TTh, 1 VH, Stehman, others
—2, 10:30-12:00 TTh, 1 VH
—3, 2:00-3:30 TTh, 207VH
- 80 **Interm Economics Analysis** (3 cr, §103; prereq 20 cr soc sci incl 7)
—1, I MWF, 113VH, McKenna
—2, III MWF, 4VH
—3, VII MWF, 207VH
- 81 **Interm Economic Analysis** (3 cr, §104; prereq 20 cr soc sci incl 7)
—1, II MWF, 113VH, Brownlee
—2, IV MWF, 2VH
- 85 **Govt Regulation of Business** (3 cr; prereq* 81 for maj)
—1, III MWF, 207VH, Boddy, Papandreou
—2, VI MWF, 1 VH
- 100 **Foundations of Mathematics for Social Scientists** (3 cr; prereq* Math 7, 30)
III MWF, 210VH, Hurwicz
- 103 **Adv Economic Theory** (3 cr, †103-104, §80; prereq 20 cr soc sci incl 7)
VII MWF, 205VH, Boddy
- 105 **Development of Economic Thought: Classical Theory** (3 cr; prereq 81)
VI MWF, 205VH, Boddy
- 108 **City Planning** (3 cr; prereq sr)
III MWF, 305E, R T Jones, W Anderson, Vaile, Caplow
- 121 **Theory of Statistics** (3 cr, †121-122; prereq 5)
I MWF, 6VH
- 142 **Monetary, Banking Policy** (3 cr, §64; prereq* grad, 3, 7, 80)
—1, I MWF, 207VH
—2, III MWF, 113VH
—3, IV MWF, 207VH
- 149 **Business Cycles** (3 cr; prereq* sr, 64 or 142)
III MWF, 1 VH, H Smith
- 155 **The Modern Corporation** (3 cr, §75; prereq* grad, 3, 7)
—1, 9:00-10:30 TTh, 1 VH
—2, 10:30-12:00 TTh, 1 VH
—3, 2:00-3:30 TTh, 207VH
- 162 **Labor Movements** (3 cr; prereq 73 or 161)
I MWF, 205VH, Ulman
- 164 **Labor Legislation, Collective Bargaining** (3 cr; prereq 73 or 161)
III MWF, 2VH, Turnbull
- 172 **Economics of Transportation** (3 cr, §BA 71; prereq 20 cr soc sci incl 7)
VI MWF, 6VH, Nightingale

- 176 **Introd Int'l Economics** (3 cr; prereq 7)
II MWF, 207VH, Upgren
- 191 **Public Finance** (3 cr, †191-192, †189, BA 58;
prereq 7)
10:30-12:00 TTh, 113VH, Heller
- 200 **Theory of Employment, Income** (3 cr, †200-
201)
VIII-IX T, 210VH, Brownlee
- 213 **General Equilibrium Theory** (3 cr; prereq
104, 142)
VIII-IX Th, 210VH, Papandreou
- 243 **Seminar: Money, Banking** (3 cr, †243-244)
VIII-IX W, 210VH, Upgren
- Winter and Spring Quarters**
- 2w See 1f (prereq 1) Lect III TTh, sec I
MWF; III MWF; IV MWF; VI MWF
- 3s See 3f Lect III TTh, sec I MWF; II MWF;
III MWF; IV MWF; V MWF; VI MWF;
VII MWF
- 5w See 5f II MTWThF; VII MTWThF
- 5s See 5f Lect II Th, sec I MTWF; II MTWF;
VII MTWF
- 6w-7s See 6f Lect VII TTh, sec I MWF(w,s);
II MWF(w,s); III MWF(w); IV MWF
(w,s); VI MWF(w,s); VII MWF(w,s)
- 6s See 6f II MTWThF; IV MTWThF; V
MTWThF
- 7w See 6f (§9, 63; prereq 6, 3 adv) Lect I
TTh, sec I MWF; II MWF; III MWF;
IV MWF; V MWF; VI MWF; VII MWF
- 8w-9s See 8f I MWF(s); III MWF(w); VI
MWF(w,s)
- 9w See 8f (§7, 63; prereq 8) I MWF; II MWF
- 10s **Introd Economics Analysis** (3 cr; for phar-
macy students) I MWF
- 24w-25s See 24f II MWF(w); IV MWF(w,s);
VI MWF(w); VII MWF(s)
- 24s See 24f III MWF; VI MWF
- 25w-26s See 24f (§BA 55; prereq 24) I MWF
(w,s); II MWF(w,s); III MWF(w); IV
MWF(w,s); V MWF(w,s); VII MWF(w,s)
- 26w See 26f III MWF
- 27s **Accounting Survey** (5 cr, §24-25, BA 54,
for prelaw, law students; prereq soph)
VI MWF
- 28w,s See 28f
- 30w **Elements of Retail Accounting** (3 cr, for
pharm students; prereq 10) I MWF
- 32w,s See 32f I MTWThF(w,s); VI MTWThF
(w,s); VII MTWThF(w)
- 33w,s See 33f III MTWThF(s); VI MTWThF
(w); VII MTWThF(w)
- 34s See 34f
- 35s **Office Practice for Dental Hygienists** (3 cr;
prereq jr, 30 words a min) IV MWF
- 38w-39s See 37f (prereq 37)
- 41w-42s See 40f (prereq* 40) II MTWThF(s);
III MTWThF(w)
- 43w **Shorthand Theory** (2 cr; prereq 34, 39,
cons instr) VII TTh
- 50w,s See 50f II MWF(s); IV MWF(w); VII
MWF(w)
- 64w,s See 64f I MWF(w,s); III MWF(w); IV
MWF(w,s)
- 73w,s See 73f Lect II T, sec I TTh; III TTh;
IV TTh; VI TTh
- 75w,s See 75f 8:30-10:00 TTh(s); 9:00-10:30
TTh(w); 10:30-12:00 TTh(s); 11:00-12:30
TTh(w); 2:00-3:30 TTh(w,s)
- 80w,s See 80f II MWF(s); III MWF(w); VI
MWF(s); VII MWF(w)
- 81w,s See 81f I MWF(w); III MWF(s); IV
MWF(w); VI MWF(w)
- 84w **Comparative Economic Systems** (3 cr; pre-
req 7) II MWF
- 85w,s See 85f I MWF(s); II MWF(w,s); IV
MWF(s); VI MWF(w)
- 101w **Econometrics I** (3 cr; prereq* 5, 100, Math
51 adv) VIII-X WF
- 102s **Econometrics II** (3 cr; prereq* 101, Math
51, Math 123 adv) VIII-X TTh
- 104w See 103f (81; prereq 103)
- 107w **Development of Economic Thought:**
Theory of Effective Demand (3 cr; pre-
req 81) VI MWF
- 122w-123s See 121f (prereq 121)
- 140s **Co-op Movement** (3 cr; prereq 7) VI MWF
- 142w,s See 142f I MWF(w,s); III MWF(w); IV
MWF(w,s)
- 149w,s See 149f III MWF(w); VII MWF(s)
- 155w,s See 155f 8:30-10:00 TTh(s); 9:00-10:30
TTh(w); 10:30-12:00 TTh(s); 11:00-12:30
TTh(w); 2:00-3:30 TTh(w,s)
- 161s **Gen Manpower Economics, Labor Probs**
(3 cr, §73; prereq* grad, 7) Lect II T,
sec VI TTh
- 163w **Union Organization, Admin** (3 cr; prereq
73 or 161) I MWF
- 166s **Settlement of Industrial Disputes** (3 cr;
prereq 73 or 161) VII MWF
- 169w **Labor Legislation: Economic Security** (3
cr; prereq 73 or 161) IV MWF
- 176s See 176f
- 178w **Economics of Consumption** (3 cr; prereq
7) VIII MWF
- 179s **Economic Probs of the Far East** (3 cr;
prereq 7) VI MWF
- 185w **Economics of Marketing** (3 cr, §BA 77;
prereq 7) II MWF
- 190w **Nat'l Income Analysis** (3 cr; prereq 80)
III MWF
- 192w See 191f (prereq 191)
- 193s **State, Local Taxation** (3 cr; prereq 189,
192 or BA 58) 10:30-12:00 TTh
- 197s **Business Cycles, Structure of Production**
(3 cr; prereq 149) III MWF
- 201w See 200f
- 202w **Methodology in Economics** (3 cr) VIII-
IX Th
- 214s **Theory of Monopolistic Competition** (3 cr;
prereq 213) VIII-IX W
- 216s **Topics in Mathematical Economics** (3 cr;
prereq* 100, Math 51) VIII-IX M
- 233w-234s **Seminar: Public Finance** (3 cr, †233-
234) VIII-IX M
- 244w See 243f (prereq 243)
- 251w-252s **Seminar: Industrial Relations** (3 cr)
VI-VII M

SCHOOL OF DENTISTRY

CROWN AND BRIDGE (CRBR)

Fall Quarter

- 60 Crown and Bridge (4 cr; prereq Anat 52)
Lect 1:00-2:00 T, 113 Owre, Yock
Lab ar, Yock
- 80 Crown, Bridge (1 cr; prereq 62)
I M, 111 Owre, Yock
- 80C Crown, Bridge Clinic (2 cr; prereq 62)
Ar, Yock
- 90C Crown, Bridge Clinic (2 cr; prereq 82C)
Ar, Yock

DENTAL ANATOMY (ANAT)

Fall Quarter

- 50 Dental Anatomy (2 cr; prereq regis 1st
yr dent)
Lect VI T, 12 Owre, Hall
Lab ar, Hall

DENTAL HYGIENE (DHYG)

Fall Quarter

- 7 Oral Anatomy (2 cr)
Ar, Hall
- 40 Educational School Work (2 cr)
Ar, Bruning
- 53 Dental Prophylaxis (2 cr)
Ar, Bruning, Jackson
- 56 Gen Pathology (1 cr)
Ar, Wahlquist
- 57 Prosthetic Dentistry, Dental Lab (2 cr)
Lect ar, Hall
Lab ar, Bruning, Hall
- 80 Oral Diagnosis (1 cr)
1:00-2:00 F, 111 Owre

DENTISTRY (DENT)

Fall Quarter

- 130 Adv Dental Anatomy (ar cr; prereq grad)
Hall
- 131 Adv Dental Anatomy (ar cr; prereq 130)
Hall
- 132 Adv Dental Anatomy (ar cr; prereq 131)
Hall
- 133 Adv Dental Anatomy (ar cr; prereq 132)
Hall
- 134 Adv Technical Restorative Dentistry (ar
cr; prereq grad)
Simon, Wittich, Yock, Listiak, staff
- 135 Adv Technical Restorative Dentistry (ar
cr; prereq 134)
Simon, Wittich, Yock, Listiak, staff

- 136 Adv Technical Restorative Dentistry (ar
cr; prereq 135)
Simon, Wittich, Yock, Listiak, staff
- 137 Adv Dental Radiographic Technique (ar
cr; prereq grad)
Simon, staff
- 138 Adv Oral Diagnosis (ar cr; prereq grad)
Mitchell
- 139 Adv Oral Physiology (ar cr; prereq grad)
- 140 Preventive Dentistry (ar cr; prereq grad)
- 141 Adv Oral Surgery (ar cr; prereq grad)
Clark, staff
- 142 Seminar: Oral Surgery (1 cr; prereq grad)
Clark
- 143 Research: Oral Surgery (ar cr; prereq
grad)
Clark, staff
- 144 Probs: Oral Surgery (ar cr; prereq grad)
Clark, staff
- 150 Adv Orthodontic Techniques (ar cr; pre-
req grad)
Speidel, Steadman, McIver
- 151 Treatment Procedures in Orthodontics (ar
cr; prereq grad)
Speidel, Steadman, McIver
- 152 Case Analysis (ar cr; prereq grad)
Speidel, Steadman, McIver
- 153 Treatment Planning (ar cr; prereq grad)
Speidel, Steadman, McIver
- 154 Adv Clinical Orthodontics (ar cr; prereq
grad)
Speidel, Steadman, McIver
- 155 Osteology, Myology of the Head (ar cr;
prereq grad)
Steadman
- 156 Growth of the Head (ar cr; prereq grad)
Speidel, Steadman, McIver
- 157 Comparative Anatomy of the Head (ar
cr; prereq grad)
Steadman
- 158 Seminar: Orthodontics (ar cr; prereq grad)
Speidel, Steadman, McIver
- 230 Adv Clinical Restorative Dentistry (ar cr)
Simon, Wittich, Yock, Listiak, staff
- 231 Adv Clinical Restorative Dentistry (ar cr;
prereq 230)
Simon, Wittich, Yock, Listiak, staff
- 232 Adv Clinical Restorative Dentistry (ar cr;
prereq 231)
Simon, Wittich, Yock, Listiak, staff
- 233 Adv Clinical Restorative Dentistry (ar cr;
prereq 232)
Simon, Wittich, Yock, Listiak, staff
- 234 Research: Probs in Restorative Dentistry
(ar cr)
Simon, Wittich, Listiak
- 235 Research: Probs in Restorative Dentistry
(ar cr; prereq 234)
Simon, Wittich, Listiak

- 236 Research: Probs in Restorative Dentistry (ar cr; prereq 235)
Simon, Wittich, Listiak
- 237 Research: Probs in Restorative Dentistry (ar cr; prereq 236)
Simon, Wittich, Listiak
- 238 Adv Clinical Oral Diagnosis (ar cr)
Mitchell, staff
- 239 Adv Clinical Oral Diagnosis (ar cr; prereq 238)
Mitchell, staff
- 240 Adv Clinical Oral Diagnosis (ar cr; prereq 239)
Mitchell, staff
- 241 Adv Clinical Oral Diagnosis (ar cr; prereq 240)
Mitchell, staff
- 242 Research: Oral Pathology (ar cr)
Mitchell
- 243 Seminar: Dental Research (1 cr)
Mitchell
- 244 Clinical Oral Pathology Conference (1 cr)
Clark, Mitchell
- 245 Probs, Research: Orthodontics (ar cr)
Speidel, Steadman, McIver
- 246 Adv Periodontia (ar cr)
Zander, staff
- 247 Research: Periodontia (ar cr)
Zander, staff
- 248 Seminar: Periodontia (3 cr)
Zander, staff

DENTURE PROSTHESIS (PROS)

Fall Quarter

- 50 Denture Prosthesis (4 cr; prereq regis 1st yr dent)
Lect VI Th, 12 Owre, Listiak
Lab ar, Listiak
- 60 Denture Prosthesis (3 cr; prereq 52)
Lect I M, 12 Owre, Listiak
Lab ar, Listiak
- 80C Denture Prosthesis Clinic (3 cr; prereq 62)
Ar, Listiak
- 90C Denture Prosthesis Clinic (2 cr; prereq 82C)
Ar, Listiak

OPERATIVE DENTISTRY (OPER)

Fall Quarter

- 80 Operative Dentistry (1 cr; prereq 62)
I F, 111 Owre, Simon
- 80C Operative Clinic (3 cr; prereq 62)
Ar, Simon
- 84 Endodontia (1 cr; prereq 62)
Lect 1:00-2:00 T, 111 Owre, Jensen
- 90C Clinical Operative Dentistry (2 cr; prereq 82C)
Ar, Simon

ORAL DIAGNOSIS AND RADIOLOGY (DIAG)

Fall Quarter

- 80 Oral Diagnosis (1 cr; prereq regis 3rd yr dent)
Lect 1:00-2:00 F, 111 Owre, Mitchell

ORAL HISTOLOGY AND PATHOLOGY (ORPA)

Fall Quarter

- 80 Oral Histology, Pathology (4 cr; prereq regis 3rd yr dent, Bact 100, Path 105)
Lect 1:00-2:00 MWTh, 111 Owre, Mitchell
Lab ar

ORAL SURGERY (OSUR)

Fall Quarter

- 90 Oral Surgery (2 cr; prereq regis 4th yr dent)
8:00-9:00 T, 1:00-2:00 Th, 113 Owre, Clark

ORTHODONTIA (ORTH)

Fall Quarter

- 90 Orthodontia (3 cr; prereq regis 4th yr dent)
8:00-9:00 MWF, 113 Owre, Speidel

PEDODONTICS (PEDS)

Fall Quarter

- 80 Pedodontics (1 cr; prereq regis 3rd yr dent)
I W, 111 Owre, Wittich
- 90C Pedodontics Clinic (no cr; prereq regis 4th yr dent)

PERIODONTIA (PERI)

Fall Quarter

- 90 Periodontia (1 cr; prereq regis 4th yr dent)
1:00-2:00 W, 113 Owre, Zander
- 90C Periodontia Clinic (1 cr; prereq 82C)
Ar, Zander

RESTORATIVE DENTISTRY (REST)

Fall Quarter

- 90 Seminar (1 cr; prereq CrBr 82)
8:00-9:00 Th, 113 Owre, Listiak, Simon, Yock

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AGED)

Fall Quarter

- 1 Introd Agricultural Education (1 cr)
IV M, 301Hr, Swanson
- 101 Young Farmer Education in Agriculture
(2 cr; prereq 81)
III TTh, 301Hr, Kitts
- 102 Adult Education in Agriculture (2 cr;
prereq 81)
II TTh, 301Hr, Kitts
- 103 Methods of Instruction in Mechanized
Farming (3 cr; prereq 81)
III MWF, 301Hr, Kitts
- 104 Planning Programs (2 cr; prereq* regis
last qtr undergrad)
Ar, M J Peterson
- 221 Field Probs (3 cr)
Ar, M J Peterson, Kitts
- 232 Research: Agricultural Education (3-9 cr)
II-IV S, 301Hr, M J Peterson, Kitts

Winter and Spring Quarters

- 54w Rural Education, Community Leader-
ship (3 cr) IV TTh, 1 hr ar
- 56s Rural Education Through Extension
Methods (3 cr) IV MWF
- 81w Teaching Agriculture (3 cr; prereq Ed
55B) IV MWF
- 82s Methods in Teaching Agriculture (3 cr;
prereq 81) III MWF
- 91w,s Supervised Student Teaching (6 cr;
prereq 82, C+ aver in maj)
- 101w See 101f III WF
- 102w See 102f III TTh
- 104w,s See 104f Ar(w); IV TTh(s)
- 154w Rural Education, Community Leadership
3 cr; addtl reading or spec probs req;
prereq* grad) IV TTh
- 221w,s See 221f
- 232w,s See 232f Ar
- 286w Current Probs in Agricultural Educa-
tion (3 cr; prereq cons instr) II-V S
- 291s Seminar: Agricultural Education (3 cr)
II-IV S

ART EDUCATION (ARED)

Fall Quarter

- 14 Introd Art Education (2 cr)
VII WF, 109J, Gayne
- 17 Pictorial Expression for Elem Education
(3 cr)
—1, I-II MWF, 213TNUH, Page
—2, III-IV MWF, 213TNUH, Bratlee
—3, VI-VII MWF, 213TNUH, Page
- 18 Design Activities for Elem Education (3 cr)
VI-VIII TTh, 213TNUH, Page

- 56 Basic Principles, Experiences in Art Edu-
cation (5 cr; prereq concur regis Ed
55A-B)
III-IV MTWThF, 109J, Hastie, Page
- 84 Teaching Art in Elem School (3 cr; pre-
req* 17, 18)
VII-VIII TTh, 109J, Bratlee
- 86 Student Teaching, Supervision of Art (2
cr, †86-87-88; prereq sr, 56-57, Ed 55B,
cons dir student tchg, concur regis 86A)
Ar, Hastie
- 86A Teaching, Supervision of Art (2 cr,
†86A-87A-88A; prereq 56-57, Ed 55B,
cons dir student tchg, concur regis 86)
IX-X T, 109J, Hastie
- 184 Adv Teaching, Supervision of Art in
Elem School (3 cr)
III-IV S, 213TNUH, Gayne
- 189 Application of Esthetic Theory in Educa-
tion (3 cr)
III-IV S, 109J, Hastie
- 284 Research: Art Education (2 cr)
X-X T, 109J, Gayne
- 295 Probs: Art Education (ar cr; prereq cons
maj advis)
Ar, Gayne, others

Winter and Spring Quarters

- 14s See 14f
- 17w,s See 17f I-II MWF
- 18w,s See 18f III-IV MWF(w); VI-VII MWF
(w,s); VI-VIII TTh(w)
- 19s Functional Arts, Crafts for Elem Edu-
cation (3 cr) III-IV MWF
- 57w-58s See 58f
- 81s Puppetry in Education (3 cr) IX-X MWF
- 84w,s See 84f
- 85w Art for Integration in Secondary Edu-
cation (3 cr, †17-18-19, not open to art
educ maj) VII-VIII MW
- 87w,s See 86f
- 87Aw-88As See 86Af
- 151w-152s Curriculum Building in Art Edu-
cation (3 cr) III-IV S
- 156w Intercultural Education Through Art
(3 cr) III-IV S
- 185s Adv Teaching of Art in Secondary
School (3 cr) III-IV S
- 296w,s Seminar: Art Education (no cr) IX-X Th

CURRICULUM AND INSTRUCTION
(EDCI)

Fall Quarter

- 58 Core Curriculum Foundations (1 cr; pre-
req cons instr)
IX-X T, 105JohH, Bossing, Adkins
- 60 Teaching Reading in Elem School (3 cr;
prereq Ed 71B)
VI MWF, 101FraH, Bond

- 62A Teaching Arithmetic in Primary Grades (2 cr; prereq Ed 71B)
VI TTh, 206WeH, Curtis
- 62B Teaching Arithmetic in Interm Grades (3 cr; prereq Ed 71B)
VII MWF, 122JohH, Curtis
- 63 Children's Literature (2 cr)
VIII MW, 2P, Smith
- 65 Teaching Science in Elem School (3 cr; prereq Ed 71B, 10 hr nat sci)
VII-VIII T, VII Th, 115JohH, Goossen
- 102 Teaching Social Studies in Elem School (3 cr; prereq 71C)
I-II S, 207NH, Jarolimek
- 105 Audio-Visual Materials in Education (3 cr; prereq sr)
IX-X T, 206WeH, Pearson
- 107 Radio in Education (3 cr; prereq 9 cr educ)
III-IV S, 302MurH, Tyler
- 109 Audio-Visual Materials, Equipment Lab (3 cr; prereq* 105 or concur regis)
IX W, 2 hrs lab ar, 6WeH, Pearson
- 113 High School Curriculum (3 cr; prereq Ed 55A-B)
I-II S, 112Bu, Bossing
- 119 Elem School Curriculum (3 cr; prereq Ed 71C)
III-IV S, 211NH, Goossen
- 131 Adv Teaching of Technical Business Subjects (3 cr)
IX-X Th, 5ShH, Price
- 133 Consumer Education in Schools (3 cr)
I-II S, 202Pt, Price
- 136 Business, Distributive Education under Vocational Acts (3 cr)
IX-X W, 5ShH, Haines
- 143 Teaching, Supervision Reading in Elem School (3 cr; prereq 9 cr educ)
IX-X M, 213NH, Bond
- 145 Reading Difficulties (3 cr; prereq recent reading course or basic trng in counslg or school psy work)
IX-X T, 213NH, Bond
- 153 Supervision, Teaching English in Elem Schools (3 cr; prereq Ed 71C)
III-IV S, 207NH, Chase
- 168 Current Developments in Social Studies (3 cr; prereq grad)
IX-X F, 214NH, McCune
- 171 Curriculum Lab Practice (2 cr; prereq 170A or 170B, cons instr)
Ar, Bossing, Cook
- 174 Clinical Methods Practice in Speech Pathology (3 cr; prereq Spch 163 or concur regis)
VII-VIII W, 409F, Bryngelson, staff
- 175 Clinical Methods Practice in Speech Pathology (3 cr; prereq Spch 163 or concur regis)
VII-VIII W, 409F, Bryngelson, staff
- 176 Clinical Methods Practice in Speech Pathology (3 cr; prereq Spch 163 or concur regis)
VII-VIII W, 409F, Bryngelson, staff
- 184 Supervision of Student Teaching (3 cr; prereq 15 cr educ, cons instr)
I-II S, 111Bu, Grim
- 199E Internship (ar cr)
Ar, Grim
- 201 Probs in Teaching Social Studies (3 cr; prereq 168, 204, cons instr)
Ar, Morse, McCune, West
- 205 Probs in Audio-Visual Education (ar cr; prereq cons instr)
Ar, Pearson
- 207 Probs in Radio Education (1-3 cr; prereq 107)
Ar, Tyler
- 215 Probs in School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 216 Field Work in School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 217 Seminar: School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 222 Seminar: Current Probs in Techniques of High School Instruction (ar cr; prereq Ed 55A-B, sr meth)
IX-X W, 111Bu, Bossing, Boardman, Keller, Smith, Stout
- 225 Special Probs: Supervision, Instruction in Secondary Schools (ar cr; prereq cons instr)
IX-X W, 111Bu, Boardman, Keller
- 226 Seminar: Elem School Probs (no cr)
IX-X Th, 206UHS, Bond, Cook, Goossen
- 227 Probs of Rural Education (ar cr; prereq 117)
Ar, Peterson
- 228 Probs of Higher Education, Teacher Education (ar cr; prereq cons instr)
Ar, Cooper, Eckert, Grim
- 238 Probs in Distributive Education (ar cr; prereq cons instr)
Ar, Haines
- 239 Probs in Business Education (ar cr; prereq cons instr)
Ar, Price
- 250 Higher Education in United States (3 cr; prereq 1 yr grad study any field or 18 cr educ)
I-II T, I Th, 5ShH, Eckert
- 253 Seminar: Improvement of College Instruction (0-3 cr; prereq cons instr)
IX-X W, 307JohH, Eckert
- 261 Special Probs in Improvement of Instruction (ar cr; prereq cons instr)
Ar, Goossen
- 271 Probs of Curriculum Construction (3 cr; prereq cons instr)
Ar, Bossing, Cook, Birkmaier, D Johnson
- 273 Probs in Reading (3 cr; prereq* 143 or 144)
Ar, Bond
- 284 Probs in Student Teaching (3-9 cr; prereq cons instr)
Ar, Grim

- 287 Adv Teaching of Science (3 cr)
III-IV S, 111Bu, P O Johnson
- 294 Adv Curriculum, Methods in Secondary
School English (2 cr; prereq EdT 75A-
B-C)
IX-X M, 111Bu, Smith
- 296 Special Probs in Teaching English (ar cr)
Ar, Smith

Winter and Spring Quarters

- 58w,s See 58f
- 60s See 60f
- 61w,s Teaching Social Studies in Elem School
(3 cr; prereq Ed 71C) VIII MWF
- 62Bw See 62Bf
- 63w,s See 63f VI TTh(w); VIII MW(s)
- 64w,s Teaching English in Elem School (3 cr;
prereq Ed 71B) VI MWF(w); VII MWF
(s)
- 65w,s See 65f
- 66s Treatment of Learning Difficulties (3 cr;
prereq concur regis student tchg) IX-X
W
- 104s Adult Education (2 cr jr or sr, 3 cr grad)
VIII-IX Th
- 105w,s See 105f I-II S(w); VII MWF(s)
- 106w Coordinating an Audio-Visual Education
Program (3 cr; prereq* 105) IX-X Th
- 107w,s See 107f III MWF(s); IX-X W(w)
- 109w,s See 109f VII T and 2 hrs lab ar(s); IX
W and 2 hrs lab ar(w)
- 113w See 113f IX-X Th
- 122s Literature for Adolescents (2 cr; prereq
Ed 55B or jr or sr HS tchg exper)
VI-VII T
- 125w Occupational Information Lab (3 cr; pre-
req cons instr) VIII-IX M
- 132s Teaching Basic Business Subjects (3 cr)
IX-X Th
- 134s Materials, Methods in Consumer Education
(3 cr; prereq cons instr) I-II S
- 135s Group Procedures in Guidance (3 cr; pre-
req* 9 cr educ, EPsy 133) VIII-IX M
- 139w Coordination Techniques (3 cr) IX-X W
- 141s Cooperative Part-time Work Experience
Programs (3 cr) IX-X W
- 144w Teaching Reading in Secondary Schools
(3 cr; prereq 9 cr educ) III-IV S
- 145s See 145f IX-X M
- 149s Teaching, Supervision of Arithmetic in
Elem School (3 cr, §62A or B; prereq
Ed 71C) III-IV S
- 150w Supervision, Improvement of Instruction
(3 cr; prereq Ed 71C) III-IV S
- 155s Materials Lab for Social Studies Teachers
(3 cr; prereq cons instr) IX-X F
- 161w Curriculum Construction in Business Edu-
cation (3 cr; prereq 113) IX-X Th
- 169w Extracurricular Activities (4 cr; prereq
Ed 55A-B) III-IV TTh
- 170Bs Curriculum, Course of Study Construc-
tion (3 cr; prereq 113 or 119, cons instr)
I-II S, 1 hr ar

- 171w,s See 171f
- 173As Organizing Units of Instruction in Ele-
mentary School (3 cr; prereq 119 or
tchg exper) III-IV S
- 173Bs Organizing Units of Instruction in Sec-
ondary School (3 cr; prereq* 113) III-
IV S
- 174w,s-175w,s-176w,s See 174f-175f-176f
- 181w Foundations of Elem School Methods (3
cr; prereq 9 cr educ) IX-X M
- 199Ew,s See 199Ef
- 201w,s See 201f
- 204w Social Studies Curriculum (3 cr) IX-X F
- 205w,s See 205f
- 207w,s See 207f
- 215w,s See 215f
- 216w,s See 216f
- 217w,s See 217f
- 222w,s See 222f
- 225w,s See 225f
- 226w,s See 226f
- 227w,s See 227f
- 228w,s See 228f
- 238w,s See 238f
- 239w,s See 239f
- 250w See 250f I-II S
- 251w Curriculum Trends in American Colleges
(3 cr; prereq 1 yr grad study in any
field or 18 cr educ) I-II T, I Th
- 252s Effective College Teaching (3 cr; prereq
1 yr grad study in any field or 18 cr
educ) I Th, I-II T; I Th, I-II S
- 261w,s See 261f
- 266s Supervision of High School Instruction (3
cr; prereq* EPsy 293) II MWF
- 271w,s See 271f
- 273w,s See 273f
- 284w,s See 284f
- 285w-286s Professional Education of Teachers
(3 cr; prereq* 15 cr educ incl HED 182
or EdCI 184 and 250 or EPsy 250) III-
IV S
- 294w See 294f
- 296w,s See 296f

EDUCATION (ED)

Fall Quarter

- 55A Introd Secondary School Teaching (5 cr;
prereq Psy 1-2)
Lect I MWF, BuAud, Mork
-1, II-III TTh, 112Bu, Mork
-2, II-III MW, 112Bu, Eckert
-3, II-III MW, 111Bu, Bowers
-4, VI-VII TTh, 112Bu, Bossing
-5, VI-VII TTh, 111Bu, Grim
-6, VI-VII MW, 111Bu, Boardman
- 55B Introd Secondary School Teaching (5 cr;
prereq Psy 2 for nurses, 55A for others)
VI-VIII T, VI-VII Th, 114JohH, Brandhorst
(for NuEd maj only)

- 71A Introd Elem School Teaching** (5 cr; pre-req Psy 1-2)
Lect III MWF, 211NH, Cook
—1, I-II TTh, 206WeH, Ar
—2, III-IV TTh, 111Bu, Goossen
—3, III-IV TTh, 202Pt, Ar
—4, VI-VII TTh, 113JohH, Ar
- 81 Introd Education for Public Health Nurses** (3 cr, not open to educ degree cand)
III MWF, 113 Owre, Grout

Winter and Spring Quarters

- 55Aw** See 55Af Lect I TThS, sec II-III TTh; VI-VII TTh
- 55Bw,s** See 55Bf (prereq 55A) Lect I MWF(w); I TThS(s); sec II-III MW(w); II-III TTh(w,s); VI-VII MW(w); VI-VII TTh(w,s); VI-VII Th, VI-VIII T(s) for nurs educ maj
- 71Bw-71Cs** See 71Af (prereq 71A)
- 81w,s** See 81f I MWF(w); III MWF(s)

EDUCATIONAL ADMINISTRATION (EDAD)

Fall Quarter

- 115 Organization of Elem School** (3 cr; prereq 9 cr educ)
I-II S, 213NH, Neale, Cramer
- 124 Public School Admin** (3 cr; prereq sr, 9 cr educ)
I MWF, 115JohH, Neale
- 133 Basic Procedures in Student Personnel Work** (3 cr; prereq 9 cr educ)
II-IV S, 1 hr ar, BuAud, Hoyt
- 167 Jr High School** (3 cr; prereq sr, 9 cr educ)
III-IV S, 5ShH, Bossing
- 218 Recent Literature in Secondary Education** (ar cr)
IX-X W, 111Bu, Boardman, Bossing, Stout
- 225 Pupil Personnel Admin** (3 cr; prereq 124)
III MWF, 306JohH, Neale
- 228 Special Probs in Educational Admin** (1-3 cr; prereq 225)
Ar, Neale
- 235 Seminar: Education Admin** (no cr)
VIII-IX W, 105JohH, Neale
- 263 Organization of Secondary School** (3 cr)
III MWF, 115Psy, Boardman
- 270 Special Probs in Secondary Education** (ar cr; prereq cons instr)
Ar, Boardman, Bossing, Keller, Stout

Winter and Spring Quarters

- 210s Financial Aspects of Public School Business Admin** (3 cr; prereq 227) IX-X W and 1 hr ar
- 218w,s** See 218f
- 226s School Plant Planning, Mgt** (3 cr; prereq 227) I-II S
- 227w Teacher, Employee Admin** (3 cr; prereq 225) I MWF
- 228w,s** See 228f

- 230w Public Relations for Schools** (3 cr; pre-req 225) I-II S
- 235w,s** See 235f VIII-IX W(w); VIII-IX Th(s)
- 264w Admin of Instructional Activities in Secondary School** (3 cr) II MWF
- 265s Admin of Noninstructional Activities in Secondary School** (3 cr) III MWF
- 270w,s** See 270f
- 274w The Jr College** (3 cr) III MWF

EDUCATIONAL PSYCHOLOGY (EPSY)

Fall Quarter

- 60 Introd Measurement, Statistics** (3 cr; pre-req 6 cr psy)
IV TThS, 112Bu, Van Wagenen
- 113 Psychology of Elem School Subjects** (2 cr; prereq 9 cr psy, educ)
IX-X W, 109Psy, Van Wagenen
- 120 Basic Prin Measurement** (3 cr; prereq 60)
VII MWF, 111AH, Cook
- 125 Social Structure of Student Groups** (3 cr; prereq sr)
VI-VII TTh, 130, 175ForH, Flanders
- 133 Basic Procedures in Student Personnel Work** (3 cr; prereq 9 cr educ)
—1, III-IV S and ar, BuAud, Hoyt
—2, IV MWF, 111Bu, Dugan (for educ psy maj only)
- 142 Individual Mental Testing** (3 cr; prereq sr, 120)
VIII MWF and ar, 202Pt, Reynolds
- 150 Clinical Practice in Remedial Teaching** (3 cr; prereq EdCI 145 or 151, cons instr)
Ar, Bond, Reynolds
- 151 Clinical Practice in Educational Diagnosis** (2-6 cr; prereq 142 or EdCI 145, cons instr)
Ar, Bond, Reynolds
- 159 Personality Development, Mental Hygiene** (3 cr; prereq sr)
II MWF, 308F, Wrenn
- 162 Education of Exceptional Children** (3 cr; prereq Ed 55B or 71C)
III-IV S, 202Pt, Reynolds
- 163 Education of Gifted Children** (2 cr; prereq Ed 55B or 71C)
III TTh, 109Psy, Van Wagenen
- 216 Statistical Methods in Education** (3 cr)
II MWF, 2F, P O Johnson
- 216a Statistical Methods in Education Lab** (2 cr)
—1, II-III TTh, 221Bu, P O Johnson, Moonan (for students taking sequence 216-217-218 concur)
—2, VII-VIII TTh, 221Bu, P O Johnson, Moonan (for students electing 1 or more qtrs)
- 219 Design, Analysis of Statistical Investigations** (3 cr; prereq* 218)
IV MWF, 112Bu, P O Johnson

- 233 Probs in Guidance, Personnel Work (1-9 cr)
Ar, Edwards, Dugan, Wrenn
- 240 Probs in Measurement (3 cr)
Ar, P O Johnson
- 243 Probs in Statistics for Students in Education, Psychology (3 cr)
Ar, P O Johnson.
- 250 College Student Personnel Work: Development, Admin (3 cr; prereq* 1 course higher educ)
IV MWF, 306JohH, Wrenn
- 251 College Student Personnel Work (1-3 cr; prereq 250 or one course higher educ)
VI-VII T, 5ShH, Wrenn
- 253 Research: Probs (ar cr; prereq cons instr)
- 260 Educational Psychology Seminar (no cr)
VIII-IX F, 5ShH, EPsy staff
- 280 Practicum in Group Leadership (3 cr; prereq cons instr)
VI-VII TTh and ar, 130, 175ForH, Flanders
- 281 Practice in Personnel Work (sec 1, 3 cr; sec 2, ar cr; prereq* 225, 226)
-1, Ar, 101EdH, Hagenah
-2, Ar, Edwards, Wrenn

Winter and Spring Quarters

- 60s See 60f II MWF
- 114w-115s See 113f
- 120w,s See 120f
- 125w-126s See 125f
- 133s See 133f
- 134w School Counseling Procedures (3 cr; prereq 120, 133, cons instr) IV MWF
- 140w Instruments, Techniques of Measurement (3 cr; prereq sr, 120) VII-VIII TTh
- 142w See 142f III-IV S and ar
- 143s Adv Individual Mental Testing (3 cr; prereq* 142) VIII MWF
- 148w Clinical Diagnosis of Reading Difficulties (3 cr; prereq EdCI 145, 9 hrs psy or educ psy) IX-X T
- 150w,s See 150f
- 151w,s See 151f
- 158s Psychology of Adolescence (3 cr; prereq Ed 55B) III MWF
- 159s See 159f
- 184s Education of the Slow-learning Child (2 cr; prereq 182) III-IV S
- 208w Methods in Educational Research (3 cr) VIII MWF
- 217w-218s See 216f
- 217aw-218as See 216af
- 220w-221s Adv Theory of Measurement (2 cr; prereq 60 or 120, 216) IX-X T(w,s)
- 225w Diagnosis as a Phase of Counseling (3 cr; prereq 140 or concur regis, 133 or 250 or Psy 130) IV MWF
- 226s Interviewing Procedures in Counseling (3 cr; prereq 140, 133 or 250 or Psy 130 and EPsy 225) IV MWF
- 233w,s See 233f
- 240w,s See 240f

- 243w,s See 243f
- 251w See 251f
- 253w,s See 253f
- 254s Measurement, Evaluation in Higher Education (3 cr) III-IV S
- 260w,s See 260f
- 280w,s See 280f
- 281w,s See 281f
- 282s Practice in High School Personnel Work (3 cr; prereq cons instr) IV MWF
- 290s Individual Differences (3 cr) II MWF
- 293w Psychology of Learning (3 cr; prereq 12 cr psy, educ psy) III MWF
- 294s Recent Theory, Research in Human Learning (3 cr; prereq cons instr) III MWF

HISTORY AND PHILOSOPHY OF EDUCATION (HED)

Fall Quarter

- 71 Brief Course in History of Education (3 cr)
IV MWF, 109Psy, Alexander
- 76 Introd Philosophy of Education (3 cr)
VI MWF, 109Psy, Ar
- 101 Historical Foundations of Modern Education (3 cr)
VI MWF, 112Bu, Alexander
- 141 Critical Issues in Contemporary Education (3 cr)
IX-X Th, 202WeH, Beck
- 180 The School, Society (3 cr; prereq sr, Ed 55B or Ed 71C)
-1, VII-VIII T, VII Th, 202WeH, Beck
-2, VIII MW, IX W, 202WeH, Ar
- 241 Probs in History, Philosophy of Education (ar cr; prereq cons instr)
Ar, Beck, Alexander

Winter and Spring Quarters

- 71s See 71f
- 102w History of Modern Secondary, Higher Education (3 cr) VI MWF
- 131w Comparative Education (3 cr) IX-X Th
- 180w,s See 180f II MW, III M (s); VII-VIII M, VII W (w); VII-VIII T, VII Th (w,s); VIII MW, IX W(w,s)
- 182s Comparative Philosophies of Education (3 cr; prereq 76 or 141) IX-X Th
- 241w,s See 241f
- 242s Seminar: Educational Philosophy (3 cr; prereq cons instr) V-VI Th

HOME ECONOMICS EDUCATION (HEED)

Fall Quarter

- 90 Child Training (3 cr; prereq soph, Psy 1-2)
IV MWF, 203HE, Peterson

- 91 **Observation, Materials, Teaching Home Economics** (5 cr; prereq HE 4, 21, 22, 41, Ed 55B, home exper, concur regis 93)
VIII MWF, IX W, 1 hr ar, 114HE, Rose
- 92 **Teaching Probs in Home Economics** (2 cr; prereq sr, 91, 93, concur regis 94, 192, 194A)
Ar, Rose
- 93 **Supervised Teaching in Home Economics** (3 cr; prereq HE 4, 21, 22, 41, Ed 55B, home exper)
3 consec hrs ar, Rose, Ford, Kafka, others
- 94 **Supervised Teaching in Home Economics** (6 cr; prereq 93)
Ar, Rose, Ford, Kafka, others
- 95 **Field Experience for Home Agents** (6 cr; prereq 91, 93, cons HEEd head, dir agric ext)
Ar, Rose, others
- 192 **Evaluation in Home Economics** (2-3 cr; prereq 93, Ed 55B)
—1, Ar, Arny, Rose
—2, Ar, Arny
- 194A **Adult Education in Home Economics** (3 cr; prereq* sr, 91, 93)
—1, Ar, Ford
—2, 10:00-12:00 T, 1 hr ar, Ford
- 197 **Organization, Methods for Related Art Teaching** (1-3 cr; prereq* sr, 91, HE 180, or concur regis)
Ar, Esteros
- 199E **Internship** (ar cr; prereq grad, cons instr)
Ar, Rose
- 243 **Trends in Home Economics** (3 cr; prereq cons instr)
III-IV S, 114HE, Rose
- 293 **Probs in Home Economics Education** (1-3 cr; prereq cons instr)
Ar, Rose, Esteros, Arny, Ford
- 294 **Research Methods** (3-6 cr; prereq cons instr)
Ar, Arny
- 295 **Seminar: Home Economics Education** (1 cr)
IX Th, 114HE, Arny, Rose

Winter and Spring Quarters

- 90s See 90f
91w,s See 91f
92w,s See 92f
93w,s-94w,s See 93f-94f
95w,s See 95f
192w,s See 192f
193Aw,s-193Bs Home Economics Curriculum (3 cr; prereq sr, cons instr)
194Aw,s See 194Af
194Bs **Adult Education Home Economics** (3 cr; prereq 194A) IX MF, 2 hrs ar
195s **Space, Equipment, Furnishings, Materials for Home Economics Departments** (3 cr; prereq sr, 91, 93, HE 49)
197w,s See 197f
199Ew,s See 199Ef

- 243w,s See 243f
292s **Probs in Evaluation** (3 cr; prereq cons instr)
293w,s See 293f
295w,s See 295f

INDUSTRIAL EDUCATION (IND)

Fall Quarter

- 1 **Basic Woodwork** (3 cr)
VIII-X TTh, 6Pt, Kavanaugh
- 5 **Basic Drawing** (3 cr)
I-II MWF, 201TNUH, Kavanaugh
- 15 **Basic Graphic Arts** (3 cr)
III-IV MWF, 16TNUH, Nelson
- 20 **Craft Work-A** (3 cr)
VI-VII MWF, 1 TNUH, Nelson
- 40 **Analysis** (2 cr)
IX-X W, 202TNUH, Micheels
- 50A **Student Teaching** (3 cr; prereq 70 or 100, 80, Ed 55B, 1.5 HPR, cons instr)
Ar, Anderson
- 50B **Student Teaching** (3 cr; prereq 50A)
Ar, Anderson
- 50C **Student Teaching** (3 cr; prereq 50B)
Ar, Anderson
- 60 **Philosophy of Vocational Education** (2 cr)
IX-X W, 202TNUH, Widdowson
- 80 **Introd Industrial Arts** (2 cr)
IX-X F, 202TNUH, Nelson
- 103 **Instructional Aids** (3 cr; prereq 70)
III MWF, 202TNUH, Micheels
- 105 **Admin of Industrial Education** (3 cr; prereq 61, 80, cons instr)
IV MWF, 202TNUH, Smith
- 107 **Coordination** (3 cr; prereq* 60, 61, or 125)
IX-X T and ar, 202TNUH, Widdowson
- 200 **Research Probs** (3-9 cr)
VI MWF and ar, Ar, Micheels, Smith
- 205 **Seminar: Industrial Education** (no cr)
IX-X M, 116TNUH, Micheels, others
- 250 **Literature of Industrial Education** (3 cr; prereq cons instr)
II MWF, 202TNUH, Smith
Dunwoody, Ar, Smith
Off-Campus Courses and Services, Ar, Widdowson

Winter and Spring Quarters

- 2w **Machine Woodwork** (3 cr; prereq 1)
VIII-X TTh Kavanaugh
- 3s **Shop Finishing** (3 cr; prereq 2)
I-III TTh Nelson
- 6s **Applied Gen Drawing** (3 cr; prereq 5)
I-II MWF Kavanaugh
- 7s **Building Construction Drawing** (3 cr; prereq 6) III-IV MWF Nelson
- 10w **Basic Electricity** (3 cr) I-II MWF Kavanaugh
- 12s **Electricity, Radio** (3 cr; prereq 10) VI-VII MWF Kavanaugh

- 16w Adv Graphic Arts (3 cr; prereq 15) III-IV MWF Nelson
 21w See 20f (prereq 20)
 40s See 40f
 42w Course Organization (3 cr; prereq 40) IX-X F and ar
 44s Equipment, Mgt (3 cr; prereq 42) IX-X M and ar
 50Aw,s-50Bw,s-50Cw,s See 50Af-50Bf-50Cf
 61w Practice in Vocational Education (2 cr; prereq 60) IX-X M Widdowson
 70w Teaching Industrial Subjects (3 cr, §100; prereq 42, Ed 55B) IX-X W and ar
 100s Industrial Instruction (3 cr, §70; prereq 42, Ed 55B) II MWF Smith
 101s Tests in Industrial Subjects (3 cr; prereq Ed 55B) III MWF Micheels
 102s The General Shop (2 cr; prereq 80) IX-X Th Nelson
 109w Conference Leading for Industry (3 cr; prereq cons instr) VIII-X T Widdowson
 110w Vocational Guidance (3 cr; prereq Ed 55B) IV MWF Smith
 115s Supervision of Industrial Education (3 cr; prereq 60, 80, or 105) IX-X T and ar
 125s Philosophy, Practice of Industrial Education (3 cr, §61) IX-X F and ar
 135w Industrial Course Construction (3 cr, §42) III MWF Micheels
 200w,s See 200f
 205w,s See 205f
 251w See 250f
 Dunwoody w,s See Dunwoody (f)
 Off-Campus w,s See Off-Campus (f)
- 56 Methods, Observation in Kindergarten (2 cr; prereq 55 or concur regis)
 VIII TTh, 112Bu, Headley
 59 Methods, Observation in Nursery School (3 cr; prereq 55 or concur regis)
 VIII MWF, 207NH, Peterson
 67 Student Teaching: Mathematics (2 cr; prereq sr, concur regis 67A-B-C)
 Ar, D Johnson
 67A Teaching Secondary School Mathematics (3 cr)
 VIII-IX TTh, 105UHS, D Johnson (for maj, min)
 68 Student Teaching: Natural Science (2 cr; prereq sr, concur regis 68A-B-C)
 Ar, Boeck
 68A Teaching Secondary School Science (3 cr)
 VIII-IX MW, 3UHS, Boeck (for maj only)
 69 Student Teaching: Social Studies (2 cr; prereq sr, concur regis 69A-B-C)
 Ar, West
 69A Teaching Social Studies in Secondary School (3 cr)
 VIII-IX MW, 206UHS, West (for maj only)
 70 Student Teaching: Modern Languages (2 cr; prereq sr, concur regis 70A-B-C)
 Ar, Birkmaier
 70A Teaching Modern Languages (3 cr)
 IX-X MW, 110 UHS, Birkmaier (for maj, min)
 71 Student Teaching: Latin (2 cr; prereq sr, concur regis 71A-B-C)
 71A Teaching Latin (3 cr)
 IX-X MW, 110 UHS, Birkmaier (for maj, min)
 72A Student Teaching: Distributive Education Subjects (2 cr; prereq Ed 55B, cons instr)
 Ar, Haines
 72B Student Teaching: Distributive Education Subjects (2 cr; prereq 72A)
 Ar, Haines
 72C Student Teaching: Distributive Education Subjects (2 cr; prereq 72B)
 Ar, Haines
 73A Student Teaching: Business Subjects (2 cr; prereq Ed 55B, cons instr)
 Ar, Price
 73B Student Teaching: Business Subjects (2 cr; prereq 73A)
 Ar, Price
 73C Student Teaching: Business Subjects (2 cr; prereq 73B)
 Ar, Price
 75 Student Teaching: Language Arts (2 cr; prereq sr, concur regis 75A-B-C)
 Ar, Alwin
 75A Teaching Language Arts (3 cr)
 VIII-IX TTh, 111Bu, Smith (for maj only)
 76 The Teacher, The Parent (3 cr; prereq 55, 56, 57, 58)
 VIII-IX F, 1 hr ar, 112Bu, Cummings
 77 Student Teaching: Nursery School (5 cr; prereq see col bul)
 IX M and ar, 202Pt, Fuller

METHODS AND STUDENT TEACHING (EDT)

Fall Quarter

- 51A Teaching Nursing (4 cr; prereq Ed 55B)
 I MWF and ar, 211Z, Boyle, Norris
 51B Teaching Nursing (6 cr; prereq 51A)
 I TTh, VIII ThF, 111 Owre, Boyle, Norris
 52 Student Teaching (ar cr)
 Ar, Grim
 53A Teaching Exceptional Children (5 cr, †53A-B; prereq cons instr)
 Ar, Reynolds
 53B Teaching Exceptional Children (5 cr, †53A-B; prereq 53A)
 Ar, Reynolds
 54A Student Teaching: Elem School (5 cr, †54A-B)
 Ar, Chase, Curtis, others
 54B Student Teaching: Elem School (5 cr, †54A-B; prereq 54A)
 Ar, Chase, Curtis, others
 55 Prin Early Childhood Education (3 cr; prereq CW 80 or concur regis)
 VII MWF, 202Pt, Fuller

- 78 Student Teaching: Kindergarten (5 cr; pre-req see col bul)
IX M, ar, 202Pt, Fuller
- 79 Student Teaching: Primary Grades (5 cr; pre-req see col bul)
IX M, ar, 202Pt, Fuller
- 82 Teaching Basic Business Subjects (2 cr; pre-req Ed 55B or concur regis)
IX-X M, 5ShH, Price
- 84A Practice, Field Work: Recreation Leadership (2 cr; pre-req cons instr)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 84B Practice, Field Work: Recreation Leadership (2 cr; pre-req 84A)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 84C Practice, Field Work: Recreation Leadership (2 cr; pre-req 84B)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 85A Practice, Field Work: Recreation (1 or 2 cr; pre-req sr, cons instr)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 85B Practice, Field Work: Recreation (1 or 2 cr; pre-req 85A)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 85C Practice, Field Work: Recreation (1 or 2 cr; pre-req 85B)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 90A Teaching Distributive Education Subjects (2 cr; pre-req cons instr)
IX-X T, 5ShH, Haines
- 93 Student Teaching: Core Curriculum (2 cr; pre-req Ed 55B)

Winter and Spring Quarters

- 51Aw-51Bw,s See 51Af-51Bf
52w,s See 52f
- 53Aw-53Bw,s See 53Af-53Bf
54Aw,s-54Bw,s See 54Af-54Bf
- 56s Methods, Observation in Kindergarten (2 cr; pre-req 55 or concur regis) VIII TTh
- 57w Nursery School, Kindergarten Lab: Art, Literature, Social Studies (5 cr; pre-req 56) VIII MTWThF
- 58s Nursery School, Kindergarten Lab: Play Materials, Music, Science (5 cr; pre-req 57) VII MTWThF
- 59w See 59f VII MWF
67w,s See 67f
- 67Bw-67Cs See 67Af (pre-req 67A) VIII-IX T (for maj only)
68w,s See 68f
- 68Bw-68Cs See 68Af (pre-req 68A) VIII-IX M (for maj only)
- 68Ms Teaching Secondary School Science (3 cr; pre-req min only) VII MWF
69w,s See 69f

- 69Bw-69Cs See 69Af (pre-req 69A) VIII MW (for maj only)
- 69Ms Teaching Social Studies Secondary School (3 cr; pre-req min only) III MWF
70w,s See 70f
- 70Bw-70Cs See 70Af (pre-req 70A) IX-X W (for maj only)
71w,s See 71f
- 71Bw-71Cs See 71Af (pre-req 71A) IX-X W (for maj only)
- 72Aw,s-72Bw,s-72Cw,s See 72Af-72Bf-72Cf
73Aw,s-73Bw,s-73Cw,s See 73Af-73Bf-73Cf
- 74w Teaching Journalism (3 cr; pre-req* Jour 41 or 51, Ed 55B) VII MWF
75w,s See 75f
- 75Bw-75Cs See 75Af (pre-req 75A) VIII-IX Th (for maj only)
- 75Ms Teaching Language Arts (3 cr; min only) IX M, VIII-IX Th
77w,s See 77f
78w,s See 78f
79w,s See 79f
- 80s Teaching Typewriting, Bookkeeping (2 cr; pre-req Ed 55B or concur regis) IX-X M
- 81w Teaching Shorthand (2 cr; pre-req Ed 55B or concur regis) IX-X M
- 84Aw,s-84Bw,s-84Cw,s See 84Af-84Bf-84Cf
85Aw,s-85Bw,s-85Cw,s See 85Af-85Bf-85Cf
-90Bw-90Cs See 90Af
93w,s See 93f

MUSIC EDUCATION (MUED)

Fall Quarter

- 4 Applied Instrumental Technique (2 cr; pre-req mus educ maj)
I MTWF, 4NMA, Ivory
- 50A Teaching Music in Primary Grades (2 cr; pre-req Mus 1)
-1, I TTh, 4ScH
-2, II TTh, 4ScH
- 60 Supervision, Teaching of Music (3 cr, †60-61-62; pre-req sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Ivory
- 61 Supervision, Teaching of Music (3 cr, †60-61-62; pre-req sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Ivory
- 62 Supervision, Teaching of Music (3 cr, †60-61-62; pre-req sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Ivory
- 65 Instrumentation (3 cr; pre-req sr, Mus 6T)
II TThS, 104ScH, Ivory
- 103 Psychological Foundations of Music Education (3 cr; pre-req sr, cons instr)
IV MWF, 4ScH
- 224 Seminar: Individual Research Probs (3 cr)
Ar, Ivory, others
- 225E Adv Applied Music (2-4 cr)

Winter and Spring Quarters

- 5w-6s See 4f VI MTWF
 50Aw See 50Af III TTh
 50Bw Teaching Music in Intern Grades (2 cr; prereq 50A) I TTh, II TTh
 53s High School Methods (3 cr; prereq* 50B, Ed 55B) III MWF
 59w Choral Literature, Conducting (2 cr sr, 1 cr others) V TTh
 60w,s-61w,s-62w,s See 60f-61f-62f
 63w Band Conducting (2 cr; prereq 4-5-6) VII TTh
 64s Band Organization (3 cr; prereq 4-5-6, cons instr) VII MWF
 65w See 65f
 67s Teaching Instrumental Music in Elem School (2 cr; prereq cons instr) III MWF
 68s Teaching Instrumental Music in Secondary School (2 cr; prereq sr, 65) IV MWF
 104s Adv Topics in Vocal Music Education (3 cr; prereq sr, cons instr) IV MWF
 105w Adv Topics in Instrumental Music Education (3 cr; prereq sr, cons instr) IV MWF
 224w,s See 224f
 225Ew,s See 225Ef

NURSING EDUCATION (NUED)

Fall Quarter

- 69 Survey of Conditions, Trends in Nursing (3 cr)
 IV MWF, 113 Owre, Densford
 162 Personnel Work in Nursing (3 cr)
 II MWF, 111 Owre, Johnston
 171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51A-B or concur regis)
 VII MWF, 111 Owre, Harrington
 190 Survey in Nursing Education (3 cr; prereq cons instr)
 VII-VIII F and ar, 130ForH, Harrington

Winter and Spring Quarters

- 68w Construction, Use of Examinations, Other Measurement in Basic Nursing Courses (3 cr) II MWF
 69s See 69f
 74w Sciences in a School of Nursing Curriculum (5 cr; prereq cons instr)
 165w Probs in Nursing Care (3 cr; prereq cons instr)
 171w,s See 171f
 197Ew-198Es Adv Teaching Nursing (2 cr; prereq introd to statistics, cons instr) Ar
 271w Probs in Curriculum (3 cr; prereq 171, cons instr)

PHYSICAL EDUCATION

Undergraduate Courses for Men (PEM)

Fall Quarter

- 4C Track Fundamentals (1 cr)
 VI-VII TTh, CH, Kelly
 5A Touch Football, Calisthenics, Tactics (1 cr)
 III-IV TTh, CH, Ostrander, Svendsen
 5B Gymnastics (1 cr)
 III MWF, CH, Piper
 6A Intramural Sports (1 cr)
 IV-V TTh, CH, Svendsen
 6C Aquatics (1 cr)
 IV MWF, CH, Thorpe
 7A Games, Relays (1 cr)
 II-III TTh, CH, Piper, Ostrander
 11A Survey of Recreation Activities (1 cr; prereq recr students)
 V M, CH, Starr
 23A Introd Recreation Leadership (1 cr; prereq 11A-B-C)
 V F, CH, Starr
 32 Introd Physical Education (3 cr)
 I MWF, CH, Keller, Johnson
 43 Camp Aquatics (2 cr)
 VI MWF, CH, Thorpe
 49 Social Aspects of Leisure (3 cr)
 VII MWF, CH, Fitzgerald
 51 Mechanics of Movement (3 cr; prereq 50 or Anat 57)
 I MWF, CH, Osell
 55 Methods, Materials in Physical Education (4 cr; prereq 5A-B-C, 6A-B-C, 7A-B-C)
 II MWF, CH, Kubitski
 56 Theory of Play (3 cr; prereq soph)
 III MWF, CH, Giles
 60B Athletic Training Lab (1 cr; prereq 60A)
 30 hrs ar, CH, Stein
 66 Officiating Football, Basketball (3 cr; prereq 4A-B)
 VI-VII TTh, CH, Nordly
 68 Basketball Coaching (2 cr; prereq 4B)
 VI MWF, CH, Cowles
 69 Track Coaching (2 cr; prereq 4C)
 IV TTh, hrs ar, CH, Kelly
 73 Directed Teaching (2 cr)
 V M, hrs ar, CH, Ostrander
 74 Directed Teaching (2 cr)
 V M, hrs ar, CH, Ostrander
 75 Directed Teaching (2 cr)
 V M, hrs ar, CH, Ostrander

Winter and Spring Quarters

- 4Aw Football Fundamentals (1 cr) VI-VII TTh
 4Bs Basketball Fundamentals (1 cr) VI-VII TTh
 5Bw See 5Bf III-IV TTh

- 5Cs Stunts, Contests, Softball, Baseball (1 cr) III-IV TTh
 -6Bw See 6Af
 6Cw,s See 6Cf IV MWF(w); V MWF(s)
 7Bw Boxing, Wrestling (1 cr) II-III TTh
 7Cs Recreational Games (1 cr) II-III TTh
 8s Tennis, Golf (1 cr) IV-V TTh
 9Aw Fundamental Rhythms (1 cr) V-VI TTh
 9Bs Folk, Square, Ballroom Dancing (1 cr) V-VI TTh
 -11Bw-11Cs See 11Af
 -23Bw-23Cs See 23Af
 45s Camp Craft (2 cr) IV MWF
 46s Camp Leadership (2 cr) VII MW
 52w Leadership in Social Activities (3 cr) VI TTh
 55w See 55f
 57w Operation, Conduct of Play Centers (3 cr) VII MWF
 58s Leadership in Community Recreation (3 cr; prereq 57) VII MWF
 59s Instructor's Course in First Aid (3 cr; prereq 25 or 26) I MWF
 60As Prevention, Care of Injuries (3 cr; prereq 50, 51, or Anat 57) IV TThs
 60Bw,s See 60Bf
 61s History of Physical Education (3 cr) I MWF
 63s Organization, Admin of Physical Education (3 cr; prereq 32 or 55, 101) III MWF
 64Aw-64Bs Leadership in Nature Recreation (2 cr; prereq 15 cr nat sci) V-VI Th (w); V-VII Th (s)
 65w Adapted Physical Education (3 cr; prereq 51, Anat 57) II MWF
 67s Football Coaching (2 cr; prereq 4A or yr exper on squad) III TThS
 72w Baseball Coaching (2 cr; prereq cons instr) VI MWF
 73w,s-74w,s-75w,s See 73f-74f-75f
 78w Scout Leadership (2 cr) VII MW
- 40B Skills, Officiating of Volleyball, Softball (1 cr)
 VI MWF, 153-153aNGW, Hauptfuehrer
 40C Apparatus, Functional Exercises (1½ cr) VII MTThF, 153NGW and ar
 40D Tap Dance (½ cr) II TTh, 151NGW, Bell
 47 Teaching of Rhythm (3 cr; prereq 21B, 22A, 40A) III MTWThF, 151, 201NGW, Bockstruck
 51 Mechanics of Movement (3 cr; prereq Anat 57) II MWF, 3NGW, Wilson
 54 Camp Leadership (3 cr) IV MWF, 201NGW, Tinker
 62 Teaching Physical Education Activities (3 cr; prereq phys educ min, recr maj) V MTWThF, 151, 153, 201NGW, Hauptfuehrer
 70 **Introd Elem Physical Education Program** (3 cr; prereq elem educ maj) VIII MWF, 201, 153NGW, Lampe
 82 Prin Physical Education (3 cr; prereq sr) III MWF, 3NGW, Wilson
 84 Physical Education Program for Elem, Secondary Schools (3 cr; prereq sr) II MWF, 201NGW, Jaeger
 90A Student Teaching: Physical Education (2 cr, †90A-B-C; prereq Ed 55B) I TTh, 3NGW, Jaeger
 90B Student Teaching: Physical Education (3 cr, †90A-B-C; prereq Ed 55B) II TTh, 3NGW, Jaeger
 94 Student Teaching: School Health Education (2 cr; prereq sr, PE 83, cons instr) IV Th, 201NGW, Ericson

Winter and Spring Quarters

- 21Aw Adv Basketball (½ cr) VII MW
 21Bw Rhythmic Fundamentals, Elem Folk Dance (1 cr) V-VI TTh
 21Dw Stunts, Tumbling (1 cr) II MWF
 21Ew Winter Sports (½ cr) III TTh
 22As Folk, Ballroom Dance (1 cr) V-VI TTh
 22Bs Golf, Track, Field (1 cr) VII MWF
 22Cs Tennis (1 cr) III MWF
 25s See 25f V MWF
 26w Adv American Red Cross First Aid (1 cr; prereq cons instr) I TTh
 41Aw Adv Aquatics (1 cr) VII MWF
 41Bw Officiating Basketball (½ cr; prereq 21A) VII TTh
 42As American Red Cross Life Saving, Water Safety (1 cr; prereq 41A) VI MWF
 48w Teaching Individual Sports (3 cr; prereq cons instr) II MTWThF
 49s Teaching Team Sports (2 cr; prereq cons instr) II MTWTh
 51w See 51f 2:00-3:30 TTh (for OT maj only)
 53w Role of Physical Educator in Recreation (3 cr) II MWF

Undergraduate Courses for Women (PEW)

Fall Quarter

- 20A Badminton (½ cr)
 -1, V TTh, 60NGW, Tenney
 -2, VI TTh, 60NGW, Tenney
 20B Skills, Officiating of Fall Teamsports (1 cr)
 VIII MWF, 60NGW, Hauptfuehrer
 20C Recreational Activities (1 cr)
 VII MWF, 60, 153NGW, Tinker
 25 American Red Cross First Aid (2 cr)
 I MWF, 201, 151NGW, Ar
 40A Modern Dance (1 cr)
 II MWF, 151NGW, Bockstruck

- 54s See 54f II MWF
 70w,s See 70f
 76s Adv Folk Dance (2 cr; prereq cons instr) III MWF
 77Aw-77Bs Teaching Aquatics (1 cr; prereq 42A) II MWF(s); II TThS(w)
 80s Prin Rhythm (3 cr; prereq cons instr) I TTh, 1 hr ar
 83w Methods, Materials of School Health Education (3 cr; prereq* PH 59) III MWF
 85s Remedial Activities in Physical Education (3 cr) III MWF
 86w Adv Fundamentals of Physical Education (1 cr) III TTh, IV Th
 87w Dance Composition (2 cr; prereq cons instr) VIII MWF
 88s Adv Probs Dance Composition (2 cr; prereq cons instr) 2:30-3:45 TTh
 89w Dance Production (3 cr; prereq cons instr) IV MWF
 90Aw,s See 90Af II TTh(s); III TTh(w)
 90Bw See 90Bf I TTh
 90Cw,s Student Teaching: Physical Education (3 cr, †90A-B-C; prereq Ed 55A-B) I TTh(s); II TTh(w)
 91s Prin Play (3 cr; prereq NKP maj) VII MWF
 94w,s See 94f
 95s Admin Physical Education (3 cr; prereq sr) IV MWF

Advanced Courses for Men and Women (PE)

Fall Quarter

- 105 Conservative of Natural Resources (2 cr; prereq sr)
 VIII-IX F, CH
 111 Recreation Areas, Facilities (3 cr; prereq 58)
 VI MWF, CH, Giles
 115 Recent Literature, Research in Mechanics of Movement (3 cr; prereq* undergrad kinesiology)
 3:30-5:00 TTh, 3NGW, Wilson
 118E Probs in Teacher Education in Health Physical Education, Recreation (ar cr; prereq cons dept advis)
 Ar, Baker, Ericson, Wilson
 123 Adv Methods of Teaching Physical Education (3 cr; prereq cons instr)
 3:30-5:00 MW, 3NGW, Ericson
 141 Hospital Recreation (3 cr; prereq recr maj only)
 VII MWF, CH, Baird
 224 Research Probs in School Health Education, Physical Education for Women (ar cr; prereq cons dept advis)
 Ar, Baker, Ericson, Wilson
 236 Recent Literature, Research in Physical Education, Recreation (3 cr)
 II MWF, CH, Nordly
 238 Admin of Physical Education in Colleges, Universities (3 cr)
 III MWF, CH, Keller
 240 Legal, Financial Aspects of Recreation (ar cr)
 IV MWF, CH, Fitzgerald
 247 Probs in Health, Physical Education, Recreation (ar cr)
 Ar, Nordly
 261B Seminar: Recreation (ar cr)
 III-IV T, CH, Fitzgerald

Winter and Spring Quarters

- 101w Prin Physical Education (3 cr; prereq 55) I MWF
 107w Camp Admin (3 cr; prereq* 47, cons instr) IX-X W
 110w Recreation Surveys (2 cr; prereq 58) VI MWF
 112s Programming in Recreation (3 cr; prereq 58) VI MWF
 113w Physical Education in Elem Schools (3 cr; prereq cons instr) 3:30-5:00 TTh
 114s School Health Education Program (3 cr; prereq* EdT 83 or PH 50) 3:30-5:00 TTh
 116s Community Recreation Resources, Organizations (3 cr; prereq 110, 111, 112) II MWF
 117w Adv School Health Instruction (3 cr; prereq* EdT 83) 3:30-5:00 MW
 118Ew,s See 118Ef
 121s Prin Recreation Methods (3 cr; prereq EdT 84A-B-C, 85A-B-C) III MWF
 124s Supervision of Physical Education (3 cr; prereq cons instr) III MWF
 135w,s Tests, Measurements in Physical Education (3 cr; prereq sr, EPsy 60) III MWF
 142w Leadership of Hospital Recreation (3 cr; prereq* 141) VIII-IX F
 143s Program Planning in Hospital Recreation (3 cr; prereq* 142) VIII-IX F
 155s Instructional Aids in Health, Physical Education, Recreation (3 cr; prereq sr) 4:00-5:30 TTh
 224w,s See 224f
 233w Special Admin Probs in Physical Education in Secondary Schools (3 cr) 4:00-5:30 TTh
 234s Secondary School, College Curriculum in Physical Education (3 cr) 4:00-5:30 MW
 241w Admin, Supervision of Public Recreation (3 cr) IV MWF
 242s Community Organization for Recreation (3 cr) IV MWF
 247w,s See 247f
 261As Seminar: Physical Education (3 cr) 4:00-5:30 TTh

GENERAL COLLEGE (GC)

Fall Quarter

- 1A Individual Orientation** (4 cr)
 -1, IV MTThF, 314JohH, Hoover
 -2, VI MTThF, 314JohH, Hoover
- 2 Vocational Orientation** (5 cr)
 -1, I MTWThF, 122NH, Borow
 -2, IV MTWThF, 122NH, Borow
- 3 Home Life Orientation** (5 cr)
 II MTWThF, 213NH, Anderson
- 4 Probs of Contemporary Society** (5 cr)
 I MTWThF, 211NH, McCune
- 7A Elements of Physics** (5 cr, \$6A)
 I MTWThF, 166Ph, Vaughan
- 7C Elements of Chemistry** (5 cr, \$6B)
 III MTWThF, 166Ph, Christensen
- 7D Elements of Geology** (5 cr, \$6C)
 III MTWThF, 210P, J M Harris
- 8 Applied Mathematics** (5 cr; prereq one yr HS math)
 -1, IV MTWThF, 207NH, Rassweiler
 -2, VII MTWThF, 207NH, J M Harris
- 10A Human Biology: Fundamental Similarities in Living World** (3 cr)
 -1, V MWF, 211NH, Cieslak
 -2, VI MWF, 211NH, Dearden
- 10C Human Biology: Healthful Living** (3 cr)
 III MWF, 213NH, Cieslak
- 11A Basic Wealth: Natural Resources** (3 cr)
 II MWF, 170Ph, Thurston
- 16 Selecting, Furnishing a Home** (3 cr)
 VI MWF, 206WeH, Myren
- 19A Probs of Business Transactions** (4 cr)
 III MTWTh, 209NH, Rassweiler
- 21 Gen Arts** (3 cr)
 III MWF, 206WeH, Hill
- 22A Art Today** (3 cr)
 IV MWF, 213NH, Safer
- 23A Art Lab** (3 cr)
 -1, I-II MW, 100NH, Roman
 -2, VI-VII MW, 100NH, Safer
 -3, VI-VII TTh, 100NH, Ar
- 23B Introd Commercial Art** (3 cr)
 II-III TTh, 100NH, Safer
- 24A Music Today** (2 cr)
 -1, III TTh, 111NH, Hill
 -2, VI TTh, 111NH, Hill
- 26A Photography** (3 cr)
 Lect V T, 308MurH, Liebling
 -1, VI-IX T, 20MurH, Liebling
 -2, VI-IX Th, 20MurH, Liebling
- 28 Film, Drama** (3 cr)
 II TTh, addl hrs ar, 207NH, Olson
- 30C Literature Today: Themes in Current Literature** (3 cr)
 I MWF, 207NH, Draxten
- 30D Literature Today: American Ideals in Literature** (3 cr)
 III MWF, 207NH, Sheldon
- 30E Literature Today: Introd World Literature** (3 cr)
 VI MWF, 207NH, Appel
- 31A Writing Lab: Descriptive Writing** (3 cr)
 -1, I-II W, I MF, 209NH, Appel
 -2, I-II TTh, 216NH, Draxten
 -3, I-II TTh, 209NH, McCoy
 -4, III-IV F, 209NH, Appel
 -5, IV-V F, IV MW, 216NH, McCoy
 -6, V-VI F, V MW, 209NH, Kivits
 -7, V-VI TTh, 216NH, Sheldon
 -8, VI-VII W, VI M, VII F, 209NH, McCoy
- 31B Writing Lab: Organization in Writing** (3 cr; prereq 31A)
 -1, I-II M, I WF, 216NH, Kivits
 -2, IV-V TTh, 209NH, Draxten
- 31C Writing Lab: Report Writing** (3 cr; prereq 31A, 31B adv)
 VI-VII TTh, 209NH, Reisman
- 31D Writing Lab: Business Writing** (3 cr; prereq 31A, 31B adv)
 V-VI M, VI WF, 216NH, Sheldon
- 31X Writing Lab: Fundamentals of English Usage and Style** (3 cr)
 III M, II-III WF, 216NH, Kivits
- 32A Oral Communication: Basic Principles** (3 cr)
 -1, I MWF, 107NH, Unes
 -2, II MWF, 107NH, Olson
 -3, III MWF, 107NH, Olson
 -4, IV MWF, 107NH, Unes
 -5, VI MWF, 107NH, Unes
- 32B Oral Communication: Applications of Speech** (3 cr; prereq 32A)
 III MWF, 106JohH, Unes
- 32C Oral Communication: Speech Organization** (3 cr; prereq 32A)
 II MWF, 207NH, Ar
- 33A Oral Communication: Speech Studio** (3 cr)
 III-IV T, III Th, 107NH, Ar
- 37 Social Trends, Probs** (5 cr)
 V MTWThF, 213NH, Anderson
- 38 Gen Geography** (5 cr)
 VII MTWThF, 213NH, Momsen
- 39 Gen Anthropology** (3 cr)
- 41 Practical Application of Psychology** (5 cr)
 11:30-12:50 MWF, NHAud, Jenkins
- 42A Human Development** (3 cr)
 IV MWF, 211NH, Templin
- 43A Background of Modern World** (5 cr)
 I MTWThF, 213NH, Moen
- 43C The Far East** (5 cr)
 II MTWThF, 211NH, Stout
- 44A Formation of Public Opinion** (3 cr)
 III TThS, 308MurH, Ford
- 44B Current History** (2 cr)
 VI TTh, 213NH, F Harris
- 45A Growth of American Democracy** (5 cr)
 V MTWThF, 207NH, Stout
- 45B American Economic, Social Development** (3 cr)
 VI MWF, 213NH, F Harris

- 45D Community Probs (1-3 cr; prereq cons instr)
Ar, McCune
- 46A American Citizen, His Govt (3 cr)
VII MWF, 211NH, Heubel
- 48A Probs of Consumption Economics (3 cr)
VII MWF, 2P, Canoyer
- 49A Retailing, Selling: Salesmanship (5 cr; prereq* soph only, cons instr)
Lect II M, 122NH, Determan
-1, II-III TTh, 122NH, Determan
-2, 6:30-10:30 p.m. T, 122NH, Determan

Winter and Spring Quarters

- 1Aw,s See 1Af, Ar
- 2w,s See 2f, Ar
- 3w,s See 3f, Ar
- 4w,s See 4f, Ar
- 7Aw See 7Af, Ar
- 7Bs Elements of Light, Astronomy (5 cr, §6C)
- 7Cw See 7Cf, Ar
- 7Ds See 7Df, Ar
- 8w,s See 8f, Ar
- 10Aw See 10Af, Ar
- 10Bw,s Human Biology: Living Machinery in Man (3 cr; prereq 10A)
- 10Cs See 10Cf, Ar
- 11Bw Basic Wealth: Utilization, Conservation of Plant Life (3 cr)
- 11Cs Basic Wealth: Utilization, Conservation of Animal Life (3 cr)
- 12s Nature Study (3 cr)
- 14w Food Selection, Purchase (3 cr)
- 15s Clothing Selection, Purchase, Care (3 cr)
- 17s Income Mgt: Buying (2 cr)
- 19Aw-19Bs See 19Af, Ar
- 21w,s See 21f, Ar
- 22Bw See 22Af, Ar
- 22Ds Art in Business (3 cr)
- 23Aw,s See 23Af, Ar
- 23Cw-23Ds See 23Bf, Ar
- 24Bw-24Cs See 24Af, Ar
- 26Aw,s-26Bs See 26Af, Ar

- 27w Introd Leisure Time Activities (3 cr)
- 30Aw,s Literature Today: Individual, Literature (3 cr)
- 30Bw,s Literature Today: Critical Standards in Reading (3 cr)
- 30Cs See 30Cf, Ar
- 30Ew See 30Ef, Ar
- 31Aw,s See 31Af, Ar
- 31Bw,s See 31Bf, Ar
- 31Cw,s See 31Cf, Ar
- 31Dw,s See 31Df, Ar
- 32Aw,s See 32Af, Ar
- 32Bw,s See 32Bf, Ar
- 32Cw,s See 32Cf, Ar
- 32Dw,s Oral Communication: Group Discussion (3 cr; prereq 32A)
- 32EXs Oral Communication: Everyday Business Speech (3 cr; prereq* 32A, cons instr)
- 33Aw-33Bs See 33Af, Ar
- 37s See 37f, Ar
- 38w See 38f, Ar
- 41s See 41f, Ar
- 42Aw-42Bs See 42Af, Ar
- 43Aw See 43Af, Ar
- 43Bw See 43Bf, Ar
- 43Cs See 43Cf, Ar
- 44Bw,s See 44Bf, Ar
- 45As See 45Af, Ar
- 45Bw See 45Bf, Ar
- 45Cw,s Minnesota, Upper Midwest (5 cr)
- 45Dw,s See 45Df, Ar
- 46Bw Functions, Probs of Govt (3 cr)
- 46Cs Int'l Relations (3 cr)
- 47As Fundamentals of Typewriting (1 cr)
- 47Cw-47Ds Bookkeeping, Accounting Lab (3 cr; prereq cons instr)
- 48Bw Probs of Production, Finance, Credit (3 cr; prereq 48A)
- 48Cs Prin Business Operation (3 cr; prereq 5 cr Econ or 48B)
- 49Bw Store Organization, Nonselling Activities (5 cr; prereq cons instr)
- 49Cs Retail Store Promotion (5 cr; prereq cons instr)

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING
(AERO)

Fall Quarter

- 1 Aeronautics (3 cr; prereq MM 24)
- 20 Flying (2 cr)
Ar, Magnus
- 21 Flying (2 cr)
Ar, Magnus
- 22 Flying (2 cr)
Ar, Magnus

- 46 Orientation Course (2 cr; prereq sr or cons dept)
Ar, Magnus
- 83 Stresses in Simple Structures (4 cr; prereq MM 128)
Lect II MWF, 211AE, Upson
Lab VII-VIII T, 215AE
- 100 Aerodynamics (3 cr; prereq 1, MM 25)
IV MWF, 227AE, Stolarik
- 103 Adv Aerodynamics (3 cr; prereq 102)
IV MWF, 211AE, Cronk

- 116 **Adv Airplane Stresses** (3 cr; prereq 115 or MM 180)
Ar, Wise
- 120 **Airplane Design** (2 cr; prereq 83, 102)
IV TTh, 211AE, Upson
- 123 **Adv Airplane Design** (2-5 cr; prereq 121)
- 126 **Airscrew Propulsion** (3 cr; prereq 120)
Ar, Stolarik
- 130 **Aerodynamic Design Lab** (2 cr; prereq concur regis 120)
VI-VIII MW, 317AE, Stolarik
- 142 **Aircraft Installation I** (2 cr; prereq 1)
Lect VI T, 19AE, Upson
Lab VII-IX Th, 209AE
- 143 **Aircraft Installation II** (3 cr; prereq concur regis 130)
Lect VI T, 211AE, Staff
Lab VI-VIII TF, 209AE
- 165 **Adv Aeronautical Lab** (2-4 cr; prereq* 141)
Ar, Akerman
- 173 **Introd Meteorology** (3 cr)
VI MWF, 211AE, Mantis
- 192 **Seminar** (1 cr; prereq 191)
- 193 **Adv Probs: Aeronautical Engineering** (2-5 cr; prereq sr or grad in AE)
- 194 **Adv Probs: Aeronautical Engineering** (2-5 cr; prereq 193)
- 195 **Adv Probs: Aeronautical Engineering** (2-5 cr; prereq 194)
- 201 **Aerodynamics of Compressible Fluid** (3 cr; prereq* 106)
II MWF, 227AE, Hermann
- 204 **Supersonic Aerodynamics Lab** (3 cr; prereq concur regis 201 or ME 134)
Ar, Bradfield
- 230 **Aerodynamics of Supersonic Inlet Diffusers** (3 cr; prereq 201 or ME 134)
III MWF, 211AE, Hermann
- 240 **Dynamics of Aircraft Structures** (3-5 cr)
Ar, Wise
- 272 **Research: Aeronautical Engineering** (3-6 cr; prereq cons instr)
- 273 **Research: Aeronautical Engineering** (3-6 cr; prereq cons instr)
- 274 **Research: Aeronautical Engineering** (3-6 cr; prereq cons instr)
- Winter and Spring Quarters**
- 1w Aeronautics (3 cr; prereq MM 24) II MWF
20w,s-21w,s-22w,s See 20f-21f-22f
46w,s See 46f
- 101w-102s See 100f (prereq 100)
-104w See 103f (prereq 103)
- 106w **Adv Aerodynamics** (3 cr; prereq 102) II MWF
- 107s **Aerodynamics of Viscous Fluids** (3 cr; prereq 102)
- 110s **Vibration, Flutter** (3 cr; prereq 115, MM 80) I MWF
- 115w **Airplane Stresses** (3 cr; prereq 83) Lect III TTh, lab VII-VIII T
- 117w **Adv Airplane Stresses** (3 cr; prereq 115) I MWF
- 118s **Stresses on Aircraft Structures** (3 cr; prereq 115) I MWF
- 119s **Testing of Aircraft Structures, Models** (3 cr; prereq 115) Lect VI TTh, lab VII-IX T
- 121w-122s See 120f (prereq 120)
-124w-125s See 123f (prereq 123)
- 127w-128s **Adv Probs: Airscrew Design** (2-5 cr; prereq 126)
- 131w-132s **Airplane Design Lab** (2 cr; prereq concur regis 121) VI-VIII MW
- 135s **Airplane Static Testing** (2 cr; prereq 142)
Lect IV F, lab VII-IX F
- 140s **Aeronautical Lab** (4 cr; prereq 142) Lect I MWF, lab I-III T
- 141s **Aerodynamics Lab** (2 cr; prereq 101) VII-IX TTh
- 155s **Aeronautical Calculations** (2 cr; prereq sr) IV MW
- 158w **Physics of the Atmosphere** (2 cr) VII MWF
- 174w **Applied Meteorology** (4 cr; prereq 173) VI MWF
- 180w **Instrumentation, Techniques for Supersonic Flow** (2 cr; prereq 106 or ME 134)
- 190w-191s **Seminar** (1 cr; prereq 101) VI T(w); VI F(s)
- 192w,s See 192f
- 193w,s-194w,s-195w,s See 193f-194f-195f
-202w-203s See 201f II MWF(w); IV MWF(s)
- 204s See 204f
- 220w **High Speed Performance, Design** (3 cr; prereq* 202)
- 231w **Aerodynamics, Flight Performance of Supersonic Missiles** (3 cr; prereq 230) V MWF
- 232s **Aerodynamics, Flight Performance of Supersonic Missiles** (3-5 cr; prereq cons instr)
- 238s **Seminar** (3 cr; cons instr)
272w,s-273w,s-274w,s See 272f-273f-274f
- ## ARCHITECTURE (ARCH)
- Fall Quarter
- AD I Architectural Design, Grade I** (6 cr; prereq soph for IT or jr for SLA students, accept school)
VI MWF, 305E, VI-VIII TTh, VII-VIII MWF, 3 hrs ar, 400E, McClure, Heath, others
- AD II Architectural Design, Grade II** (6 cr; prereq AD I)
VI-VIII MTWThF, 3 hrs ar, 306E, Vivrett, others
- AD III Architectural Design, Grade III** (9 cr; prereq AD II)
VI-VIII MTWThF, 12 hrs ar, 315E, Cerny, others
- AD IV Architectural Thesis** (12 cr; prereq AD III)
36 hrs ar, Roy Jones, others
- 51 **History of Architecture** (4 cr; prereq soph for IT or jr for SLA students)
IV MTWF, 305E, Koepfer

- 57 **Building Materials, Methods** (4 cr; prereq soph for IT or jr for SLA students)
II MTWF, 305E, Robert Jones
- 71 **Building Equipment** (2 cr)
III T, III-IV Th, 305E, Close
- 101 **Tutorial Work in History of Architecture** (2 cr; prereq sr, 53)
Ar, Koeper
- 104 **City Planning** (3 cr; prereq sr)
III MWF, 305E, Robert Jones

Winter and Spring Quarters

- AD I w,s-AD II w,s-AD III w,s See AD I f-Ad II f-AD III f
- AD IV w,s See AD IVf (prereq AD III)
1s **Intro Architectur** (1 cr; prereq cons instr) III M
- 52w-53s See 51f (prereq 51)
- 58w-59s See 57f (prereq 57)
- 72w-73s See 71f (prereq 71)
- 102w-103s See 101f
- 105w **Professional Relations** (3 cr; prereq sr)
- 106s **City Planning** (3 cr; prereq 104)

CHEMICAL ENGINEERING (CHEN)

Fall Quarter

- 80 **Chemical Engineering Materials** (2 cr; prereq InCh 12)
V TTh, 240ChE, Preckshot
- 100 **Chemical Engineering Stoichiometry** (3 cr; prereq AnCh 1, 2)
I MWF, 154ChE, Ceaglske
- 101 **Unit Operations** (3 cr; prereq 80, AnCh 1, 2)
Lect II TTh, 240ChE, Stoppel
-1, I MW, 158ChE
-2, II MW, 154ChE
- 111 **Unit Operations Lab** (2 cr; prereq 101)
-1, VI-IX T, 3rd fl ChE, Preckshot
-2, VI-IX W, 3rd fl ChE
- 119 **Chemical Engineering Thermodynamics** (3 cr; prereq 103)
Lect II MW, 142ChE, Isbin, Preckshot
-1, Lab II TF, 150ChE
-2, Lab IV TF, 154ChE
- 121 **Substitute IE 173**
- 131 **Inorganic Technology** (3 cr; prereq 102 for chem engr, 89, 90 for chem students)
I MWF, 142ChE, Madden
- 153 **Special Probs** (ar cr)
- 171 **Instrumentation, Control** (3 cr; prereq cons instr)
IV MWF, 150ChE, Ceaglske
- 191 **Seminar** (1 cr; prereq sr)
VII M, 240ChE
- 201 **Seminar** (1 cr)
VII M, 240ChE
- 205 **Adv Unit Operations** (3 cr; prereq 103)
Ar, Piret

- 214 **Adv Mathematics for Chemical Engineers, Chemists** (3 cr; prereq differ equat)
III MWF, 158ChE, Amundson
- 231 **Intro Nuclear Reactor Design, Applications** (3 cr; prereq* 103)
Ar, Isbin
- 301 **Research: Chemical Engineering** (ar cr)

Winter and Spring Quarters

- 100s See 100f
- 102w-103s See 101f (prereq 101) Lect II TThS (w,s); sec I MWF(w); II MWF(w,s)
- 105s **Fuels, Combustion** (2 cr; prereq AnCh 1-2)
Lect I TTh, lab VI-IX T or VI-IX W
- 112w-113s See 111f (prereq 102)
- 117w-118s **Chemical Engineering Equipment Design** (3 cr; prereq 103, MM 85, 87) Lab VI-VIII T, VIII-IX Th
- 120w See 119f (prereq 119)
- 132w **Organic Technology** (3 cr; prereq 103, 131 for chem engr, 90 for chem students) I MWF
- 154w-155s See 153f
- 172w See 171f (prereq 171)
- 187w **Inspection Trip** (2 cr; prereq 131, 132)
- 192w-193s See 191f
- 202w-203s See 201f
- 207w-208s See 205f
- 215w-216s See 214f Ar
- 220s **Adv Chemical Engineering Thermodynamics** (3 cr; prereq cons instr)
- 232w-233s See 231f
- 302w-303s See 301f

CHEMISTRY

Analytical Chemistry (ANCH)

Fall Quarter

- 2 **Quantitative Analysis** (5 cr; prereq InCh 13 for chem, InCh 12 for chem engr students)
Lect VI MWF, 225C, Herr
-1, Lab V-IX TTh, 310C
-2, Lab VII-IX MWF (for ROTC students only)
- 7 **Quantitative Analysis** (4 cr; prereq InCh 11 or 12)
-1, Lect VI MWF, 410C, Meehan
Lab VII-IX MWF, 310C
-2, Lect VI TTh, 225C, O'Connor
Rec I S, 215C
Lab VII-X T, VII-IX Th and I-III T or Th
- 96 **Sr Thesis** (5 cr; prereq sr)
- 104 **Qualitative Inorganic Microanalysis** (3 cr; prereq 1-2)
VI F, 315C, Sandell
- 106 **Gen Technical Analysis** (2-3 cr; prereq 1-2)
Ar, Sandell
- 109 **Rock Analysis** (3 cr; prereq 1-2, cons instr)
Ar, Goldich

- 122 Adv Analytical Chemistry (2 cr; prereq 1-2) III TTh, 215C, Meehan
- 123 Adv Analytical Chemistry (3 cr; prereq* 1-2)
Ar, Meehan
- 131 Applications of Indicators in Neutralization Reactions, pH Determinations (2-3 cr; prereq 1-2, PCh 103)
Lect VI MW, 111C, Kolthoff
Lab ar
- 134 Voltammetry, Amperometric Titrations (2 cr; prereq 133 or concur regis)
Ar, Kolthoff
- 135 Seminar: Modern Probs in Analytical Chemistry (1 cr; prereq 1-2, PCh 103)
IV T, 315C, Staff
- 201 Selected Topics in Analytical Chemistry (3 cr; prereq 1-2, 123)
Ar, Kolthoff
- 301 Research: Quantitative Analysis (ar cr)

Winter and Spring Quarters

- 1w-2s See 2f
- 7s See 7f Lect VI MWF, lab V-IX TTh
- 9w Quantitative Analysis (3 cr; prereq InCh 11 or 12) Lect VI TTh, lab VII-IX TTh
-97w-98s See 96f
- 101w-102s Quantitative Analysis (5 cr; prereq InCh 13) VI-IX MWF
- 103s Quantitative Inorganic Microanalysis (3 cr; prereq 1-2) VI F, lab ar
- 105w Polarizing Microscope (3 cr; prereq PCh 101) VI F, lab ar
-107w-108s See 106f
- 109w,s See 109f
- 127s Optical Methods in Analytical Chemistry (2 cr; prereq PCh 103) III TTh
- 132w Electrometric Measurements, and Titrations (3 cr with lab, 2 cr without lab; prereq 1-2, PCh 103) VI MW, lab ar
- 133s Voltammetry, Amperometric Titrations (2 cr; prereq 1-2, PCh 103) VI MW
134w,s See 134f
-136w-137s See 135f
- 138s Adv Volumetric Analysis (3 cr; prereq 131)
- 140w Water Analysis (2 cr; prereq 1-2)
-202w-203s See 201f
-302w-303s See 301f
- 4 Gen Inorganic Chemistry (4 cr, +4-5; prereq enter cr in chem)
-1, Lect I MWF, 100C, Heisig
Quiz I T, 100C
Lab VI-IX Th (IT)
-2, Lect VII MWF, 100C, Maynard
Quiz VII T, 100C
Lab VI-IX Th (med, med tech)
-3, Lect VII MThF, 325C, Brasted
Quiz VII T, 325C
Lab VI-IX W (nurs, nurs educ, dent, PH nurs, educ)
-4, Lect VII TWF, 225C, Johnson
Quiz VII Th, 410C
Lab VI-IX M (SLA, agric)
- 6 Gen Inorganic Chemistry (5 cr, +6-7)
Lect II MWF, 225C, O'Brien
Lab I-II T, I-IV Th
- 9 Gen Inorganic Chemistry (5 cr, +9-10; prereq entr cr in chem)
Lect II MWF, 100C, Sneed
Lab I-II T, I-IV Th
- 11 Semimicro Qualitative Analysis (4 cr; prereq 2, 5, 7, or 10)
Lect V MWF, 225C, Barber
Lab VI-IX T
- 12 Semimicro Qualitative Analysis (5 cr; prereq 2, 5, 7, or 10)
Lect II MWF, 215C, Brasted
Lab VI-VIII WF
- 13 Semimicro Qualitative Analysis (5 cr; prereq 12)
Lect VI WF, 325C, Heisig
Quiz VI M, 455C
Lab VII-VIII M, VII-IX WF
- 52 Seminar (1 cr; prereq sr)
VIII T, 215C, Heisig
- 96 Sr Thesis (5 cr)
- 103 Adv Inorganic Chemistry (3 cr; prereq AnCh 1, 2, OrCh 62)
VII MWF, 215C, O'Brien
- 134 Seminar (1 cr; prereq grad)
VIII T, 215C, Heisig
- 301 Research: Inorganic Chemistry (ar cr)

Winter and Spring Quarters

- 1w-2s See 1f Lect V MWThF, lab VI-IX T or VI-IX F
- 2w See 1f (prereq 1)
- 5w See 4f (prereq 4) Lect I MTWF, lab VI-IX Th; lect VII MTWF, lab VI-IX Th; lect VII MTThF, lab VI-IX W; lect VII TWThF, lab VI-IX M
- 6w-7s See 6f Lect II MWF, lab VI-VIII MW
- 7w See 6f (prereq 6) Lect II MWF, lab I-III TTh
- 10w See 9f (prereq 9) Lect II MWF, lab I-III TTh
- 11w See 11f
- 11s See 11f Lect I MWF, lab VI-IX Th; lect VI MWF, lab VI-IX T; lect VIII MWF, lab VI-IX T; lect VII MWF, lab VI-IX Th; lect VII MTTh, lab VI-IX W

Inorganic Chemistry (INCH)

Fall Quarter

- 1 Gen Inorganic Chemistry (4 cr, +1-2)
-1, Lect III MWF, 225C, Pray
Quiz III Th, 410C
Lab VI-IX F (IT)
-2, Lect VI MWF, 100C, Pervier
Quiz VI Th, 100C
Lab VI-IX T (med, dent, med tech, educ)
-3, Lect VIII TWF, 100C, Barber
Quiz VIII Th, 100C
Lab VI-IX M (SLA, educ, agric)

- 12s See 12f Lect II MWF, lab I-III TTh
 -53w-54s See 52f
 -97w-98s See 96f
 102s Semimicro Qualitative Analysis (3 cr; pre-
 req AnCh 1-2)
 -104w-105s See 103f (prereq 103) III MWF(s);
 III TThS(w)
 106w-107s Chemistry of Less Familiar Elements
 (3 cr; prereq AnCh 1-2, OrCh 62) VII
 MWF
 108s Nonaqueous Systems (3 cr; prereq AnCh
 1-2, OrCh 62)
 109w-110s Synthetic Inorganic Chemistry (3-5
 cr; prereq OrCh 63)
 -135w-136s See 134f
 -302w-303s See 301f

Organic Chemistry (ORCH)

Fall Quarter

- 61 **Elem Organic Chemistry** (4 cr, †61-62; pre-
 req 12-15 cr chem)
 -1, Lect I MWF, 410C, Fenton
 Lab Conf II T, 410C
 Quiz I T, 410C
 -1, Lab VI-IX T, 390C
 -2, Lab VI-IX W, 390C
 -3, Lab I-IV Th, 390C
 -2, Lect III MWF, 100C, Arnold
 Lab Conf III S, 100C
 Quiz III Th, 100C
 -4, Lab VI-IX M, 390C
 -5, Lab II-V T, 390C
 -6, Lab VI-IX T, 390C
 -7, Lab VI-IX Th, 390C
 63 **Elem Organic Chemistry** (3 cr; prereq 62)
 Lect III MWF, 325C, Parham
 Quiz III Th, 325C
 64 **Elem Organic Chemistry Lab** (3 cr; prereq
 63 or concur regis)
 Lab conf III S, 325C, Parham
 -1, Lab II-IV, VI-VIII T, 390C
 -2, Lab VI-VIII TTh, 390C
 96 **Sr Thesis** (5 cr; prereq 63, 64)
 102 **Characterization of Organic Compounds**
 (3 cr; prereq 1 yr org chem)
 Lect III M, 215C, Fenton
 Lab VI-VIII MW or MF, 390C
 105 **Adv Organic Chemistry** (3 cr; prereq 64)
 II MWF, 325C, Smith
 110 **Adv Organic Qualitative Analysis** (3 cr;
 prereq 102, cons instr)
 Ar, Koelsch
 139 **Adv Organic Chemistry Lab Work** (2-5 cr;
 prereq 64, read Germ, cons instr)
 Ar, Arnold
 141 **Reagents in Organic Chemistry** (3 cr; pre-
 req 64)
 IV TThS, 215C, Koelsch
 151 **Organic Chemistry Seminar** (1 cr; prereq
 sr)
 7:45-8:45 p.m. W, 325C, Staff

- 201 **Organic Chemistry Seminar** (1 cr)
 7:45-8:45 p.m. W, 325C
 205 **Theoretical Organic Chemistry** (3 cr; pre-
 req 107)
 I MWF, 315C, Lauer
 301 **Research: Organic Chemistry** (ar cr; pre-
 req 110, cons div)

Winter and Spring Quarters

- 61w-62s See 61f Lect IV MWF, conf IV Th,
 quiz IV T, lab VI-IX M; VI-IX T; VI-
 IX W; VI-IX Th; I-IV Th; VI-IX F
 -62w See 61f (prereq 61)
 63s See 63f
 64s See 64f
 -97w-98s See 96f
 101w **Interm Organic Chemistry** (3 cr; prereq
 14 cr) III MWF
 -106w-107s See 105f (prereq 105) II MWF
 130s **Organic Quantitative Analysis** (3 cr; pre-
 req 64, AnCh 1-2, cons instr)
 139w,s See 139f
 140w **Aromatic Compounds** (3 cr; prereq 64)
 III TThS
 -152w-153s See 151f
 -202w-203s See 201f
 -206w See 205f I MWF
 212s **Physico-Organic Chemistry** (4 cr; prereq*
 107, PCh 103, calculus) I MWF
 -302w-303s See 301f

Physical Chemistry (PCH)

Fall Quarter

- 96 **Sr Thesis** (5 cr; prereq sr)
 101 **Physical Chemistry** (3 cr; prereq AnCh 1,
 2, Phys 9, math thru differ, integ cal-
 culus)
 IV MWFS, 325C, Lipscomb, Prager
 104 **Physical Chemistry Lab** (1-2 cr; prereq 101
 or concur regis)
 Lect VI M, 325C, Wertz
 -1, VII-VIII M, VI-VIII W, 190C
 -2, VI-VIII T, VII-VIII Th, 190C
 -3, III-IV T, II-IV Th, 190C
 107 **Elem Physical Chemistry** (3 cr; prereq 2
 yr col chem, 1 yr col phys, Math 7 or
 16)
 Lect IV MWF, 225C, Livingston
 -1, II-IV T, 190C
 -2, II-IV Th, 190C
 128 **Colloid Chemistry** (3 cr; prereq 103)
 IV MWF, 111C, Reyerson
 132 **Colloid Chemistry Lab** (1-2 cr; prereq 128
 or concur regis)
 Ar, Reyerson
 150 **Seminar** (1 cr; prereq sr)
 7:30 p.m. M, 325C, Livingston
 161 **Nuclear Chemistry, Radioactivity** (3 cr;
 prereq 103)
 III MWF, 315C, O'Connor

- 201 Thermodynamics, Chemistry (4 cr; prereq 103, calculus)
II MWF, 115C, Prager
- 204 Kinetic Theory, Atomistics (4 cr; prereq 103, calculus)
II MWF, 315C, Crawford
- 221 Colloid Seminar (1 cr)
Ar, Reyerson
- 231 Radioactivity Lab (1-2 cr; prereq 161 or concur regis)
Ar, O'Connor
- 250 Physical Chemistry Seminar (1 cr)
7:30 p.m. M, 325C, Livingston
- 253 Molecular Vibrations (3 cr)
Ar, Crawford
- 257 Research Seminar: Crystal Structure (ar cr)
Ar, Lipscomb
- 264 Seminar: Magneto Chemistry (1 cr)
Ar, Wertz
- 301 Research: Physical Chemistry (ar cr)
- Winter and Spring Quarters**
- 97w-98s See 96f
- 102w-103s See 101f (prereq 101)
- 105w-106s See 104f
- 108w See 107f (prereq 107)
- 113w Fundamentals of Reaction Kinetics (3 cr; prereq 103) II TThS
- 118s Adv Physical Chemistry (3 cr; prereq 117) II TThS
- 129w Adsorption, Catalysis (3 cr; prereq 128) IV MWF
- 130s Colloids in Industry (3 cr; prereq 128) IV MWF
- 133w-134s See 132f
- 151w-152s See 150f
- 175s Photochemistry (3 cr; prereq 103, Phys 9) I TThS
- 202w-203s See 201f
- 205w-206s See 204f
- 222w-223s See 221f
- 231w,s See 231f
- 251w-252s See 250f
- 254w See 253f
- 257w,s See 257f
- 262w Seminar: Radioactivity (3 cr)
- 265w-266s See 264f
- 302w-303s See 301f
- 31 Stresses in Structures (3 cr; prereq MM 26)
-1, Lect II MWF, 227E
-2, Lect VI MWF, 227E
-1, Lab I-III T, 100TNCE
-2, Lab VII-IX M, 229E
-3, Lab VII-IX F, 217E
- 38 Elem Structural Design: Steel (3 cr; prereq MM 93)
III MWF, 227E
- 51 Highways, Pavements (3 cr; prereq concur regis MM 128)
-1, Lect IV T, V F, 227E
-2, Lect V TF, 227E
-3, Lect V ThF, 227E
-1, Lab I-III T, 113Ex
-2, Lab I-III Th, 113Ex
-3, Lab VII-IX M, 113Ex
-4, Lab VII-IX W, 113Ex
-5, Lab VII-IX F, 113Ex
- 121 Railway Engineering (3 cr; prereq 22, MM 127)
Lect III F, 206E
-1, Lab I-III MW, 217E
-2, Lab I-III TTh, 217E
Lect IV F, 227E
-3, Lab VII-IX MW, 217E
-4, Lab VII-IX TTh, 217E
- 130 Statically Indeterminate Structures (3 cr; prereq 33)
-1, Lect IV MW, 227E
-2, Lect VI MW, 206E
-1, Lab VII-VIII M, 225E
-2, Lab VII-VIII W, 225E
- 141 Reinforced Concrete (3 cr; prereq 33)
-1, Lect IV TTh, 215E
-2, Lect II F, VI T, 154ChE
-1, Lab VII-IX T, 225E
-2, Lab VII-IX W, 220TSCE
-3, Lab VII-IX Th, 225E
- 146 Concrete, Concrete Materials (3 cr; prereq MM 141)
Lect IV MW, 21AE
-1, Lab VI-IX M, 8Ex
-2, Lab VI-IX T, 8Ex
- 153 Soils in Highway Engineering (3 cr; prereq 53)
II MWF, 215E
- 156 Highway Traffic Engineering (3 cr; prereq 52)
Lect III WF, 21AE
Lab ar
- 158 Airport Design (3 cr; prereq 52)
V TThF, 215E
- 161 Hydrology (3 cr; prereq Hyd 102)
Lect III MW, 206E
-1, Lab I-IV T, 229E
-2, Lab I-IV Th, 229E
Lect V MW, 227E
-3, Lab VI-IX T, 220TNCE
-4, Lab VI-IX Th, 220TNCE
- 169 Public Works Engineering (3 cr; prereq 52)
- 172 Sanitary Lab (3 cr; prereq sr)

CIVIL ENGINEERING (CE)

Fall Quarter

- 11 Surveying (3 cr; prereq MM12, Draw 2)
-1, I-IV TTh, 220TNCE
-2, VI-IX TTh, 210TSCE
-3, VI-IX MW, 220TNCE
-4, IV-IX WF, 210TSCE
- 14 Surveying (3 cr; prereq 13)
-1, I-IV MW, 225E
-2, I-IV TTh, 225E
-3, VI-IX TTh, 229E
-4, VI-IX WF, 229E

- 173 Sanitary Engineering Probs: Water (3 cr; prereq 170)
- 176 Sanitary Engineering Seminar (1 cr; prereq sr)
- 234 Adv Theory of Structures (3-5 cr; prereq 132, 142)
- 243 Dynamics of Structures (3 cr; prereq 132)
- 276 Adv Sanitary Engineering: Water (3-5 cr; prereq 173)

Winter and Spring Quarters

- 12w-13s See 11f
- 15w Surveying (2 cr; prereq 12) Lect IV T, lab VII-IX M or VII-IX W; lect IV Th, lab VII-IX T or VII-IX Th
- 16s Surveying (2 cr; prereq 14) Lect IV T, lab I-IV Th or VI-IX T; lect IV F, lab VI-IX W or VI-IX Th
- 17s Surveying (3 cr; prereq MM 12) VI-IX ThF
- 21w Route Surveying (2 cr; prereq 13) Lect II Th, lab I-IV F or VI-IX T; lect V F, lab VI-IX W or VI-IX Th
- 22s Railway Engineering (2 cr; prereq 21) Lect IV M, lab I-III Th or VII-IX M; lect IV W, lab VII-IX T or VII-IX F
- 32w Design in Steel (3 cr; prereq 31, Draw 23, MM 128)
- 33s Design in Timber (3 cr; prereq 32)
- 37s Elem Structural Engineering (3 cr; prereq MM 128) Lect VI TTh, lab VII-VIII Th
- 39w See 38f (prereq 38)
- 41s Elem Structural Design: Concrete (3 cr; prereq 39) III MWF
- 52w See 51f (prereq 51) Lect IV M, IV F; IV T, IV F; IV F, VI T; labs I-IV T; I-IV Th; VI-IX M; VI-IX W; VI-IX F
- 53s Elements of Soil Mechanics (3 cr; prereq 52) Lect I T, II F; II MW; VI TTh; labs II-IV Th; III-V W; VII-IX T; VII-IX Th; VII-IX F
- 109s Cadastral Surveying (2 cr; prereq 16)
- 112w Aerial Surveying, Photogrammetry (3 cr; prereq 23)
- 131w Structural Analysis (2 cr; prereq 130) Lect VI M, lab VII-IX M; lect VI W, lab VII-IX W
- 132s Structural Design (2 cr; prereq 131) Lect VI M, lab VII-IX M; lect VI W, lab VII-IX W
- 137w,s Structural Lab (3 cr; prereq 141, concur regis 131) Lect I MW, lab VI-VII T(w); lect V TTh, lab VII-IX T(s)
- 142w Reinforced Concrete Design (3 cr; prereq 130, 141) Lect IV MW; IV TTh; labs VIII-IX T; VIII-IX Th; VIII-IX F
- 143s Arch Analysis, Design (3 cr; prereq 131, 142)
- 146w,s See 146f Lect IV TTh, lab VI-IX Th(s); lect V TTh, lab VI-IX M(w)
- 147w,s Foundations (3 cr; prereq 32) I MWF (w,s); II MWF(w)

- 148w Adv Concrete (2 cr; prereq 146)
- 151s Adv Highway Lab (3 cr; prereq 52)
- 152s Highway Design (3 cr; prereq 52) Lect V MF, lab ar
- 158w See 158f I MWF
- 159w Soil Mechanics (3 cr; prereq 53) IV MWF
- 160w,s Applied Hydraulics (3 cr; prereq Hyd 102, 104) Lect III MW(w,s), lab I-IV Th(w); I-IV F(s); VI-IX T(s); lect V TTh(s), lab VI-IX W or VI-IX Th(s)
- 161w See 161f Lect V MW, lab I-IV T
- 166w Water Power (3 cr; prereq 161)
- 170w Water Supply (3 cr; prereq 160) Lect II W, V F, lab VI-IX Th; lect II MF, lab VI-IX F
- 171s Sewerage, Sewage Treatment (3 cr; prereq 161, 170) Lect III MF, lab I-IV T; lect IV MF, lab VI-IX F
- 174w Sanitary Engineering Probs: Sewage, Industrial Wastes (3 cr; prereq 171)
- 175s Industrial Waste Disposal (3 cr; prereq 171)
- 177w-178s See 176f (prereq 176)
- 232s Adv Structural Probs in Sanitary Engineering (3 cr; prereq 132)
- 235w See 234f
- 244w Dynamics of Structures Lab (3 cr; prereq 243)
- 251w-252s Adv Soil Mechanics Lab (3 cr; prereq 159 or concur regis)
- 251s Adv Soil Mechanics Lab (3 cr; prereq 159 or concur regis)
- 261w-262s Water, Sewage Plant Design (3-5 cr; prereq 173 or 174)
- 277s Adv Sanitary Engineering: Sewage, Industrial Wastes (3-5 cr; prereq 174)

DRAWING AND DESCRIPTIVE GEOMETRY (DRAW)

Fall Quarter

- 4 Engineering Drawing (3 cr; prereq solid geom)
 - 1, I-II TWThF, 201E
 - 2, I-II TWThF, 120TNCE
 - 3, III-IV MWThF, 201E
 - 4, III-IV MWThF, 120TNCE
 - 5, III-IV MWThF, 100TSCE
 - 6, V-VI MWThF, 201E
 - 7, V-VI MWThF, 100TNCE
 - 8, V-VI MWThF, 120TNCE
 - 9, V-VI MTWTh, 100TSCE
 - 10, V-VI MTWTh, 120TSCE
 - 11, V-VI MTWTh, 220TSCE
 - 12, VII-VIII MTWTh, 201E
 - 13, VII-VIII MTWTh, 100TNCE
 - 14, VII-VIII MTWTh, 120TNCE
- 5 Engineering Drawing (3 cr; prereq 4)
 - 1, I-II MTWF, 220TSCE
 - 2, III-IV MWThF, 220TSCE
 - 3, VII-VIII MTWF, 100TSCE
 - 4, VII-VIII MTWF, 120TSCE

- 7 **Engineering Drawing** (3 cr; prereq solid geom)
 -1, II-IV MW, II-III F, 210TNCE
 -2, II-IV MW, II-III F, 120TSCE
- 10 **Solid Geometry** (no cr; prereq plane geom)
 -1, I MWF, 106E
 -2, I MWF, 162ChE
 -3, II MWF, 162ChE
 -4, III MWF, 227AE
 -5, IV MWF, 205E
- 21 **Drafting** (2 cr; prereq 3)
 -1, I-II MWF, 100TNCE
 -2, III-IV MWF, 100TNCE
- 23 **Structural Detailing** (2 cr; prereq 22)
 I-II MWF, 210TSCE
- 28 **Drafting** (2 cr; prereq 3)
 I-II MWF, 100TSCE
- 44 **Lettering** (1 cr)
 IV T, 18E
- 45 **Alphabets** (2 cr; prereq soph, 44)
 III TTh, 210TNCE
- 55 **Production Illustration** (2 cr; prereq 3)
 V-VI MWF, 210TNCE
- 111 **Adv Descriptive Geometry** (3 cr; prereq 3, MM 25)
- 115 **Curve Fitting** (3 cr; prereq 3, MM 25)
- 152 **Nomography** (3 cr; prereq 52, MM 25)
- 157 **Graphical Mathematics** (2 cr; prereq 3, MM 26)

Winter and Spring Quarters

- 4w,s See 4f Ar
- 5w-6s See 4f (prereq 4)
- 5s See 5f Ar
- 8w,s See 7f (prereq 7)
- 10w,s See 10f II MWF
- 21w See 21f I-II MWF
- 22w,s-23s **Structural Detailing** (prereq 21) I-II MWF; III-IV MWF
- 28s See 23f
- 34w **Lettering** (1 cr; prereq 1) VI Th
- 37s **Lettering for Engineers** (2 cr; prereq 2) III TTh
- 38s **Reading Drawings** (2 cr; prereq 2) VII TTh
- 44w,s See 44f
- 45w,s See 45f
- 50w **Diagrams, Charts** (2 cr; prereq 1) IV TTh
- 51s **Graphic Representation, Computation** (3 cr; prereq 2, MM 11) I MWF
- 52w,s **Alignment Charts** (3 cr; prereq 2, MM 12) I TTh, 1 hr ar
- 112w-113s See 111f (prereq 111)
- 116w-117s See 115f (prereq 115)
- 118w,s **Short Course in Curve Fitting** (3 cr; prereq* 3, MM 25)
- 153w-154s See 152f (prereq 152)
- 158w-159s See 157f (prereq 157)

ELECTRICAL ENGINEERING (EE)

Fall Quarter

- 11 **Elements of Electrical Engineering** (3 cr; prereq MM 24 or concur regis)
 -1, III MWF, 138EE
 -2, III MWF, 237EE
 -3, VII MWF, 138EE
 -4, VII MWF, 237EE
- 12 **Elements of Electrical Engineering Lab** (1 cr; prereq 11 or concur regis)
 -1, II-III T, 9EE
 -2, II-III Th, 9EE
 -3, V-VI T, 9EE
 -4, VII-VIII T, 9EE
 -5, VII-VIII Th, 9EE
 -6, VIII-IX M, 9EE
 -7, VIII-IX W, 9EE
 -8, VIII-IX F, 9EE
- 36 **Electrical Engineering Survey** (3 cr; prereq ChE or ME students, Phys 9)
 -1, Lect I MW, 106ME
 -2, Lect I MW, 114ME
 -3, Lect V TTh, 102ME
 -1, Lab III-IV T, 207bEE
 -2, Lab III-IV Th, 207bEE
 -3, Lab V-VI T, 207bEE
 -4, Lab VII-VIII M, 207bEE
 -5, Lab VII-VIII W, 207bEE
 -6, Lab VII-VIII F, 207bEE
- 38 **Electrical Engineering Survey** (3 cr; ME and ChemEngr students, prereq 37)
 Lect I TTh, 237EE
 -1, Lab VII-VIII T, 207cEE
 -2, Lab VII-VIII Th, 207cEE
- 46 **Electrical Engineering Survey, Aeronautical Radio** (3 cr; prereq Aero sr, Phys 9)
 Lect IV TTh, 138EE
 Lab VII-VIII W, 207aEE
- 81 **Electrical Engineering Measurements** (3 cr; prereq 111)
 Lect VI TTh, 138EE
 Lab ar
- 109 **Electric, Magnetic Fields** (3 cr; prereq 15, 16)
 -1, I MWF, 237EE
 -2, VII MWF, 238EE
 -3, VII MWF, 114ME
- 111 **Electrical Engineering** (3 cr; prereq 15, 16)
 -1, II MWF, 138EE
 -2, II MWF, 237EE
 -3, VI MWF, 138EE
- 112 **Electrical Engineering Lab** (1 cr; prereq concur regis 111)
 -1, I-II T, 107cEE
 -2, I-II Th, 107cEE
 -3, III-IV Th, 107cEE
 -4, VI-VII T, 107cEE
 -5, VI-VII Th, 107cEE
- 121 **Electrical Engineering** (3 cr; prereq 115, 116, 119)
 -1, I MWF, 238EE
 -2, V MWF, 237EE

- 122 **Electrical Engineering Lab** (2 cr; prereq 116, concur regis 121)
 -1, II-IV T, 107aEE
 -2, II-IV Th, 107aEE
 -3, VI-VIII T, 107aEE
 -4, VI-VIII W, 107aEE
- 127 **Transient Electrical Phenomena** (3 cr; prereq MM 80)
 -1, Lect III TTh, 138EE
 -2, Lect V TTh, 237EE
 -1, Lab VI-VII T, 129EE
 -2, Lab VII-VIII W, 129EE
 -3, Lab VII-VIII M, 129EE
 -4, Lab VII-VIII Th, 129EE
 -5, Lab VIII-IX T, 129EE
- 131 **Electronic Circuit Design** (3 cr; prereq 163)
 Lect I TTh, 238EE
 -1, Lab V-VI W, 36EE
 -2, Lab VII-VIII M, 36EE
 -3, Lab VII-VIII Th, 36EE
- 132 **Electric Design** (3 cr; prereq 125)
 II MWF, 238EE
- 138 **Power Systems** (3 cr; prereq 125)
 Lect I TTh, 138EE
 Lab VII-VIII M, 107aEE
- 157 **Industrial Electronics** (3 cr; prereq 163)
 Lect II TTh, 138EE
 -1, Lab V-VI M
 -2, Lab V-VI F
 -3, Lab VI-VII T
 -4, Lab VII-VIII F
- 161 **Electric Communication** (4 cr; prereq 119)
 -1, Lect II MWF, 335EE
 -2, Lect VI MWF, 237EE
 -1, Lab I-II T, 307EE
 -2, Lab V-VI T, 307EE
 -3, Lab V-VI Th, 307EE
 -4, Lab VII-VIII M, 307EE
 -5, Lab VII-VIII F, 307EE
- 164 **Communication Circuits** (3 cr; prereq 115, 116, 119)
 Lect IV TTh, 238EE
 Lab VII-VIII Th, 307EE
- 167 **Radio Communication** (3 cr; prereq 163)
 Lect II TTh, 238EE
 Lab VII-VIII W, 307EE
- 187 **Communication Seminar** (1 cr; prereq cons instr)
- 191 **Graduate Seminar** (1 cr; prereq cons instr)
- 197 **Adv Electrical Design** (3 cr; prereq 136)
- 211 **Adv Network Analysis** (3 cr; prereq cons instr)
 IV MWF, 138EE
- 227 **Stability of AC Power Systems** (3 cr; prereq 140)
 VII MWF, 335EE
- 233 **Fluctuation Phenomena** (2 cr)
- 255 **Analysis of AC Power-Systems Circuits** (3 cr; prereq 140)
- 261 **Adv Communication** (3 cr; prereq Phys 105)
- 262 **Communication Seminar** (1-3 cr; prereq cons instr)
 VIII M
- 272 **Electromechanical Vibrating Systems, Engineering Acoustics** (3 cr; prereq cons instr)
 IV MWF
- 287 **Adv Vacuum Tube Analysis** (3 cr; prereq cons instr)
- 291 **Electronics Seminar** (1-3 cr; prereq cons instr)

Winter and Spring Quarters

- 11w See 11f III MWF
 12w-14s See 12f (prereq 11 or concur regis) VIII-IX M; VIII-IX T
 -13w-15s See 11f (prereq 11, concur regis 25)
 -13s See 11f (prereq 11, concur regis 25) III MWF
 -14w See 12f (prereq 13 or concur regis)
 16s Elements of Electrical Engineering Lab (2 cr; prereq 15 or concur regis) I-II T; I-III Th; VII-IX T; VII-IX Th
 -37w-38s See 36f (prereq 36)
 41w **Electrical Engineering Survey** (3 cr; prereq jr mines, Phys 8) Lect IV TTh, lab I-II Th
 42s **Electrical Engineering Survey** (3 cr; prereq CE, sr, Phys 8) II MWF
 -47w See 46f (prereq 46)
 100s **Inspection Trip** (2 cr; prereq sr)
 -113w-115s See 111f (prereq 111)
 -114w-116s See 112f (prereq 112)
 117w-119s **Engineering Electronics** (3 cr; prereq 109, 111, 112) I MWF; VII MWF
 118w-120s **Engineering Electronics Lab** (1 cr; prereq concur regis 117) I-II Th; III-IV T; VI-VII Th; VIII-IX M; VIII-IX T; VIII-IX Th
 -123w-125s See 121f (prereq 121)
 -124w-126s See 122f (prereq 122)
 -128-129s See 127f (prereq 127)
 -133w-135s See 131f (prereq 131)
 -134w-136s See 132f (prereq 132)
 -139w-140s See 138f (prereq 138)
 151s **Illuminating Engineering** (3 cr; prereq concur regis 121) I MWF
 -158w-159s See 157f (prereq 157)
 161w-162s See 161f Lect V MWF, lab VII-VIII W
 -162w-163s See 161f (prereq 161)
 -165w-166s See 164f (prereq 164)
 -168w-169s See 167f (prereq 167)
 -188w-189s See 187f (prereq 187)
 -192w-193s See 191f (prereq 191)
 -198w-199s See 197f (prereq 197)
 -212w-213s See 211f
 -228w-229s See 227f
 -234w-235s See 233f (prereq 233)
 -256w-257s See 255f
 -263w-265s See 261f
 -264w-266s See 262f
 -273w-274s See 272f
 -288w-289s See 287f
 -292w-293s See 291f

ENGINEERING ENGLISH (ENGL)

Fall Quarter

- 4 Written, Spoken Communication** (3 cr; pre-req placement test)
- 1, I MWF, 50ChE
 - 2, I MWF, 19AE
 - 3, II MWF, 140ForH
 - 4, II MWF, 202AH
 - 5, II MWF, 109AH
 - 6, III MWF, 111C
 - 7, III MWF, 40ForH
 - 8, III MWF, 420MurH
 - 9, IV MWF, 162ChE
 - 10, IV MWF, 19AE
 - 11, V MWF, 50ChE
 - 12, V MWF, 142ChE
 - 13, VI MWF, 106ME
 - 14, VI MWF, 321ME
 - 15, VII MWF, 206E
 - 16, VII MWF, 102ME
- 6 Written, Spoken Communication** (3 cr; prereq 5)
- IV MWF, 104E
- 85 Adv Technical Communication** (3 cr; pre-req 6)
- 1, II MWF, 160ForH
 - 2, II MWF, 143Ph
 - 3, III MWF, 150ForH
 - 4, III MWF, 302MurH
 - 5, V MWF, 102ME
 - 6, V MWF, 106ME
 - 7, VII MWF, 215E
 - 8, VII MWF, 227E

Winter and Spring Quarters

- 4w-5s See 4f II MWF(w); III MWF(w); IV MWF(w,s); VI MWF(s)
- 5w-6s See 4f (prereq 4)
- 85w-86s See 85f II MWF; V MWF
- 86w See 85f (prereq 85)

GENERAL ENGINEERING (GE)

Fall Quarter

- 21 Orientation** (1 cr)
- III T, NHAud
- 70 Slide Rule** (1 cr; prereq MM 11 or concur regis)
- 1, VI T, 205E
 - 2, VI Th, 205E
- 101 Contracts, Specifications** (3 cr; prereq sr)
- 1, III MWF, 215E, Fixen
 - 2, IV MWF, 215E, Fixen
 - 3, VI MWF, 215E, Fixen
- 103 Professional Probs** (1 cr)
- VI Th, 335EE

Winter and Spring Quarters

- 70w,s See 70f
- 101w,s See 101f
- 103w See 103f

GEOPHYSICS (GPHY)

Fall Quarter

- 108 Introd Gen Geophysics** (3 cr; prereq Phys 9, Geol 2)
- III MWF, 202AH, Mooney
- 125 Prin Gravity, and Magnetic Exploration** (2 cr; prereq Phys 9, Geol 125, MM 25)
- III TTh, 315AH, Mooney

Winter and Spring Quarters

- 109w See 108f (prereq 108) Lect III MWF
- 110s Introd Exploration Geophysics (3 cr; pre-req Phys 9, Geol 2) II MWF
- 126w Prin Seismic Exploration (2 cr; prereq 125) III TTh
- 127s Prin Electrical Exploration (2 cr; prereq 126) III TTh

HYDROMECHANICS (HYDR)

Fall Quarter

- 101 Fluid Mechanics** (3 cr; prereq MM 26 or 84)
- 1, II MWF, 110Ex
 - 2, VI MWF, 110Ex
- 102 Fluid Mechanics** (4 cr; prereq MM 26)
- III MWThF, 110Ex
- 103 Fluid Mechanics** (5 cr; prereq MM 26 or 84)
- I MTWThF, 110Ex
- 104 Hydraulics Lab** (1 cr; prereq cr or regis in 101, 102, 103 or ChEn 101)
- 1, VIII-IX M, Ex
 - 2, VIII-IX T, Ex
 - 3, VIII-IX Th, Ex
- 183 Open Channel Flow** (3 cr; prereq 101, 104)
- 187 Intern Fluid Mechanics** (3 cr; prereq 101, 104)
- 194 Adv Hydraulic Lab** (2 cr; prereq 102, 104)
- 293 Hydrodynamics** (3 cr; prereq* 187, differ equat or adv calc)

Winter and Spring Quarters

- 101w,s See 101f I MWF(s); II MWF(w)
- 102w,s See 102f III MWThF(w,s); V MTWTh(w)
- 103w,s See 103f I MTWThF(w); II MTWThF(s); IV MTWThF(s)
- 104w,s See 104f VI-VII F; VIII-IX M; VIII-IX T; VIII-IX W; VIII-IX Th; VIII-IX F
- 190w Mechanics of Similitude, Dimensional Analysis (3 cr; prereq* 101, MM 127, 128)

- 191w Hydraulic Motors, Pumps (3 cr; prereq* 187)
- 192s Natural, Artificial Waterways (3 cr; prereq* 183)
- 193s Hydraulic Measurements (3 cr; prereq* 187)
- 195w-196s See 194f (prereq 194)
- 294w-295s See 293f (prereq 293)

- 165w,s See 165f Lect III TTh(w,s); lab VII-IX M(w); VII-IX W(s)
- 167w Materials Handling, Packaging (3 cr; prereq 165 or ME 105) IV MWF
- 170s Production Planning, Control (3 cr; prereq 153 or 155) I MWF
- 172s Elements of Quality Control (3 cr; prereq 150, ME 115 adv) III MWF
- 180w Elements of Supervision (3 cr; prereq 150) VI MWF
- 191w-192s See 190f
- 193s Inspection Trip (1 cr) Ar
- 194s Applied Production Engineering, Mgt (3 cr; prereq* 18 cr) Lect I TTh, lab VII-IX T
- 252w-253s See 251f
- 262w-263s See 261f
- 272w-273s See 271f

INDUSTRIAL ENGINEERING (IE)

Fall Quarter

- 90 **Industrial Assignment** (3 cr; prereq regis work study program)
Ar, Algren
- 92 **Industrial Assignment** (3 cr; prereq regis work study program)
Ar, Algren
- 93 **Industrial Assignment** (3 cr; prereq regis work study program)
Ar, Algren
- 150 **Elements of Industrial Engineering, Mgt** (3 cr; prereq* ME 15)
-1, II MWF, 102ME, Block
-2, III MWF, 102ME, Carlson
- 153 **Methods Engineering, Work Measurement** (3 cr; prereq 150)
Lect I TTh, 102ME, MacKenzie, Carlson
-1, Lab VII-IX T, 180ME
-2, Lab VII-IX Th, 180ME
- 165 **Industrial Plants** (3 cr; prereq 153 or 155)
Lect III TTh, 102ME, Whitson
-1, Lab VII-IX M, 180ME
-2, Lab VII-IX W, 180ME
- 171 **Quality Control** (3 cr; prereq 150, MM 90, ME 115 adv)
II MWF, 106ME, Block
- 173 **Engineering Economic Analysis, Cost Control** (3 cr; prereq 165, BA 66)
Ar, Whitson (for ChemEngrs only)
- 181 **Industrial Relations** (3 cr; prereq 150)
VI MWF, 102ME, Block
- 190 **Industrial Engineering Seminar** (1 cr)
VI T, 110ME, Whitson
- 251 **Adv Industrial Engineering, Mgt** (3 cr; prereq cons instr)
Ar, Whitson
- 261 **Production Engineering Probs** (3-5 cr; prereq cons instr)
Ar, Whitson
- 271 **Industrial Engineering Research** (3-5 cr; prereq cons instr)
Ar, Whitson

Winter and Spring Quarters

- 91w,s-92s-93w,s See 90f-92f-93f
- 150w,s See 150f II MWF(s); III MWF(w)
- 153w,s See 153f
- 154s **Adv Methods Engineering, Work Measurement** (3 cr; prereq 153) Lect II TTh, lab VII-IX M or VII-IX F

MATHEMATICS AND MECHANICS (MM)

Fall Quarter

- 11A **College Algebra, Trigonometry I** (5 cr; prereq 9)
-1, I MTWThF, 211AE
-2, I MTWThF, 104E
-3, I MTWThF, 327AE
-4, II MTWThF, 150ForH
-5, II MTWThF, 202ME
-6, II MTWThF, 327AE
-7, II MTWThF, 110ME
-8, II MTWThF, 21AE
-9, II MTWThF, 50ChE
-10, IV MTWThF, 50ChE
-11, IV MTWThF, 327AE
-12, IV MTWThF, 214ME
-13, V MTWThF, 305E
-14, V MTWThF, 211AE
-15, VI MTWThF, 106E
-16, VI MTWThF, 104E
- 12 **Trigonometry** (5 cr; prereq 11)
V MTWThF, 206E
- 13 **Analytic Geometry** (5 cr; prereq 11, 12)
-1, I MTWThF, 110ME
-2, I MTWThF, 227E
-3, VII MTWThF, 203E
- 24 **Calculus I: Differential** (5 cr; prereq 13)
-1, I MTWThF, 215E
-2, I MTWThF, 227AE
-3, II MTWThF, 143Ph
-4, III MTWThF, 327AE
-5, III MTWThF, 154ChE
-6, III MTWThF, 30ForH
-7, V MTWThF, 138EE
-8, V MTWThF, 238EE
-9, VI MTWThF, 238EE
- 25 **Calculus II: Integral** (5 cr; prereq 24)
-1, IV MTWThF, 237EE
-2, IV MTWThF, 114ME

- 26 **Technical Mechanics: Statics** (5 cr; prereq 25)
 -1, II MTWThF, 321ME
 -2, II MTWThF, 104E
- 80 **Elem Differential Equations** (3 cr; prereq 25)
 -1, I MWF, 133EE
 -2, I MWF, 102ME
 -3, III MWF, 104E
 -4, III MWF, 50ChE
 -5, VI MWF, 327AE
- 84 **Technical Mechanics** (5 cr; prereq 25 or 91)
 V MTWThF, 110Ex
- 85 **Strength of Materials** (3 cr; prereq 26 or 84)
 -1, III MWF, 142ChE
 -2, IV MWF, 158ChE
- 87 **Materials Testing Lab** (1 cr; prereq 85 or concur regis)
 -1, III-IV T, Ex
 -2, V-VI Th, Ex
 -3, VII-VIII M, Ex
- 91 **Calculus** (4 cr; prereq 13)
 -1, I MTWF, 305E
 -2, I MTWF, 203E
- 127 **Technical Mechanics: Dynamics** (5 cr; prereq 26)
 -1, II MTWThF, 19AE
 -2, II MTWThF, 158ChE
 -3, IV MTWThF, 110Ex
 -4, IV MTWThF, 143Ph
- 128 **Strength of Materials** (5 cr; prereq 26)
 -1, III MTWThF, 162ChE
 -2, III MTWThF, 150ChE
 -3, VI MTWThF, 203E
- 132 **Industrial Statistics** (3 cr; prereq 25)
 V MWF, 110ME, McElrath
- 141 **Materials Testing Lab** (1 cr; prereq 128 or concur regis)
 -1, VII-VIII T, Ex
 -2, VII-VIII W, Ex
 -3, VII-VIII Th, Ex
 -4, VII-VIII F, Ex
- 150 **Calculus III** (3 cr; prereq 25)
 -1, I MWF, 206E, Loye
 -2, III MWF, 238EE, Thompson
- 153 **Calculus V** (3 cr; prereq 152)
 IV MWF, 206E, Loye
- 154 **Vector Analysis** (3 cr; prereq 25)
 II MWF, 206E, Wilcox
- 156 **Elements of Tensor Analysis** (3 cr; prereq 154)
 V MWF, 106E, Polansky
- 161 **Adv Technical Mechanics** (3 cr; prereq* 127)
 IV MWF, 203E, Koehler
- 164 **Special Probs, Seminar: Materials Engineering** (3 cr; prereq 129)
 Ar, Lazan
- 167 **Selected Topics in Mathematics for Sr Aeronautical Engineers** (3 cr; prereq 26)
 III MWF, 106E, Polansky
- 173 **Elem Partial Differential Equations with Applications** (3 cr; prereq 80, 153)
 II MWF, 106E, Munro
- 181 **Applied Elasticity** (3 cr; prereq 128)
 II MWF, 203E, Miller
- 184 **Elem Numerical Analysis in Engineering** (3 cr; prereq 80)
 III MWF, 203E, Munro
- 190 **Prob Seminar** (3 cr; prereq cons instr)
 VI MWF, 110ME, McElrath
- 193 **Theory of Vibrations** (3 cr; prereq 80, 127, concur regis 152)
 VI MWF, 114ME, Young
- 193 **Special Functions in Mathematical Analysis** (3 cr; prereq 168)
 V MWF, 203E, Fulks
- 217 **Reimannian Geometry** (3 cr; prereq cons instr)
 VI MWF, 205E, Milgram
- 227 **Mathematics of Computers, Control Devices** (3 cr; prereq 186)
 V MWF, 205E, Munro
- 240 **Adv Material Engineering** (3 cr; prereq 129)
 VI-VII TTh, 110Ex, Lazan
- 261 **Functions of a Complex Variable** (3 cr; prereq 153)
 II-III TTh, 106E, Warschawski
- 267 **Selected Topics: Theory of Analytic Functions** (3 cr; prereq 263)
 IV MWF, 106E, Warschawski
- 284 **Nonlinear Mechanics** (3 cr; prereq 127, 151, 153)
 III MWF, 205E, Turrittin
- 297 **Mathematical Foundations of Statistical Mechanics** (3 cr; prereq* Math 208)
 VII MWF, 106E, Rosenbloom

Winter and Spring Quarters

- 11Aw,s See 11Af, Ar
- 12Aw,s College Algebra, Trigonometry II (5 cr; prereq 11A)
- 13w See 13f, Ar
- 24w,s See 24f, Ar
- 25w,s See 25f, Ar
- 26w,s See 26f, Ar
- 80w,s See 80f, Ar
- 84w,s See 84f, Ar
- 85w,s See 85f, Ar
- 87w,s See 87f, Ar
- 90w,s Elem Engineering Statistics (3 cr; prereq 13)
- 92w Mechanics for Architects (4 cr; prereq 91) I MTWF
- 93s Strength of Materials (4 cr; prereq 91, 92) I MTWF
- 127w,s See 127f, Ar
- 128w,s See 128f, Ar
- 133w-134s See 132f (prereq 132)
- 141w,s See 141f, Ar
- 150w See 150f IV MWF
- 151w,s Ordinary Differential Equations (3 cr; prereq 80) II MWF(s); IV MWF(w)

- 152w,s Calculus IV (3 cr; prereq 150) I MWF (w); III MWF(w); IV MWF(s)
- 153s See 153f I MWF; III MWF
- 154w See 154f V MWF
- 155w,s Vector Analysis, Dyadics with Applications (3 cr; prereq 154) II MWF(w); V MWF(s)
- 156s See 156f II MWF
- 162w-163s See 161f (prereq 161)
- 164w,s See 164f
- 168w Elem Theory of Complex Variables (3 cr; prereq 152) III-IV TTh
- 169s Mathematical Theory of Flow (3 cr; prereq 168, Hyd 103) III-IV TTh
- 174w-175s See 173f (prereq 173)
- 182w-183s See 181f (prereq 181)
- 185w-186s See 184f (prereq 151, 153, 184)
- 191w-192s See 190f (prereq 190)
- 194w-195s See 193f (prereq 193)
- 197w-198s See 196f (prereq 196)
- 218w-219s See 217f
- 228w-229s See 227f
- 241w-242s See 240f
- 262w-263s See 261f
- 268w-269s See 267f
- 285w-286s See 284f
- 298w-299s See 297f

MECHANICAL ENGINEERING (ME)

Fall Quarter

- 12 **Molding, Casting Processes** (2 cr)
Lect I MW, 202ME, Holtby
-1, Lab I-III T, 70ME
-2, Lab VII-IX M, 70ME
-3, Lab VII-IX W, 70ME
-4, Lab VII-IX F, 70ME
- 13 **Metal Processing** (2 cr)
Lect I MW, 18ME, Hughes
-1, Lab I-III Th, 50ME
-2, Lab VII-IX M, 50ME
-3, Lab VII-IX W, 50ME
-4, Lab VII-IX F, 50ME
- 14 **Machine Tool Operation** (2 cr)
Lect I MW, 4ME, Crowder
-1, Lab I-III Th, 171ME
-2, Lab VII-IX M, 171ME
-3, Lab VII-IX W, 171ME
-4, Lab VII-IX F, 171ME
- 18 **Materials, Processing** (3 cr)
Lect II TTh, 102ME, Severson
Lab VII-IX TTh, ME Shops
- 20 **Elem Machine Design** (2 cr; prereq Draw 2)
Lect I F, 18ME, Palmer
-1, Lab VII-IX M, 314ME
-2, Lab VI-VIII T, 314ME
-3, Lab VI-VIII Th, 314ME
-4, Lab VII-IX F, 314ME
- 21 **Kinematics** (3 cr; prereq MM 24)
Lect I TTh, 18ME, Kemler
-1, Lab II-III Th, 308ME

- 2, Lab VII-VIII M, 308ME
- 3, Lab VI-VII T, 308ME
- 4, Lab VI-VII Th, 308ME
- 22 **Mechanisms** (2 cr; prereq 21)
Lect III T, 18ME, Baillif
-1, Lab VII-IX M, 325ME
-2, Lab VI-VIII T, 208ME
-3, Lab VII-IX W, 325ME
-4, Lab VI-VIII Th, 208ME
- 23 **Dynamics of Machinery** (3 cr; prereq 22, 127 or concur regis)
Lect III TTh, 321ME, Larsen
Lab V-VII T, 214ME
- 24 **Elements of Machine Design** (3 cr; prereq MM 128)
Lect III MW, 321ME, Baillif
-1, Lab VI-VIII M, 302ME
-2, Lab VI-VIII T, 102ME
-3, Lab VI-VIII W, 314ME
- 33 **Mechanical Engineering Lab I** (2 cr; prereq 131 or concur regis, regis Phys 7 for work-study program)
Lect I T, 302ME, Carlson
-1, Lab VII-VIII MW, 370ME
-2, Lab VII-VIII TTh, 370ME
- 34 **Mechanical Engineering Lab II** (2 cr; prereq 33, 132 or concur regis, regis Phys 8 for work-study program)
Lect I Th, 302ME, LaJoy
-1, Lab IV-V MW, 370ME
-2, Lab VII-VIII TTh, 370ME
- 35 **Mechanical Engineering Lab III** (2 cr; prereq 34)
Lect III F, 321ME, Baillif
-1, Lab I-III Th, 370ME
-2, Lab VI-VIII M, 370ME
-3, Lab VI-VIII T, 370ME
-4, Lab VI-VIII W, 370ME
- 40 **Heat Engines** (3 cr; prereq Phys 7)
Lect II TTh, 114ME, Lee
Lab VII-IX Th, 260ME
- 42 **Heat Engines** (4 cr; prereq Phys 7)
I MTWF, 321ME, Lee
- 50 **Auto, Airplane Engines** (3 cr; prereq soph) I MWF, 302ME, Murphy
- 90 **Industrial Assignment** (3 cr; prereq regis coop-work study program)
Ar, Algren
- 93 **Industrial Assignment** (3 cr; prereq regis coop-work study program)
Ar, Algren
- 94 **Industrial Assignment** (3 cr; prereq regis coop-work study program)
Ar, Algren
- 100 **Milling I** (3 cr; prereq 23, 132, MM 130) III MWF, 114ME, MacKenzie
- 105 **Milling Design I** (2 cr; prereq 100, 121, 160) V-VII TTh, 325ME, MacKenzie
- 118 **Adv Processing Technology** (3 cr; prereq 12, 13, 14, 24, MM 141)
Lect II MW, 18ME, Severson
-1, Lab I-III T, ME Shops
-2, Lab VII-IX Th, ME Shops

- 121 **Machine Design** (2 cr; prereq 24)
Lect I F, 214ME, Ryan
Lab I-III Th, 314ME
- 122 **Mechanical Engineering Design I** (3 cr; prereq 121)
Lect VI T, 321ME, Ryan
I-III TTh, 214ME
- 124 **Experimental Stress Analysis** (3 cr; prereq MM 128)
Ar, Ryan
- 129 **Vibration Engineering** (3 cr; prereq MM 127)
IV MWF, 321ME, Kemler
- 131 **Thermodynamics** (3 cr; prereq MM 25, Phys 8)
—1, I MWF, 208ME, Hall
—2, II MWF, 208ME
—3, III MWF, 106ME
—4, III MWF, 214ME
—5, VI MWF, 208ME
- 132 **Thermodynamics** (3 cr; prereq 131)
III MWF, 110ME, Hall
- 133 **Heat Transmission** (3 cr; prereq 132)
II MWF, 114ME, Eckert
- 141 **Heat Power Engineering** (3 cr; prereq 132)
IV MWF, 208ME, Lee
- 149 **Adv Steam Lab** (2 cr; prereq 35, 141)
VI-IX F, 260ME, Andeen
- 150 **Internal Combustion Engines** (4 cr; prereq 132)
Lect II MWF or VI MWF, 214ME, Murphy
—1, Lab VII-IX M, 460ME
—2, Lab VII-IX Th, 460ME
—3, Lab I-III T, 460ME
- 154 **Design of Internal Combustion Engines** (3 cr; prereq 121, 150)
Lect I F, 202ME, Murphy
Lab I-III TTh, 325ME
- 157 **Gas Turbine, Jet Propulsion Power Plants** (3 cr; prereq 150 or 150A)
V MWF, 214ME, Murphy
- 158 **Aero Engine Testing** (2 cr; prereq 150 or 150A or concur regis)
I-III TTh, 480ME, Murphy
- 159 **Internal Combustion Engine Lab** (2 cr; prereq 150 or concur regis)
VI-IX T, 480ME, Murphy
- 160 **Heating, Ventilation** (3 cr; prereq MM 127, Hyd 102 or 103)
—1, II MWF, 302ME, Whitnah
—2, IV MWF, 302ME
- 161 **Heating, Ventilation, Air Conditioning Design** (3 cr; prereq 160)
Lect VI T, 302ME, Whitnah
Lab VII-IX TTh, 302ME
- 169 **Heating, Ventilation Lab** (2 cr; prereq 35, 160 or concur regis)
VI-IX M, 358ME
- 180 **Refrigeration** (3 cr; prereq 132, 160 or concur regis)
III MWF, 302ME, Threlkeld
- 189 **Refrigeration Lab** (2 cr; prereq 180 or concur regis)
VI-IX W, 362ME, Borry
- 190 **Seminar** (1 cr; prereq sr)
—1, I F, 106ME
—2, I F, 114ME
—3, V M, 114ME
—4, VI T, 202ME
- 191 **Seminar** (1 cr; prereq 190)
V W, 114ME, Staff
- 192 **Seminar** (1 cr; prereq 191)
V F, 114ME, Staff
- 198 **Industrial Instrumentation, Automatic Control** (3 cr; prereq sr)
Lect V TTh, 321ME, LaJoy
—1, Lab VI-VIII T, 359ME
—2, Lab VI-VIII W, 359ME
- 221 **Adv Mechanical Engineering Design** (3 cr; prereq 121)
III MWF, 202ME, Young
- 231 **Adv Thermodynamics** (3 cr; prereq 132)
III MWF, 208ME, Hall
- 233 **Adv Heat Transmission** (3 cr; prereq* 133, MM 153)
V MWF, 202ME, Eckert
- 250 **Dynamics of High Speed Engines** (3 cr; prereq 121, 150)
Ar, Murphy
- 252 **Adv Reciprocating Engines** (3 cr; prereq 151 or 151A)
VII MWF, 208ME, Murphy
- 265 **Adv Air Conditioning** (3 cr; prereq 160)
IV MWF, 202ME, Algren
- 280 **Theoretical Refrigeration** (3 cr; prereq 180)
VI MWF, 202ME, Jordan

Winter and Spring Quarters

- 12w,s See 12f Lect I MW, labs VII-IX M; VII-IX W; VII-IX F
- 13w,s See 13f Lect I MW, labs VII-IX M; VII-IX W; VII-IX F
- 14w,s See 14f
- 20w,s See 20f Lect I F, lab VII-IX M(w,s) or VI-VIII Th(w)
- 21w,s See 21f Lect I TTh, labs II-III Th(w); VI-VII T(w); VI-VII Th(w,s); VII-VIII M(w,s); VII-VIII W(w)
- 22w,s See 22f Lect III T, lab VI-VIII Th
- 23w,s See 23f Lect III TTh, labs V-VII T(w,s); V-VII F(s); VI-VIII M(s); VI-VIII W(s)
- 24w,s See 24f Lect III MW, lab VI-VIII W
- 33w,s See 33f Lect I T, labs II-III TTh(w); V-VI MW(w); V-VI TTh(w); VII-VIII MW(w,s); VII-VIII TTh(w,s)
- 34w,s See 34f Lect I Th, labs II-III TTh(s); IV-V MW(w,s); V-VI TTh(s); VII-VIII MW(s); VII-VIII TTh(w,s)
- 35w,s See 35f Lect III F, lab I-III Th or VI-VIII M
- 38s Heat Engines (3 cr; prereq Phys 7) V MWF
- 39s Heat Engine Lab (1 cr; prereq 33 or concur regis) VII-IX T or VII-IX Th
- 40w See 40f Lect V TTh, lab VII-IX T or VII-IX W

- 41w,s Heat Engines (3 cr; prereq 40) Lect II TTh(w); V TTh(s); lab VII-IX W or VII-IX F(s); VII-IX Th(w)
- 42s See 42f I MWThF
- 91w,s-93w-94s-95w,s See 90f-93f-94f
- 101w-102s See 100f (prereq 100) II MWF(s); III MWF(w)
- 103w-104s Milling Lab I (2 cr; prereq ME 35, 100 or concur regis) VI-VIII TTh(s); VII-IX TTh(w)
- 106w See 105f (2 cr; prereq 104, 105) VII-IX MW
- 117s Adv Plastics (3 cr)
- 118w,s See 118f
- 120s Adv Engineering Design, Drafting (2 cr; prereq 20, 24) VI-VIII WF
- 121w,s See 121f Lect I F, lab I-III Th(w,s); VI-VIII T(w); VII-IX W(w)
- 122s See 122f
- 123w See 122f Lect VI T, lab VI-VIII WF
- 125s Machine Design Lab (2 cr; prereq 24) Lect I W, lab I-III Th
- 127s Lubrication (3 cr; prereq 121) III MWF
- 129s See 129f
- 131w,s See 131f I MWF(w); III MWF(w,s); VI MWF(w,s)
- 132w,s See 132f I MWF(w); II MWF(w); III MWF(w,s); VI MWF(w,s)
- 134w Thermodynamics of Fluid Flow (3 cr; prereq 132 or Phys 73) II MWF
- 135s Turbomachinery (3 cr; prereq 132) II MWF
- 141w,s See 141f IV MWF(w,s); V MWF(s)
- 147w Design of Steam Machinery (3 cr; prereq 141) Lect I F, lab VII-IX TTh
- 148s Design of Power Plant Units (3 cr; prereq 147) Lect I F, lab VII-IX TTh
- 149w,s See 149f VI-IX M
- 150w,s See 150f Lect II MWF, lab VII-IX M or VII-IX Th
- 150Aw Internal Combustion Engines (4 cr; prereq 131 or Phys 73) II MTWF
- 151s Adv Internal Combustion Engines (3 cr; prereq 150) VI MWF
- 151As Adv Internal Combustion Engines (2 cr; prereq 150 or 150A) III TTh
- 152w Diesel Engines (3 cr; prereq 55 or 150) V MWF
- 154w-155s See 154f
- 157s See 157f
- 159w,s See 159f
- 160w,s See 160f I MWF(w); IV MWF(w,s)
- 161w-162s See 161f
- 161s See 161f Lect VI M, lab VII-IX MW
- 165w Adv Heating, Ventilation, Air Conditioning (3 cr; prereq 160) II MWF
- 169w,s See 169f VI-IX M(w); VI-IX F(s)
- 170w Tool Design (3 cr; prereq 14, IE 150) Lect V M, lab VII-IX TTh
- 180w,s See 180f III MWF(w,s); VI MWF(w)
- 181s See 180f (prereq 180) Lect VI MWF
- 182s Refrigeration Design (3 cr; prereq 180) Lect I T, lab I-III Th, II-IV T
- 189w,s See 189f VI-IX W(w); VI-IX F(s)

- 190w,s See 190f V W(w); V F(s)
- 191s See 191f
- 191w-192s See 190f (prereq 190)
- 192w See 192f
- 195s Inspection Trip (1 cr)
- 196s Inventions and Patents (3 cr; prereq* 121) II MWF
- 198w,s See 198f
- 199w Servomechanisms (3 cr; prereq MM 80, EE 37 or concur regis)
- 222w-223s See 221f
- 229w Adv Vibration Engineering (3 cr; prereq 129)
- 232w Adv Fluid Thermodynamics (3 cr; prereq* 134, MM 153) III MWF
- 234w-235s See 233f (prereq 233)
- 253w Adv Gas Turbines (3 cr; prereq 157) Lect VII WF, lab VII-IX M
- 255s Thermal Jets, Rockets (3 cr; prereq 134, 157) VII MWF
- 256w Engine Testing Research (ar cr; prereq 158 or 159)
- 257s Combustion, Fuels for Gas Turbines, Jet Propulsion, Reciprocating Power Plants (3 cr; prereq 150, 157)
- 266w-267s See 265f (prereq* 265)
- 281w-282s See 280f
- 298s Adv Instrumentation, Automatic Control (3 cr; prereq 198)

MINES AND METALLURGY

Metallography (MET)

Full Quarter

- 152 **Metallography for Aeronautical Engineers** (3 cr; prereq aero sr)
Lect I MW, 315AH, Mackay
-1, Lab VI-VII T, 307AH
-2, Lab VIII-IX T, 307AH
-3, Lab VI-VII W, 307AH
-4, Lab VI-VII F, 307AH
-5, Lab VIII-IX F, 307AH
- 153 **Metallography** (4 cr; prereq 12)
Lect II MWF, VI Th, 315AH, Jerabek
Lab VII-IX Th, 307AH
- 156 **Metallography for Mechanical, Mining, Petroleum Engineers** (3 cr)
Lect I MW, 315AH, Mackay
-1, Lab VI-VII T, 307AH
-2, Lab VIII-IX T, 307AH
-3, Lab VI-VII W, 307AH
-4, Lab VI-VII F, 307AH
-5, Lab VIII-IX F, 307AH
- 159 **Dental Metallography** (2 cr)
II-III T, 108AH, Jerabek
- 160 **Metallography** (3 cr; prereq AnCh 1, 2)
Lect III MF, 315AH, Mackay
-1, Lab VI-VII T, 307AH
-2, Lab VIII-IX T, 307AH
-3, Lab VI-VII W, 307AH
-4, Lab VI-VII F, 307AH
-5, Lab VIII-IX F, 307AH

- 163 Adv Metallurgy (3 cr; prereq 6 cr)
II MWF, 306AH, Dowdell
- 166 Laboratory (1-3 cr; prereq 155)
- 170 Special Probs in Metallurgy (1-3 cr;
prereq sr)
- 204 Seminar (ar cr)
IV T, 109AH, Jerabek

Winter and Spring Quarters

- 154w-155s See 153f (prereq 153)
- 156w,s See 156f Lect II TTh(s); III MF(w);
lab VI-VII T(w,s); VI-VII W(w,s); VIII-
IX T(w,s); Ar (s)
- 160w,s See 160f Lect I MF(s); III MF(w); lab
VI-VII T(w,s); VI-VII W(w,s); VIII-
IX T(w,s); Ar (s)
- 161w-162s Adv Metallurgy (2-3 cr; prereq
152, 156, or 160) Lect II TTh(w); III
TTh(s); lab VI-VIII F(s); VII-IX W(w)
- 164w-165s See 163f III MWF
- 167w-168s See 166f
- 171w-172s See 170f
- 205w-206s See 204f

Metallurgy (MET)

Fall Quarter

- 11 Metallurgy of Pig Iron (3 cr; prereq InCh
5)
IV MWF, 108AH, Joseph
- 106 Nonferrous Metallurgy (3 cr; prereq inorg
chem)
III MWF, 109AH Bitslanes
- 110 Mineral Dressing (3 cr; prereq Geol 24)
Lect III TTh, 202AH, Cooke
-1, VII M, 202AH
-2, VII Th, 202AH
-1, Lab VI-VIII M, 203AH
-2, Lab VI-VIII Th, 203AH
- 121 Ore Testing (2 cr; prereq 110)
Lect VI W, MEx, Christoff
Lab VII-IX W, MEx
- 124 Special Probs in Mineral Dressing (ar cr;
prereq 112)
Ar, Cooke
- 134 Refractories (4 cr; prereq 12)
Lect III MWF, 108AH, Martin
Lab VI-IX T, 5AH
- 216 Seminar: Process Metallurgy (1 cr)

Winter and Spring Quarters

- 12s Metallurgy of Steel (3 cr; prereq 11) IV
MWF
- 107w-108s See 106f (prereq 106) II MWF(w);
III MWF(s)
- 111w-112s See 110f Lect III TTh(w,s); rec
VII T or Th(s); VII T or F(w); lab
VI, VIII T or VI, VIII F(w); VI, VIII T
or VI, VIII Th(s)

- 122w-123s Adv Mineral Dressing (3 cr; prereq
112) Lect II T, VI M(w); VI-VII M(s);
rec VII M(w); lab VIII M(s)
- 124w See 124f
- 125w See 124f (prereq 124)
- 126w,s Special Probs in Mineral Dressing (ar
cr; prereq 125)
- 133w Electrometallurgy (3 cr; prereq 12) Lect
II TTh, 1 hr ar
- 135w Adv Metallurgy of Pig Iron (4 cr; prereq
134) Lect II MWF, lab VI-IX T
- 136s Adv Metallurgy of Steel (4 cr; prereq
135) Lect II MWF, lab VI-IX W
- 143s Special Probs (3 cr; prereq 142)
- 175s Study, Metallurgical Operations in Im-
portant Iron, Steel Centers (3 cr) In-
spection trip during spring vacation

Mining Engineering (MIN)

Fall Quarter

- 11 Surveying (3 cr; prereq Draw 3, MM 12)
II MTThF, 111AH, Hellig
- 111 Elements of Mining (3 cr; prereq sr)
I MTThF, 202AH, Yardley
- 123 Mine Ventilation (3 cr; prereq 113, Hydr
102)
Lect IV Th, 206AH, Hartman
Lab VI-VIII MF, 206AH
- 126 Engineering Construction (2 cr; prereq
MM 127)
Lab VI-VIII TTh, 205AH, Hartman
- 141 Examination, Valuation (3 cr; prereq 113
or PetE 112)
IV MTWF, 202AH, Pfeider
- 144 Adv Mining (2 cr; prereq 141)
- 145 Adv Mining (4 cr; prereq 144)
- 151 Special Probs in Mining (ar cr; prereq 113)
Ar, Pfeider

Winter and Spring Quarters

- 12w-13s See 11f (prereq 11) I MTThF(w); II
MWF(s)
- 14s Surveying Field Work (5 cr; prereq 12)
Lab V-IX MTWF
- 106w Mine Mapping (2 cr; prereq 15) Lab VI-
IX TTh
- 112w-113s See 111f (prereq 111) I MTWF(w);
I MTThF(s)
- 121w Mine Plant Design (2 cr; prereq MM 127,
ME 131, Hydr 102) Lab VI-VIII MW
- 122s Mine, Petroleum Plant Design (3 cr; pre-
req Hydr 102, ME 131, EE 41) Lect II
T, lab II-III MWF
- 127w See 126f (prereq 126) Lab I-III TTh,
VI-VIII F
- 142w Surface Mining (3 cr; prereq 113) IV
MTWF
- 143s Coal Mining (3 cr; prereq 113) IV MTWF

- 144w See 144f Lab VI-VIII MW
 -145w,s See 144f (prereq 144) Labs VI-VII F,
 VI-IX MW(s); VI-VIII MW, VI-IX F
 -152w-153s See 151f (prereq 151)
 160w Industrial Minerals, Rocks (2 cr; prereq
 sr) Lect I MF

Petroleum Engineering (PETE)

Fall Quarter

- 111 Oil Field Development (3 cr; prereq sr)
 I MWThF, 109AH, Lacabanne
 144 Adv Petroleum Engineering (2 cr; prereq
 Min 141)
 Ar, Pfeider
 145 Adv Petroleum Engineering (4 cr; prereq
 144)
 Ar, Pfeider
 152 Petroleum Production Technology (3 cr;
 prereq 112)
 Lect III T, 109AH, Lacabanne, Yardley
 -1, Lab VI-VIII TTh, 112AH
 -2, Lab ar

Winter and Spring Quarters

- 112w Oil Field Production (3 cr; prereq 111)
 I MTWF
 131s Petroleum Refining (2 cr; prereq InCh 12,
 Phys 7) III TTh
 134w Natural Gas Engineering (2 cr; prereq
 152) IV TTh
 135s Study of Oil Well Drilling (3 cr) Inspec-
 tion trip during spring vacation
 138s Oil Field Mapping (2 cr; prereq Min 14,
 cons instr) Lab VI-VIII WF
 144w See 144f VI-VIII MW
 -145w,s See 144f (4 cr; prereq 144) VI-VIII M
 W, VI-IX F(w); VI-VIII WF, VI-IX
 M(s)
 -153w-154s See 152f (prereq 152) Lect I Th(s);
 III Th(w); lab VI-VIII TTh(w,s); ar
 (w,s)

TECHNICAL AID (TA)

Fall Quarter

- 11 Engineering Drafting (5 cr)
 -1, VI-VIII MTWThF, 18E
 -2, VI-VIII MTWThF, 101E
 14 Engineering Drafting (5 cr; prereq 13)
 -1, I-III MTWThF, 18E
 -2, I-III MTWThF, 101E
 16 Lettering (2 cr)
 -1, IV MWF, 18E
 -2, IV MWF, 101E
 21 Applied Mathematics (6 cr)
 I-II MTWThF, 205E
 24 Applied Mathematics (6 cr; prereq 23)
 V-VI MTWThF, 227AE
 34 Technical Writing (3 cr)
 -1, III MWF, 19AE
 -2, III MWF, 50ForH
 37 Oral Composition (3 cr; prereq 36)
 VII MWF, 205E
 83 Metal Processing (2 cr; prereq 82)
 Lect IV MW, 110ME
 -1, Lab VII-IX T, 50ME
 -2, Lab VII-IX Th, 50ME

Winter and Spring Quarters

- 12w-13s See 11f (prereq 11) VII-IX MW; VI-
 VIII TThF
 15s Production Illustration (5 cr; prereq 14)
 I-III MTWThF
 17w Slide Rule (1 cr) VII W
 -22w-23s See 21f (prereq 21)
 -25w-26s See 24f (prereq 24)
 27s Engineering Probs (3 cr; prereq 25) VII
 MWF
 -35w-36s See 34f (prereq 34)
 41w Engineering Drafting (5 cr; prereq 14)
 I-III MTWThF
 42w Engineering Materials (2 cr) VII MF
 81w-82s Gen Shop (2 cr) Lect III TTh, lab
 IV-V MW or IV-V TF
 84w Machine Shop (2 cr; prereq 83) Lect VIII
 MW, lab VII-IX T or VII-IX Th
 85s Engineering Materials (2 cr) VII TTh

COLLEGE OF MEDICAL SCIENCES

ANATOMY (ANAT)

Fall Quarter

- 3 Elem Anatomy (4 cr; prereq regis 3 yr
 nurs, dent hyg)
 Lect I TThS, 06Bo, Schaar
 -1, Lab VIII-IX T, 301, 302, 303 IA
 -2, Lab VIII-IX Th, 301, 302, 303 IA
 58 Anatomy of Extremities (5 cr; prereq regis
 PT, OT, 3 or 4)
 Lect I MWF, 304 IA, Burleigh
 Lab II-III MWF, 301 IA

- 59 Systematic Anatomy (6 cr; prereq regis
 1st yr dent)
 Lect VI MWF, 15 Owre, Hartmann
 Lab VII-IX MWF, 301, 302, 303 IA
 100 Gross Human Anatomy (8 cr; prereq regis
 med or grad)
 Lect VI MTWTh, 102 IA, Boyden
 Lab VII-IX MTWTh, 306, 307, 308, 312,
 313 IA
 103 Human Histology (4 cr; prereq regis 1st
 yr med, 100; or grad, 100-101)
 Lect I TF, 102 IA, Williams

- Dem II-III WTh, 304 IA, Williams
 —1, Lab I-III Th, II-III S, 212, 215 IA
 —2, Lab I-II W, II-III T, I or II M 212, 215 IA
- 105 Microscopic Anatomy (9 cr; prereq regis 2nd yr dent, or grad, 102)
 Lect II MTWThF, 102 IA, Campbell
 —1, Lab III-V M, VII-IX WF, 212, 215 IA
 —2, Lab VII-IX M, III-V WF, 212, 215 IA
- 149 Experimental Neurology (ar cr; prereq 111)
 Ar, 226 IA, Campbell
- 150 Special Topics in Neurology (ar cr; prereq 111)
 Ar, 217 IA, Larsell
- 152 Prosecution (ar cr; prereq 100-101)
 Ar, 313 IA, Boyden
- 153 Adv Anatomy (ar cr)
- 165 Hematology (4 cr, primarily for med students; prereq* 103)
 Lect VII TTh, 104 IA, Sundberg
 Lab VIII-IX TTh, IV-V TTh, 213 IA
- 201 Research: Anatomy (ar cr)
- 205 Anatomical Seminar (1 cr)
 IV S, 226 IA

Winter and Spring Quarters

- 4s Elem Anatomy (5 cr; prereq regis med tech, 5 yr nurs, PT, OT) Lect I MTWF, lab VIII-IX TTh
- 5s Elem Anatomy for Students of Pharmacy (5 cr) Lect VI MTWTh, lab VII-VIII MW
- 57s Elem Anatomy (4 cr; prereq phys educ maj) Lect III MWF, lab IV MWF
- 101w See 100f (prereq 100) Lect VI MWThF, lab VII-IX MWThF
- 102s Anatomy of Head, Neck (6 cr; prereq 59, regis dent or grad) Lect VI MWF, lab VII-IX MWF
- 104s-su See 103f (prereq 103) Lect VI TW, dem II-III MT, lab I-III MT
- 107w Human Embryology (5 cr; prereq regis 1st yr med; or grad, 100-101) Lect I TF and IV Th, lab II-III T, I-II Th or I-II M, II-III F
- 111s-su Human Neurology (6 cr; prereq regis 1st yr med, 103, 107; or grad, 103, 107 or Zool 150) Lect VI MF, lab II-III ThF or II-III W, VII-VIII F
- 132w Experimental Study of the Fetus (ar cr)
- 149w,s See 149f
- 150w,s See 150f
- 152w See 152f
- 154w-155s See 153f
- 158s Special Histology, Neurology of the Head Region (3 cr; prereq 111)
- 160w Seminar: Probs of Reproduction (1 cr; prereq 107)
- 164w Segmental, Topographic Anatomy of Lungs (2 cr; prereq 101) 7:00-10:00 p.m. Th
- 166w See 165f (prereq 165) Lect VII TTh, lab VIII-IX TTh

- 167s Seminar: Hematology (1 cr; prereq 166) VIII-IX Th
 -202w-203s See 201f
 -206w-207s See 205f

BACTERIOLOGY (BACT)

Fall Quarter

- 53 Gen Bacteriology (5 cr; prereq* soph, C+ aver in prereq courses, 10 cr chem, 4 cr biol sci)
 Lect VII MWF, 15 Owre, Staff
 Lab VIII-IX MWF, 201MH
- 104 Sanitary Bacteriology (4 cr; prereq 53, 15 cr chem)
 Lect I MWF, 214MH, Johansson
 Lab II-III MWF, 201MH
- 105 Prin Infectious Disease (6 cr; primarily for 2nd yr med; prereq Anat 103, PhCh 100 or 101, or AgBi 120)
 Lect I TThS, 12 Owre, Syverton
 Lab II-IV ar, 201MH
- 112 Gen Mycology (3 cr; prereq 53, 15 cr bact or 3 cr plant path)
 Lect II MW, 214MH, Roth
 Lab III-IV MW, 201MH
- 121 Physiology of Bacteria (3 cr; prereq 53, 8 cr org chem or biochem)
 III TThS, 214MH, Lichstein
- 124 Viruses, Rickettsia (4 cr; prereq 102 or 105, 116)
 Lect VI TTh, 214MH, Syverton
 Lab VII-IX TTh, 201MH
- 201 Research: Bacteriology, Immunology (ar cr)
- 203 Seminar (1 cr)
 V T, 214MH, Watson
- 204-205 Adv Bacteriology (ar cr; prereq 122 or concur regis, cons instr)

Winter and Spring Quarters

- 1w,s Elem Bacteriology (4 cr, offered by the Ext Div. Open to Pt, dent hyg maj without fee winter qtr, by cons instr)
 Lect II MWF(s); III MWF(w); lab I-II MWF(w); V-VI MWF(s)
- 53w,s See 53f
- 102w Medical Bacteriology (5 cr; prereq 53, no med students) Lect II MWF, lab III-IV MWF
- 103s Soil Microbiology (4 cr; prereq 53, 8 cr org chem) Lect I MWF, lab II-III MF
- 106w See 105f (prereq 105)
- 113w Actinomycetes, Yeasts (3 cr; prereq 112)
 Lect VI TTh, lab VII-VIII TTh
- 114s Medical Mycology (3 cr; prereq 102) Lect I WF, lab II-III WF
- 116s Immunology (3 cr; prereq 102 or 105) Lect VI TTh, lab VII-VIII TTh
- 122w See 121f (prereq 121) Lect VIII M, lab VI-VII MWF

- 123s Bacterial Metabolism (3 cr; prereq* 122, biochem, grad in bact) Lect III TThs
 201w,s See 201f
 203w,s See 203f, Ar
 204-205w,s See 204-205f

BIOPHYSICS (BPHY)

Fall Quarter

- 138 Seminar: Gen Physiology, Biophysics (ar cr)
 170 Probs: Biophysics (ar cr)
 Ar, Stenstrom
 204 Research: Biophysics, Physiology of Radiation (ar cr)
 Ar, Stenstrom
 221 Research: Biophysics (ar cr)
 Ar, Schmitt
 222 Research: Biophysics (ar cr)
 Ar, Schmitt
 223 Research: Biophysics (ar cr)
 Ar, Schmitt

Winter and Spring Quarters

- 138w,s See 138f
 170w,s See 170f
 204w,s See 204f
 221w,s-222w,s-223w,s See 221f, 222f, 223f

CANCER BIOLOGY (BIOL)

Fall Quarter

- 140 Seminar: Cancer Biology (1 cr)
 Ar, Bittner
 141 Probs: Cancer Biology (ar cr)
 Ar, Bittner
 207 Research: Cancer Biology (ar cr)
 Ar, Bittner

Winter and Spring Quarters

- 140w,s See 140f
 141w,s See 141f
 207w,s See 207f

MEDICAL TECHNOLOGY (MEDT)

Fall Quarter

- 51 Introd Medical Technology (2 cr; prereq regis med tech)
 III TTh, Ar
 101 Methods, Clinical Orientation (no cr; prereq concur regis 102)
 I T, PoH Amph, Evans
 102 Sr Practical Training (15 cr; prereq see col bul)
 Ar, Evans, others

Winter and Spring Quarters

- 52w See 51f (prereq 51) II MTTh
 61w,s Introd Medical Technology (4 cr; prereq regis med tech)
 101w,s See 101f
 102w,s See 102f Ar

MEDICINE (MED)

Fall Quarter

- 104 Introd Internal Medicine (2 cr; prereq regis 3rd yr med, 101, 102)
 Ar, Watson, staff
 123 Dermatology, Syphilology (1 cr; prereq regis 4th yr med, 101, 102)
 Ar, Michelson
 201 Clinical Medicine (ar cr)
 Ar, Watson, staff
 202 Diseases of Cardiovascular Apparatus (ar cr)
 Ar, Fahr
 203 Research: Medicine (ar cr)
 Ar, Watson, staff
 205 Tuberculosis (ar cr)
 Ar, Myers
 206 Clinical Conference (1 cr)
 Ar, Watson, Ebert, staff
 207 Clinical Pathological Conference (1 cr)
 Ar, Bell, Watson, Ebert, staff
 208 Clinical Radiological Conference (1 cr)
 Ar, Watson, Ebert, Rigler, staff
 209 Psychosomatic Medicine (1 cr)
 Ar, Hastings
 210 Infectious Disease Seminar (1 cr)
 Ar, Spink
 211 Electrocardiographic Conference (1 cr)
 Ar, Aagaard
 225 Clinical Dermatology, Syphilology (ar cr)
 Ar, Michelson, staff
 226 Dermatology, Syphilology (ar cr)
 Ar, Michelson, staff
 227 Histopathology of Skin (ar cr)
 Ar, Michelson, staff
 228 Research: Dermatology, Syphilology (ar cr)
 Ar, Michelson, staff
 235 Adv Clinical Lab Medicine (ar cr; prereq Anat 165-166)
 Ar, Evans, staff
 236 Research on Clinical Lab Probs (ar cr)
 Ar, Evans, staff

NURSING

Nursing (NURS)

Fall Quarter

- 17A Introd Clinical Nursing (7 cr)
 Lect II TTh, III MW, IV W, PoH Amph, Love
 Lab ar

- 37A Maternal, Child Nursing (12 cr)
Ar, Robertson
- 37B Maternal, Child Nursing (12 cr; prereq 37A)
VII-VIII MWF and ar, 2317 PoH Amph, Gautefald
- 57A Medical, Surgical Nursing (12 cr)
IV MTWTh, VI-VII MTWTh, PoH Amph, Brennan, Reif
- 67 Nursing Care of Neuropsychiatric Patients (8 cr)
Ar, Anderson
- 77A Nursing in the Operating Room (6 cr)
77B Gynecologic Nursing (4 cr)
Ar, Pike
- 77C Orthopedic Nursing (2 cr)
79 Tuberculosis Nursing (3 cr)
Ar, Einerson
- 87A Public Health Field Experience (10 cr)
Ar, Griffin
- 87B Rural Nursing Experience (5 cr)
Ar, Lysen
- 97A Medical, Surgical Nursing (7 cr)
Ar, Klock
- 97B Nursing in Outpatient Dept (5 cr)
Ar, Schey
- 150 Foundations of Clinical Nursing Specialties (3 cr; prereq cons instr)
II-III TTh, 113 Owre, Coe
- 151A Adv Medical Nursing (3 cr, †151A,B,C; prereq cons instr)
I TF, VIII TTh, Coe
- 152A Adv Obstetric Nursing (3 cr, †152A,B,C; prereq cons instr)
I TS, IX T, Pike
- 153A Adv Operating Room Nursing (3 cr, †153 A,B,C; prereq cons instr)
VI T, VI-VII Th
- 154A Adv Pediatric Nursing (3 cr, †154A,B,C; prereq cons instr)
I-VII W, III-IV F, Davidson
- 155A Adv Psychiatric Nursing (3 cr, †155A,B,C; prereq cons instr)
VII-VIII TTh
- 156A Adv Rural Nursing (3 cr, †156A,B,C; prereq cons instr)
Ar, Low
- 157A Adv Surgical Nursing (3 cr, †157A,B,C; prereq cons instr)
VII Th and ar
- 158A Adv Tuberculosis Nursing (3 cr, †158A, B,C; prereq cons instr)
Ar, Einerson
- 165 Analysis Nursing Care (4 cr)
VIII-IX MW, 113 Owre, Hanson
- 190 Foundations of Nursing (5 cr; prereq sr, cons instr; or grad)
VI-VII MW, VI F, 130ForH
- Winter and Spring Quarters
- 17As See 17Af
17Bw Introd Clinical Nursing (4 cr; prereq 17A)
- 37Aw,s-37Bw,s See 37Af-37Bf
54w Introd Medical Sciences (2 cr)
57As See 57Af
-57Bw See 57Af (prereq 57A)
67w,s See 67f
77Aw,s See 77Af
77Bw,s See 77Bf
77Cw,s See 77Cf
79w,s See 79f
87Aw,s See 87Af
87Bw,s See 87Bf
97Aw,s See 97Af
97Bw,s See 97Bf
106w,s Neuropsychiatric Nursing (4 cr)
-151Bw-151Cs See 151Af
-152Bw-152Cs See 152Af
-153Bw-153Cs See 153Af
-154Bw-154Cs See 154Af
-155Bw-155Cs See 155Af
156Bw-156Cs See 156Af
157Bw-157Cs See 157Af
158Bw-158Cs See 158Af
165s See 165f Ar
191w Field of Psychiatric Nursing (5 cr)
192s Psychiatric Nursing (3 cr; prereq cons instr)
193s Medical Nursing (3 cr; prereq sr, cons instr)
- Nursing Administration (NUAD)
- Fall Quarter
- 67 Field Practice in Ward Admin (6 cr; prereq 60, 65, 73, EdT 51B or concur regis, cons instr)
III MF and ar, 111 Owre, Grainger
- 86 Nursing Service Admin in Govt Hospitals (2 cr; prereq 60)
Ar, Goodale
- 160 Ward Admin (5 cr)
VI-VII MF and ar, 113 Owre, Grainger
- 167 Studies, Experience in Ward Admin (8 cr; prereq 60, 65, 73, EdT 51B or concur regis)
III MF and ar, 111 Owre, Grainger
- 191 Prin of Admin Applied to Nursing Service Admin (5 cr; prereq grad, cons instr)
Ar, Goodale
- Winter and Spring Quarters
- 67w,s See 67f
160w See 160f
161w Prin Economics in Nursing Service Admin (1 cr) VII F
167w,s See 167f
-192w See 191f
199Ds Field Experience: Nursing Service Admin (15 cr; prereq cons instr)

OBSTETRICS AND GYNECOLOGY (OBST)

Fall Quarter

- 120 Obstetrics (2 cr; prereq regis 4th yr med)
 135 Clinical Clerkship in Obstetrics, Gynecology (6 cr)
 201 Adv Obstetrics, Gynecology (ar cr)
 202 Adv Obstetrics, Gynecology (ar cr)
 203 Adv Obstetrics, Gynecology (ar cr)
 204 Adv Obstetrics, Gynecology (ar cr)
 205 Adv Obstetrics, Gynecology (ar cr)
 206 Adv Obstetrics, Gynecology (ar cr)
 207 Adv Obstetrics, Gynecology (ar cr)
 208 Adv Obstetrics, Gynecology (ar cr)
 209 Adv Obstetrics, Gynecology (ar cr)
 210 Adv Obstetrics, Gynecology (ar cr)
 211 Adv Obstetrics, Gynecology (ar cr)
 212 Adv Obstetrics, Gynecology (ar cr)

OPHTHALMOLOGY AND OTOLARYNGOLOGY (OO)

Fall Quarter

- 100 Ophthalmology (2 cr; prereq regis 4th yr med; or grad)
 8:00-9:00 M, Eustis Amph, Hansen, staff
 101 Otolaryngology (1 cr; prereq regis 4th yr med; or grad)
 8:00-9:00 Th, Eustis Amph, Boies, staff
 200 Refraction (3 cr)
 Ar, Tracht
 202 Clinical Ophthalmology (6 cr)
 204 Ocular Muscles (2 cr)
 Ar, Horns
 206 Surgery of Eye (3 cr)
 212 Seminar: Ophthalmology (1 cr)
 Ar, Hansen
 230 Clinical Otolaryngology (3 cr)
 231 Clinical Rhinology, Laryngology (3 cr)
 232 Surgery of Ear, Nose, Throat (3 cr)
 235 Roentgenology of Head (1 cr)
 Ar, Rigler
 245 Allergy (1 cr)

PATHOLOGY (PATH)

Fall Quarter

- 101 Gen Pathology (8 cr; prereq regis 2nd yr med, histology, embryology, spec bact)
 Lect VII MTWThF, 102 IA
 Dem I-III MWF, 104 IA, VIII MWF, 104 IA, Hebbel, McCartney
 Lab I-IV MWF, 106, 107, 108 IA, VII-VIII MWF 106, 107, 108 IA
 104 Autopsies (ar cr; prereq regis 3rd, 4th yr med; or grad, 102)
 107 Tumors (3 cr; prereq 102)
 VIII-IX TTh, 104 IA, Hebbel, McCartney

- 107a Surgical Pathology (3 cr; prereq 102)
 Ar, Hebbel, McCartney
 109 Clinical Pathological Conference (1 cr; prereq regis 4th yr med)
 IX F, 104 IA, Dawson
 110 Seminar: Pathology (1 cr; prereq 102)
 V M, 104 IA, Staff
 111 Conference on Autopsies (1 cr; prereq 102)
 V T, 104 IA, Dawson
 201 Research (ar cr)

Winter and Spring Quarters

- 100s Pathology for Students in Dentistry (8 cr; prereq regis dent) Lect I MTWThF, lab II-III MTWF
 102w Special Pathology (8 cr; prereq regis 2nd yr med, 101) Lect VII MTWThF, dem I-III MWFS, lab I-IV MWFS
 104w,s See 104f
 107w See 107f VII-VIII TTh
 107Aw,s See 107Af
 107Bs Diseases of Heart (3 cr; prereq 102) Lect VII TTh, dem VIII TTh
 107Cw Diseases of Kidney (3 cr; prereq 102) VII-VIII MW
 110w,s See 110f V T
 111w,s See 111f
 201w,s See 201f

PEDIATRICS (PED)

Fall Quarter

- 120 The Normal Child (1 cr; prereq regis 3rd yr med)
 8:00-8:50 W, Eustis Amph, McQuarrie, Good, Quast, Brown, Denny, Ulstrom
 124 Jr Clinical Clerkship in Pediatrics (6 cr)
 135 Sr Clinical Clerkship in Pediatrics (3 cr)
 135A Allergy Clinic (1 cr)
 150 Physiology, Diseases of Newborn (1 cr)
 Ar, Ulstrom
 152 Fundamental Prin Nutrition, Metabolism Applied to Children (1 cr)
 Ar, McQuarrie, Ulstrom, Ziegler
 154 Endocrinology Applied to Pediatrics (1 cr)
 Ar, McQuarrie, Ulstrom
 156 Adv Study of Noncontagious Diseases (1 cr)
 Ar, McQuarrie, Thomas, Good, Huenekens
 158 Adv Study of Contagious Diseases (1 cr)
 Ar, Thomas, Denny, Good, Platou
 160 Allergic Disorders in Childhood (1 cr)
 1:30-3:00 W, Hosp OPD, Siegel, Stoesser
 162 Pediatric Psychiatry (1 cr)
 III-IV TF, Hosp OPD, Jensen, Quast, Wallinga
 163 Hematology of Infancy, Childhood (1 cr)
 IX T, Hosp wards, Nelson
 164 Rare, Unusual Diseases of Infancy, Childhood (1 cr)
 Ar, McQuarrie, Platou

- 166 Weekly Seminar for Basic Subjects Related to Pediatrics (1 cr)
IX M, Hosp 6th fl, Ziegler
- 167 Weekly Seminar for Review of Current Literature (1 cr)
Ar, McQuarrie, staff
- 168 Speech Disturbances in Childhood (1 cr)
Ar, Jensen, Brown, Quast, Stenswick
- 170 Rheumatic Infection, Heart Diseases in Childhood (1 cr)
Ar, Thomas, Dwan, Good, Adams, Anderson
- 202 Pediatric Clinic (1-7 cr)
Ar, McQuarrie, Stoesser, Jensen, Brown, Siegel, Ulstrom
- 204 Residency in Pediatrics (1-7 cr)
Ar, McQuarrie, Huenekens, Platou, Seham, Thomas, Jensen, Richdorf, Denny, Good, Ulstrom
- 208 Pediatric Research (3-7 cr)
Ar, McQuarrie, Thomas, Denny, Jensen, Good, Ulstrom, Ziegler, others

PHARMACOLOGY (PHCL)

Fall Quarter

- 10 Pharmacology for Nursing Students (2 cr, †9-10; prereq 9)
Lect VI Th, 129MH, Cranston
Lab VII-VIII Th, 101MH
- 101 Introd Pharmacology (2 cr; prereq Phsl 107, regis pharm or dent or grad)
I TTh, 15 Owre, Wright
- 105 Gen Experimental Pharmacology (6 cr; prereq 101, regis pharm or dent or grad)
VI TTh, VIII-IX W, 15 Owre, 129MH, Stowe, Hammond
- 109 Pharmacological Probs (ar cr; prereq 102)
- 110 Toxicology (2-5 cr; prereq 102)
Ar, Wright
- 124 Pharmacology of Special Systems (ar cr)
- 203 Research: Pharmacology (ar cr; prereq 102, cons instr)
- 204 Adv Pharmacology (1 cr; prereq 101, cons instr)
- 205 Gen Discussions in Pharmacology (1 cr; prereq 101 or 102, cons instr)

Winter and Spring Quarters

- 9w Pharmacology for Nursing Students (2 cr, †9-10) VI TTh
- 10s See 10f
- 101s See 101f II WF
- 109w,s See 109f
- 111s Adv Toxicology (3 cr; prereq 110 or concur regis)
- 112w Spectrochemical Toxicology (3 cr; prereq 110)
- 123s Special Topics (ar cr)
- 124w,s See 124f
- 203w,s See 203f
- 204w,s See 204f
- 205w,s See 205f

PHYSIOLOGICAL CHEMISTRY (PHCH)

Fall Quarter

- 1 Physiological Chemistry for Nurses (4 cr)
II MWF, 12 Owre, Caster
- 100 Physiological Chemistry (7 cr, \$50; prereq regis 1st yr med, org chem, phys chem, phys; or grad)
Lect IV MTWFS, 15 Owre, Staff
—1, Lab I-III MW, 310MH
—2, Lab I-III ThS, 310MH
- 104 Physiological Chemistry (5 cr, primarily for 1st yr dent; prereq org chem)
IV MTWF, 12 Owre, Frame, Singer
- 153 Probs: Physiological Chemistry (ar cr; prereq 101)
- 200 Seminar: Physiological Chemistry (1 cr)
V Th, 214MH, Staff
- 205 Research: Physiological Chemistry (ar cr)
- 209 Histochemistry (3 cr; prereq* 101, histology)
IX MWF, 214MH, Glick
- 212 Histochemistry Lab (ar cr; prereq 101, cons instr)
Ar, Glick
- 236 Radioisotope Seminar (1 cr)
12:30-1:30 W, 12 Owre, Marvin

Winter and Spring Quarters

- 50s Physiological Chemistry (4 cr, §100-101, primarily for phys educ, dent hyg, nurs; prereq inorg chem) VI MTWTh
- 101w See 100f (prereq 100) Lect IV MTWF, lab I-III MW or I-III ThS
- 102w-103s Physiological Chemistry (6 cr, primarily for 1st yr vet med; prereq org chem) Lect III-IV S, IV T, VI M(w); IV MTWTh(s); IV, VI TTh(s); lab I-III T, VII-IX M for vet med students (w); I-III TTh(s); VI-VIII TTh for med tech students (w); VII-IX TTh(s)
- 105w See 104f (prereq 104) Lect III MT, IV WF, lab VI-VIII WF
- 153w,s See 153f
- 200w,s See 200f
- 205w,s See 205f
- 211s Intermediary Metabolism (3 cr; prereq 101) IX MWF
- 212w,s See 212f
- 236w,s See 236f

PHYSIOLOGY (PHSL)

Fall Quarter

- 4 Human Physiology (4 cr, §106-107; prereq regis HE, pharm, 1 qtr zool, 1 qtr chem)
III MWF, IV F, 129MH
- 60 Human Physiology (6 cr, §106-107, primarily for med tech, 5 yr nurs, PT students; prereq physiol chem, human or mammalian anat)
II MTThFS, 129MH

- 114 Seminar: Physiology (ar cr; prereq 107)
 124 Seminar: Neurophysiology (1-2 cr; prereq 107 with grade B or spec exam)
 201 Seminar: Physiology (1 cr)
 V M, 214MH
 202 Readings: Physiology (1-3 cr)
 203 Research: Physiology (ar cr)

Winter and Spring Quarters

- 4s See 4f VII-VIII TTh
 60w See 60f I MWThF, conf II F
 101w Human Physiology (10 cr, §106-107, primarily for dental students, prereq physiol chem, anat) IV S, VI MTWThF
 106-107s Human Physiology (10 cr, §4, 60, 101, †106-107; prereq regis 1st yr med, org chem, zool, neuroanatomy; or grad, org chem, zool) Lect IV MTWThF, VII M, conf VI Th, dem VIII-IX W
 113s Probs in Physiology (ar cr; prereq 106-107)
 114w,s See 114f
 124w See 124f
 201w,s See 201f
 202w,s See 202f
 203w,s See 203f

PSYCHIATRY AND NEUROLOGY (NPSY)

Fall Quarter

- 101 Neurology (1 cr; prereq regis 3rd yr med or grad in clin psy)
 Ar, Baker
 103 Junior Didactic Clerkship: Psychiatry, Neurology (2 cr)
 103x Jr Clinical Clerkship: Psychiatry, Neurology (4 cr)
 120 Psychosomatics (1 cr; prereq* regis 1st yr med)
 Ar, Hastings
 121 Introd Psychiatry in Practice of Medicine (2 cr; prereq regis 2nd yr med; or grad in clin psy)
 Ar, Schiele
 145 Reading in Psychiatry (ar cr)
 145x Reading in Neurology (ar cr)
 171A Psychiatry (2 cr; prereq regis nurs)
 VI-VII T, 129MH, Rowe
 171B Neurology (2 cr; prereq regis SW, PT)
 1:30-3:30 Th, Todd, Brown
 208 Clinical Neurology (ar cr)
 Ar, Baker
 208x Clinical Psychiatry (ar cr)
 Ar, Hastings
 208y Clinical Child Psychiatry (ar cr)
 Ar, Jensen
 209 Research: Neurology (ar cr)
 Ar, Baker
 210 Adv Neuropathology (2 cr)
 Lect 2:00-3:00 Th, 111 Owre, Tichy
 Lab 3:00-5:00 Th, Path Lab, Tichy
 212 Survey of Neuropathology (1 cr)
 Ar, Tichy

- 215 Seminar: Application of Psychological Methods (1 cr)
 Ar, Hathaway
 219 Personality Structure: Normal, Abnormal (1 cr)
 Ar, Hathaway
 220 Adv Clinical Neurology (ar cr)
 Ar, Baker
 221 Psychometric Clerkship (2 cr)
 Ar, Schofield
 222 Interviewing Techniques in Psychiatry (1 cr)
 Ar, Hathaway
 226 Neurological-Neurosurgical Conference (1 cr)
 Ar, Baker
 227 Clinical Seminar for Psychologists (1 cr)
 Ar, Schofield
 228 Research: Neuropathology (ar cr)
 Ar, Tichy
 231 Applied Electroencephalography, Myography (2 cr)
 232 Applied Neuroroentgenology (2 cr)
 233 Applied Neuropathology (1 cr)
 Ar, Baker
 236 Normal Personality Development, Psychopathology (1 cr)
 Ar, Challman
 237 Psychoanalytic Therapy (1 cr)
 Ar, Lippman
 238 Neurological Clinical Pathological Conference (1 cr)
 Ar, Baker
 240 Neuropathology Conference (1 cr)
 Ar, Baker
 241 Neuroradiology (1 cr)
 243 Prolonged Psychotherapy (1 cr)
 244 Seminar: Psychosomatic Medicine (1 cr; prereq MD degree, cons instr)
 Ar, Aldrich
 245 Case Conference for Psychologists (ar cr; prereq clinical psych)
 247 Neurological Speech Disorders (1 cr; prereq MD degree)
 Ar, Schuell

PUBLIC HEALTH (PH)

Fall Quarter

- 3 Personal Health (2 cr, §GC 10C)
 VI MW, BuAud, Thomson
 50 Personal, Community Health (3 cr, §3, 4, 51, 52, 100 or GC 10C)
 VIII MWF, 15 Owre, Thomson
 51 Community Hygiene (3 cr, §4, 50, 52 or 100; prereq 3 or GC 10C)
 IV MWF, 214MH, Cowan
 52a Health Care of the Family (2 cr, §4, 50 or 51, concur regis 52b, for HE students; prereq Bact 53, Phsl 4)
 VI MW, 12 Owre, Todd

- 52b Home Nursing, Family Care (1 cr; prereq concur regis 52a)
—1, VII-VIII T, 01MeH, Sandve
—2, VII-VIII Th, 01MeH, Sandve
- 60 Tuberculosis, Its Control (2 cr; prereq regis nurs; or cons instr, 4, or 50, or 51, or 52 or 100, 62)
IV TS, 129MH, Myers
- 62 Prin Public Health Nursing I (5 cr, †62-63; prereq 100 or concur regis, regis PH Nurs or cons instr)
—1, I MTWThF, 240ChE
—2, VI-VII MWF, 129MH
- 65 Field Work: Public Health Nursing (ar cr; prereq regis PH nurs, 62)
- 69 Nursing in Health Programs for School-Age Children (3 cr; prereq* 62, 63 or concur regis)
II TThS, 111 Owre, Field
- 70 Practice Teaching Home Nursing or Child Care (ar cr; prereq* 65, Ed 81)
Ar, Sandve
- 91 Physiological Hygiene (4 cr; prereq 8 cr chem, 4 cr anat)
Lect IV MWF, 111 Owre, Taylor, Brozek Lab VI-VII T, 201MH
- 95 Human Nutrition (3 cr; prereq* chem, biol)
IV MWF, 160ForH, J Anderson
- 100 Elements of Preventive Medicine, Public Health (6 cr for med, 5 cr for other students; prereq 3 or 50, bact)
Lect II MWF, 15 Owre, Anderson, Thomson
—1, Rec III TTh, 111 Owre
—2, Rec VI TTh, 104 IA
- 101 Public Health Admin, Field Work (2 cr; prereq regis 4th yr med)
Ar, Thomson
- 102 Environmental Sanitation I (3 cr; prereq* sr, 50 or 51 or 100 or concur regis)
I MWF, 129MH, Pierce, Olson
- 103 Public Health Bacteriology (ar cr; prereq Bact 102, 116, cons instr)
II-III MWF, SBH Lab, Bauer
- 106 Public Health Admin (3 cr, for physicians, engrs, nurs, SW, others cons instr; prereq 100)
I TThS, 129MH, Anderson
- 107 Child, Adult Hygiene (3 cr; prereq* 100, for physicians)
I-IV MF, VI-IX W, Boynton
- 110 Biometric Principles (3 cr; prereq sr, concur regis 111)
III MWF, 214MH, Treloar, Johnson
- 111 Biostatistics Lab (2 cr; prereq concur regis 110)
—1, I-II MWF, 118MH, Johnson, Erickson
—2, VI-VII MWF, 118MH
—3, I-II TThS, 118MH
—4, III-IV TThS, 118MH
—5, VI-VIII TTh, 118MH
- 112a Water Supplies (1 cr; prereq* 102)
III W, ar, Bosch, Pierce
- 114 Environmental Sanitation II (2 cr; prereq 102 or concur regis)
VI-IX MF, Bosch
- 117 Sanitary Biology (3 cr; prereq cons instr)
VI-IX MW, Olson
- 119 Field Practice in Environmental Sanitation (ar cr; prereq cons instr)
- 123 Topics in Public Health (ar cr; prereq cons instr)
- 129 Field Work in Industrial Nursing (ar cr; prereq 65)
- 139 Field Work in Mental Hygiene (ar cr; prereq cons instr)
Ar, von Bergen
- 152 Industrial Hygiene Engineering (3 cr; prereq cons instr)
Ar, Pierce
- 161 History, Development of Hospitals (6 cr)
III-IV MWF, 105TSP, Hamilton, Stephan
- 162 Prin Organization, Mgt of Hospitals (6 cr)
VI-VII TWTh, 105TSP, Hamilton, Stephan
- 168 Orientation to Medical Sciences (3 cr)
I MWF, 105TSP, Thomson
- 169 Administrative Residency (ar cr)
Ar, Stephan
- 171 Probs in Public Health Nursing (ar cr; prereq* 170)
- 173 Field Work in Supervision in Public Health Nursing (ar cr, for PH nurs; prereq* 170)
- 174 Supervision Lab (ar cr; prereq 170 or concur regis)
- 181 Prin, Methods: Community Health Education (ar cr; prereq cons instr)
Ar, Grout
- 190 Field Work in Community Health Education (ar cr; prereq 125, 181, 227, see PH bul)
Ar, Grout, others
- 200 Research (ar cr)
- 201 Topics in Biometry (ar cr; prereq 120, 130, cons instr)
Ar, Treloar
- 210 Seminar: Public Health (ar cr)
IX-X M, 15 Owre, Staff
- 211 Seminar: Biometry (ar cr)
Ar, Treloar
- 212 Seminar: Public Health Engineering, Sanitation (ar cr)
Ar, Bosch
- 215 Maternal, Child Health (ar cr, for physicians; prereq cons instr)
III-IV M, Boynton
- 220 Reading in Probs of Physiological Hygiene (ar cr; prereq cons instr)
Ar, Keys, staff
- 227 Probs in Community Health Education Program (ar cr; prereq cons instr)
Ar, Grout, others
- 290 Research: Physiological Hygiene Related Areas (ar cr)

Winter and Spring Quarters

- 3w,s See 3f VI MW(w,s); VI TTh(s)
 4s Health Probs of the Community (2 cr; prereq 3 or GC 10C) I TTh
 50w See 50f III MWF
 51w See 51f
 52as See 52af
 52bw,s See 52bf
 55w Nursing, Social Probs in Venereal Disease 2 cr, for PH nurs, soc maj; prereq 62 or Soc 50-51) VII MW
 57w Health of Infant, Preschool Child (2 cr; prereq 4, or 50, or 51, or 52 or 100) II TTh
 58s Maternal, Child Hygiene (3 cr; prereq regis nurs, 62) VIII MWF
 59w,s Health of School Child (3 cr; prereq 3, 4; or 3, 51; or GC 10C, 4; or GC 10C, 51; or 50, or 52, or 100) IV MWF(w); VII MWF(s)
 60s See 60f
 62w See 62f III-IV TThS; V-VI MWF
 63w,s Prin Public Health Nursing II (5 cr, t62-63, prereq 62 or 100 or concur regis, regis PH nurs, others cons instr) II-III MWF(w); VI-VII MW, VI F(s)
 65w,s See 65f
 69s See 69f IV MWF
 70w,s See 70f
 75w Introd Environmental Sanitation (3 cr; prereq 3 cr) II TThS
 90s Statistics in Medicine (2 cr; prereq* regis 2nd yr med)
 -92w See 91f (prereq 91) VI MWF, VII T
 100s See 100f
 101w,s See 101f
 103w,s See 103f
 104w-105s Epidemiology (3 cr; prereq see PH bul) I TThS(w); III TThS(s)
 109s Institutional Sanitation (3 cr; prereq 100, 106 for hosp admin; cons instr for others) II MWF
 110s See 110f II MWF
 111s See 111f III-IV MWF; III-IV TThS; VI-VII MWF
 112bw Waste Disposal Systems (1 cr) III W
 112cw Swimming Pools, Plumbing (1 cr) III F
 113aw Water Supplies (2 cr; prereq 102 for engr; cons instr for others) I MW
 113bs Waste Disposal (2 cr; prereq 102 for engr; cons instr for others) III WF
 113cs Swimming Pools, Plumbing (2 cr; prereq 102 for engr; cons instr for others) I TTh
 114w See 114f
 115w Food Sanitation (3 cr; prereq 100 or 102) IV WF, VI-IX F
 116s Public Health Engineering Admin (2 cr; prereq 102, 100 or 104, 106, two of following 112, 113, 115) VI-VIII M
 118aw-118bs Sanitary Biology (3 cr; prereq cons instr) IV-IX MW(w); IV-IX TTh(s)
 119w,s See 119f
 120w Adv Biostatistics I (3 cr; prereq 110, concur regis 121) III MWF
 121w Adv Biostatistics Lab I (2 cr; prereq concur regis 120) I-II MWF; I-II TThS; III-IV TThS; VI-VIII TTh
 122w Public Health Admin Probs (3 cr; prereq 106) I MWF
 123w,s See 123f
 125s Community Health Education Program (3 cr; prereq 100, 106 or concur regis) II TThS
 126s Industrial Health (3 cr; prereq* 100, InCh 1-2) VI MWF
 127s Industrial Health Probs: Nursing Aspects (1 cr; prereq concur regis 126) VII M
 129w,s See 129f
 130s Adv Biostatistics II (3 cr; prereq 120, concur regis 131) III MWF
 131s Adv Biostatistics Lab II (2 cr; prereq concur regis 130) I-II MWF; I-II TThS; VI-VIII TTh; VIII-IX MWF
 133w,s Mental Hygiene (3 cr; prereq 62 or PH nurs exper) I MWF
 135s Conservation of Hearing (1 cr; prereq 62 or concur regis) I F
 136s Sight Conservation (1 cr; prereq 62 or concur regis) I W
 137s Dental Health (1 cr; prereq 62 or concur regis) I M
 139w,s See 139f
 140w Vital Statistics I (3 cr; prereq cons instr, concur regis 104) VI-VIII MF; VI-VIII TTh
 141s Social, Economic Aspects of Medical Care (3 cr; prereq cons instr) I TThS
 142s Medical Economics (2 cr; prereq regis 4th yr med) VII MF
 150s Vital Statistics II (3 cr; prereq 140)
 152w,s See 152f
 153s The Hospital, the Community (1 cr; prereq cons instr)
 -163w-164s See 162f (prereq 162) I-II MWF(w); III-IV TThS(w); VI-VII MTWThF(s)
 165w Hospitals in Community Organization (1 cr) VII-VIII T
 166w Hospital Clerkship (5 cr) VI-VII W, VII-VIII Th
 167s Mgt Probs in Hospital Admin (6 cr; prereq 163, concur regis 164) III-IV MTWThFS
 169w,s See 169f
 170w Supervision in Public Health Nursing (3 cr; prereq* 100, 133, or PH nurs exper) III TThS
 171w,s See 171f
 173w,s See 173f
 174w,s See 174f
 181w,s See 181f
 190w,s See 190f
 191w Science of Human Nutrition (3 cr; prereq cons instr)

- 192w Physiology of Exercise (4 cr; prereq 92 or Phsl 103, cons instr)
 194w Human Factors in Industry (3 cr; prereq sr, cons instr) IV MWF
 200w,s See 200f
 201w,s See 201f
 202w,s Seminar: Physiological Hygiene (1 cr)
 210w,s See 210f
 211w,s See 211f
 212w,s See 212f
 215w,s See 215f
 220w,s See 220f
 227w,s See 227f
 290w,s See 290f

RADIOLOGY AND PHYSICAL MEDICINE

Physical Medicine (PMED)

Fall Quarter

- 50 Physics for Physical Therapy (2 cr; prereq regis PT)
 I TTh, 132ChE, Marvin
 57 Ethics, Admin (1 cr; prereq regis PT)
 IV W, 132ChE, Kottke, staff
 60 Theory, Technique of Thermo-, Photo-, Hydro-, Electrotherapy (5 cr; prereq regis PT)
 Lect II-III TTh, 132ChE, Staff
 Lab I-III S, VI-VII TTh, W107Hosp, 132ChE
 65 Theory, Technique of Muscle Re-education (4 cr; prereq regis PT)
 Lect IV TTh, 132ChE, Overmann
 Lab I-II F, V-VI W, 132ChE
 69 Anatomy Applied to Techniques of Poliomyelitis (2 cr; prereq regis PT)
 I-II M, 132ChE, Knapp
 81 Rehabilitation (2 cr)
 Lect IV WF, 142ChE, Gerischer
 Lab VI-VII M, 132ChE
 82 Physiology of Muscles, Nerves, Circulation (3 cr; prereq regis PT)
 III MWF, 132ChE, Kottke, Kubicek
 103 Physical Therapy Clinic (ar cr)
 Ar, Kottke
 200 Physical Medicine Service (ar cr)
 Ar, Kottke
 203 Poliomyelitis Clinic (ar cr, for physicians)
 II-IV Th, W107Hosp, Kottke
 204 Peripheral Vascular Disease Clinic (ar cr, for physicians)
 Ar, Kottke
 210 Research: Physical Medicine (ar cr)
 Ar, Kottke, Kubicek
 220 Seminar: Physical Medicine (ar cr)
 IV M, VCHH Theater, Kottke

Radiology

Fall Quarter

- 102 X-ray Conference (1 cr)
 5:00-6:00 T, Eustis Amph, Rigler

- 104 Roentgen, Radium Therapy (1 cr)
 4:00-5:00 T, Eustis Amph, Stenstrom
 111 Medical Roentgenologic Conference for Medical Clerks (1 cr)
 9:00-10:00 M, Todd Amph, Rigler
 124 Pediatric-Roentgenologic Conference for Pediatric Clerks (1 cr)
 9:00-10:00 T, Eustis Amph, Rigler
 137 Surgical Roentgenologic Conference for Surgical Clerks (1 cr)
 9:00-10:00 S, Todd Amph, Rigler
 163 Neurosurgical-Roentgenologic Conference for Neurosurgical Clerks (1 cr)
 1:00-2:30 F, Todd Amph, Peterson
 185 Interpretation of Roentgenograms (1 cr; prereq regis 4th yr med, 121)
 2:00-4:00 TTh, M532Hosp, Rigler
 186 Roentgen Technique (1 cr; prereq regis 3rd, 4th yr med)
 3:00-5:00 T, W300Hosp, Baggenstoss
 187a Roentgen Anatomy of Bones, Joints (1 cr; prereq Anat 100, 101)
 4:00-5:00 T, 101TNHS, Borman
 188a Roentgen Diagnosis of Diseases of Bones, Joints (1 cr)
 4:00-5:00 Th, 101TNHS, Hansen
 200 Research: Roentgenology (ar cr)
 Ar, Rigler
 205 Research: Radiation Therapy (ar cr)
 Ar, Stenstrom
 206 Roentgenoscopy (ar cr)
 Ar, Rigler
 207 Roentgen, Radium Therapy (ar cr)
 Ar, Stenstrom
 208 Seminar: Radiology (1 cr)
 5:00-6:00 Th, Eustis Amph, Rigler
 209 Roentgen Diagnosis (ar cr)
 Ar, Rigler
 210 Roentgen Technique (ar cr)
 Ar, Rigler
 211 Roentgen Diagnosis of Diseases of Gastrointestinal Tract (1 cr)
 5:00-6:00 W, VCHH Theater, Rigler
 220 Urologic-Roentgenologic Conference for Graduate Students (1 cr)
 5:00-6:00 M, Eustis Amph, Baggenstoss
 236 Radioisotope Seminar (1 cr)
 12:30-1:30 W, 12 Owre, Marvin
 240 Radiation Therapy Conference (1 cr)
 4:00-5:00 W, VCHH Theater, Stenstrom

SURGERY (SURG)

Fall Quarter

- 104 Prin Anesthesia (1 cr)
 Ar, Knight, staff
 121b Prin Anesthesia (2 cr)
 VI MWF, Eustis Amph, Wangensteen
 122 Basic Prin Involved in Diagnosis, Treatment, Prognosis of Fractures, Dislocations (1 cr; prereq regis 3rd yr med)
 I M, Todd Amph, Hendrickson
 129 Surgical Clinics for Juniors (1 cr; prereq regis 3rd yr med)
 I Th, Todd Amph, Wangensteen

- 135 Clinical Clerkship (6 cr; prereq regis 3rd yr med)
260 hrs ar, Wangenstein, staff
- 136 Surgical Specialities (5 cr; prereq regis 4th yr med)
135 hrs ar
- 139 Operative Surgery (ar cr)
Ar, Wangenstein, staff
- 140 Orthopedic Surgery in Children (1 cr; prereq regis 4th yr med)
I-II W, Gillette Hosp, Cole
- 142 Lectures in Orthopedic Surgery (1 cr; prereq regis 4th yr med)
I-II W, Gillette Hosp, Cole
- 152 Probs in Clinical Investigations (ar cr)
Ar, Wangenstein, staff
- 160 Clinic in Urology Mpls General Hosp (prereq regis 4th yr med)
Ar, Sweetser
- 161 Clinic in Urology at Ancker Hospital (prereq regis 4th yr med)
Ar, Foley
- 165 Clinical Anesthesia
Ar, Knight, staff
- 167 Probs in Experimental Surgery (ar cr)
Ar, Wangenstein, staff
- 169 Diagnostic Bedside Surgical Clinic (ar cr)
Ar, Wangenstein, staff
- 173 Clinic in Urology (1 cr; prereq regis 4th yr med)
I F, Eustis Amph, Creevy
- 200 Outpatient Clinic in Surgery (1 cr)
I-IV MTWThF
- 202 Applied Surgical Anatomy on Cadaver (1 cr)
III W, 306 IA
- 203 Proctoscopy, Sigmoidoscopy (1 cr)
I-IV TF
- 204 Tumor Clinic (1 cr)
I-IV MTh
- 205 Surgical Diagnosis (1 cr)
- 208 Surgical Service (1 cr)
- 211 Operative Surgery (1 cr)
- 214 Surgical Ward Conference (1 cr)
7:00-9:00 WF, ar, staff
- 215 Roentgenological-Surgical Conference (1 cr)
II-IV S, Todd Amph, Wangenstein, staff
- 216 Surgical Research (4 cr)
Ar MTWThF, 428MH, Wangenstein, staff
- 218 Medical, Surgical Pathological Conference (1 cr)
IV W, Todd Amph, Wangenstein, staff
- 245 Surgical Literature Conference (1 cr)
I W, Ar, Wangenstein, staff
- 250 Urological Surgery (ar cr)
Ar, Creevy, staff
- 251 Cystoscopy, Urological Diagnosis (ar cr)
Ar, Creevy, staff
- 252 Urological Conference (ar cr)
Ar, Creevy, staff
- 253 Research: Urology (ar cr)
Ar, Creevy, staff
- 254 Urological Seminar (ar cr)
Ar, Creevy, staff
- 255 Urological Radiological Conference (ar cr)
Ar, Creevy, staff
- 256 Urological Pathological Conference (ar cr)
Ar, Creevy, staff
- 257 Surgical Clinical Pathological Conference (1 cr)
Mpls Gen Hosp, staff
- 265 Regional Anesthesia (4 cr)
Ar, Knight, staff
- 266 Gen Anesthesia (12 cr)
Ar, Knight, staff
- 267 Pre-, Postoperative Evaluation (2 cr)
Ar, Knight, staff
- 268 Research: Anesthesia (ar cr)
Ar, Knight, staff
- 269 Seminar: Anesthesia (2 cr)
Ar, Knight, staff
- 305 Neurosurgical Diagnosis (ar cr)
Ar, Hosp OPD, Peyton, staff
- 308 Neurosurgical Service (ar cr)
Ar, Hosp OPD, Peyton, staff
- 311 Operative Neurosurgical Surgery (ar cr)
Ar, Hosp OPD, Peyton, staff
- 316 Neurosurgical Research (3 cr)
Ar, Hosp OPD, Peyton, staff
- 318 Neurosurgical Conference (ar cr)
Fridays, Todd Amph, Peyton, staff
- 405 Orthopedic Diagnosis (7 cr)
Ar, Cole, staff
- 408 Orthopedic Service (1 cr)
Ar, Cole, staff
- 411 Orthopedic Operative Surgery (1 cr)
Ar, Cole, staff
- 416 Orthopedic Research (1 cr)
Ar, Cole, staff

COLLEGE OF PHARMACY

PHARMACEUTICAL CHEMISTRY
(PHMC)

Fall Quarter

- 1 Inorganic Pharmaceutical Products (4 cr; prereq* soph, InCh 12)
Lect II W, IV F, 202WuH, Soine
—1, Lab VI-VIII M, II-IV Th, 301WuH, Soine
—2, Lab VI-VIII WF, 301WuH, Soine
- 54 Quantitative Pharmaceutical Chemistry (5 cr; prereq sr, 2, InCh 12, OrCh 62)
Lect VII M, VIII W, III Th, 202WuH, DiGangi
—1, Lab II-IV TF, 1 WuH, DiGangi
—2, Lab II-IV M, VI-VIII Th, 1 WuH, DiGangi
- 161 Organic Pharmaceutical Products (3 cr; prereq jr, OrCh 2)
IV MW, VIII F, 202 WuH, Gisvold

CLASS SCHEDULE

- 201 Pharmaceutical Chemistry Seminar (1 cr)
Ar, Gisvold
- 202 Adv Analytical Methods (3-5 cr; prereq 165)
Ar, Rogers, Netz
- 208 Carbohydrates, Glycosides (3-5 cr; prereq* 163)
Ar, Gisvold
- 210 History of Pharmaceutical Chemistry (3 cr)
Ar, Netz
- 213 Special Probs (ar cr; prereq* 163)
Ar, Rogers, Gisvold, Hadley, Netz, Soine, DiGangi
- 214 Research: Pharmaceutical Chemistry (ar cr)
Ar, Rogers, Gisvold, Hadley, Netz, Soine, DiGangi

PHARMACOGNOSY (PHCG)

Fall Quarter

- 1 Vegetable Drug Histology, Microscopy (2 cr; prereq soph, Bot 2)
Lect IV F, 202WuH, Fischer
—1, Lab VI-VIII F, 104WuH, Fischer
—2, Lab VI-VIII M, 104WuH, Fischer
- 54 Drug Collection, Medicinal Plant Study (3 cr; prereq jr, 3, Bot 2)
Lect IV T, VI Th, 202WuH, Fischer
—1, Lab VI-VIII T, 104WuH, Fischer
—2, Lab VII-IX W, 104WuH, Fischer
- 55 Identification, Medicinal Properties of Vegetable Drugs (3 cr; prereq jr, 3, Bot 2)
VI MWF, 202WuH, White
- 59 Biological Products (3 cr; prereq sr, Bact 53)
I MF, III W, 202WuH, Fischer
- 201 Adv Pharmacognosy (3-5 cr; prereq 56, 57)
Ar, Fischer

- 204 Research: Pharmacognosy (ar cr)
Ar, Fischer, White
- 205 Microscopy of Foods (3-5 cr; prereq 56, 57)
Ar, Fischer
- 206 Technical Microscopy (3-5 cr; prereq 56, 57)
Ar, White
- 209 Adv Experimental Drug Testing Techniques (ar cr)
Ar, White

PHARMACY (PHCY)

Fall Quarter

- 1 Orientation (2 cr)
V MW, 202WuH, Rogers
- 2 Pharmaceutical Latin (1 cr; prereq soph)
II F, 202WuH, Miller
- 54 Pharmaceutical Preparations (5 cr; prereq jr, 2, 3, PhmC 2)
Lect III T, VII ThF, 202WuH, Hadley
—1, Lab VII IX MW, 302WuH, Hadley
—2, Lab VI-VIII T, II-IV Th, 302WuH, Hadley
- 57 History of Pharmacy (1 cr)
II T, 202WuH, Miller
- 58 Prescription Compounding (5 cr; prereq sr, 56, PhmC 2, 163, Phcg 57)
Lect VIII M, VII W, IV Th, 205WuH, Netz, Miller
—1, Lab II-IV M, VI-VIII Th, 205WuH, Netz, Miller
—2, Lab II-IV TF, 205WuH, Netz, Miller
- 65 Cosmetics (2 cr; prereq sr, 56, OrCh 62)
IV W, II Th, 201, 202WuH, Netz
- 70 First Aid (1 cr; prereq sr)
VI-VII T, 201, 202WuH, Hartmann
- 73 Special Probs (ar cr; prereq sr, 56, PhmC 163)
Ar, Netz, Hadley, Miller

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AMST)

Fall Quarter

- 90 Proseminar: American Studies (2 cr; prereq sr, cons instr)
VIII-IX T, 103F, Bowron
- 200 Introd American Studies (2 cr; prereq MA cand in Amer st)
VIII-IX T, 108F, McDowell
- 210 Seminar: American Studies (3 cr; prereq cons instr)
VIII-IX W, 108F, Smith
- 250 Readings: American Civilization (ar cr; prereq cons dept chair)

Winter and Spring Quarters

- 91w-92s See 90f
-201w-202s See 200f
-211w-212s See 210f
-251w-252s See 250f

ANTHROPOLOGY (ANTH)

Fall Quarter

- 1 Introd Anthropology (5 cr)
VI MTWThF, 55ForH
- 54 Social Organization (3 cr)
I MWF, 15ForH, Wallis

- 109 Gen Linguistics (4 cr; prereq 2 courses above 50 in foreign lang)
II MWF, VIII-X T, 346ForH, Spencer
- 110 Physical Anthropology (3 cr)
III MWF, 15ForH, Wilford
- 113 Character of Cultures (3 cr)
VII MWF, 15ForH, Wallis
- 122 Probs: Anthropology (ar cr; prereq cons instr)
- 126 Ethnology of India (3 cr)
IV TThS, 15ForH, Spencer
- 165 Psychological Phases of Culture (3 cr)
IV MWF, 15ForH, Spencer
- 166 History of Anthropological Theory, Method (3 cr; prereq 1 or 2)
III TThS, 15ForH, Wallis
- 172 Indians of South America (3 cr)
VIII MWF, 15ForH
- 204 Seminar: Anthropology (3 cr)
VIII-IX Th, 346ForH
- 251 Seminar: Culture, Personality (3 cr; prereq MD degree)
Ar, Spencer

Winter and Spring Quarters

- 1w See 1f VII MTWThF
- 2s Introd World Ethnology (5 cr) VII MTWThF
- 56s Primitive Science (3 cr) III MWF
- 80w American Indian (3 cr) IV MWF
- 81w Archeology of North America (3 cr) III MWF
- 111w Adv Physical Anthropology (3 cr; prereq* 110 or Zool 22 or 175 or human anat) II MWF
- 116s Indians of the Southwest (3 cr) III TThS
- 118s Indian Civilization of Mexico, Central America (3 cr) IV MWF
- 119s Contact of Cultures (3 cr) II MWF
-123w-124s See 122f
- 125w Peoples of SE Asia, Indonesia (3 cr) VIII MWF
- 127w Races, Cultures of China (3 cr) IV TThS
- 129s Economic Activities in Primitive Culture (3 cr) II TThS
- 131w Islamic Culture Sphere (3 cr) III TThS
- 161s Primitive Religion (3 cr) VII MWF
- 171s Peoples of NE Asia, NW North America (3 cr) VI MWF
-205w-206s See 204f
-252w-253s See 251f

ART (ART)

Fall Quarter

- 1 Prin Art (4 cr)
Lect III MWF, NHAud, Torbert
-1, Lab I-II M, 203TSF, Staff
-2, Lab I-II T, 203TSF, Staff
-3, Lab III-IV T, 203TSF, Staff
-4, Lab VI-VII Th, 203TSF, Staff

- 10 Photography (3 cr, §Jour 10; prereq soph)
Lect V T, 308MurH, Downs
Lab II-III WF, 20MurH, Downs
- 23 Drawing, Design I (3 cr)
-1, IV-V MWF, 104J, Downs
-2, VI-VII MWF, 104J, Rollins
-3, VIII-IX MWF, 104J, Young
- 23A Drawing, Painting I (2 cr; prereq arch students only)
II-IV TTh, 417E, Young
- 24 Drawing, Design I (3 cr; prereq 23)
I-II MWF, 104J, Collins
- 30 Elements of Drawing (2 cr)
-1, III-IV MW, 207aJ, Doseff
-2, I-II TTh, 207aJ, Quirt
- 31 Elements of Drawing (2 cr; prereq 30)
I-II MW, 207aJ, Doseff
- 32 Elements of Printmaking (3 cr)
II-IV MW, 203J, Myers
- 33 Textile Design: Weaving (3 cr; prereq 23)
VI-VII MWF, 4J, Berglund
- 34 Textile Design: Weaving (3 cr; prereq 33)
VIII-IX MWF, 4J, Berglund
- 40 Drawing, Sculpture (3 cr; prereq 1)
VII-VIII MWF, 405E, Frazier
- 43 Textile Design (3 cr; prereq 23)
II-III MWF, 2J, Berglund
- 45 Ceramic Processes (3 cr)
I-II MWF, 10J, Frazier
- 46 Ancient, Medieval Art (3 cr)
IV MWF, 207bJ, Eitner
- 50 Pictorial Design (3 cr; prereq 24)
VI-VIII TTh, 200aJ, Booth
- 53 Design II (3 cr; prereq 24, 41)
I-II MWF, 11J, Morton
- 56 Renaissance, Baroque Art 1300-1500 (3 cr; prereq* 1)
II MWF, 207bJ, Arnason
- 60 Drawing, Painting II (3 cr; prereq* 31 or 24)
-1, II-III MWF, 200aJ, Rollins
-2, IV-V MWF, 200aJ, Rollins
-3, VI-VII MWF, 417E, Doseff
-4, VI-VIII TTh, 200bJ, Quirt
- 60A Drawing, Painting II (2 cr; prereq 21, arch students only)
III-V Th, II-IV S, 417E, Arnest, Tovish
- 61 Drawing, Painting II (3 cr; prereq 60)
-1, II-III MWF, 200aJ, Rollins
-2, IV-V MWF, 200aJ, Rollins
-3, VI-VII MWF, 417E, Doseff
-4, VI-VIII TTh, 200bJ, Quirt
- 61A Drawing, Painting II (2 cr; prereq 60A)
III-V Th, II-IV S, 417E, Arnest, Tovish
- 62 Drawing, Painting II (3 cr; prereq 61)
-1, II-III MWF, 200aJ, Rollins
-2, IV-V MWF, 200aJ, Rollins
-3, VI-VII MWF, 417E, Doseff
-4, VI-VIII TTh, 200bJ, Quirt
- 62A Drawing, Painting II (2 cr; prereq 61A)
III-V Th, II-IV S, 417E, Arnest, Tovish

- 63 **Introd Drawing, Design, Art History** (5 cr)
Lect III MWF, NHAud, Torbert
—1, Lab IV-V MWF, 104J, Downs
—2, Lab VI-VII MWF, 104J, Rollins
—3, Lab VIII-IX MWF, 104J, Young
- 66 **Modern Art: Classicism, Romanticism** (3 cr; prereq* 1)
VII MWF, 207bJ, Eitner
- 70 **Drawing, Painting III** (3 cr; prereq 62)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, Ar, 200bJ, Quirt
- 71 **Drawing, Painting III** (3 cr; prereq 70)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, Ar, 200bJ, Quirt
- 72 **Drawing, Painting III** (3 cr; prereq 71)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, Ar, 200bJ, Quirt
- 73 **Presentation Techniques** (3 cr; prereq 24, none for arch students)
I-III TTh, 104J, Collins
- 80 **Sculpture II** (3 cr; prereq 42)
VI-VIII TTh, 405E, Tovish
- 81 **Sculpture II** (3 cr; prereq 80)
VI-VIII TTh, 405E, Tovish
- 82 **Sculpture II** (3 cr; prereq 81)
VI-VIII TTh, 405E, Tovish
- 83 **Design, Photography** (3 cr; prereq* 54, 55)
VII-IX MW, 104J, Downs
- 90 **Printmaking** (3 cr; prereq* 62)
—1, VI-VIII MW, 203J, Myers
—2, VI-VIII TTh, 203J, Myers
- 91 **Printmaking** (3 cr; prereq 90)
—1, VI-VIII MW, 203J, Myers
—2, VI-VIII TTh, 203J, Myers
- 92 **Printmaking** (3 cr; prereq 91)
—1, VI-VIII MW, 203J, Myers
—2, VI-VIII TTh, 203J, Myers
- 94 **Ceramic Design** (3 cr; prereq* 45)
III-IV MWF, 10J, Frazier
- 95 **Ceramic Design** (3 cr; prereq 94)
III-IV MWF, 10J, Frazier
- 101 **Ceramic Sculpture** (3 cr; prereq* 45)
III-IV MWF, 10J, Frazier
- 102 **Ceramic Sculpture** (3 cr; prereq 101)
III-IV MWF, 10J, Frazier
- 103 **Design in Industry** (3 cr; prereq 54, 55)
- 106 **Ancient Art in Egypt, Mesopotamia, Greece** (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr)
IV MWF, 207bJ, Eitner
- 110 **Adv Drawing** (3 cr; prereq 62)
VI-VIII TTh, 207aJ, Arnest
- 111 **Adv Drawing** (3 cr; prereq 110)
VI-VIII TTh, 207aJ, Arnest
- 112 **Adv Drawing** (3 cr; prereq 111)
VI-VIII TTh, 207aJ, Arnest
- 116 **Origins of Renaissance Art** (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr)
V MWF, 207bJ, Thomas
- 116a **Northern Renaissance Art** (3 cr; prereq 9 cr art hist, or 9 cr lit or hist, cons instr)
II MWF, 316NMA, Thomas
- 123 **Adv Photography** (3 cr; prereq 54, 55)
VI-VIII WF, 104J, Liebling
- 136 **Art in the United States** (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr)
VI MWF, 207bJ, Torbert
- 140 **Metal Sculpture, Jewelry** (3 cr; cons instr)
III-IV MWF, 11J, Morton
- 141 **Metal Sculpture, Jewelry** (3 cr; prereq* 140)
VI-VIII MWF, 11J, Morton
- 142 **Metal Sculpture, Jewelry** (3 cr; prereq 141)
VI-VIII MWF, 11J, Morton
- 150 **Probs in Painting** (ar cr; prereq 72, cons instr)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, Ar, 200bJ, Quirt
- 151 **Probs in Painting** (ar cr; prereq 150)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, Ar, 200bJ, Quirt
- 152 **Probs in Painting** (ar cr; prereq 151)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, Ar, 200bJ, Quirt
- 156 **European, American Painting 1775-1850** (3 cr; prereq 1, 9 cr art hist; or 9 cr lit or hist, cons instr)
VII MWF, 207bJ, Tselos
- 166 **European, American Sculpture: Houdon-Rodin 1700-1900** (3 cr; prereq 1, 9 cr art hist; or 9 cr lit or hist, cons instr)
VI MWF, 316NMA, Tselos
- 180 **Probs: Sculpture** (ar cr; prereq* 82, 102 or 142)
VI-VIII TTh, 405E, Tovish
- 181 **Probs: Sculpture** (ar cr; prereq 180)
VI-VIII TTh, 405E, Tovish
- 182 **Probs: Sculpture** (ar cr; prereq 181)
VI-VIII TTh, 405E, Tovish
- 190 **Probs: Printmaking** (ar cr; prereq* 92)
—1, VI-VIII MW, 203J, Myers
—2, VI-VIII TTh, 203J, Myers
- 191 **Probs: Printmaking** (ar cr; prereq 190)
—1, VI-VIII MW, 203J, Myers
—2, VI-VIII TTh, 203J, Myers
- 192 **Probs: Printmaking** (ar cr; prereq 191)
—1, VI-VIII MW, 203J, Myers
—2, VI-VIII TTh, 203J, Myers
- 193 **Adv Probs: Design** (3 cr; prereq* one design course above 53, 54, 55)
- 194 **Adv Probs: Design** (3 cr; prereq 193)
- 195 **Adv Probs: Design** (3 cr; prereq 194)
- 196 **Readings in Art History, Criticism** (3 cr; prereq cons instr)
- 197 **Readings in Art History, Criticism** (3 cr; prereq cons instr)
- 198 **Readings in Art History, Criticism** (3 cr; prereq cons instr)
- 200 **Adv Probs: Studio Work** (ar cr; prereq cons instr)

- 201 Adv Probs: Studio Work (ar cr; prereq cons instr)
- 202 Adv Probs: Studio Work (ar cr; prereq cons instr)
- 206 Seminar: European, American Architecture (3 cr; prereq cons instr)
Ar, Tselos, staff
- 207 Seminar: European, American Architecture (3 cr; prereq cons instr)
Ar, Tselos, staff
- 208 Seminar: European, American Architecture (3 cr; prereq cons instr)
Ar, Tselos, staff
- 236 Seminar: Probs in Art History, Criticism (ar cr; prereq cons instr)
- 237 Seminar: Probs in Art History, Criticism (ar cr; prereq cons instr)
- 238 Seminar: Probs in Art History, Criticism (ar cr; prereq cons instr)
- 250 Thesis Seminar (ar cr; prereq cons grad advis)
Ar, Booth, Arnest
- 251 Thesis Seminar (ar cr; prereq cons grad advis)
Ar, Booth, Arnest
- 252 Thesis Seminar (ar cr; prereq cons grad advis)
Ar, Booth, Arnest

Winter and Spring Quarters

- 1w,s See 1f
- 2w Masters of Art (3 cr; prereq 1) III MWF
- 3s Elements of Art Criticism (3 cr; prereq 2) III MWF
- 10w,s See 10f
- 23w,s See 23f I-II MWF(s); VI-VII MWF(w,s)
- 24w,s See 24f IV-V(w); VIII-IX(w,s)
-24Aw-25As See 23Af
- 25w,s Drawing, Design I (3 cr; prereq 24) I-II MWF(w); IV-V MWF(s)
- 30w,s See 30f
- 31w,s See 31f
- 32w,s See 32f
- 33s See 33f
- 34w See 34f VI-VII MWF
- 40w See 40f
- 41w,s-42s See 40f (prereq 40)
- 45w See 45f
- 47w Hellenistic Art to Christian Art (3 cr) IV MWF
- 48s Romanesque, Gothic Art (3 cr) IV MWF
- 51w-52s See 50f (prereq 50)
- 53w See 53f
- 54w,s See 53f (prereq 53)
- 57w-58s See 56f
- 60w,s-61w,s-62w,s See 60f-61f-62f
- 60Aw,s-61Aw,s-62Aw,s See 60Af-61Af-62Af
- 64w-65s See 63f (prereq 63)
- 67w-68s See 66f
- 70w,s-71w,s-72w,s See 70f-71f-72f
- 74w-75s See 73f (prereq 73)

- 78s Art of China (3 cr; prereq 1, or 9 cr lit or hist, cons instr) IV TTH
- 80w,s-81w,s-82w,s See 80f-81f-82f
- 84w-85s See 83f (prereq 83)
- 89w,s Textile Design: Weaving (3 cr; prereq 88) VIII-IX MWF
- 90w,s-91w,s-92w,s See 90f-91f-92f
- 94w,s-95w,s See 94f-95f
- 97w Textile Design: Printing Processes (3 cr; prereq* 23) II-III MWF
- 98s Master Drawings (3 cr; prereq 9 cr art hist; or 9 cr hist or lit, cons instr) I MWF
- 101w,s-102w,s See 101f-102f
- 104w-105s See 103f (prereq 103)
- 107w Hellenistic Art to Christian Art (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr) IV MWF
- 108s Romanesque, Gothic Art (3 cr; prereq 9 cr art hist; or 9 cr lit or hist, cons instr) IV MWF
- 110w,s-111w,s-112w,s See 110f-111f-112f
- 117w-118s See 116f
- 124w-125s See 123f (prereq 123)
- 137w-138s See 136f
- 140w,s-141w,s-142w,s See 140f-141f-142f
- 150w,s-151w,s-152w,s See 150f-151f-152f
- 157w-158s See 156f
- 167w-168s See 166f
- 180w,s-181w,s-182w,s See 180f-181f-182f
- 190w,s-191w,s-192w,s See 190f-191f-192f
- 193w,s-194w,s-195w,s See 193f-194f-195f
- 196w,s-197w,s-198w,s See 196f-197f-198f
- 200w,s-201w,s-202w,s See 200f-201f-202f
- 206w,s-207w,s-208w,s See 206f-207f-208f
- 236w,s-237w,s-238w,s See 236f-237f-238f
- 250w,s-251w,s-252w,s See 250f-251f-252f

ASTRONOMY (AST)

Fall Quarter

- 11 Descriptive Astronomy (5 cr, \$51)
IV MTWF, 133Ph, Luyten
- 101 Celestial Mechanics (3 cr; prereq Math 51, cons instr)
II MWF, 358Ph, Luyten

Winter and Spring Quarters

- 11s See 11f IV MTWF, 3 hrs lab ar
- 20w Astronomy for Celestial Navigation (5 cr)
III MTWF, 3 hrs lab ar
- 51w Gen Astronomy (3 cr; prereq Math 6) I MWF
- 52w Astrophysics (4 cr; prereq 51 or 11, Math 6, cons instr) II MTWF
- 53s Stellar Astronomy (3 cr; prereq 51 or 11, Math 6, cons instr) II MWF

BOTANY (BOT)

Fall Quarter

- 1 Gen Botany (3 cr)
 -1, Lect III TTh, 06Bo, Hall
 -2, Lect VI TTh, 06Bo, Hall
 -1, Lab III-IV TTh, 1,4,5Bo
 -2, Lab V-VI TTh, 1,4,5Bo
 -3, Lab VII-VIII TTh, 1,4,5Bo
 -4, Lab IX-X TTh, 1,4,5Bo
 -5, Lab III-IV WF, 1,4,5Bo
 -6, Lab V-VI WF, 1,4,5Bo
 -7, Lab VII-VIII WF, 1,4,5Bo
- 50 Gen Plant Ecology (3 cr; prereq 3 or 5 or NSci 9)
 Lect III MW, 06Bo, Hulbert
 -1, Lab I-II MW, 214Bo
 -2, Lab IV-V MW, 214Bo
- 52 Elem Taxonomy (3 cr; prereq 3 or 5 or NSci 9)
 VI-VIII MW, 401Bo, Morley
- 110 Gymnosperms (3 cr; prereq* 52 or 54)
 II-IV TTh, 401Bo, Ownbey
- 113 Minnesota Flora (3 cr; prereq* 52)
 VI-VIII TTh, 401Bo, Morley
- 119 Nuclear Cytology (3 cr; prereq* 10 cr bot or zool, elem genetics)
 Lect IV MW, 211Z, Dahl
 -1, Lab II-III MW, 202Bo
 -2, Lab VI-VII MW, 202Bo
- 121 Developmental Anatomy (5 cr; prereq 10 cr)
 II-IV MWF, 209Bo, Abbe
- 130 Gen Plant Ecology (3 cr; prereq sr, 10 cr)
 Lect III MW, 06Bo, Hulbert
 -1, Lab I-II MW, 214Bo
 -2, Lab IV-V MW, 214Bo
- 131 Field Ecology (5 cr; prereq 50 or 130 or For 3, 4)
 VI-VIII MWF, 214Bo, Lawrence
- 134 Research Methods in Ecology (5 cr; prereq 18 cr pl sci incl 50 or 130, cons instr)
 I-III TThS, IV S, 214Bo, Lawrence
- 140 Adv Survey of Plant Physiology (3 cr; prereq* elem bot or zool; pl physiol, org chem or biochem)
 1:15-2:30 TTh, 110Bo, Brown
- 170 Water Relations of Plants (3 cr; prereq* sr, 51 or 140, 20 cr chem or biochem, PCh 103 or 108)
 8:30-9:45 TTh, 110Bo, Brown, Frenkel
- 173 Adv Physiology Lab (2 cr; prereq sr, 170 or concur regis)
 -1, Lab VI-X T, 104Bo, Brown, Frenkel
 -2, Lab VI-X Th, 104Bo, Brown, Frenkel
- 197 Problems (1-5 cr; prereq 20 cr nat sci, cons instr)
- 201 Research Probs: Morphology of Vascular Plants (ar cr)
 Ar, Abbe
- 205 Research Probs: Taxonomy, Floristic Plant Geography (ar cr)
 Ar, Ownbey, Morley

- 209 Research Probs: Paleobotany (ar cr)
 Ar, Hall
- 221 Research Probs: Ecology (ar cr)
 Ar, Lawrence, Hulbert
- 225 Research Probs: Plant Physiology (ar cr)
 Ar, Brown, Frenkel
- 229 Research Probs: Cytology (ar cr)
 Ar, Dahl
- 240 Seminar: Morphology (1 cr)
 Ar, Abbe
- 243 Seminar: Taxonomy (1 cr)
 Ar, Ownbey, Morley
- 246 Seminar: Paleobotany (1 cr)
 Ar, Hall
- 249 Seminar: Ecology (1 cr)
 Ar, Lawrence, Hulbert
- 252 Seminar: Plant Physiology (1 cr)
 Ar, Brown, Frenkel
- 255 Seminar: Cytology (1 cr)
 Ar, Dahl

Winter and Spring Quarters

- 2w-3s See 1f (prereq 1)
- 10s Minnesota Plant Life (3 cr) Lect VII WF, lab VII-VIII M
- 12w Plants Useful to Man (3 cr) IV TThS
- 51s Gen Plant Physiology (4 cr; prereq 3 or 5 or NSci 9, 2 qtr inorg chem) Lect VI MW, lab III-IV MW or VII-VIII MW; conf VI F
- 52s See 52f
- 53w Introd Plant Anatomy (3 cr; prereq 3 or 5 or NSci 9) II-IV TTh
- 54s Survey of Plant Kingdom (5 cr; prereq 3 or 5 or NSci 9) II-IV MWF
- 112w Aquatic Flowering Plants (3 cr; prereq* 10 cr bot or zool) Lect IV MW, lab VI-VII MW
- 114w Phyletic Taxonomy of Angiosperms (3 cr; prereq* 52 or 54) VI-VIII TTh
- 115s Minnesota Spring Flora (3 cr; prereq* 52 or 176) VI-VIII TTh
- 118w Extranuclear Cytology (3 cr; prereq* 10 cr bot or zool) VI-VII MWF
- 120s Research Methods in Cytology (3-5 cr; prereq* 3 or 5, 118 or 119, cons instr) Lect III MWF, lab ar
- 125w Morphogenesis (5 cr; prereq 10 cr) II-IV MWF
- 128s Introd to Paleobotany (3 cr; prereq* 54) VI-VII MWF
- 133s Ecological Plant Geography (5 cr; prereq 50 or 130 or For 3, 4) VI-VIII MWF
- 137s Experimental Ecology (5 cr; prereq 18 cr pl sci incl 50 or 130, 51, cons instr) I-III TThS, IV S
- 171w Mineral Nutrition of Plants (3 cr; prereq* sr, 51 or 140, 20 cr chem or biochem, PCh 103 or 108) 8:30-9:45 TTh
- 172s Plant Growth (3 cr; prereq* sr, 51 or 140, 20 cr chem or biochem, PCh 103 or 108) 8:30-9:45 TTh

- 174w-175s See 173f (prereq 171 or concur regis)
- 198w-199s See 197f
- 202w-203s See 201f
- 206w-207s See 205f
- 210w-211s See 209f
- 222w-223s See 221f
- 226w-227s See 225f
- 230w-231s See 229f
- 241w-242s See 240f
- 244w-245s See 243f
- 247w-248s See 246f
- 250w-251s See 249f
- 253w-254s See 252f
- 256w-257s See 255f

CLASSICS

Classics (CLAS)

Fall Quarter

- 31 Greek, Latin Drama (2 cr; prereq soph)
IV MW, 6F, McDonald
- 42 Greek Mythology (2 cr; prereq soph)
V MW, 6F, Forbes
- 106 Introd Study of Language (3 cr; prereq
any 2 courses above 50 in foreign lang)
VIII MWF, 103F, Swanson
- 191 Classical Literary Traditions (3 cr; prereq
9 cr Engl above C or foreign lit)
I MWF, 109F, DeWitt

Winter and Spring Quarters

- 24s Technical Terms of Science, Medicine, Hu-
manities (3 cr; prereq soph) IV MWF
- 43w Ancient Mythology in Relation to Litera-
ture, Art (2 cr; prereq soph) V MWF
- 107w See 106f (prereq 106)
- 108s Cultural Aspects of Language (3 cr; pre-
req any 2 courses above 50 in foreign
lang) VIII MWF
- 122w Introd to Greek Archeology (3 cr) VI
MWF
- 123s Introd to Roman Archeology (3 cr) VI
MWF
- 192w-193s See 191f

Greek (GRK)

Fall Quarter

- 1 Bgn Greek (5 cr, +1-2)
II MTWThF, 103F, McDonald
- 51 Lucian (3 cr; prereq 3)
IV MWF, 103F, DeWitt
- 171 Reading (3 cr; prereq cons dept)
Ar, McDonald

Winter and Spring Quarters

- 2w See 1f (prereq 1)
- 3s Selections from Attic Prose (5 cr; prereq
2) II MTWThF

- 52w Homer (3 cr; prereq 3) IV MWF
- 53s Plato: Apology, Selections (3 cr; prereq
3) IV MWF
- 73s New Testament (3 cr; prereq any two of
51, 52, 53) III MWF
- 172w-173s See 171f

Latin (LAT)

Fall Quarter

- 1 Bgn Latin (5 cr, +1-2)
II MTWThF, 205½F, Forbes
- 21 Introd Latin Reading (5 cr; prereq* 1 or
2 yr HS Lat)
- III MTWThF, 103F, Forbes, McDonald
- 31 Latin Literature (3 cr; prereq* 40 or 4
yr HS Lat)
- V MWF, 103F, Swanson
- 171 Reading (3 cr prereq cons dept)
Ar, Swanson
- 201 Seminar: Cicero (3 cr)
Ar, DeWitt

Winter and Spring Quarters

- 2w See 1f (prereq 1)
- 3s Interm Latin (5 cr; prereq 2 or 1 yr HS
Lat) II MTWThF
- 30w Readings from Prose, Poetry (5 cr; pre-
req* 3 or 21; or 2 or 3 yr HS Lat) III
MTWThF
- 40s Vergil (5 cr; prereq* 30 or 3 yr HS Lat)
III MTWThF
- 73s Prose Composition (2 cr; prereq* 3 or 4
yr HS Lat) IV MTWThF
- 82w-83s See 81f
- 172w-173s See 171f
- 202w-203s See 201f

ENGLISH

Composition (COMP)

Fall Quarter

- 4 **Freshman Composition** (3 cr, §Comm 1 or
Engl A; prereq assign to category 1, 2,
or 3)
 - 1, I MWF, 204F
 - 2, II MWF, 306F
 - 3, III MWF, 140ForH
 - 4, IV MWF, 204F
 - 5, V MWF, 209½F
 - 6, VI MWF, 204F
 - 7, V MWF, 303F (for foreign students)
- 5 **Freshman Composition** (3 cr, §Comm 2 or
Engl B; prereq 4)
I MWF, 311F
- 6 **Freshman Composition** (3 cr, §Comm 3 or
Engl C; prereq 5)
VII MWF, 303F

- 7 Composition Review (3 cr; prereq 6 or Comm 3; or Engl C with cons instr)
III MWF, 304F, Christie
- 27 Adv Writing (3 cr; prereq see col bul)
—1, I MWF, 305F, Buckley
—2, III MWF, 2F, Bean
—3, IV MWF, 209½F, Helton
—4, V MWF, 205F, Blum
—5, VI MWF, 305F, Christie
—6, VII MWF, 305F, Orr
—7, II TThS, 205F, Willen
—8, II MWF, 107F, del Plaine (for law students)
—9, V MWF, 107F, del Plaine (for med students)
- 28 Adv Writing (3 cr; prereq see col bul)
—1, II MWF, 205F, Marx
—2, III MWF, 205F, Hulbert
- 58 Business Reports, Letters (3 cr; prereq 6 or Comm 3 or Engl C or exempt, regis BA or cons instr)
II MWF, 5F
- 67 Probs of Style (3 cr; prereq B aver in 2 qtrs of 27, 28, 29, 65)
VI MWF, 107F, Atkins
- 101 Writing Fiction (3 cr; prereq* 6 cr above 50 or grad)
—1, VIII-IX M, 205F, Blum
—2, VIII-IX W, 304F, Ross
- 200 Seminar: Writing (3 cr; prereq cons instr)
VIII-IX M, 108F, Tate
Workshop, VII-VIII Th, 108F, Cox

Winter and Spring Quarters

- 4w-5s See 4f V MWF; VIII MWF
4s See 4f II MWF
-5w-6s See 4f (prereq 4)
-6w See 5f (prereq 5)
27w-28s See 27f II MWF; III MWF; V MWF
27w,s See 27f II MWF(s); III MWF (for law students) (s); IV MWF (for law students) (w); IV MWF (s); VI MWF (w)
28w-29s See 28f I MWF(w); II MWF(s); III MWF(w); IV MWF(w); VI MWF(w)
58w,s See 58f II MWF(w,s); IV MWF(w)
65w Writing of Research Papers, Articles (3 cr; prereq 6 or Comm 3 or Engl C, and 6 addtl cr Engl or Comp; or 10 cr Engl 21-22-23, B aver in prereq course)
III T and ar
-68w See 67f (prereq 67)
-102w-103s See 101f VIII-IX M(w,s); VIII-IX W(w)
-201w-202s See 200f (prereq 200)

English (ENGL)

Fall Quarter

- A Freshman English (5 cr, §Comp 4 or Comm 1; prereq assign to category 1 or 2)
—1, I MTWThF, 207F
—2, II MTWThF, 322F

- 3, III MTWThF, 322F
—4, IV MTWThF, 207F
—5, V MTWThF, 206F
—6, VI MTWThF, 110F

- C Freshman English (5 cr; Comp 6 or Comm 3; prereq B)
VI MTWThF, 114F
- 19 Classics of English Literature (3 cr, §21 or 22 or 23; prereq soph, C or Comp 6 or Comm 3 or exempt)
VI MWF, 207F, Montgomery
- 21 Introd Literature (5 cr; prereq C or Comp 6 or Comm 3 or exempt)
—1, III MTWThF, 305F, Monk
—2, VI MTWThF, 301F, Buckley
- 37 Modern Literature (3 cr; prereq C or Comp 6 or Comm 3 or exempt)
VII MWF, 301F, Montgomery
- 52 English Novel (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
VII MWF, 206F, Stange
- 55 Shakespeare: Comedies (3 cr; prereq see col bul)
—1, II MWF, 213F, Atkins
—2, IV MWF, 303F, Christie
—3, VI MWF, 303F, Rathburn
—4, VII MWF, 107F, del Plaine
- 56 Shakespeare: Tragedies (3 cr; prereq see col bul)
—1, II MWF, 303F, Montgomery
—2, VI MWF, 205F, Marx
- 66 Literature of the Bible (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
III TThS, 308F, Unger
- 73 American Literature (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
—1, II MWF, 204F, Turpie
—2, VII MWF, 204F, Smith
- 75 Chaucer (4 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
III MWThF, 107F, Clark
- 97 Adv Selective Survey for Seniors (3 cr; prereq sr, A or Comp 6 or Comm 3 or exempt, cons instr)
VIII-IX Th, 103F, Krieger
- 100 Old English (4 cr; prereq 6 cr above C)
I MWThF, 205F, Clark
- 104 Emerson, Thoreau (3 cr; prereq 6 cr above C)
III MWF, 206F, Turpie
- 109 Romantic Poets: Early 19th Century (3 cr; prereq 6 cr above C)
IV TThS, 107F, Jackson
- 114 Midwest Literature (3 cr; prereq 6 cr above C)
II MWF, 206F, Buckley
- 120 Interpretation of Poetry (3 cr; prereq 6 cr above C)
VII MWF, 207F, Tate

- 123 Technique of the Novel (3 cr; prereq sr, 6 cr above C)
VIII-IX T, 207F, Unger
- 126 Drama: 1660-1870 (3 cr; prereq 6 cr above C)
IV MWF, 206F, Hillhouse
- 137 19th Century English Literature (3 cr; prereq 6 cr above C)
II TThS, 206F, Stange
- 142 20th Century Literature (3 cr; prereq 6 cr above C)
I MWF, 206F, O'Connor
- 152 Medieval, Early Elizabethan Drama (3 cr; prereq 55-56)
IV MWF, 205F
- 154 American Novel (3 cr; prereq 6 cr above C)
III TThS, 206F, Bowron
- 162 Milton (3 cr; prereq 21-22 or 55-56)
III MWF, 213F
- 165 Introd Modern English (3 cr; prereq 6 cr above C)
VI MWF, 206F, Allen
- 184 Interpretation of the Drama (3 cr; prereq 6 cr above C, 55-56 adv)
IX-X W, 205F, Reisman
- 187 18th Century Literature (3 cr; prereq 6 cr above C)
II MWF, 207F, Monk
- 191 Imagery, Symbolism in English, American Literature (3 cr; prereq 6 cr above C)
IV MWF, 107F, Atkins
- 197 17th Century Literature (3 cr; prereq 6 cr above C)
III MWF, 204F, Unger
- 202 Elizabethan Nondramatic Literature (3 cr; prereq sr, cons dept)
VI MWF, 304F, Brown
- 204 Rise, Development of Standard English (3 cr; prereq 100, sr, cons dept)
VII-VIII T, VII Th, 304F, Allen
- 213 Bibliography, Methods of Literary Research (2 cr)
VIII-IX M, 304F, O'Connor
- 234 Studies in Medieval English Culture (3 cr)
IX-X Th, 312Lib, Clark
- 265 American Romanticism II (3 cr; prereq cons instr)
IX-X W, 4F, McDowell
- 274 Age of Queen Anne (3 cr)
IX-X T, 304F, Monk
- 277 American Realism (3 cr; prereq cons instr)
VIII-IX F, 108F, Smith
- 290 Studies in Literary Theory (3 cr; prereq cons instr)
VII-VIII Th, 205F, Tate
- 297 Independent Reading (3 cr; prereq MA degree or equiv)
- 22w-23s See 21f III MTWThF; IV MTWThF; VI MTWThF
- 38w-39s See 37f
- 53w See 52f
- 55w-56s See 55f III MWF; VI MWF
- 55s See 55f II MWF
- 56w See 56f II MWF; IV MWF; VI MWF
- 67w See 66f
- 73w-74s See 73f III MWF
- 74w See 73f
- 75w,s See 75f III MTWF(w); IV MTWF(s)
- 98w-99s See 97f (prereq 97)
- 102w Readings: Old English Prose, Verse (3 cr; prereq 100) I MWF
- 103s Beowulf (3 cr; prereq 100) I MWF
- 105w Hawthorne, Melville (3 cr; prereq 6 cr above C) III MWF
- 106s Whitman, Mark Twain (3 cr; prereq 6 cr above C) III MWF
- 110w See 109f
- 113s American Short Story (3 cr; prereq 6 cr above C) II MWF
- 115s Development of English Prose Style (3 cr; prereq 6 cr above C) VI MWF
- 121w-122s See 120f (prereq cons instr)
- 124w-125s See 123f VIII-IX T
- 127w See 126f
- 129s Modern Drama: 1880 to Present (3 cr; prereq 55-56 or 127) IV MWF
- 130w-131s English Poetry 1832-1901 (3 cr; prereq 6 cr above C) III MWF
- 134s Origins of American Naturalism (3 cr; prereq 6 cr above C) VI MWF
- 136s Adv Shakespeare (4 cr; prereq 55-56) IV MTWF
- 138w-139s See 137f
- 143w See 142f
- 151s Recent Poetry (4 cr; prereq 6 cr above C)
VII MTWTh
- 155w See 154f
- 159w-160s American Colonial Literature (3 cr; prereq 6 cr above C) VII MWF
- 162w,s See 162f II MWF(s); IV MWF(w)
- 165w See 165f
- 166s Historical Backgrounds of Modern English (3 cr; prereq 165) VI MWF
- 170w Shakespeare's Later Contemporaries (3 cr; prereq 55-56) IV MWF
- 174s American English (3 cr; prereq 6 cr Engl lit incl lang, above C) VII MWF
- 175s Chaucer (4 cr, §75; prereq 100) VIII MTW Th
- 176w-177s History of English Verse (3 cr; prereq 6 cr above C)
- 181s Recent Trends in Literary Criticism (3 cr; prereq 6 cr above C) I MWF
- 182w Far West in Literature (3 cr; prereq 6 cr above C) II MWF
- 185w-186s See 184f
- 188w-189s See 187f
- 193w Poetry of W B Yeats (3 cr; prereq 6 cr above C) VI MWF
- 198w-199s See 197f

Winter and Spring Quarters

Aw-Bs See Af I MTWThF

-Bw-Cs See Af (prereq A)

-20w See 19f

- 200w-201s Adv Chaucer (3 cr; prereq 75, sr, cons dept) VI MWF
 -203w See 202f
 -205w-206s See 204f VII-VIII T, VII Th
 213w,s See 213f VIII-IX W(w); VIII-IX F(s)
 -229w-230s See 228f
 -232w-233s See 231f
 -235w-236s See 234f
 246w-247s English Literary Criticism (3 cr; prereq sr, cons instr; or grad) IV MWF
 -266w-267s See 265f
 -275w-276s See 274f
 -278w-279s See 277f
 -291w-292s See 290f
 -298w-299s See 297f

GENERAL STUDIES

Communication (COMM)

Fall Quarter

- 1 **Communication** (4 cr, §Comp 4 or Engl A; prereq assign to category 1, 2 or 3)
 -1, I MTWF, 8TNM
 -2, II MTWF, 8TNM
 -3, III MTWF, 8TNM
 -4, IV MTWF, 8TNM
 -5, V MTWF, 114TNM
 -6, VI MTWF, 8TNM
 -7, VII MTWF, 114TNM
- 2 **Communication** (4 cr, §Comp 5 or Engl B; prereq 1)
 V MTWF, 8TNM
- 3 **Communication** (4 cr, §Comp 6 or Engl C; prereq 2)
 V MTWF, 108TNM

Winter and Spring Quarters

- 1w-2s See 1f I MTWF; V MTWF; VII MTWF
 1s See 1f I MTWF
 -2w-3s See 1f (prereq 1)
 -3w See 2f (prereq 2)

Family Life (FL)

Fall Quarter

- 1 **Preparation for Marriage** (3 cr)
 -1, II MWF, 107TNM, Dyer, Hansen, Swan
 -2, IV MWF, 115TNM, Dyer, Hansen, Swan
 -3, V MWF, 107TNM, Dyer, Hansen, Swan
 -4, VII MWF, 107TNM, Dyer, Hansen, Swan
- 15 **The Home, Its Furnishings** (3 cr)
 VII MWF, 206WeH, Ludwig
- 20 **Consumer Education** (3 cr)
 II MWF, 145Ph, Price
- 25 **Child Development, Adjustment** (3 cr)
 III MWF, 2P, Brieland

Winter and Spring Quarters

- 1w,s See 1f
 15w,s See 15f VII MWF(w); VI MWF(s)
 20w,s See 20f
 25w,s See 25f

Humanities (HUM)

Fall Quarter

- 1 **Humanities in Modern World I** (5 cr)
 -1, I MTWThF, 210P, Kwiat
 -2, II MTWThF, 301F, Coxé
 -3, II MTWThF, 115JohH, Rosenfeld
 -4, III MTWThF, 110P, Blum
 -5, III MTWThF, 122JohH, Rosenfeld
 -6, IV MTWThF, 110P, Ramsland
 -7, IV MTWThF, 122JohH, Amberg
 -8, V MTWThF, 122JohH, Krieger
- 2 **Humanities in Modern World II** (5 cr; prereq 1)
 II MTWThF, 305F, Smith
- 3 **Humanities in Modern World III** (5 cr; prereq 2)
 III MTWThF, 310JohH, Bryan
- 4 **Humanities in Modern World IV** (5 cr; prereq 1 or 2 or 3)
 IV MTWThF, 115JohH, Rosenfeld
- 11 **Greek Heritage** (5 cr)
 III MTWThF, 309JohH, Ames
- 21 **American Life I** (3 cr)
 -1, II MWF, 9F, Kwiat
 -2, III MWF, 9F, Bowron, others
 -3, IV MWF, 9F, Turpie
 -4, VII MWF, 9F, Chambers
- 51 **Humanities in Modern World** (5 cr, §1)
 -1, I MTWThF, 122JohH, Bowditch
 -2, III MTWThF, 303F, Wood
 -3, VI MTWThF, 122JohH, Wolf
- 61 **Greek Heritage** (5 cr, §11)
 -1, II MTWThF, 122JohH, Ames
 -2, III-IV TTh, 114JohH, Ross
- 71 **Humanities in United States** (3 cr, §21)
 VII MWF, 6F, Marx
- 131 **Proseminar** (2 cr; prereq sr)
 VII-VIII T, 303JohH, Ross

Winter and Spring Quarters

- 1w-2s See 1f II MTWThF; III MTWThF
 1s See 1f II MTWThF; IV MTWThF
 -2w-3s See 1f (prereq 1)
 3w See 3f (prereq 2)
 -4w,s See 3f (prereq 1 or 2 or 3) I MTWThF(w); II MTWThF(s)
 -12w-13s See 11f
 -22w-23s See 21f
 -52w-53s See 51f
 -62w-63s See 61f II MTWThF(w); III-IV TTh, 1 hr ar(s)
 -72w-73s See 71f
 -132w-133s See 131f

Natural Science (NSCI)

Fall Quarter

- 1 **Orientation in the Natural Sciences** (5 cr)
 II MTWThF, 150Ph, Graubard

- 4 **Physical World** (3 cr)
IV MWF, 170Ph, Kruglak
Lab secs assigned during first two days of class
- 7 **Gen Biology** (3 cr, †7-8-9)
Lect V WF, 06Bo, Moir
-1, Lab I-II MF
-2, Lab I-II TTh
-3, Lab VIII-IX MF
- 171 **Development of the Sciences** (3 cr; prereq*
1 yr biol, 1 yr phys sci)
IV MWF, 241Ph, Graubard

Winter and Spring Quarters

- 2w-3s See 1f (prereq 1)
-5w-6s See 4f (prereq 4)
-8w-9s See 7f (prereq 7)
-172w-173s See 171f (prereq* 171) IV MWF(s);
VI MWF(w)

Personal Orientation (PO)**Fall Quarter**

- 1 **How to Study** (2 cr)
-1, I MWF, 106TNM, McHale
-2, II MWF, 106TNM, McHale
-3, VI MWF, 106TNM, Tollefson
-4, VII MWF, 106TNM, Tollefson
- 11 **Choosing a Vocation** (2 cr)
II TTh and 1 hr ar, 106TNM, Hewer

Winter and Spring Quarters

- 1w,s See 1f
11w,s See 11f

Social Science (SSCI)**Fall Quarter**

- 1 **Intro Social Science** (4 cr)
-1, I MTWF, 114JohH, Potter
-2, I MTWF, 113JohH, Rainele
-3, II MTWF, 113JohH, Rainele
-4, II MTThF, 180ForH, Rozental
-5, III MWThF, 113JohH, Cooperman
-6, III MTWF, 313JohH, Ar
-7, IV MTWF, 113JohH, Ar
-8, V MWThF, 113JohH, Cooperman
-9, VI MTWF, 185ForH, Sibley
-10, II-III TTh, 302JohH, Page
- 2 **Intro Social Science** (4 cr; prereq 1)
-1, II MWThF, 115ForH, Miller
-2, III MWThF, 133Ph, Miller
- 8 **Intro Social Science** (4 cr; prereq 2)
-1, II MTWF, 114JohH, Potter
-2, IV MTWF, 111AH, Potter
- 11 **Int'l Relations** (3 cr)
III MWF, 114JohH, Turner
- 81 **Public Affairs Forum** (3 cr)
IV MWF, V F, 305F, Ziebarth

Winter and Spring Quarters

- 1w-2s See 1f I MTWF(w); II-III TTh(w);
III MWThF(w,s); IV MTWF(w,s)
- 1s See 1f I MTWF; II MWThF; III MWThF
- 2w-3s See 1f (prereq 1) I MTWF(w,s); II
MTWF(w,s); II MWThF(w,s); III
MWThF(w,s); III MTWF(w,s); IV MTWF
(w,s); V MWThF(w,s); VI MTWF(w)
- 3w See 2f (prereq 2)
- 12w-13s See 11f
- 82w-83s See 81f

GEOGRAPHY (GEOG)**Fall Quarter**

- 1 **Geography of Physical Resources** (5 cr,
§old 11)
Lect II MWF, 240ChE, Borchert
-1, I MW, 261ForH
-2, I TTh, 261ForH
-3, III MW, 261ForH
-4, III TTh, 261ForH
-5, V MW, 261ForH
-6, V TTh, 261ForH
- 4 **Human Geography** (5 cr, §old 45)
Lect III MWF, 155ForH, Broek
-1, II TTh, 261ForH
-2, II WF, 261ForH
-3, IV MW, 261ForH
-4, IV TTh, 261ForH
-5, VI MW, 261ForH
-6, VI TTh, 261ForH
- 41 **Commercial Production** (5 cr)
Lect IV MWThF, 55ForH, Weaver
-1, I F, 261ForH
-2, II M, 261ForH
-3, III F, 261ForH
-4, V F, 261ForH
-5, VII T, 261ForH
-6, VII Th, 261ForH
- 70 **Intro Cartography** (3 cr, §old 111; prereq
soph with C aver, 10 cr)
V-VI TTh, 275ForH, Sopher
- 90 **Readings** (ar cr; prereq 12 cr, cons instr)
- 112 **Western Anglo-America** (3 cr, §old 71;
prereq* 5 cr)
I MWF, 285ForH, Weaver
- 122 **East Asia** (3 cr, §old 120; prereq* 5 cr)
II MWF, 285ForH, Sopher
- 133 **Intro Climatology** (3 cr; prereq* 1)
IV MWF, 285ForH, Borchert
- 251 **Seminar: Urban Geography** (ar cr)
VI-VII F, 290cForH, Broek
- 254 **Seminar: Climatology** (ar cr)
VII-VIII Th, 290cForH, Borchert
- 301 **Research Probs** (ar cr)

Winter and Spring Quarters

- 1w,s See 1f
4w,s See 4f
41w,s See 41f

- 67s Minnesota (3 cr; prereq* 5 cr) IV MWF
90w,s See 90f
- 101w Western, Central Europe (3 cr; prereq* 5 cr) II MWF
- 107w Soviet Union (3 cr; prereq* 5 cr) VI MWF
- 110s South America (3 cr; prereq* 5 cr) II MWF
- 113w Eastern Anglo-America (3 cr, §old 71; prereq* 5 cr) I MWF
- 117s The Middle East (3 cr; prereq* 5 cr) III MWF
- 121w India, Southeast Asia (3 cr, §old 120; prereq* 5 cr) VII MWF
- 134w Adv Climatology (3 cr; prereq* 133 or Aero 173) VIII MWF
- 138w-139s Adv Cartography (3 cr; prereq* 70) V-VI TTh
- 143w-144s Political Geography (3 cr, §old 43; prereq* 12 cr geog, hist, pol sci) III MWF(w); VI MWF(s)
- 150w Agricultural Geography (3 cr; prereq* 1 or 41, 10 addtl cr geog or econ) IV MWF
- 160w Development of Geographic Thought (3 cr, §old 155; prereq sr, 15 cr) VI MWF
- 170s Field Course (3 cr; prereq sr, 15 cr)
- 252w Seminar: Australia and New Zealand VII-VIII Th
- 253w Seminar: Topic to be announced (ar cr) VII-VIII Th
- 255s Seminar: Topic to be announced (ar cr) VII-VIII T
- 301w,s See 301f

GEOLOGY (GEOL)

Fall Quarter

- A Gen Geology Lab** (2 cr; prereq 1 or concur regis)
—1, I-II TTh, 22P
—2, VI-VII TTh, 22P
- B Gen Geology Lab** (2 cr; prereq A)
III-IV TTh, 22P
- 1 Gen Geology** (3 cr, †1-2 except forestry students)
—1, II MWF, 110P
—2, VI MWF, 110P
- 2 Gen Geology** (3 cr, †1-2; prereq 1)
VII MWF, 110P, Bell
- 5 Engineering Geology** (3 cr; for IT students)
I MWF, 2P, Schwartz
- 8 Earth Features, Their Meaning** (5 cr, §1, NSci 6)
II MTWThF, 2P, Thiel
- 23 Mineralogy** (4 cr; prereq soph, 1 qtr col chem)
Lect I MWF, VIII T, 110P, Gruner
—1, Lab VI-VII TTh, 100P
—2, Lab VII-VIII MW, 100P
- 101 Sedimentation** (3 cr; prereq 24)
VII MWF, 210P, Thiel

- 106 Petrography** (3 cr; prereq 25)
Lect II TTh, 210P, Goldich
—1, Lab VI-VII TTh, 200P
—2, Lab ar, 200P
- 107 Invertebrate Paleontology** (3 cr; prereq* 25)
Lect VI-VII T, 110P, Bell
Lab ar
- 118 Prin Geomorphology** (3 cr; prereq A, 2)
VI MWF, 210P, Wright
- 121 Crystallography** (3 cr; prereq trig, 1 yr col chem)
Ar, Gruner
- 125 Structural Geology** (3 cr; prereq 25)
IV MWF, 210P, Wright
- 146 Soil Mineralogy** (4 cr; prereq 1 qtr col chem)
Ar, Gruner
- 153 Subsurface Stratigraphy** (3 cr; prereq 151)
Lect II T, 110P, Swain
Lab VIII-IX MF, 10P
- 170 Geologic Probs** (ar cr; prereq cons maj advis)
- 218 Adv Structural Geology** (3 cr; prereq 125, 132)
Ar, Schwartz
- 263 Research: Petrology** (3 cr; prereq 132)
Ar, Goldich

Winter and Spring Quarters

- Aw-Bs** See Af I-II MW(w,s); III-IV MW(w); VI-VII TTh(s)
- As** See Af
- Bw** See Af (prereq A) I-II TTh; VI-VII MW
- 1w-2s** See 1f IV MWF; VII MWF
- 1s** See 1f
- 2w** See 1f (prereq 1)
- 6w** See 5f (prereq 5)
- 8w,s** See 8f II MTWThF(s); III MTWThF(w)
- 24w** See 23f (prereq 23) Lect I MWF, lab VI-VII TTh or ar
- 25s** Rock Study (2 cr; prereq 24) Lect I T; rec I Th; lab VI-VII T or VIII-IX T
- 62s** Mineralogy of Precious Stones (3 cr) III MWF
- 70s** Geologic Field Methods (2 cr; prereq 25, trig)
- 102w** Methods of Study of Sediments (3 cr; prereq 101, 106) Lect VI T, lab VII-VIII TTh or ar
- 103w-104s** Micropaleontology (3 cr; prereq 107) III-IV TTh(w,s); VIII-IX W(w)
- 108w-109s** Adv Invertebrate Paleontology (3 cr; prereq 107) VIII-IX F
- 110w-111s** Economic Geology (3 cr; prereq 25) III MWF(w); III TTh, VIII F(s)
- 112s** Petroleum Geology (3 cr; prereq sr, 125, 151) I MWF
- 119bw** Geomorphology of Western United States (3 cr; prereq 118 or 125) Lect II TTh, lab ar
- 120s** Glacial Geology (3 cr; prereq A, 2) II MWF

- 131w-132s Petrology (4 cr; prereq 106) Lect II MW(w); III MW(s); rec II F(w); III F(s); lab VI-VII WF(w,s)
- 137s Prin Chemical Geology (3 cr; prereq 25) I TThS
- 140w-141s Applied Petrography (3 cr; prereq 131) Lect ar, lab VIII-IX MW
- 144w Geologic Maps (3 cr; prereq 125) Lab VI-VIII MW
- 145s Aerial Photographs (3 cr; prereq A, 2) VI-VIII TTh
- 147w See 146f (prereq 146) I MWF
- 151w-152s Stratigraphy (3 cr; prereq 107) II TTh, VI M(s); IV MWF(w)
- 161w Adv Mineralogy (3 cr; prereq sr, 24) Lect I TTh, lab ar
- 166w-167s Mineralography (3 cr; prereq sr, 110, 131) VI-VIII MWF(w); VIII W(s)
- 170w,s See 170f
- 216s Mining Geology (3 cr; prereq 111) IV Th, IX TF
- 261s Theoretical Mineralogy (prereq* 121, 161)

GERMAN (GERM)

Fall Quarter

- 1 **Bgn German** (5 cr, §1a or 1b)
-1, I MTWThF, 209F
-2, II MTWThF, 209F
-3, III MTWThF, 209F
-4, V MTWThF, 209F
- 1a **Bgn Conversational German** (5 cr, §1 or 1b)
Dem III MTWThF, 108F
Lab IV MTWThF, 209F
- 1b **Bgn Reading German** (5 cr, §1 or 1a)
II MTWThF, 11F
- 2 **Bgn German** (5 cr, §2a or 2b; prereq 1 or 1 yr HS Germ)
-1, III MTWThF, 207F
-2, VII MTWThF, 209F
- 3 **Bgn German** (5 cr, §3a or 3b; prereq 2 or 2 yr HS Germ)
-1, I MTWThF, 209½F
-2, II MTWThF, 209½F
-3, VI MTWThF, 209F
- 4 **Interm German** (5 cr; prereq 3 or 3a or 3b or 3 yr HS Germ)
-1, III MTWThF, 209½F
-2, VII MTWThF, 209½F
- 24 **Chemical German** (3 cr; for chemists, miners)
II MWF, 111C
- 27 **Chemical Prose** (3 cr; prereq 1 yr col German or 2 yr HS Germ; for chem, min, pharm students)
II MWF, 108F
- 41 **Reading German Chemical Periodicals** (2 cr; prereq 26)
I TTh, 208F
- 50 **Composition** (2 cr; prereq 4)
VI MF, 209½F, Downs
- 53 **Conversation** (2 cr; prereq 4)
VI TTh, 209½, Menze
- 56 **Essay Writing** (3 cr; prereq 52)
III TThS, 208F, Pfeiffer
- 63 **Classical Drama** (3 cr; prereq 60 or 4 with grade B)
IV MWF, 208F, Ramras
- 66 **Adv German Conversation** (2 cr; prereq 3a or 55)
IV TTh, 208F, Menze
- 70 **Survey of Literature** (3 cr; prereq 3 cr above 59)
III MWF, 208F, Downs
- 73 **Classics in Translation** (2 cr)
VII MF, 208F, Wood
- 90 **German Civilization, Culture** (3 cr; prereq 3 cr above 59)
II MWF, 208F, Prottengeier
- 103 **Syntax, Composition** (1 cr; prereq 57)
VIII M, 208F
- 118 **Old High German** (3 cr; prereq sr, with compl maj seq, 80, 11 cr above 59)
VIII-IX W, 208F, Downs
- 143a **Classical Period: Lessing, Wieland, Herder** (3 cr; prereq sr, 71, 11 cr above 59)
VIII-IX Th, 208F, Ramras
- 150 **19th Century Literature** (3 cr; prereq sr, 72, 11 cr above 59)
VIII-IX T, 208F, Pfeiffer
- 253 **Seminar: Literary Probs** (3 cr; prereq 9 cr grad courses German lit)
VIII-IX F, 208F, Wood

Winter and Spring Quarters

- 1w-2s See 1f I MTWThF; II MTWThF
- 1s See 1f I MTWThF; II MTWThF
- 2w-3s See 1f (prereq 1 or 1 yr HS German)
- 2aw-3as See 1af (prereq 1a)
- 2bw-3bs See 1bf (prereq 1b)
- 3w See 2f (prereq 2 or 2 yr HS German)
- 4w,s See 4f I MTWThF(w); III MTWThF(s); VI MTWThF(w); VII MTWThF(s)
- 20w,s Reading, Speaking German (5 cr; prereq 4 or 4 yr HS German) III MTWThF
- 25w-26s See 24f (prereq 24)
- 28w-29s See 27f (prereq 27)
- 33s **Medical German** (5 cr; prereq 3 or 3a or 3b; for premed students) II MTWThF
- 42w-43s See 41f (prereq* 41)
- 51w-52s See 50f (prereq* 50)
- 54w-55s See 53f (prereq* 53)
- 57w See 56f (prereq* 56)
- 58s **Pronunciation** (2 cr; prereq 4) III TTh
- 59s **Pronunciation, Diction** (1-2 cr; prereq 3, cand for Germ play)
- 60w **Modern Writers** (3 cr; prereq 4) II MWF
- 62s **19th Century Prose** (3 cr; prereq 3 cr above 59) II MWF
- 64w **19th Century Drama** (3 cr; prereq 3 cr above 59) IV MWF
- 65s **Modern Drama** (3 cr; prereq 3 cr above 59)
IV MWF
- 67w-68s See 66f (prereq* 66)

- 71w-72s See 70f (prereq* 70)
 -74w-75s See 73f
 77s Faust I (3 cr; prereq 63, 3 addtl cr above 59) VII MWF
 80w History of German Language (3 cr; prereq 6 cr above 60) VII MWF
 -91w-92s See 90f (prereq* 90)
 -104w-105s See 103f
 -119w-120s See 118f (prereq* 118)
 -144aw-145as See 143af
 -151w-152s See 150f (prereq 150)
 -254w-255s See 253f

HISTORY (HIST)

Fall Quarter

- 1 Civilization of the Modern World (3 cr)**
 Lect II TTh, BuAud, Wolf
 -1, I M, 70ForH
 -2, I T, 60ForH
 -3, I W, 70ForH
 -4, I Th, 60ForH
 -5, II M, 60ForH
 -6, II W, 60ForH
 -7, II F, 60ForH
 -8, III T, 60ForH
 -9, III W, 70ForH
 -10, III Th, 60ForH
 -11, III Th, 75ForH
 -12, IV Th, 60ForH
 -13, IV T, 60ForH
 -14, IV T, 40ForH
 -15, VI W, 60ForH
 -16, VI Th, 70ForH
- 3 Civilization of the Modern World (3 cr)**
 Lect II MW, 4ME, Bowditch
 -1, II Th, 75ForH
 -2, II F, 40ForH
 -3, II F, 30ForH
 -4, III F, 60ForH
 -5, IV Th, 75ForH
- 4 English History (3 cr)**
 Lect II TTh, 55ForH, Burt
 -1, I T, 70ForH
 -2, I Th, 70ForH
 -3, II T, 75ForH
 -4, II Th, 70ForH
 -5, III T, 70ForH
- 11 Medieval, Renaissance History (3 cr; prereq* maj mus or art)**
 IV MWF, 115ForH, Thompson
- 14 Ancient Civilization (3 cr)**
 VII TWTh, 115ForH, Jones
- 14A Ancient Civilization with Readings (5 cr)**
 VII MTWThF, 115ForH, Jones
- 20 American History (3 cr; prereq soph)**
 -1, Lect II TTh, NHAud, Osgood
 -2, Lect VIII TTh, 155ForH, Osgood
 -1, II F, 142ChE
 -2, IV T, 50ForH
 -3, IV Th, 70ForH
 -4, IV F, 70ForH
- 5, VI W, 70ForH
 -6, VI F, 70ForH
 -7, VII F, 70ForH
 -8, VII M, 60ForH
- 50 Ancient Civilization (3 cr, §14)**
 VII TWTh, 115ForH, Jones
- 53 Civilization of Modern World (3 cr, §1)**
 Lect II TTh, BuAud, Wolf
 -1, II M, 70ForH
 -2, II F, 75ForH
 -3, III F, 70ForH
 -4, III M, 70ForH
 -5, IV W, 70ForH
 -6, VII T, 60ForH
- 55 Civilization of Modern World (3 cr, §3)**
 Lect II MW, 4ME, Bowditch
 Rec II F, 50ForH
- 56 English History (3 cr, §4)**
 Lect II TTh, 55ForH, Burt
 II F, 70ForH
- 59 American History (3 cr, §20)**
 -1, Lect II TTh, NHAud, Osgood
 -2, Lect VIII TTh, 155ForH, Osgood
 -1, IV T, 70ForH
 -2, III Th, 70ForH
 -3, VII T, 70ForH
- 62 Cultural History of China to 600 AD (3 cr)**
 VII MWF, 175ForH, Mather
- 65 Medieval European History (3 cr)**
 III MWF, 115ForH, Krey
- 70 English Constitutional History (3 cr; prereq see col bul)**
 -1, I MWF, 115ForH, Thompson
 -2, I MWF, 180ForH, Willson
- 76 Canadian History (3 cr)**
 III TThS, 140ForH, Burt
- 79 United States in 20th Century (3 cr)**
 VI MWF, 4ME, Chambers
- 86 American Colonies (3 cr)**
 II MWF, 185ForH, Tyler
- 90 American West (3 cr)**
 III TThS, 115ForH, Osgood
- 93 American Diplomatic History (3 cr)**
 IV MWF, 80ForH, Beatty
- 97 Minnesota, the Northwest (3 cr)**
 III MWF, 20ForH, Jordan
- 100a Greece to 200 BC (3 cr)**
 I TThS, 160ForH, Jones
- 103 Medieval European History (3 cr)**
 III MWF, 115ForH, Krey
- 106a Continental Europe (3 cr)**
 IV MWF, 185ForH, Steefel
- 109 Europe in the 20th Century (3 cr)**
 I MWF, 155ForH, Deutsch
- 112 Economic History of Europe (3 cr)**
 II TThS, 170ForH, Heaton
- 120 Modern France (3 cr; prereq 9 cr hist or 15 cr soc sci or maj Fren)**
 VI MWF, 175ForH, Bowditch
- 122 History of Scandinavian Countries (3 cr)**
 III MWF, 12F
- 125 Russia (3 cr)**
 IV MWF, 180ForH, Anderson

- 125a Eastern Europe, Middle East in 19th, 20th Century (3 cr; prereq 1-2-3)
III MWF, 160ForH, Anderson
- 128a Modern England: 1714-1783 (3 cr)
II MWF, 170ForH, Willson
- 134 World War II (3 cr)
II MWF, 155ForH, Deutsch
- 137 Early National Period in US History (3 cr)
I MWF, 185ForH, Jordan
- 146 American Economic, Social History (3 cr)
II TThS, 160ForH, Kohlmeyer
- 149 Social, Intellectual History of United States (3 cr)
III MWF, 185ForH, Tyler
- 154 Canadian History, Canadian-American Relations (3 cr)
III TThS, 130ForH, Burt
- 157 Latin-American History (3 cr)
III MWF, 170ForH, Beatty
- 170 Readings in Ancient History (3 cr, †170-171-172; prereq sr)
Ar, Jones
- 173 Readings in Medieval, Renaissance History (3 cr, †173-174-175; prereq sr)
VIII-IX W, 244ForH, Krey
- 173a Readings: Medieval English History (3 cr)
Ar, Thompson
- 176 Readings: 17th Century France (3 cr, †176-177-178; prereq sr, knowl Fren)
Ar, Wolf
- 176a Readings: Russian History (3 cr, †176a-177a-178a; prereq* sr, 125-126-127, knowl Russ, Germ or Fren)
Ar, Anderson
- 176b Readings: Scandinavian History (3 cr, †176b-177b-178b; prereq sr)
- 176c Readings: Recent European History (3 cr, †176c-177c-178c; prereq* sr, 20th Cent Europe)
VI-VII W, 244ForH, Deutsch
- 179 Readings: European Economic History since 1700 (3 cr, †179-180-181; prereq sr)
VI-VII T and ar, Heaton
- 182 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq sr)
VIII-IX Th, 301Lib, Willson
- 185 Readings: Prob of Slavery in American History (3 cr)
VI-VII Th, 244ForH, Tyler
- 185a Readings: West in American History (3 cr, †185a-186a-187a; prereq sr)
Ar, Osgood
- 185d Readings: 19th Century American History (3 cr; prereq sr)
VIII-IX W, 175ForH, Jordan
- 191 Readings: American Relations with Britain, British North America (3 cr; prereq sr)
VIII-IX T, 244ForH, Burt
- 194 Readings: Latin-American History (3 cr, †194-195-196; prereq sr, knowl Spanish)
VI-VII T, 244ForH, Beatty
- 200 Historical Bibliography, Criticism (3 cr)
VIII-IX M, 244ForH, Steefel
- 208a Seminar: American History (3 cr, †208a-209a-210a)
VIII-IX F, 244ForH, Osgood
- 221 Seminar: Economic History (3 cr, †221-222-223)
VI-VII Th, Ar, Heaton
- 224 Seminar: Modern European History (3 cr, prereq* knowl French and German cons instr)
Ar, Steefel
- 230 Seminar: Ancient History (3 cr, †230-231-232)
VIII-IX F, Ar, Jones

Winter and Spring Quarters

- 1w-2s See 1f Lect II MW
-2w-3s See 1f
-5w-6s See 4f
-12w-13s See 11f
-15w-16s See 14f
-15Aw-16As See 14Af
17s Modern Economic, Social Probs (5 cr; prereq 3rd qtr fresh) III TThS
-21w-22s See 20f
-51w-52s See 50f (§15-16)
53w-54s See 53f Lect II MW
-54w-55s See 53f (§2-3)
-57w-58s See 56f (§5-6)
-60w-61s See 59f (§21-22)
-63w See 62f
-66w-67s See 65f
-71w-72s See 70f
-77w-78s See 76f
-80w-81s See 79f
-87w-88s See 86f
89s Economic History of Modern War (3 cr)
VI MWF
-91w-92s See 90f
-94w-95s See 93f
-98w-99s See 97f
-101aw-102as See 100af
-104w-105s See 103f
-107aw-108as See 106af
-110w-111s See 109f
-113w-114s See 112f
-121w See 120f
122w-123s See 122f
-126w-127s See 125f
-126aw-127as See 125af
-129aw-130as See 128af
135w-136s See 134f
-138w-139s See 137f
-147w-148s See 146f
-150w-151s See 149f
-155w-156s See 154f
-158w-159s See 157f
168w-169s Readings: Works of Great Historians (3 cr; prereq sr) VIII-IX M
-171w-172s See 170f
-174w-175s See 173f
-174aw-175as See 173af
-177w-178s See 176f

- 177aw-178as See 176af
- 177bw-178bs See 176bf
- 177cw-178cs See 176cf
- 180w-181s See 179f
- 183w-184s See 182f
- 186w-187s See 185f
- 186aw-187as See 185af
- 186dw-187ds See 185df
- 192w-193s See 191f
- 195w-196s See 194f
- 209aw-210as See 208af
- 222w-223s See 221f
- 225w-226s See 224f
- 231w-232s See 230f

JOURNALISM (JOUR)

Fall Quarter

- 10 **Photography** (3 cr; prereq soph, jour maj only)
 - Lect V T, 208MurH, Liebling
 - Lab VI-IX M, 20MurH, Liebling
- 11 **Introed Reporting** (3 cr; prereq see col bul)
 - 1, I MWF, 302MurH, Park
 - 2, IV MWF, 308MurH, Ford
- 13 **Introed Reporting for Majors** (3 cr; prereq see col bul)
 - 1, I-III MW, 212MurH
 - 2, I-III TTh, 212MurH, Hage
 - 3, VII-IX MW, 212MurH, Nixon
 - 4, VI-VIII TTh, 212MurH, Nelson
- 15 **Newspaper Reporting** (3 cr; prereq see col bul)
 - III-IV MWF, 210MurH, Gerald
- 19 **Business News, Feature Writing** (3 cr; prereq 18)
 - VI MWF, 308MurH
- 51 **News Editing** (3 cr; prereq 15 or B aver in 13-14; or 13, 18 for adver maj)
 - Lect V T, MurHAud, Emery
 - 1, Lab I-II TTh, 206MurH, Jones
 - 2, Lab I-II WF, 206MurH
 - 3, Lab VI-VII TTh, 206MurH, Hage
 - 4, Lab VIII-IX TTh, 206MurH, Hage
 - 5, Lab VIII-IX TTh, 207MurH, Price
- 55 **Advertising, Newspaper Typography** (3 cr; prereq jour maj; for others 11 or 13 and 41)
 - 1, Lect V M, 302MurH, Barnhart
 - 1, Lab VI-VII TTh, 315, 320 MurH, Barnhart
 - 2, Lect V M, MurHAud, Wilson
 - 2, Lab I-II TTh, 315, 320 MurH, Wilson
 - 3, Lab VI-VII MW, 315, 320 MurH, Wilson
- 59 **Typography Workshop** (2 cr; prereq 55, cons instr)
 - III T, 1 hr ar, 315, 320MurH, Wilson
- 65 **Graphic Arts** (3 cr; prereq cons maj advis)
 - IV MWF, MurHAud, Wilson
- 66 **Pictorial Journalism** (3 cr; prereq 10, 13, cons instr)
 - Lect VIII M, 311MurH, Kildow
 - Lab VIII-IX WF, 20MurH, Kildow
- 67 **Radio News Writing** (3 cr; prereq 15)
 - Lect VII WF, 302MurH, Haskins
 - Lab III-IV MTWThF, 207MurH, Haskins
- 73 **Magazine Writing, Editing** (3 cr; prereq 15 or 18)
 - 1, VI MWF, 302MurH, Kildow
 - 2, VIII MWF, 302MurH, Hage
- 78 **Public Relations** (3 cr; prereq sr, 51, 55, 73; or 41, 55, 69)
 - I MWF, MurHAud, Emery
- 86 **Advertising Copy Writing** (3 cr; prereq 41 or 51, and 55, 65)
 - VII MWF, 311MurH
- 87 **Radio Advertising** (3 cr; prereq sr, 18, 120, cons instr; or 69, BA 88, cons instr)
 - I TTh, 1 hr ar, 302MurH
- 93 **Weekly Editorial Admin** (3 cr; prereq 51 or concur regis)
 - 9:30-11:00 TTh, MurHAud, Barnhart
- 104 **Adv Newspaper Advertising** (3 cr; prereq 51, 94, cons instr)
 - II MWF, MurHAud, Barnhart
- 106 **Critical Writing** (3 cr; prereq a sr col writing course, cons instr)
 - II TTh, 1 hr ar, 302MurH, Ford
- 111 **Int'l Communications** (3 cr; prereq* 51, hist or pol sci course in int'l relations)
 - IV MWF, 311MurH, Park
- 113 **Mass Communications** (3 cr; prereq* sr, jour maj)
 - II MWF, 311MurH, Nixon
- 130 **Communication Agencies, Public Opinion** (3 cr; prereq 15 cr soc studies)
 - III MWF, MurHAud, Casey
- 140 **Interpretation of Contemporary Affairs** (3 cr; prereq sr, 51, 15 cr soc studies)
 - Lect VI TTh, MurHAud, Staff
 - 1, VI TTh, VII T, 302MurH, Gerald
 - 2, VI TTh, VII T, 308MurH, Emery
 - 3, VI TTh, VII T, 311MurH, Park
- 210 **Research: Mass Communications Probs** (2 or 3 cr; prereq cons dir of school)
 - Ar, Jones

Winter and Spring Quarters

- 10w,s See 10f
- 11w See 11f II TTh, 1 hr ar
- 13w See 13f I-III TTh; VI-VIII TTh
- 14w,s **Newspaper Reporting** (3 cr; prereq see col bul) I-III MW(w); I-III TTh(s); VI-VIII MW(w); VI-VIII TTh(w)
- 15s See 15f I-III MW; VI-VIII MW; VI-VIII TTh
- 18w,s **Prin Advertising** (3 cr; prereq soph, 13 with C aver, Comp 27-28 or concur regis) I TTh, 1 hr ar(w); IV MWF(s)
- 19s See 19f I TTh, 1 hr ar

- 41w Editing for Nonmajors (3 cr; prereq jr, 11 or 13, SLA students with cons dept) Lect IV MW, lab I-II F; II-III T; IV-V F
- 51w,s See 51f Lect V T(w,s), lab I-II TTh (w,s); VI-VII TTh(w); VIII-IX MW(s)
- 52s See 51f (prereq 51, 55) Lect V T, lab III-IV MF; VI-VII WF; VIII-IX TTh
- 55w,s See 55f Lect V M(w,s); lab I-II MW(s); I-II TTh(w,s); III-IV MW(w); VI-VII TTh(w,s)
- 58w Adv Typography (2 cr; prereq 55, cons instr) Lect II MW, lab II-III F
- 59s See 59f
- 65s See 65f
- 66w,s See 66f
- 67w,s See 67f Lect VII WF, lab ar
- 68s Probs in Radio Writing (3 cr; prereq see col bul) VI MWF
- 73s See 73f I MWF; II TTh, 1 hr ar
- 74w See 73f (prereq 55, 73, cons instr) V-VI M, 1 hr ar
- 82s Supervision of School Publications (3 cr; prereq 41 or 51) VI MWF
- 86w,s See 86f
- 87w Radio Advertising (3 cr; prereq sr, 18, 120, cons instr; or 69, BA 88, cons instr) III MWF
- 88w Radio, Television Station Admin (3 cr; prereq* 120) I MWF
- 90s Mass Communications, the News (3 cr; no jour maj) III MWF
- 94w,s Newspaper Advertising (3 cr; prereq 51, 55; or 41, 55, cons instr) 9:30-11:00 TTh(w); VI TTh, 1 hr ar(s)
- 95s Circulation, Newspaper Mgt (3 cr; prereq 51) 9:30-11:00 TTh
- 101w,s Reporting Public Affairs (3 cr; prereq sr, 51) I TTh, 1 hr ar (w); III MWF(s)
- 103s Literary Aspects of Journalism (3 cr; prereq cons instr) IV MWF
- 104s See 104f
- 106s See 106f VI MWF
- 109w-110s History of Journalism (3 cr) I MWF (s); II MWF(w,s); VI MWF(w)
- 112w Comparative Foreign Journalism (3 cr; prereq* 111) II MWF
- 115w,s Communication Media Analysis (3 cr; prereq 51, cons instr; or Econ 5 or Psy 70, cons instr) I TTh, 1 hr ar(s); III TTh, 1 hr ar
- 118As Selected Topics: Adv Reporting of Public Affairs (3 cr; prereq sr, 101, cons instr) VI-IX MW
- 118Bs Selected Topics: Projects in Media Analysis (3 cr; prereq sr, 115, cons instr) VIII-IX TF
- 118Cw,s Selected Topics: Readings in Journalism (3 cr; prereq sr, jour maj with B aver, cons instr)
- 121w The Press in a Dynamic Society (3 cr; prereq* 15 or 18) IV MWF

- 131w See 130f (prereq 130)
- 141w See 140f (prereq 140)
- 142s Current Communications Probs (3 cr; prereq sr, 51) VI-VII TTh
- 150s Public Relations in Community Services (2 cr, §78; prereq sr, cons maj advis and instr) VIII-IX Th
- 177s Freedom of Press, Communications Law (3 cr; prereq* 51) IV MWF
- 205w Topics in Int'l News Communication (3 cr; prereq cons dir of school)
- 208s Communications Agencies as Social Institutions (3 cr; prereq cons advis)

LINGUISTICS

Chinese (CHIN)

Fall Quarter

- 1 Bgn Chinese (5 cr)
IV MTWThF, 304F, Mather
- 51 Interm Chinese (3 cr; prereq 3)
Ar, Mather
- 101 Adv Chinese (3 cr; prereq 53)
Ar, Mather

Winter and Spring Quarters

- 2w-3s See 1f (prereq 1)
- 52w-53s See 51f (prereq 51)
- 102w-103s See 101f (prereq 101)
- 110s Chinese Literature in Translation (3 cr; prereq 8 cr lit)

Japanese (JAP)

Fall Quarter

- 1 Bgn Japanese (5 cr)
V MTWThF, 307F, Brower
- 51 Interm Japanese (3 cr; prereq 3)
VIII MWF, 307F, Brower
- 56 Composition (2 cr; prereq 3)
II TTh, 307F, Brower
- 101 Adv Japanese (3 cr; prereq 53)
Ar, Brower
- 110 Japanese Literature in Translation (3 cr; prereq* soph, 6 cr lit)
VII MWF, 307F, Brower

Winter and Spring Quarters

- 2w-3s See 1f (prereq 1)
- 52w-53s See 51f (prereq 51)
- 57w-58s See 56f (prereq 56)
- 102w-103s See 101f (prereq 101)
- 111w See 110f

Linguistics (LING)**Fall Quarter**

- 131 Introd Sanskrit (2 cr; prereq* grad; 2 sr col courses in early Indo-European lang)
Ar, Swanson
- 151 Honors Course (1-3 cr; prereq cons instr)

Winter and Spring Quarters

- 132w See 131f (prereq 131)
-152w-153s See 151f

Russian (RUSS)**Fall Quarter**

- 1 Bgn Russian (5 cr)
—1, I MTWThF, 302F, Magner
—2, II MTWThF, 4F, Niemi
- 51 Interm Russian (3 cr; prereq 3)
VI MWF, 302F, Magner
- 56 Conversation (3 cr; prereq 3)
Ar, Blinoff
- 61 Composition (2 cr; prereq 3)
VI MW, 10F, Blinoff
- 71 Rapid Reading of Russian Literature (3 cr; prereq* 53)
VI MWF, 4F, Niemi
- 75 Russian Civilization (3 cr; prereq 10 cr hist or lit)
V MWF, 5F, Blinoff
- 101 Russian Literature in Translation (3 cr; prereq 8 cr lit)
V MWF, 302F, Niemi
- 131 19th Century Russian Poetry, Adv Interpretation: Pushkin to Tolstoy (3 cr; prereq* 73)
Ar, Niemi
- 125 History of Russian Language (3 cr; prereq 53)
Ar, Magner

Winter and Spring Quarters

- 2w-3s See 1f (prereq 1)
-52f-53s See 51f (prereq 51) VI MWF
-57w-58s See 56f (prereq 56)
-62w-63s See 61f (prereq 61)
-72w-73s See 71f (prereq 71)
-76w See 75f
-102w-103s See 101f (prereq 101)
-126w-127s See 125f (prereq 125)
-132w-133s See 131f (prereq 131)

Slavic (SLAV)**Fall Quarter**

- 1 Serbo-Croatian (3 cr)
Ar, Magner

Winter and Spring Quarters

- 2w-3s See 1f (prereq 1)

MATHEMATICS (MATH)**Fall Quarter**

- 1 Higher Algebra (5 cr; prereq see col bul)
—1, I MTWThF, 301F
—2, III MTWThF, 301F
—3, V MTWThF, 104F
—4, VI MTWThF, 104F
- 6 Trigonometry (5 cr, prereq plane geom, 1)
—1, II MTWThF, 109F
—2, VII MTWThF, 104F
- 7 College Algebra (5 cr, \$8 or 15; prereq 6 or HS trig with cons dept chrm after placement test)
—1, II MTWThF, 104F
—2, VI MTWThF, 105F
- 8 Commerce Algebra (5 cr, \$7 or 15; prereq 1)
IV MTWThF, 109F
- 15 Elem Mathematical Analysis (5 cr, \$7 or 8; prereq plane geom, 1 or HS alg)
—1, III MTWThF, 105F
—2, V MTWThF, 105F
- 30 Analytic Geometry (5 cr; prereq 6, 7 or 6, 8, or 15, 16)
—1, I MTWThF, 104F
—2, IV MTWThF, 104F
- 50 Calculus I (5 cr; prereq 30)
III MTWThF, 104F
- 51 Calculus II (5 cr; prereq 50)
I MTWThF, 102F
- 52 Interm Calculus (5 cr; prereq 51)
V MTWThF, 101F, Hatfield
- 60 Synthetic Metric Geometry (3 cr; prereq 30)
VI MWF, 102F, Carlson
- 106 Differential Equations (3 cr; prereq 51)
II MWF, 102F, Gibbens
- 121 Mathematical Theory of Statistics (3 cr; prereq 51)
IV MWF, 105F, Hart
- 136 Solid Analytic Geometry (3 cr; prereq 50 or concur regis)
III MWF, 101F, Olmsted
- 144 Fourier Series, Orthogonal Functions (3 cr; prereq 51)
IV TThS, 113F, Nering
- 157 Methods of Applied Mathematics (3 cr; prereq interm calculus)
II TThS, 101F, Geibaum
- 170 Introd Modern Algebra (3 cr; prereq* 51)
III TThS, 101F, Kalisch
- 203 Adv Topics in Mathematical Statistics (3 cr; prereq* 123, 5 cr of old course 107-108)
IV MWF, 113F, Donsker
- 206 Theory of Functions (3 cr; prereq* 5 cr 107-108)
II MWF, 101F, Loud
- 245 Introd Lebesgue Integrals (3 cr; prereq 208)
VII MTThF, 101F, Cameron

- 246 Introd Wiener Integrals (3 cr; prereq 208, cons instr)
 IV TTh, 1 hr ar, 105F, Cameron
 258 Theory of Probability (3 cr; prereq 245 or concur regis)
 VI MWF, 113F, Donsker

Winter and Spring Quarters

- 1w,s See 1f I MTWThF(w,s); V MTWThF(w,s); VI MTWThF(w)
 6w,s See 6f I MTWThF(s); III MTWThF(w); V MTWThF(s); VI MTWThF(w,s)
 7w,s See 7f II MTWThF(w); III MTWThF(s); IV MTWThF(s); VII MTWThF(w)
 8w,s See 8f I MTWThF(w); V MTWThF(s)
 15w-16s See 15f-16w I MTWThF; V MTWThF
 -16w See 15f (prereq 15) III MTWThF; V MTWThF
 20w,s Mathematics of Investment (5 cr; prereq 8, or 6, 7, or 15, 16) I MTWThF(s); IV MTWThF(w)
 30w,s See 30f II MTWThF(w,s); VI MTWThF(w); VII MTWThF(s)
 50w,s See 50f I MTWThF(w); II MTWThF(s); IV MTWThF(w); VI MTWThF(s)
 51w,s See 51f I MTWThF(s); III MTWThF(w); IV MTWThF(s)
 52w,s See 52f I MTWThF(w); III MTWThF(s)
 62w,s Introd Theory of Equations (3 cr; prereq 50 or concur regis, cons instr) II MWF(s); VI MWF(w) Carlson
 106s See 106f V MWF
 107w-108s Adv Calculus (3 cr; prereq 52 or 50, 51 with A grade in SLA, work in solid anal geom or cons instr) V MWF Hatfield
 109s Theory of Numbers (3 cr; prereq 51) VI MWF
 115w Differential Geometry (3 cr; prereq 136) II MWF Gibbens
 -122w-123s See 121f
 -145w-146s See 144f
 -158w-159s See 157f
 -171w-172s See 170f
 -204w-205s See 203f
 -207w-208s See 206f
 212w-213s Point Set Topology (3 cr; prereq 206) III MWF Olmsted
 247w Integration in Function Space (3 cr; prereq 245, cons instr) VII MWF Cameron
 257s Seminar: Integration in Function Space (3 cr; prereq 247) VII MWF
 -259w-260s See 258f

MUSIC (MUS)

Fall Quarter

- A Piano (no cr; prereq cons dir)
 D Voice (no cr; prereq cons dir)
 1 Fundamentals of Music (2 cr; for nonmusic maj)
 V MTWTh, 4ScH, Berryman

- 1T Music Theory (3 cr; prereq see col bul)
 -1, II MTWThF, 103ScH, Fetler
 -2, III MTWThF, 3ScH, George
 -3, VII MTWThF, 103ScH, Fetler
 3T Music Theory (3 cr; prereq 2T)
 V MTWThF, 3ScH, George
 4T Music Theory (4 cr; prereq 3T)
 -1, I MTWThF, 103ScH, Malcolm
 -2, III MTWThF, 103ScH, Malcolm
 -3, VI MTWThF, 103ScH, George
 6T Music Theory (4 cr; prereq 5T)
 V MTWThF, 103ScH, Malcolm
 10 Introd Music (4 cr)
 VI MTWThF, 4ScH
 11 Piano: Individual Lessons (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Kendall, Rymer, McConkie, Stephens
 11C Piano: Class Lessons (2 cr; prereq cons instr)
 -1, VI TTh, 204ScH, VIII Th, SchAud, McConkie
 -2, III TTh, 204ScH, VIII Th, SchAud, McConkie
 -3, II TTh, 208ScH, VIII Th, SchAud, Kendall
 -4, VI TTh, 208ScH, VIII Th, SchAud, Kendall
 12 Voice: Individual Lessons (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Hull, Schuessler
 12C Voice: Class Lessons (2 cr; prereq cons instr)
 -1, III MW, 205ScH, VIII Th, SchAud
 -2, IV MW, 205ScH, VIII Th, SchAud
 -3, VI MW, 205ScH, VIII Th, SchAud
 -4, VII MW, 205ScH, VIII Th, SchAud
 -5, III TTh, 205ScH, VIII Th, SchAud
 -6, IV TTh, 205ScH, VIII Th, SchAud
 -7, VI TTh, 205ScH, VIII Th, SchAud
 -8, VII TTh, 205ScH, VIII Th, SchAud
 -9, 6:20 TTh, 205ScH, VIII Th, SchAud
 13 Violin (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Cullen, Druian, Scheurer
 14 Viola (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Barton
 15 Cello, 2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Meltzer
 16 Double Bass (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Fitch
 17 Flute (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Winkler
 18 Oboe (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Angelucci
 19 Clarinet or Saxophone (2-4 cr; prereq entr exam, see col bul)
 VIII Th, SchAud, hr ar, Handlon, Thalín, Fitch

- 20 Bassoon (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Santucci
- 21 Trumpet (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, MacKay, Adelstein
- 22 French Horn (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Linder
- 23 Trombone (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, MacKay
- 24 Tuba (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, MacKay
- 25 Percussion (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar
- 26 Harp (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar
- 27 Organ (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Jennings, Berryman
- 31 Music Literature (2 cr)
II MWF, ScHAud, Ivory
- 34 History of Music (2 cr; prereq soph)
II MWF, 4ScH, II TTh, ScHAud, Downes
- 37 Keyboard Harmony (1 cr; prereq 3T)
IV MW, 3ScH, Jennings
- 40 Orchestra (1 cr; prereq cons dir)
—1, 7:30 p.m. T, NMA Stage
—2, VIII-IX F, 4NMA (for strings only)
- 43 University Chorus (1 cr, †43-44-45; prereq cons dir)
—1, IV MW, 4, 5NMA, 7:30 p.m. T, NHAud
—2, VIII MW, 5NMA, NHAud, 7:30 p.m. T, NHAud
- 43StP Farm Music Ensembles (1 cr)
4:30-5:30 TTh, 102Hr, Rymr
- 46 Concert Band (1 cr; prereq cons dir)
—1, IX MTTh, 4NMA, Prescott
—2, IX WThF, 5NMA, Glass
- 53 Romantic Movement (2 cr; prereq 35)
VII WF, 104ScH, Kendall
- 60 Instrumental Ensemble (2 cr)
VI MWF, 104ScH, Stephens
- 63 Vocal Ensemble (2 cr; prereq 6 cr in 12 or 12C)
VIII MWF, 103ScH, Hull
- 66 The Chamber Singers (2 cr; prereq cons instr)
VII MWF, NHAud, 4NMA
- 70 Normal Piano (2 cr; prereq 2 yrs piano)
I MWF, 104ScH, Kendall
- 76 Form, Analysis (3 cr; prereq 6T)
II MWF, 104ScH, Stephens
- 77 Composition (2 cr; prereq proficiency exam, cons instr)
VII-VIII W, 2ScH, George
- 80 Adv Normal Piano (2 cr; prereq sr, 72)
VIII-IX MW, 2, 3, 4ScH, Kendall
- 90 Adv Instrumental Ensemble (2 cr; prereq sr, 62)
VI MWF, 104ScH, Stephens
- 93 Improvisation (1 cr; prereq* 6T, 12 cr organ, 27)
II TTh, 206ScH, Berryman
- 97 Counterpoint (2 cr; prereq 6T)
IV MWF, 103ScH, Fetler
- 104 American Music (2 cr; prereq 36 or 9 cr Amer hist or Amer st)
III TTh, 104ScH, Oberg
- 121 Adv Harmony (2 cr; prereq 6T)
II TTh, 2ScH, George
- 124 History of Opera (3 cr; prereq* 9 cr music hist or art hist or theater hist or Europ hist from 1600)
VI-VII TTh, 104ScH, Downes
- 127 Composition (2 cr; prereq 99, 123)
Ar, Fetler
- 134 History of Church Music (2 cr; prereq* 34-35-36)
IX TTh, 4ScH, Berryman
- 141 Orchestration (2 cr; prereq 6T)
II WF, 3ScH
- 144 Bach Through Beethoven (3 cr; prereq 36)
III MWF, 104ScH, Downes
- 164 Music in the Baroque Era (2 cr; prereq 34-35-36)
II MWF, 2ScH, McConkie
- 197 Adv Counterpoint (2 cr; prereq 99)
VI TTh, 2ScH, Fetler
- 204 Applied Music (3 cr; prereq placement test)
- 209 Adv Topics in Musical Analysis (3 cr; prereq 76)
VII-VIII M, 104ScH, Oberg
- 212 Special Probs in Music (3-9 cr; prereq 202 or 211)
Ar, Oberg
- 227 Graduate Composition (3 cr; prereq see col bul)

Winter and Spring Quarters

- Bw-Cs See Af (prereq A)
-Ew-Fs See Df (prereq D)
1w,s See 1f
1Tw-2Ts See 1Tf I MTWThF
-2Tw-3Ts See 1Tf (prereq 1T)
-4Tw-5Ts See 3Tf (prereq 3T)
-5Tw-6Ts See 4Tf (prereq 4T)
10w,s See 10f
11w,s See 11f
11Cw,s See 11Cf
12w,s See 12f
12Cw,s See 12Cf
13w,s See 13f
14w,s See 14f
15w,s See 15f
16w,s See 16f
17w,s See 17f
18w,s See 18f
19w,s See 19f

- 20w,s See 20f
 21w,s See 21f
 22w,s See 22f
 23w,s See 23f
 24w,s See 24f
 25w,s See 25f
 26w,s See 26f
 27w,s See 27f
 -32w-33s See 31f
 -35w-36s See 34f
 -38w-39s See 37f (prereq 37)
 -41w-42s See 40f
 -44w-45s See 43f
 -44StPw-45StPs See 43StPf
 -47w-48s See 46f
 -54w-55s See 53f (prereq 53)
 -61w-62s See 60f (prereq 60)
 -64w-65s See 63f (prereq 63)
 -67w-68s See 66f (prereq 66)
 -71w-72s See 70f (prereq 70)
 -78w-79s See 77f (prereq 77)
 -81w-82s See 80f (prereq 80)
 -91w-92s See 90f (prereq 90)
 -94w-95s See 93f (prereq 93)
 -98w-99s See 97f (prereq 97)
 -105w-106s See 104f (prereq 104)
 -122w-123s See 121f (prereq 121)
 -125w-126s See 124f (prereq 124)
 -128w-129s See 127f (prereq 127)
 -135w-136s See 134f (prereq 134)
 -142w-143s See 141f (prereq 141)
 -145w-146s See 144f (prereq 144)
 -165w-166s See 164f (prereq 164)
 -198w-199s See 197f (prereq 197)
 204w,s See 204f
 -210w-211s See 209f
 212w,s See 212f
 -228w-229s See 227f

PHILOSOPHY (PHIL)

Fall Quarter

- 1 Probs of Philosophy** (5 cr, §1A; prereq* soph)
 -1, Lect I MWF, 202WeH, Terrell
 Quiz I TTh, 313JohH
 -2, Lect I MWF, 202WeH, Terrell
 Quiz II TTh, 313 JohH
 -3, Lect III MWF, 202WeH, Feigl
 Quiz III TTh, 307JohH
 -4, Lect III MWF, 202WeH, Feigl
 Quiz IV TTh, 309JohH
 -5, Lect VI MTWThF, 202WeH, Hospers
- 2 Logic** (5 cr, §2A; prereq* soph)
 IV MTWThF, 202WeH, Scriven
- 2A Sel Probs of Logic** (3 cr, §2; prereq* soph)
 VI MWF, 313JohH, Terrell
- 3 Ethics** (5 cr, §3A; prereq* soph)
 -1, II MTWThF, 314JohH, Raab
 -2, V MTWThF, 202WeH, Raab

- 10 Science, Religion (2 cr; prereq soph)
 III TTh, 202WeH, Holmer
- 50 Gen History of Philosophy (5 cr)
 II MTWThF, 202WeH, Shaw
- 81 Science, Civilization (3 cr; prereq* sr)
 II MWF, 313JohH, Scriven
- 101 Prin Philosophy (4 cr, §1, 2; prereq sr)
 IV MTWF, 313JohH, Terrell
- 106 Plato (3 cr; prereq* 50)
 VII MWF, 202WeH, Sellars
- 114 Introd American Philosophy (3 cr)
 VI MWF, 115JohH, Brodbeck
- 125 Rationalism: Descartes (2 cr; prereq 1 course from 50, 51, 52)
 IV MF, 105JohH, Shaw
- 130 Readings in Medieval Philosophy (3 cr; prereq* 51)
 Ar, Shaw
- 147 Elements of Symbolic Logic, Semantics (4 cr; prereq* 2)
 III MTThF, 314JohH, Brodbeck
- 159 Prin Esthetics (3 cr; prereq cons instr)
 III MWF, 105JohH, Hospers
- 170 Philosophy of History (3 cr; prereq 6 cr phil or 10 cr hist)
 VI MWF, 114JohH, Holmer
- 180 History of Religions (3 cr; prereq 6 cr)
 VII MWF, 115JohH, Holmer
- 191 Seminar: Philosophy (3 cr; prereq* 9 cr)
 Ar, Sellars, Feigl, Shaw, others
- 210 Seminar: Moral Philosophy (3 cr; prereq 164 or cons instr)
 VIII-IX W, 104WeH, Sellars
- 220 Seminar: Philosophical Analysis (3 cr; prereq* 143)
 VIII-IX T, 104WeH, Sellars
- 230 Adv History of Philosophy (3 cr; prereq see col bul)
 V-VI T, 307JohH, Hospers
- 233 Seminar: Philosophy of Religion (3 cr; prereq* 182)
 Ar, Holmer
- 244 Seminar: Philosophy of Psychology (3 cr; prereq cons instr)
 VIII-IX M, 104WeH, Feigl, Meehl
- 247 Seminar: Logic of Exact Sciences (3 cr; prereq cons instr)
 VIII-IX Th, 104WeH, Feigl

Winter and Spring Quarters

- 1w,s See 1f Lect II MTWThF(s); III MWF, quiz III TTh or IV TTh(s); IV MWF, quiz III TTh or IV TTh(w); V MTWThF(w)
- 1Aw Sel Probs of Philosophy (3 cr, §1; prereq* soph) VI MWF
- 2w,s See 2f Lect I MWF, quiz I TTh or II TTh(s); II MTWThF(w); III MTWThF(w); V MTWThF(s)
- 3w,s See 3f I MTWThF(w); III MTWThF(w); IV MTWThF(s)

- 4s Introd Philosophy of Art (4 cr; prereq Art 1 or Mus 10) III MTThF
 -51w-52s See 53f
 -82w-83s See 81f
 -107w See 106f
- 108s Aristotle (3 cr; prereq* 50 or 51 or 52) VII MWF
- 111Aw 18th Century Philosophy (3 cr) VI MWF
 112s Kant (3 cr; prereq* 52) IV MWF
- 113w Kierkegaard, Scandinavian Philosophy (3 cr; prereq* 50 or 51 or 52) VI MWF
- 114Aw American Philosophy since James (3 cr; prereq* 114) VI MWF
- 115s Contemporary Philosophy (3 cr; prereq* 52, cons instr) II MWF
- 115As 19th Century Thought (3 cr; prereq cons instr) VI MWF
- 117s Readings in Recent Philosophy (3 cr; prereq* 52) VI MWF
- 134w Hume (3 cr; prereq* 52) IV MWF
- 135w Philosophy of Modern Literature (3 cr) IV MWF
- 143w Theory of Knowledge (4 cr; prereq* 2) III MTThF
- 153s Philosophy of Science (4 cr; prereq* 2) III MTThF
- 155s Metaphysics (5 cr; prereq* 50 or 51 or 52) IV MTWF
- 160w See 159f (prereq 159)
- 164s Ethical Theory (3 cr; prereq* 50 or 51 or 52) III MWF
- 181w Psychology of Religion (3 cr; prereq 6 cr) VII MWF
- 182s Philosophy of Religion (3 cr; prereq 6 cr) VII MWF
- 192w-193s See 191f (prereq 191)
- 211w-212s See 210f
- 221w-222s See 220f
- 231w-232s See 230f
- 234w-235s See 233f
- 241w-242s Seminar: Philosophy of Physical Sciences (3 cr; prereq cons instr) VIII-IX Th
- 245w-246s See 244f
- 7 Gen Physics (5 cr; prereq regis in anal geom)
 Lect VI MTWF, VIII Th, 133Ph, Johnston
 Lab secs will be assigned during first 2 days of class
- 8 Gen Physics (5 cr; prereq 7, regis in diff calc)
 -1, Lect IV MTWThF, 166Ph, Valasek
 -2, Lect VI MTWThF, 166Ph, Van Patter
 Lab secs will be assigned during first 2 days of class
- 11 Gen Physics (5 cr; prereq concur regis MM 11)
 -1, I MTWThF, 150Ph, Buchta
 -2, VI MTWThF, 150Ph, Freier
 Lab secs will be assigned during first 2 days of class
- 50 Gen Physics (5 cr; prereq 9)
 II MTWThF, 166Ph, Collins
- 101 Theoretical Physics (5 cr; prereq 15 cr, Math 106 or concur regis)
 I MTWThF, 170Ph, Nier
- 107 Modern Physics (3 cr; prereq 15 cr, Math 51)
 VI MWF, 170Ph, Collins
- 114 Elem Physical Investigation (3 cr; prereq 15 cr, Math 51, cons dept chrm)
- 116 Elem Physical Investigation (3 cr; prereq 15 cr, Math 51, cons dept chrm)
- 118 Elem Physical Investigation (3 cr; prereq 15 cr, Math 51, cons dept chrm)
- 120 Atomic Physics (3 cr; prereq 9 cr, Math 51) VI-IX TTh, Ar, Blair
- 131 Geometrical Optics (3 cr; prereq 15 cr, Math 51)
 II TThS, 143Ph, Valasek
- 134 Experimental Optics (3 cr; prereq 15 cr)
 Lect VII T, 143Ph, Valasek
 Lab VII Th, VIII-IX TTh, 348Ph
- 144 Electricity Measurements (3 cr; prereq 15 cr, Math 51)
 III TThS, 170Ph, Blair
- 181 Atomistics, Elem Quantum Mechanics (3 cr; prereq* sr, 105, Math 107)
 IV MWF, 145Ph, Williams
- 191 Introd Mathematical Physics (3 cr; prereq sr, 105, 5 cr Math 107-108)
 III MWF, 145Ph, Freier

PHYSICS (PHYS)

Fall Quarter

- 1 Introd Physical Science (3 cr, t1-2; prereq HS alg, plane geom)
 III MWF, 150Ph, Wall
- 1a Introd Physical Science with Lab (4 cr, t1a-2a; prereq HS alg, plane geom)
 Lect III MWF, 150Ph, Wall
 Lab secs will be assigned during first 2 days of class
- 4 Gen Physics (5 cr; prereq see col bul)
 Lect I MTWThF, 133Ph, Tucker
 Lab secs will be assigned during first 2 days of class

Winter and Spring Quarters

- 2w See 1f (prereq 1)
- 2aw See 1af (prereq 1a)
- 3w Introd Physical Science (3 cr; prereq 2) III MWF
- 3aw Introd Physical Science with Lab (4 cr; prereq 2A) III MWF
- 5w-6s See 4f (prereq 4)
- 8w See 8f VI MTWF; VIII Th
- 9w,s See 8f (prereq 8) IV MTWThF(w); VI MTWThF(w); VI MTWF, VIII Th(s)
- 12w-13s See 11f (prereq 11)
- 103w-105s See 101f (prereq 101)

- 109w-111s See 107f (prereq 107)
 112s Modern Experimental Physics (3 cr; prereq* 120-121)
 114w,s-116w,s,-118w,s See 114f-116f-118f
 121w Exper Nuclear Physics I (3 cr; prereq 9, Math 51) VI-IX TTh
 122s Exper Nuclear Physics II (3 cr; prereq* 121, 146) VI-IX TTh
 133w Physical Optics (3 cr; prereq 15 cr, Math 51) II TThS
 134w Experimental Optics (3 cr; prereq 15 cr) VII-IX TTh
 135s Spectroscopy (3 cr; prereq 15 cr, Math 51)
 136w,s Spectrum Analysis (3 cr; prereq 15 cr)
 146w Vacuum Tubes, Associated Circuits (3 cr; prereq 144, cons instr)
 -183w-185s See 181f (prereq 181)
 -192w-193s See 191f (prereq 191)
 -205w-206s See 204f
 -226w-227s See 225f
 -229w-230s See 228f
 -232w-233s See 231f
 -253w-254s See 252f
 -256w-257s See 255f
 -259w-260s See 258f

POLITICAL SCIENCE (POL)

Fall Quarter

- A State in the Modern World (3 cr, †A-B, §9-10, or 15)
 III MWF, 55ForH, Lippincott
 1 American Govt, Politics (3 cr, †1-2, §5)
 IV MWF, 150Ph, Christensen
 5 American Govt, Politics (5 cr, §1-2)
 VI MTWThF, 155ForH, Naftalin
 25 World Politics (3 cr)
 VI MWF, NHAud, Mills
 51 Field Work in Govt, Politics (3 cr; prereq 9 cr)
 III-IV T, 1 hr ar, 75ForH, Naftalin
 80 Nat'l Govt in United States (3 cr, §1-2, 5)
 IV MWF, 120ForH, Warp
 91 Honors Work in Selected Fields (ar cr; prereq 18 cr, cons maj advis)
 101 Prin American Constitution I (3 cr; prereq 1-2 or 5)
 III MWF, 180ForH, Anderson
 120 Municipal Functions (3 cr; prereq 6 cr)
 II TThS, 185ForH, Ludwig
 123 City Planning (3 cr; prereq sr)
 III MWF, 305E, R T Jones, Anderson, Caplow, Filipetti, Vaile
 124 Recent Social Legislation (3 cr; prereq 6 cr)
 VII MWF, 180ForH, Christensen
 131 Public Admin (3 cr; prereq 6 cr)
 II MWF, 80ForH, Short
 137 American Political Parties (3 cr; prereq 6 cr or 12 cr soc sci)
 II MWF, 55ForH, Christensen

- 141 European Govts (3 cr, †141-142; prereq 6 cr or 12 cr soc sci)
 VI MWF, 120ForH, Turner
 145 Govt, Politics of Scandinavian Countries (3 cr; prereq* C)
 VI MWF, 12F
 149 Govt, Politics of British Empire: India, Tropical Colonies (3 cr; prereq* 6 cr)
 III MWF, 120ForH, Mills
 153 Japanese Govt, Politics (3 cr; prereq* 6 cr)
 IV MWF, 150ForH, Turner
 160 American Political Thought (3 cr; prereq* 6 cr or 12 cr soc sci)
 III TThS, 155ForH, Sibley
 164 Political Thought: Greece, Rome (3 cr; prereq* 6 cr or 12 cr soc sci)
 IV TThS, 185ForH, Sibley
 175 Conduct of American Foreign Relations (3 cr, †175-176; prereq 9 cr or Hist 93-94-95)
 III TThS, 85ForH, McLaughlin
 180 Int'l Law (3 cr, †180-181; prereq* 9 cr)
 I TThS, 85ForH, McLaughlin
 184 Int'l Organization I (3 cr; prereq* 6 cr)
 I MWF, 120ForH, Levi
 187 Probs of European Reconstruction (3 cr)
 IV-V M, 1 hr ar, 349, 356ForH, Levi
 210 Seminar: Public Admin (3 cr, †210-211-212; prereq cons staff)
 3:30-5:00 TTh, 13Lib, Warp, Short, Ludwig
 225 Readings in Classics of Politics (3 cr; prereq* 12 cr incl 6 cr pol theory)
 VIII-IX TTh, 359, 366ForH, Lippincott
 229 Scope, Methods of Political Science (3 cr; prereq* 12 cr)
 I MWF, 175ForH, Anderson
 238 Intl Law Diplomacy I (3 cr; prereq* 12 cr)
 VIII-IX F, 359, 366ForH, McLaughlin
 242 Colonization, Imperialism (3 cr; prereq* 196)
 IX-X W, 349, 356ForH, Mills
 245 Seminar: Far Eastern Govt, Politics (3 cr; prereq 153-154)
 VII-VIII W, 359, 366ForH, Quigley

Winter and Spring Quarters

- Aw-Bs See Af II MWF
 -Bw-Cs See Af (prereq A)
 1w-2s See 1f II TThS
 -2w-3s See 1f (prereq 1)
 5w,s See 5f
 25s See 25f
 -52w See 51f (prereq 51) III-IV T
 85s Probs of World Politics (3 cr; prereq* 25 or Hist 1-2-3) III MWF
 -92w-93s See 91f
 -102w-103s See 101f (prereq 101)
 108w Legislative Organization, Procedure (3 cr; prereq 6 cr) IV MWF
 116w-117s Local Govt (3 cr, †116-117; prereq* 9 cr) I MWF
 121w Municipal Admin (3 cr; prereq* 120) II TThS

- 122s Municipal Probs (3 cr; prereq* 121) II TThS
- 126w-127s Govt, Economic Order (3 cr; prereq 2 or 5) II TThS
- 129w Social Legislation, Institutions in Scandinavian Countries (3 cr; prereq* Soc 1) VI MWF
- 132w-133s See 131f (prereq 131)
- 138s American Political Campaigns, Elections (3 cr; prereq 6 cr pol or 12 cr soc sci) III TThS
- 142w See 141f (prereq 141)
- 143s Govt of USSR, Adjacent States (3 cr; prereq 6 cr) VI MWF
- 150w See 149f
- 154w Chinese Govt, Politics (3 cr; prereq* 6 cr) IV MWF
- 155w-156s Govt, Int'l Relations in Latin America (3 cr; prereq* 6 cr) II MWF
- 161w Probs of Democracy (3 cr; prereq* 6 cr; or 12 cr soc sci) III TThS
- 162s Recent Political Thought (3 cr, §Phil 70; prereq* 6 cr; or 12 cr soc sci) III TThS
- 165w See 164f
- 166s Political Thought: Early Modern (3 cr; prereq* 6 cr; 12 cr soc sci) IV TThS
- 167w,s-168w,s-169w,s Political Behavior (4½ cr) VI-VII TTh
- 176w-177s See 175f (prereq 175)
- 181w-182s See 180f (prereq 180)
- 185w-186s See 184f
- 194s Far East in Int'l Relations (3 cr; prereq* 6 cr) IV MWF
- 197w Mediterranean Area in World Affairs (3 cr; prereq 25 or Hist 125a-126a-127a) IV MWF
- 204w-205s Seminar: Public Law (3 cr, †204-205; prereq* 18 cr) 1:00-2:20 TTh
- 211w-212s See 210f
- 214w Seminar: Political Parties (3 cr; prereq* 12 cr) VIII-IX W
- 217w-218s Seminar: Comparative European Govt (3 cr; prereq* 12 cr) IV-V M
- 226w-227s See 225f
- 239w-240s See 238f
- 243w-244s See 242f
- 246w-247s See 245f
- 248w-249s Seminar: Int'l Organization (3 cr; prereq cons instr) IV-V F
- 4 Psychology Lab** (2 cr, †4-5; prereq 1-2 or concur regis)
- 1, I-II TTh, 211Psy, Tinker, others
- 2, V-VI TTh, 211Psy
- 3, VII-VIII TTh, 211Psy
- 4, V-VI MW, 211Psy
- 5, VII-VIII MW, 211Psy
- 6, III-IV MW, 211Psy
- 7, III-IV TS, 211Psy
- 70 Prin Psychological Measurement (3 cr; prereq 2, 5)
- VI MWF, 113JohH, Clark
- 90 Readings in Psychology (ar cr; prereq 2, 3 addtl cr, cons instr)
- 101 Experimental Psychology (3 cr, †101-102; prereq 2, 5 or equiv in another sci)
- Lect VII M, 109Psy, Tinker
- Lab VII-VIII WF
- 108 Systems of Psychology (3 cr; prereq sr, cons instr, adv work in psy)
- Ar, Elliott
- 125 Psychology of Individual Differences (3 cr; prereq sr, 2, 5 or 5 cr stat)
- 1, II MWF, 115Psy, Paterson
- 2, II MWF, 210P, Jenkins
- 127 Projects in Individual Differences (3 cr; prereq sr, 126)
- 128 Psychology of Learning (3 cr; prereq 9 cr) IV MWF, 109AH, Heron
- 135 Occupational Counseling (2 cr; prereq* sr, 9 cr)
- VIII-IX M, 115Psy
- 144 Abnormal Psychology (3 cr, †144-145; prereq 9 cr or 6 cr psy, Zool 3 or 12 cr soc sci)
- 1, IV TThS, 170Ph, Bird
- 2, VIII MWF, 166Ph, Rosen
- 151 Animal Psychology (3 cr; prereq 2, 5) VI MWF, 115Psy, Heron
- 156 Psychology of Advertising (3 cr; prereq 2, Econ 7)
- II MWF, NHAud, Longstaff
- 160 Psychology in Personnel Work (3 cr; prereq* 2, 5 or 3 cr stat, Econ 7)
- III MWF, 170Ph, Longstaff
- 165 Adv Gen Psychology (3 cr; prereq 2, 1 sr col course)
- VII MWF, 115Psy, MacCorquodale
- 171 Clinical Psychology (3 cr, †171-172; prereq sr, 125, 144, or EPsy 120 or 5 cr stat and 6 addtl cr psy or educ psy)
- VI MWF, 122JohH, Meehl
- 203 History of Psychology II: American (1 cr, †203-204; prereq cons instr)
- II S, 115Psy, Tinker
- 207 Group Dynamics (2 cr; prereq cons instr)
- Ar, Willerman
- 210 Research Probs (ar cr)
- 215 Scaling Techniques, Non-parametric Statistics (2 cr)
- Ar, Festinger
- 230 Field Work: Psychometrics, Applied Psychology (ar cr; prereq cons instr)

PSYCHOLOGY (PSY)

Fall Quarter

- A Elem Psychology (5 cr, §1-2, GC 41; prereq see col bul)
- 11:30-12:50 MWF, NHAud, Jenkins
- 1 Gen Psychology (3 cr, †1-2, §A or GC 41; prereq soph)
- 1, III MWF, BuAud, Bird
- 2, V MWF, BuAud, Elliott, MacCorquodale

- 235 Clinical Practice in Student Counseling Bureau (ar cr; prereq cons instr)
Ar, Berdie
- 240 Seminar: Student Personnel Work (1 cr; prereq cons instr)
Ar, Williamson
- 243 Experimental Psychodynamics (3 cr; prereq 128, 145, cons instr)
Ar, Russel
- 250 Topics in Psychology (ar cr)
- 253 Clinical Use of Projective Techniques (1 cr)
Ar, Hales
- 260 Seminar: Applications of Psychological Methods to Study of Psychiatry (1 cr; prereq cons instr)
Ar, Hathaway
- 270 Adv Psychological Measurement (3 cr)
Ar, Clark
- 271 Seminar: Recent Literature of Psychology (1 cr; prereq cons instr)
Ar, MacCorquodale
- 280 Psychology for Fellows in Psychiatry or Neurology (1 cr)
Ar, Meehl, others
- 290 Introduction to Projective Techniques (3 cr; prereq 145, 172)
VIII-IX T, 115Psy, Rosen
- 295 Seminar: Individual Differences, Applied Psychology (1 cr; prereq cons instr)
Ar, Paterson

Winter and Spring Quarters

- As See Af
- 1w-2s See 1f II MWF; VIII MWF
- 1s-2s See 1f-2w (6 cr; prereq soph) IV MTWThFS
- 2w See 1f (prereq 1)
- 3s Psychology Applied to Daily Life (3 cr; prereq 2) III MWF
- 4w-5s See 4f I-II MW; IX-X TTh
- 4s-5s See 4f-5w (4 cr; prereq 2 or concur regis) V-VI MTThF; VII-VIII MTThF; I-II TThFS
- 5w See 4f (prereq 4)
- 52s Genetic Psychology (3 cr; prereq 2) IV MWF
- 55s Psychology of Sensation (3 cr; prereq 2) IV MWF
- 70s See 70f
- 86s Biographical Psychology (3 cr; prereq sr, 12 cr) III MWF
- 91w-92s See 90f
- 102w-103s See 101f (prereq 101)
- 114w Human Behavior (3 cr; prereq sr, 2; 5 or Zool 3, or Phil 1) II TThS
- 118s Psychology of Language (3 cr) VI MWF
- 125s-126s See 125f-126w (6 cr) II MTWThFS
- 126w See 125f (prereq 125)
- 127w,s See 127f
- 129w See 128f (prereq 128)
- 130w,s Vocational, Occupational Psychology (3 cr; prereq 9 cr) Lect IV TTh (w,s); lab V-VI W or VII-VIII W(s); V-VI F or VII-VIII F(w)

- 136w-137s See 135f
- 140w Social Psychology (3 cr; prereq 2, 5, 9 cr soc sci) II TThS
- 145w See 144f (prereq 144)
- 147s Political Psychology (2 cr; prereq 2, 5, 9 cr soc sci) III TThS
- 148w Physiological Psychology (3 cr; prereq* 2, 5 or Zool 3) IV MWF
- 152w-153s Individual Investigations in Animal Psychology (ar cr; prereq 151)
- 155s Industrial Psychology (3 cr; prereq 1-2, Math 15-16, or 10 cr stat) V MWF
- 156w See 156f VII MWF
- 160w See 160f
- 167w Techniques of Public Opinion Analysis (3 cr; prereq sr, 140 or 147; or grad, course in stat) VII MWF
- 168w Research Project in Public Opinion Analysis (3 cr; prereq sr, 167)
- 172w See 171f (prereq 171)
- 204w-205s See 203f
- 208w-209s See 207f
- 211w-212s See 210f
- 219s Psychology of Personality (3 cr; prereq* abnor psy, maj in psy) IV MWF
- 231w-232s See 230f
- 236w-237s See 235f
- 241w-242s See 240f
- 244w See 243f
- 246s Adv Abnormal Psychology (3 cr; prereq 145, 171) IV MWF
- 251w-252s See 250f
- 254w See 253f
- 261w-262s See 260f
- 270s See 270f
- 272w-273s See 271f
- 274s Preclinical Practicum in Clinical Psychology (2 cr; prereq maj clinical psy, 172, 291 or concur regis)
- 281w-282s See 280f
- 286s Adv Biographical Psychology (3 cr) III MWF
- 291w Practicum in Interpretation of Projective Techniques (3 cr; prereq 290, cons instr) VIII-IX T
- 292w-293s Theoretical Probs of Group Functioning (2 cr; prereq cons instr)
- 296w-297s See 295f
- 299w Tabulating Equipment Lab (1 cr; prereq PH 110, 111)

ROMANCE LANGUAGES

French (FREN)

Fall Quarter

- 1 Bgn French (5 cr, §1a)
- 1, I MTWThF, 201F, 202F
- 2, IV MTWThF, 226F, 5F
- 3, VI MTWThF, 201F

- 1a Bgn French: Conversational Section** (5 cr, §1)
Dem III MTWThF, 227F, Butler
—1, Lab VI MTWThF, 103F, 307F, 8F
—2, Lab VII MTWThF, 10F
- 2 Bgn French** (5 cr, §2a; prereq 1, or 1 yr HS Fren)
III MTWThF, 202F, 5F
- 3 Interm French** (5 cr, §3a; prereq 2, or 2 yrs HS Fren)
—1, III MTWThF, 201F, 10F
—2, VII MTWThF, 201F
- 4 Interm French** (5 cr; prereq 3 or 3a or 3 yrs HS Fren)
II MTWThF, 201F, 4F
- 20 Oral, Written French** (5 cr; prereq* 4 or 4 yrs HS Fren)
VI MTWThF, 202F, Sullivan
- 50 Pronunciation** (3 cr; prereq 4)
II TTh, 1 hr ar, 203F, Sullivan
- 53 Composition** (3 cr; prereq 4)
VI MWF, 203F, 208F
- 63 Adv Composition** (3 cr; prereq 53 or 20 with grade B)
VII MWF, 103F, Blinoff
- 70 Survey of French Literature** (3 cr, §73-74; prereq 4)
IV MWF, 201F, Clefthon
- 75 French Civilization, Culture** (3 cr; prereq 4)
III MWF, 6F, Blinoff
- 103 Syntax, Composition** (1 cr; prereq 63 or concur regis)
VI F, 108F, Barton
- 110 19th Century Prose** (3 cr; prereq 72 or 74)
II MWF, 203F, Barton
- 115 17th Century Literature** (3 cr; prereq 72 or 74)
IV MWF, 4F, Virtanen
- 118 18th Century Literature** (3 cr; prereq 72 or 74)
IV TTh, 1 hr ar, 201F, Clefthon
- 132 Baudelaire** (3 cr; prereq 72 or 74)
VII MWF, 203F, Clefthon
- 158 Main Currents in Contemporary French Literature** (3 cr; prereq 72 or 74)
4 to 5:30 MW, 301Lib, Virtanen
- 171 History of French Language** (1 cr, †171-172-173; prereq* 1 yr Latin)
VIII Th, 307F, Brackney
- 201 Old French Phonology, Morphology** (2 cr)
VIII-IX T, 307F, Brackney
- 204 Readings in Old French Literature** (2 cr)
Ar, Brackney
- 207 Old Provençal** (2 cr)
Ar, Brackney
- 225 Seminar: French Romanticism** (2 cr)
Ar, Virtanen

Winter and Spring Quarters

- 1w-2s See 1f III MTWThF; VII MTWThF
1s See 1f II MTWThF; VII MTWThF

- 2w See 1f (prereq 1)
-2aw See 1af prereq 1a)
3w,s See 3f I MTWThF(s); III MTWThF(w); IV MTWThF(s); VI MTWThF(s)
3as Interm French—Conversational Section (5 cr, §3, prereq 2a) Dem III MTWThF, lab VI MTWThF or VII MTWThF
-4w,s See 4f III MTWThF(w,s); VII MTWThF(w)
20s See 20f
50w See 50f
52s Pronunciation, Diction (1-2 cr; prereq 4, cand for Fren play)
54w-55s Conversation (3 cr; prereq 53 or 20) VI MWF
64w-65s Adv Conversation (3 cr; prereq 63) VII MWF
-71w-72s See 70f (prereq 70)
73w-74s Survey of French Literature (5 cr, §70-71-72; prereq 4) III MTWThF
-76w-77s See 75f (prereq 75)
-104w-105s See 103f (prereq 103)
107s Cours de Style (3 cr; prereq* 64)
111w 19th Century French Drama (3 cr; prereq 72 or 74) II MWF
112s 19th Century Poetry (3 cr; prereq 72 or 74) II MWF
-116w-117s See 115f (prereq 115)
-119w-120s See 118f
156s Realistic Novel (3 cr; prereq 72 or 74) VIII MWF
-159w-160s See 158f
-172w-173s See 171f (prereq 171)
-202w-203s See 201f
-205w-206s See 204f
-208w-209s See 207f
-226w-227s See 225f

Italian (ITAL)

Fall Quarter

- 1 Bgn Italian (4 cr, §5)
IV MTWF, 307F, Nissen
4 Interm Italian (4 cr; prereq 3)
II MTWF, 302F, Nissen
69 Survey of Italian Literature I (3 cr; prereq 3 or 4; students bgn 1 or 2 in sr col, cons instr)
III TTh, II Th, 302F, Nissen
159 Dante (3 cr; prereq one course above 50)
III MWF, 302F, Nissen

Winter and Spring Quarters

- 2w See 1f (prereq 1)
3s Interm Italian (4 cr; prereq 2 with grade C) IV MTWF
5w Reading Knowledge of Italian (5 cr, †1; prereq knowl Fren, Lat or Span) II MTWThF
-70w See 69f

- 73s Boccaccio (3 cr; prereq 3 or 4; students bgn 1 or 2 in sr col, cons instr) II-III Th, III T
 -160w See 159f (prereq 159)
 164s Dante in English (3 cr; prereq cons instr) III MWF

Portuguese (PORT)**Fall Quarter**

- 1 Bgn Portuguese (5 cr)
 VII TWThF, 302F, Luckey

Winter and Spring Quarters

- 2w See 1f (prereq 1)
 3s Interm Portuguese (5 cr; prereq 2) VII MTWThF
 70w-71s Brazilian Literature, Culture in English (3 cr; prereq soph with C aver, 9 cr in any lit)

Spanish (SPAN)**Fall Quarter**

- 1 Bgn Spanish (5 cr, §1a)
 -1, I MTWThF, 226F, 227F
 -2, IV MTWThF, 202F
 -3, VI MTWThF, 226F
 1a Bgn Spanish: Conversational Section (5 cr, §1)
 Dem II MTWThF, 227F, Cuneo
 Lab I MTWThF, 203F
 2 Bgn Spanish (5 cr, §2a; prereq 1 or 1 yr HS Span)
 III MTWThF, 226F
 3 Interm Spanish (5 cr, §3a; prereq 2 or 2 yrs HS Span)
 III MTWThF, 3F
 4 Interm Spanish (5 cr; prereq 3 or 3a or 3 yrs HS Span)
 II MTWThF, 202F
 53 Composition (3 cr; prereq 4)
 III MWF, 307F, Irving
 60 Adv Composition (3 cr; prereq 53 or 20 with grade B)
 II MWF, 307F, Floripe
 65 Literature of Spain (3 cr, §68-69; prereq 4)
 IV MWF, 108F, Grismer
 70 Latin-American Civilization, Culture (3 cr; prereq* 5 cr above 4)
 III TTh, 1 hr ar, 203F, Cuneo
 74 Literature of Spanish America (3 cr; prereq 4)
 II MWF, 226F, Irving
 90 Spanish Civilization, Culture (3 cr; prereq 4)
 III MWF, 203F, Pattison
 103 Syntax, Composition (1 cr; prereq 60 or concur regis)
 IV T, 203F, Irving

- 110 19th Century Literature (3 cr; prereq 67 or 69)
 IV MWF, 203F, Pattison
 140 Contemporary Latin-American Literature (3 cr; prereq survey lit of Spain or Lat Amer)
 VIII MWF, 302F, Floripe
 155 16th Century Literature (3 cr; prereq 67 or 69)
 VII MWF, 108F, Grismer
 230 Research Methods, Materials (1 cr)
 II S, 203F, Grismer, staff
 241 Old Spanish Philology (2 cr)
 III-IV S, 203F, Grismer
 247 Hispano-Arabic Culture (2 cr)
 IX-X M, 203F, Irving
 250 Spanish Seminar (2 cr)
 IX-X W, 203F, Pattison
 253 Seminar: Latin-American Literature (2 cr)
 IX-X F, 203F, Floripe

Winter and Spring Quarters

- 1w-2s See 1f III MTWThF; VII MTWThF
 1s See 1f (II MTWThF; VII MTWThF)
 -2w See 1f (prereq 1)
 -2aw See 1af (prereq 1a)
 3w,s See 3f I MTWThF(s); II MTWThF(w); IV MTWThF(s)
 3as Interm Spanish: Conversational Section (5 cr, §3; prereq 2a) Dem II MTWThF, lab I MTWThF
 4w,s See 4f II MTWThF(s); III MTWThF(w)
 20w,s Oral, Written Spanish (5 cr; prereq* 4 or 4 yrs HS Span) III MTWThF(s); VII MTWThF(w)
 52w Pronunciation, Diction (1-2 cr; prereq* 4, cand for Span play)
 54w-55s Conversation (3 cr; prereq 53 or 20) III MWF
 56s Phonetics, Diction (3 cr; prereq 53 or 20)
 Lect IV TTh, lab VII TTh
 57w,s Commercial Spanish (5 cr; prereq 53 or 20) VI MTWThF
 61w-62s Adv Conversation (3 cr; prereq 60) II MWF
 -66w-67s See 65f (prereq 65)
 68w-69s Survey of Literature of Spain (5 cr, §65-66-67; prereq 4) VI MTWThF
 -71w-72s See 70f (prereq 70)
 -75w-76s See 74f (prereq 74)
 -91w-92s See 90f (prereq 90)
 -104w-105s See 103f (prereq 103)
 -111w-112s See 110f (prereq 110)
 -141w-142s See 140f (prereq 140)
 -156w-157s See 155f (prereq 155)
 -231w-232s See 230f
 -242w-243s See 241f
 -248w-249s See 247f
 -251w-252s See 250f
 -254w-255s See 253f

SCANDINAVIAN (SCAN)

Fall Quarter

- 1 Bgn Norwegian (5 cr)
VI MTWThF, 11F, Nelson
- 4 Adv Norwegian (3 cr; prereq 3)
VII MWF, 12F, Nelson
- 7 Bgn Swedish (5 cr)
II MTWThF, 12F, Lorenzen
- 10 Adv Swedish (3 cr; prereq 9)
III MWF, 15TTSF, Lorenzen
- 171 Ibsen: Bgn of Modern Drama (3 cr; prereq 6 or 12, or 8 cr lit, no knowl Scan lang)
IV MWF, 12F, Gustafson
- 191 Readings in Scandinavian Literatures (3 cr; prereq 6 or 12)
Ar, Gustafson
- 218 Studies in Late 19th Century Scandinavian Literature (3 cr)
Ar, Gustafson
- 221 Dramatic Interpretative Probs in Strindberg (3 cr)
Ar, Gustafson

Winter and Spring Quarters

- 2w See 1f (prereq 1)
- 3s Interm Norwegian (5 cr; prereq 2)
VI MTWThF
- 5w-6s See 4f (prereq 4)
- 8w See 7f (prereq 7)
- 9s Interm Swedish (5 cr; prereq 8) II MTW-ThF
- 11w-12s See 10f (prereq 10)
- 51w 19th Century Literature (2 cr; prereq 6 or 12, or 8 cr lit, no knowl Scan lang) V MWF
- 52s Contemporary Literature (2 cr; prereq 6 or 12, or 8 cr lit, no knowl Scan lang) V MWF
- 61s Norwegian Conversation (3 cr; prereq 3)
- 71s Swedish Conversation (3 cr; prereq 12)
- 161w-162s Scandinavian Novel I (3 cr; prereq 6 or 12, or 8 cr lit, no knowl Scan lang)
- 172w-173s See 171f
- 192w-193s See 191f (prereq 191)
- 219w-220s See 218f
- 222w-223s See 221f

SOCIAL WORK (SW)

Fall Quarter

- 205 Topics in Social Work (ar cr)
- 210 Initial Field Training in Social Work (ar cr; prereq 220 or 282A, concur regis)
- 215 Adv Field Training in Social Work (ar cr; prereq 221 or 282B)
- 219 Seminar: Field Training Supervisors (ar cr; prereq superv of students in field work)
- 220 Case Work I (3 cr; prereq concur regis 210)
-1, II TThS, 175ForH, Whitmore
-2, III TThS, 175ForH, Whitmore
-3, III TThS, 467ForH

- 222 Adv Case Work (2 cr; prereq 221)
-1, III-IV T, 457ForH, Boehm
-2, III-IV Th, 457ForH, Mueller
- 225 Seminar: Family Case Work (ar cr; prereq* 221)
I-II Th, 467ForH, Boehm
- 227 Seminar: Case Work in Psychiatric Setting (ar cr; prereq 221, concur regis 215-216-217)
I-II Th, 457ForH
- 236 Personality Development as It Affects Social Work (3 cr; prereq 220 or concur regis)
VI-VII T, VII Th, 120ForH, Mueller, others
- 240 Dynamics of Human Behavior Based on Psychoanalytic Theory (2 cr; prereq 235)
IX-X Th, 115ForH
- 259 Seminar: Medical Social Work (ar cr; prereq 222 or concur regis)
I-II T, 467ForH, Mueller
- 266 Seminar: Child Welfare (ar cr)
VI-VII T, 467ForH, Guilford
- 267 Public Welfare I (3 cr)
I TThS, 115ForH, Guilford
- 269 Seminar: Public Welfare Admin (ar cr; prereq 268)
VII-VIII Th, 457ForH, Stinson
- 279 Seminar: Admin, Community Organization (ar cr; prereq 275, 280)
VIII-IX M, 467ForH, Kidneigh
- 282A Prin Group Work I (3 cr; prereq SW major)
IV-V TTh, 115ForH, Konopka
- 284 Use of Program in Groups II (1 cr; prereq 282A)
VI-VII Th, 467ForH, Pernell
- 287 Supervision, Admin in Group Work I (2 cr; prereq 284, 286)
I-II T, 457ForH, Pernell
- 289 Seminar: Group Work (ar cr)
I-II Th, 447ForH, Konopka
- 293 Special Studies in Social Work (ar cr)
- 300 Gen Seminar in Social Work (ar cr)
VIII-X W, 467ForH, Kidneigh, Boehm

Winter and Spring Quarters

- 206w-207s See 205f
- 209w,s Seminar: Social Agencies, Institutions (ar cr)
- 210s See 210f V TThS
- 211w-212s See 210f
- 216w-217s See 215f
- 219w,s See 219f
- 221w,s Case Work II (2 cr; prereq 211, 236 or concur regis) III-IV T; III-IV Th
- 222w See 222f
- 225w,s See 225f
- 227w See 227f
- 235s Introd Psychiatry (2 cr) VII-VIII Th
- 239s Seminar: Psychiatric Social Work (2 cr; prereq 230, 235, 236) IX-X Th
- 250w Medical Information for Social Workers (3 cr; prereq PH 50 or 51) VII T; VIII-IX Th
- 259w,s See 259f

- 260s The Child, the State (3 cr; prereq 200)
IV TThS
- 262s Prin School Social Work (2 cr; prereq 221) IX-X T
- 266w,s See 266f
- 268w See 267f (prereq 267) I TTh
- 269w,s See 269f
- 275s Prin Admin Applied to Social Work (3 cr)
I TThS
- 280s Community Organization (2 cr; prereq* 220, 282A) II-III S
- 282As See 282Af IV-V TTh
- 282Bw Prin Group Work II (2 cr; prereq 282A, 211, 236 or concur regis) III-IV T
- 283w Use of Program in Groups I (2 cr; prereq 282A) III-IV Th
- 285s Group Work III (2 cr; prereq 282B) II-III T
- 286w Group Work IV (2 cr; prereq 282A, 230, 251 or 261) VI-VII Th
- 288w See 287f
- 289w,s See 289f
- 293s See 293f III Th
- 299w,s Seminar: Recent Research in Social Work (ar cr)
- 300w,s See 300f VIII-IX W
- 106 City Planning (3 cr; prereq sr)
III MWF, 305E, R T Jones, W Anderson, Vaile, Caplow
- 120 Social Psychology (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
I TThS, 120ForH, Rose
- 123 Intergroup Relations (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
III TThS, 180ForH, Rose
- 141 The Family (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil or psy)
IV TThS, 120ForH, A Johnson
- 160 Rural Community Organization (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
I MWF, 80ForH, Nelson
- 170 Analytical Social Theory (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 20ForH, Martindale
- 182 Statistical Methods (3 cr; prereq 45)
II TThS, 155ForH, Chapin
- 200 Seminar: Research Probs in Criminology (ar cr)
VIII-IX W, 448ForH, Vold
- 201 Seminar: Social Psychology (ar cr)
VIII-IX T, 448ForH, Rose
- 202 Seminar: Research in Urban Sociology (ar cr)
VI-VII T, 448ForH, Caplow
- 203 Seminar: Social Theory (ar cr)
VI-VII W, 448ForH, Martindale
- 206 Seminar: Statistical Theory, Relation to Social Theory, Practice (ar cr)
VIII-IX F, 448ForH, Chapin
- 215 Seminar: Rural Social Policy (ar cr)
VI-VII Th, 448ForH, Nelson
- 238 Prin Sociology (3 cr, †238-239)
VIII-IX M, 448ForH, Monachesi
- 240 Gen Seminar (ar cr)

SOCIOLOGY (SOC)

Fall Quarter

- 1 Introd Sociology (3 cr)
II MWF, 06Bo, Mouratides
- 1A Introd Sociology (3 cr, for AFHE and VM students)
III TThS, 302Hr, Taves
- 2 Intern Sociology (3 cr)
I MWF, 20ForH, C Johnson
- 14A Rural Sociology (3 cr; prereq 1 or 1A, for AFHE and VM students)
I MWF, 102Hr, Taves
- 45 Social Statistics (5 cr)
Lect IV MWF, 85ForH, A Johnson
—1, VI-VII MW, 85ForH
—2, VI-VII TTh, 85ForH
- 49 Social Probs (3 cr)
II MWF, 133Ph, Martindale
- 50 Areas of Social Work (5 cr; prereq 49)
III MTWThF, 80ForH, Cohn
- 53 Elements of Criminology (3 cr; prereq 1 or 1A)
II MWF, 120ForH, Vold
- 91 Case Method: Study of Human Probs (3 cr; prereq 50 or 51, or cons maj advis)
IV TThS, 155ForH, Cohn
- 97 Tutorial, Honors Work: Selected Fields (ar cr; prereq cons maj advis)
- 101 Criminal Theories (3 cr; prereq* 1, 53, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 140ForH, Vold
- 103 Juvenile Courts, Probation (3 cr; prereq 53)
II TThS, 120ForH, Monachesi

Winter and Spring Quarters

- 1w,s See 1f
- 1Aw,s See 1Af I TThS(s); III TThS(w)
- 2w,s See 2f
- 14w,s Rural Sociology (3 cr) IV MWF
- 14Aw See 14Af IV TThS
- 45w,s See 45f
- 49w,s See 49f
- 50w See 50f
- 53w,s See 53f
- 91s See 91f IV MWF; IV TThS
- 98w-99s See 97f
- 100s Contemporary Penology (3 cr; prereq* 1, 53, 15 cr soc sci, CW, educ, phil or psy)
III MWF
- 104w Police Probs, Practices in United States (3 cr; prereq* 1, 53, 15 cr soc sci, CW, educ, phil or psy) VII MWF
- 111w Population Trends (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil or psy) VI MWF
- 112s World Population Probs (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil or psy) III MWF

- 117s Scandinavian Folk Movements (3 cr; prereq* 1) VII MWF
- 121w Adv Social Psychology (3 cr; prereq 120) III TThS
- 122w Sociology of Conflict (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil or psy) IV MWF
- 123s See 123f
- 140w,s Social Organization (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil or psy) II TThS
- 141w,s See 141f
- 144w Social Stratification (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy) III MWF
- 145s Urban Sociology (3 cr, §old 7 or 118; prereq 1, 15 cr soc sci) II MWF
- 146w Industrial, Occupational Sociology (3 cr; prereq 1, 15 cr soc, psy, pol, or econ) VI MWF
- 161s Rural Community Analysis (3 cr; prereq sr, 1, 15 cr soc sci, cons instr) VI T, VI-VII Th
- 162w,s Rural Social Institutions (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy) I MWF
- 171w Social Life, Cultural Change (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil or psy) IV MWF
- 172s Backgrounds of Modern Social Thought (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil or psy) IV MWF
- 180w Methods of Social Research (3 cr; prereq 45) II TThS
- 183s Probs in Social Measurement (3 cr; prereq 45 or 182) III TThS
- 200Aw,s Seminar: Research Probs in Social Conflict (ar cr) VIII-IX W
- 201w,s See 201f
- 202w,s See 202f
- 204w-205s See 203f
- 207w-208s See 206f
- 216w Seminar: Rural Community (ar cr) VI-VII Th
- 217s Seminar: Rural Social Theory (ar cr) VI-VII Th
- 234s Seminar: Juvenile Delinquency, Treatment (ar cr) VIII-IX M
- 239w See 238f (prereq 238)
- 240w,s See 240f
- 2 Fundamentals of Speech** (3 cr, §1-2, §5; prereq 1)
III MWF, 311F, Gilkinson, Smith, others
- 3 Fundamentals of Speech** (3 cr; prereq* 2)
II MWF, 311F, Gilkinson, Smith, others
- 5 Fundamentals of Speech** (5 cr, §1-2; prereq* soph)
-1, III MTWThF, 311½F, Gilkinson, Smith, and others
-2, IV MTWThF, 311½F
-3, VI MTWThF, 311½
- 9 Freshman Discussion, Debate** (1 cr; prereq by petition, fr with C aver)
Ar, Bystrom
- 31 Introd Theater** (3 cr; prereq 2 or 5 or concur regis)
II MWF, 19ScH, Whiting
- 32 Bgn Acting** (3 cr; prereq 31)
II TThS, 19ScH, Graham
- 34 Stagecraft** (3 cr; prereq 31)
II T, I-II ThS, 302NH, Walker
- 55 Speech Writing, Platform Speaking** (3 cr; prereq 2 or 5)
III MWF, 4F, Gilkinson
- 61 Personal Development Through Speech** (3 cr; prereq 2 or 5, Psy 2)
III MWF, 308F, Bryngelson
- 65 Eadlo, Television Speech** (3 cr; prereq 2 or 5)
II MWF, 302MurH, Ziebarth
- 66 Radio Drama** (3 cr; prereq 3 or 6; 65 adv)
IV MWF, 302MurH, Morgan
- 67 Phonetics** (3 cr; prereq 2 or 5)
I MWF, 306F, Fletcher
- 71 Play Production** (3 cr; prereq 32)
IV MWF, 302NH, Graham
- 78 Adv Acting** (3 cr; prereq 32)
II MWF, 302NH, Graham
- 81 Interpretative Reading** (3 cr; prereq 2 or 5)
-1, IV MWF, 308F, Thompson
-2, VI MWF, 308F, Corrigan
- 83 Interpretative Reading** (3 cr; prereq 82)
VII MWF, 308F, Corrigan
- 93 Stage Costuming** (3 cr, §34, 73, 113; prereq 31)
III TThS, IV TS, 302NH, Moulton
- 101 Argumentation, Persuasion** (3 cr; prereq 2 or 5, Psy 2, 10 cr soc sci)
-1, III MWF, 306F, Howell
-2, VI MWF, 306F, Howell
- 106 Discussion** (3 cr; prereq 3 or 6)
VII MWF, 304F, Howell
- 111 Stage Direction** (3 cr; prereq sr, 33, 34, 91-92-93 cons instr)
III MWF, 19ScH, Whiting
- 115 Playwriting, Production** (3 cr; prereq* sr, 33)
II MWF, 109Psy, Thompson
- 119 Introd Speech Correction** (3 cr; prereq 2 or 5)
II TThS, 306F, Henrikson
- 122 Introd to Research** (3 cr; prereq 2 or 5, Psy 2)
II TThS, 308F, Gilkinson

SPEECH AND THEATER ARTS (SPCH)

Fall Quarter

- 1 Fundamentals of Speech** (3 cr, §1-2, §5; prereq* soph)
-1, I MWF, 311½F, Gilkinson, Smith, and others
-2, II MWF, 311½F
-3, III MWF, 307 MNH
-4, IV MWF, 311F
-5, VI MWF, 311F
-6, VII MWF, 311F

- 141 Anatomy, Physiology of the Voice Mechanism (3 cr; prereq 2 or 5, 67; Psy 2, 5) VII MWF, 306F, Fletcher
- 152 Hearing Disorders (3 cr; prereq* 2 or 5, 61, 67, Psy 2)
IV MWF, 5ShH, Lassman
- 164 Clinical Methods, Practice in Speech Pathology (3 cr, §EdCI 174; prereq sr, 119, 162, or concur regis 163)
VII-VIII W and ar, 409F, Bryngelson
- 171 History of Theater (3 cr; prereq 2 or 5, 31)
VI Th, VII TTh, 302NH, Graham
- 181 Readings in Speech (1-3 cr; prereq 3 or 6 and 6 addtl cr, cons instr)
- 191 Technical Stage Probs (3 cr; prereq 113)
Ar, Whiting
- 201 Gen Seminar (1 cr)
Ar, Gilkinson
- 203 Debate Coaching (2 cr; prereq 2 or 5, 101-102-103, Psy 2, 10 cr soc sci)
Ar, Howell
- 207 Seminar: Rhetoric, Persuasion (3 cr; prereq 3 or 6, 103, Psy 2, 140, 10 cr soc sci)
Ar, Howell
- 221 Seminar: Oral Interpretation of Literature (3 cr; prereq 3 or 6, 83, 105, 122, Psy 74)
Ar, Thompson
- 231 Seminar: Adv Speech Probs (2 cr; prereq undergrad maj spch, cons instr)
Ar, Gilkinson
- 241 Seminar: Radio Research (2 cr; prereq cons instr)
Ar, Ziebarth
- 261 Seminar: Speech Pathology (3 cr; prereq 122, 163, Psy 2)
Ar, Henrikson
- 271 Seminar: Hearing (3 cr; prereq 153, 155, cons instr)
Ar, Lassman
- 281 Seminar: Organic Disorders of Speech (2 cr)
Ar, Brown
- 291 Research: Special Probs (ar cr)
- Winter and Spring Quarters
- 1w-2s See 1f I MWF; II MWF; III MWF; IV MWF; V MWF
- 1s See 1f I MWF; III MWF; IV MWF; VI MWF
- 2w See 1f (prereq 1)
- 3w,s See 3f II MWF(s); III MWF(w,s); IV MWF(s)
- 5w-6s See 5f II MTWThF; III MTWThF; IV MTWThF; VI MTWThF
- 5s See 5f I MTWThF; II MTWThF; III MTWThF; IV MTWThF; V MTWThF; VI MTWThF
- 6w See 5f (prereq 5)
- 9w,s See 9f
- 31s See 31f
- 32w-33s See 32f II MWF; II TThS; III MWF
- 33w See 32f (prereq 32)
- 34s See 34f
- 51s Adv Public Speaking (3 cr; prereq 2 or 5) III MWF
- 56w-57s See 55f
- 61s See 61f
- 65w,s See 65f
- 66w,s See 66f
- 67w,s See 67f I MWF (s); II MWF (w)
- 72w-73s See 71f
- 78w-79s See 78f III MWF
- 81w-82s See 81f VII MWF
- 82w-83s See 81f (prereq 81)
- 91w Stage Design (3 cr; prereq 31) III TThS, IV TS
- 92s Stage Lighting (3 cr; prereq 31) III TThS, IV TS
- 97w,s See 97f
- 102w-103s See 101f
- 106w,s See 106f
- 107w Platform Reading (3 cr; prereq 83 with grade B) VI MWF
- 112w-113s See 111f (prereq 111)
- 116w See 115f (prereq 115)
- 117s Writing Radio Drama (3 cr; prereq sr, 32, cons instr) II MWF
- 124w Experiments in Gen Speech (3 cr; prereq 2 or 5, Psy 2) II TThS
- 126s History, Criticism of Public Address (3 cr; prereq 2 or 5, Psy 2) II TThS
- 131w Creative Dramatics (3 cr; prereq* 31; EdCI 63 adv) VI MWF
- 132s Children's Theater (3 cr; prereq* 31) VI MWF
- 142w Physical Bases of Speech (3 cr; prereq 67, Psy 2, 5) VII MWF
- 143s Speech Instrumentation (3 cr; prereq 67, Psy 2, 5) VII MWF
- 153w Audiometry, Hearing Aids (3 cr; prereq 152) IV MWF
- 155s Lip Reading, Lip Reading Methods (3 cr; prereq* 61, 67, Psy 2) IV MWF
- 162w-163s Speech Pathology (3 cr; prereq 61, 67, 119) VI T, VI-VII Th
- 165w-166s See 164f
- 169w Speech, Language in Human Behavior (3 cr; prereq cons instr) VIII MWF
- 172w-173s See 171f VII T, VI-VII Th
- 182w-183s See 181f
- 192w-193s See 191f (prereq 191)
- 201w,s See 201f
- 204w See 203f
- 208w-209s See 207f
- 222w-223s See 221f
- 232w-233s See 231f
- 242w-243s See 241f
- 251s Seminar: Listening Comprehension (2 cr; prereq undergrad maj in spch, cons instr)
- 262w-263s See 261f
- 282w-283s See 281f
- 292w-293s See 291f

ZOOLOGY (ZOO)

Fall Quarter

- 1 **Gen Zoology** (3 cr, †1-2-3)
 —1, Lect II TTh, 06Bo, Minnich
 —2, Lect IV WF, 06Bo, Minnich
 —1, Lab I-II MF, 101Z
 —2, Lab III-IV MF, 101, 107Z
 —3, Lab V-VI MF, 101, 107Z
 —4, Lab VII-VIII MF, 101, 107Z
 —5, Lab III-IV TTh, 101, 107Z
- 14 **Gen Zoology** (3 cr, †14-15; prereq regis in agric, for, HE, nurs, or pharmacy)
 Lect VII TTh, 06Bo, Olson
 —1, Lab V-VI TTh, 101, 107Z
 —2, Lab VIII-IX TTh, 101, 107Z
- 51 **Introd Animal Parasitology** (5 cr; prereq 3)
 Lect VI MWF, 313Z, Wallace
 —1, Lab I-II MWF, 208Z
 —2, Lab III-IV MWF, 208Z
 —3, Lab VII-VIII MWF, 208Z
- 54 **Histology** (5 cr; prereq soph, 3)
 Lect I TThS, 313Z, Olson
 —1, Lab II-IV TTh, 201Z
 —2, Lab VI-VIII TTh, 201Z
- 82 **Organic Evolution** (3 cr; prereq 3 or Bot 3)
 II TThS, 313Z, Merrell
- 83 **Introd Genetics, Eugenics** (3 cr; prereq 3 or 10 cr bot)
 II MWF, 313Z, Reed
- 100 **Zoological Techniques** (ar cr; prereq grad)
- 112 **Adv Gen Physiology** (3 cr; prereq 15 cr, cons instr)
 Lect VI MF, 211Z, Steinbach
 Lab VI-IX W, 18Z
- 117 **Animal Ecology** (3 cr; prereq 15 cr zool or ent)
 Lect VI-VII TTh, 211Z, Eddy
 Lab VIII TTh, Sub 3Z
- 121 **Ichthyology** (3 cr; prereq 15 cr)
 Lect VIII-IX F, 211Z, Eddy
 —1, Lab VI-VII MW, Sub 3Z
 —2, Lab VIII-IX MW, Sub 3Z
- 125 **Adv Gen Entomology** (3 cr; prereq 15 cr)
 Lect I TTh, 211Z, Mickel
 Lab I-III S, 401Z
- 128 **Insect Physiology** (4 cr; prereq 15 cr zool or ent, cons instr)
 Lect VI WF, 8 CofH, Richards
 Lab VII-IX WF, 8CofH
- 144 **Medical Entomology** (3 cr; prereq 15 cr incl 52, cons instr)
 Lect VI TTh, 208Z, Barr
 Lab VII-VIII TTh, 208Z
- 170 **Adv Genetics** (3 cr; prereq* 15 cr incl 83)
 —1, VI-VIII MW, 323Z, Reed, Merrell
 —2, VI-VIII TTh, 323Z, Reed, Merrell
- 185 **Physiology of Development** (4 cr; prereq 184)
 Ar, Spratt
- 197 **Problems** (ar cr; prereq 3, spec requir)
- 201 **Research: Entomology** (ar cr)
 Ar, Mickel

- 211 **Research: Ecology** (ar cr)
 Ar, Eddy
- 217 **Research: Physiology** (ar cr)
 Ar, Steinbach, Richards
- 221 **Research: Biophysics** (ar cr)
 Ar, Schmitt
- 229 **Research: Histology** (ar cr)
 Ar, Olson
- 233 **Research: Embryology** (ar cr)
 Ar, Spratt
- 237 **Research: Cytology** (ar cr)
 Ar, Gall
- 251 **Research: Genetics** (ar cr)
 Ar, Reed
- 261 **Research: Parasitology** (ar cr)
 Ar, Wallace
- 291 **Gen Seminar** (no cr)
- 296 **Seminar: Special Research Fields** (1 cr)

Winter and Spring Quarters

- 2w-3s See 1f (prereq 1)
- 15w See 14f (prereq 14)
- 22w **Comparative Anatomy** (5 cr; prereq soph, 3)
 Lect III TThS, lab VI-VIII TTh or III-IV MWF
- 50s **Introd Gen Physiology** (5 cr; prereq* soph, 3, or 15 cr bot, 10 cr chem)
 Lect IV TThS, lab I-III TTh or V-VII TTh
- 52w **Introd Entomology** (5 cr; prereq 3)
 Lect VII MWF, lab V-VI MWF or VIII-IX MWF
- 53s **Fauna of Central United States** (5 cr; prereq 3)
 Lect VII MWF, lab V-VI MWF or VIII-IX MWF
- 57w-58s **Introd Ornithology** (3 cr, †57-58; prereq 3 or 15)
 Lect VII TTh, lab VIII-IX TTh
- 59w **Comparative Embryology** (5 cr; prereq 21)
 Lect I TTh, conf II or III S, lab VI-VIII TTh
- 81s **Invertebrate Zoology** (3 cr; prereq 3)
 Lect II WF, lab I-II TTh
- 83s See 83f
- 101w-102s See 100f
- 109w **Sense Organs** (3 cr; prereq 15 cr, cons instr)
 IV MWF
- 110s **Animal Reactions** (3 cr; prereq 15 cr, cons instr)
 IV MWF
- 113w See 112f
- 118w See 117f
 Lect VI TTh, lab VII-VIII TTh
- 120s **Gen Ecology of Insects** (3 cr; prereq 15 cr zool or ent)
 Lect VI TTh, lab VII-VIII TTh
- 126w-127s See 125f (prereq 125)
- 129w See 128f (prereq 128)
- 145w **Parasitic Protozoa** (3 cr; prereq 15 cr, cons instr)
 Lect VI TTh, lab VII-VIII TTh
- 146s **Helminthology** (3 cr; prereq 15 cr, cons instr)
 Lect VI TTh, lab VII-VIII TTh
- 157w **Biophysics** (3 cr; prereq 28 cr phys and biol, cons instr)
- 160w-161s **Cytology** (3 cr; prereq 15 cr, cons instr)
 Lect VI TTh, lab VII-VIII TTh

- 171w Genetics of Speciation (3 cr; prereq* 15 cr incl 83) VI MWF
 175s Human Genetics (3 cr; prereq 83, cons instr) VIII MWF
 182s Experimental Embryology (5 cr; prereq sr, 50, 59) Lect III-IV TTh, lab ar
 -198w-199s See 197f (prereq 197)
 -202w-203s See 201f
 -212w-213s See 211f
 -218w-219s See 217f
 -222w-223s See 221f
 -230w-231s See 229f
 -234w-235s See 233f
 -238w-239s See 237f
 242w-243s Research: Protozoology (ar cr)
 -252w-253s See 251f
 -262w-263s See 261f
 -292w-293s See 291f
 -297w-298s See 296f

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE AND TACTICS (AIR)

Fall Quarter

- 31 Air Science I (1 cr)
 -1, I MWF, 305, 309AE, Aasheim, Roeller
 -2, II MWF, 305, 309AE, Aasheim, Roeller
 -3, III MWF, 305, 309AE, Aasheim, Roeller
 -4, IV MWF, 305, 309AE, Aasheim, Roeller
 -5, V MWF, 305, 309AE, Jurgensen, Moffett
 -6, VI MWF, 305, 309AE, Jurgensen, Moffett
 -7, VII MWF, 305, 309AE, Jurgensen, Moffett
 -8, VIII MWF, 305, 309AE, Jurgensen, Moffett
 34 Air Science II (1 cr; prereq 33)
 -1, I MWF, 9, 15AE, Young, Hunt
 -2, II MWF, 9, 15AE, Young, Hunt
 -3, III MWF, 9, 15AE, Young, Hunt
 -4, IV MWF, 9, 15AE, Young, Hunt
 -5, V MWF, 9, 15AE, Brown
 -6, VI MWF, 9, 15AE, Brown
 -7, VII MWF, 9, 15AE, Brown
 -8, VIII MWF, 9, 15AE, Brown
 131A Air Science III: Supply, Admin (3 cr; prereq 36)
 -1, I MTWThF, 12A, Eisman
 -2, IV MTWThF, 12A, Eisman
 -3, VII MTWThF, 12A, Eisman
 131B Air Science III: Communications (3 cr; prereq 36)
 I MTWThF, 14A, Freund
 131C Air Science III: Gen Technical Training (3 cr; prereq 36)
 -1, III MTWThF, 14A, Covell
 -2, VIII MTWThF, 14A, Covell
 131D Air Science III: Flight Operations (3 cr; prereq 36)
 -1, II MTWThF, 14A, Widen
 -2, VI MTWThF, 14A, Widen
 134A Air Science IV: Supply, Admin (3 cr; prereq 133A)
 -1, II MTWThF, 12A, Booher
 -2, III MTWThF, 12A, Booher
 -3, VI MTWThF, 12A, Booher

Winter and Spring Quarters

- 32w See 31f (prereq 31)
 -33s See 31f (prereq 32) Drill I-II T or VI-VII T; lect I MWF; II MWF; III MWF; IV MWF; V MWF; VI MWF; VII MWF; VIII MWF
 -35w See 34f (prereq 34)
 -36s See 34f (prereq 35) Drill I-II T or VI-VII T; lect I MWF; II MWF; III MWF; IV MWF; V MWF; VI MWF; VII MWF; VIII MWF
 -132Aw See 131Af (prereq 131A)
 -133As See 131Af (prereq 132A) Drill I-II T or VI-VII T; lect I MTWThF; IV MTWThF; VII MTWThF
 -132Bw See 131Bf (prereq 131B)
 -133Bs See 131Bf (prereq 132B) Drill I-II or VI-VII T; lect I MTWThF
 -132Cw See 131Cf (prereq 131C)
 -133Cs See 131Cf (prereq 132C) Drill I-II T or VI-VII T; lect III MTWThF; VIII MTWThF
 -132Dw See 131Df (prereq 131D)
 -133Ds See 131Df (prereq 132D) Drill I-II T or VI-VII T; lect II MTWThF; VI MTWThF
 -135Aw See 134Af (prereq 134A)
 -136As See 134Af (prereq 135A) Drill I-II T or VI-VII T; lect II MTWThF; III MTWThF; VI MTWThF

INSTITUTE OF CHILD WELFARE (CW)

Fall Quarter

- 40 Child Training (3 cr; prereq Psy 2)
 VI TTh, 202Pt, Fuller
 80 Child Psychology (3 cr; prereq Psy 2)
 IV MWF, 2P, Harris
 130 Motor, Linguistic, Intellectual Development (3 cr; prereq sr, 12 cr psy)
 II MWF, 202Pt, Anderson, others
 140 Behavior Probs in Younger Children (2 cr; prereq sr, 12 cr psy, educ psy or soc)
 VIII-IX Th, 202Pt, Blodgett

- 143 Probs of Mental Deficiency (3 cr; prereq sr, 12 cr psy)
III MWF, 202Pt, Blodgett
- 150 Childhood Education (2 cr; prereq sr, 12 cr psy)
VIII-IX T, Fuller
- 166 Maturity, Aging (2 cr; prereq sr, 15 cr psy, educ, or soc)
VIII-IX M, 202Pt, Anderson
- 200 Observation, Study of Children (1 cr; prereq 12 cr psy, 3 cr stat)
Ar, Harris
- 220 Seminar: Current Research (1 cr)
IX-X W, 202Pt, 230CWI, Roff
- 223 Seminar: Developmental Theory (1 cr; prereq cons instr)
Ar, Anderson
- 230 Seminar: Recent Literature (1 cr)
VIII-IX W, 202Pt, 220CWI, Anderson
- 240 Practicum: Behavior Probs (ar cr; prereq cons instr)
Ar, Harris, Blodgett
- 250 Internship: Professional Work with Children (ar cr; prereq cons instr)
Ar, Anderson
- 260 Seminar: Developmental Research Practice (2 cr; prereq* 1 yr grad work or PhD cand)
- 270 Readings Research in Child Development (ar cr)

Winter and Spring Quarters

- 10s Introd Child Study (2 cr; prereq 3rd qtr fr) II TTh
40w,s See 40f V MW(w); VI TTh(w,s)
80w,s See 80f
- 131w Personality, Emotional, Social Development (3 cr; prereq sr, 12 cr psy) II MWF
- 132s Later Childhood, Adolescence (3 cr; prereq sr, 12 cr psy) II MWF
- 140w See 140f
- 141w,s Behavior Probs in Older Children (2 cr; prereq sr, 12 cr psy, educ psy or soc)
VIII-IX T(w); VIII-IX Th(s)
- 142s Psychology of Atypical Children (3 cr; prereq sr, 12 cr psy) II TThS
-151w-152s See 150f VIII-IX T
- 160w Physical Growth, Development (3 cr; prereq sr, 12 cr psy) IV MWF
- 170w Parent Education (3 cr; prereq sr, 15 cr, CW, HE, educ, psy, soc, or PH)
V MWF
- 185s Children in a Changing World (3 cr; prereq sr, 12 cr psy, educ, or soc) VI MWF
- 190s Use, Interpretation of Tests for Children (2 cr; prereq sr, 12 cr psy, educ, or soc)
III-IV T
- 200w See 200f
- 210s Adv Developmental Psychology (3 cr; prereq 130-131, cons instr) 2:00-3:30 WF
-221w-222s See 220f

-224w-225s See 223f

226s Seminar: Projective Methods with Children, Adolescents (2 cr; prereq cons instr) VII-VIII M

227s Multiple Factor Analysis (2 cr; prereq cons ins.r)

-231w-232s See 230f

233w-234s Research Methods (2-4 cr; prereq sr, 10 cr psy or educ psy incl stat) VII-VIII TTh

-241w-242s See 240f

250w,s See 250f

-261w-262s See 260f

-271w-272s See 270f

274w-275s Technique, Field Work in Parent Education (ar cr; prereq cons instr)

290w-291s Mental Examination of Pre-school Child (4 cr; prereq cons instr)

LIBRARY INSTRUCTION (LIB)

Fall Quarter

- 1 Use of Books, Libraries (3 cr)
I MWF, Moen
- 50 Libraries, Society (3 cr)
IV MWF, 5Lib, Shove
- 60 Sources of Information about Library Materials (3 cr)
III MWF, 5Lib
- 61 Library Practice (3 cr; prereq 18 cr or lib exper)
Ar, Shove
- 62 Reference I (2 cr)
III TTh, 5Lib, Russell
- 74 Library Materials in School's Instructional Program (2 cr)
II TTh, 301Lib, Hayner
- 81 Bibliographical Description of Library Materials (3 cr)
II MWF, 5Lib
- 85 Special Probs (1-3 cr; prereq cons dir)
Ar, Shove, Hayner
- 151 Invention, Spread of Printing (2 cr)
Ar, Shove
- 255 Seminar: Library Admin (3 cr)
Ar, Stanford
- 260 Seminar: Adv Bibliography (3 cr)
Ar, Shove
- 271 Seminar: Library Work with Children, Young People (3 cr)
Ar, Hayner
- 274 Reading Guidance (3 cr)
Ar, Hayner

Winter and Spring Quarters

- 1w,s See 1f
- 53w Prin School Library, Organization, Mgt (3-4 cr; prereq cons instr) VI MWF
- 61w,s See 61f
- 63w See 62f (prereq 62) IV MWF
- 70w Reading Guidance (3 cr) I MWF

- 82w Subject Organization of Library Materials (3 cr) II MWF
 85w,s See 85f
 152w History of Printing to Modern Times (2 cr)
 154s Prin Public Library Admin (3 cr; prereq cons instr) I MWF
 155s Admin Probs in College, University Library (3 cr; prereq cons instr) I MWF
 157s School Library Probs (3 cr; prereq 53 or cons instr) II MWF
 164s Reference III (2 cr; prereq 62, 63) I TTh
 165w Adv Bibliography (2 cr) III TTh
 171w Prin, Probs in Reading Guidance for Children (3 cr; prereq 70) III MWF
 172s Prin, Probs in Reading Guidance for Adolescents (3 cr; prereq 70) III MWF
 173s Prin, Probs in Adult Reading Guidance (3 cr; prereq 70) II MWF
 -256w-257s See 255f
 -261w-262s See 260f
 -272w-273s See 271f
 -275w-276s See 274f

MILITARY SCIENCE AND TACTICS (MIL)

Fall Quarter

- 1 First Year Basic Course (1 cr)
 Drill VI T or VI Th or VII Th
 -1, I MW, Armory Gym
 -2, II MW, Armory Gym
 -3, III MW, Armory Gym
 -4, IV MW, Armory Gym
 -5, VI MW, Armory Gym
 -6, VII MW, Armory Gym
 -7, VIII MW, Armory Gym
 -8, II MW, 107AgrBot (for AFHE & VM students)
 1G First Year Basic Medical Course (1 cr)
 1H First Year Basic Dental Course (1 cr)
 1J First Year Basic Pharmaceutical Course (1 cr)
 IV T, 201WuH
 4A Antiaircraft Artillery (1 cr; prereq 3)
 Drill VI T or VI Th or VII Th
 -1, III MW, 201A, Pully
 -2, VI MW, 201A, Pully
 -3, VII MW, 201A, Pully
 4B Engineers (1 cr; prereq 3)
 Drill VI T or VI Th or VII Th
 -1, III MW, 116aA
 -2, VI MW, 116aA
 4C Ordnance (1 cr; prereq 3)
 Drill VI T or VI Th or VII Th
 -1, III MW, 105A, Wood
 -2, VI MW, 105A, Wood
 4D Quartermaster (1 cr; prereq 3)
 Drill VI T or VI Th or VII Th
 -1, III MW, 159TSE, Sullivan
 -2, VI MW, 159TSE, Sullivan
 -3, VII MW, 159TSE, Sullivan
 4E Signal Corps (1 cr; prereq 3)
 Drill VI T or VI Th or VII Th
 -1, III MW, 206A, Warburton
 -2, VI MW, 206A, Warburton
 4F Transportation (1 cr; prereq 3)
 Drill VI T or VI Th or VII Th
 -1, III MW, 103A
 -2, VI MW, 103A
 -3, VI MW, 116A
 -4, VII MW, 103A
 4G Medical Corps (1 cr; prereq 3G)
 4H Dental Corps (1 cr; prereq 3H)
 4J Pharmaceutical Corps (1 cr; prereq 3J)
 IX F, 201WuH, Luehrs
 151A Antiaircraft Artillery (3 cr; prereq 6A)
 Drill VI T or VI Th or VII Th
 -1, I MTWF, 201A, Pully
 -2, I MTWF, 116A, Pully
 -3, IV MTWF, 201A, Pully
 -4, IV MTWF, 116A, Pully
 151B Engineers (3 cr; prereq 6B)
 Drill VI T or VI Th or VII Th
 -1, I MTWF, 116aA
 -2, IV MTWF, 116aA
 151C Ordnance (3 cr; prereq 6C)
 Drill VI T or VI Th or VII Th
 -1, I MTWF, 105A, Wood
 -2, IV MTWF, 105A, Wood
 151D Quartermaster (3 cr; prereq 6D)
 Drill VI T or VI Th or VII Th
 -1, I MTWF, 159TSE, Sullivan
 -2, IV MTWF, 159TSE, Sullivan
 -3, VII MTWF, 116aA, Sullivan
 151E Signal Corps (3 cr; prereq 6E)
 Drill VI T or VI Th or VII Th
 -1, I MTWF, 206A, Warburton
 -2, IV MTWF, 206A, Warburton
 151F Transportation (3 cr; prereq 6F)
 Drill VI T or VI Th or VII Th
 -1, I MTWF, 103A
 -2, IV MTWF, 103A
 -3, VII MTWF, 105A
 151G Medical Corps (1 cr; prereq 6G)
 151H Dental Corps (1 cr; prereq 6H)
 151J Pharmaceutical Corps (1 cr; prereq 6J)
 VIII Th, 201WuH, Luehrs
 154A Antiaircraft Artillery (3 cr; prereq 153A)
 Drill VI T or VI Th or VII Th
 -1, II MTWF, 201A, Pully
 -2, VIII MTWF, 201A, Pully
 154B Engineers (3 cr; prereq 153B)
 Drill VI T or VI Th or VII Th
 -1, II MTWF, 116aA
 -2, VIII MTWF, 116aA
 154C Ordnance (3 cr; prereq 153C)
 Drill VI T or VI Th or VII Th
 -1, II MTWF, 105A, Wood
 -2, VIII MTWF, 105A, Wood
 154D Quartermaster (3 cr; prereq 153D)
 Drill VI T or VI Th or VII Th
 -1, II MTWF, 159TSE, Sullivan
 -2, VIII MTWF, 159TSE, Sullivan

- 154E Signal Corps** (3 cr; prereq 153E)
 Drill VI T or VI Th or VII Th
 —1, II MTWF, 206A, Warburton
 —2, VIII MTWF, 206A, Warburton
- 154F Transportation** (3 cr; prereq 153F)
 Drill VI T or VI Th or VII Th
 —1, II MTWF, 103A
 —2, VIII MTWF, 103A
- 154G Medical Corps** (1 cr; prereq 153G)
- 154H Dental Corps** (1 cr; prereq 153H)
- 154J Pharmaceutical Corps** (1 cr; prereq 153J)
 V M, 201 WuH, Luehrs

Winter and Spring Quarters

- 2w See 1f (prereq 1) I MWF; II MWF; III MWF; IV MWF; VI MWF; VII MWF; VIII MWF
- 3s See 1f (prereq 2) Drill I-II Th or VI-VII Th; lect I M; II M; III M; IV M; VI M; VII M; VIII M
- 2Gw-3Gs See 1Gf (prereq 1G)
- 2Hw-3Hs See 1Hf (prereq 1H)
- 2Jw-3Js See 1Jf (prereq 1J) Ar
- 5Aw See 4Af (prereq 4A) III MWF; VI MWF; VII MWF
- 5Bw See 4Bf (prereq 4B) III MWF; VI MWF
- 5Cw See 4Cf (prereq 4C) III MWF; VI MWF
- 5Dw See 4Df (prereq 4D) III MWF; VI MWF; VII MWF
- 5Ew See 4Ef (prereq 4E) III MWF; VI MWF
- 5Fw See 4Ff (prereq 4F) III MWF; VI MWF
- 5Gw-6Gs See 4Gf (prereq 4G)
- 5Hw-6Hs See 4Hf (prereq 4H)
- 5Jw-6Js See 4Jf (prereq 4J) Ar
- 6As See 4Af (prereq 5A) Drill I-II Th or VI-VII Th; lect III M; VI M; VII M
- 6Bs See 4Bf (prereq 5B) Drill I-II Th or VI-VII Th; lect III M; VI M
- 6Cs See 4Cf (prereq 5C) Drill I-II Th or VI-VII Th; lect III M; VI M
- 6Ds See 4Df (prereq 5D) Drill I-II Th or VI-VII Th; lect III M; VI M; VII M
- 6Es See 4Ef (prereq 5E) Drill I-II Th or VI-VII Th; lect III M; VI M
- 6Fs See 4Ff (prereq 5F) Drill I-II Th or VI-VII Th; lect III M; VI M
- 152Aw See 151Af (prereq 151A) I MTWThF; IV MTWThF
- 152Bw See 151Bf (prereq 151B) I MTWThF; IV MTWThF
- 152Cw See 151Cf (prereq 151C) I MTWThF; IV MTWThF
- 152Dw See 151Df (prereq 151D) I MTWThF; IV MTWThF; VII MTWThF
- 152Ew See 151Ef (prereq 151E) I MTWThF; IV MTWThF
- 152Fw See 151Ff (prereq 151F) I MTWThF; IV MTWThF; VII MTWThF
- 152Gw-153Gs See 151Gf (prereq 151G)
- 152Hw-153Hs See 151Hf (prereq 151H)
- 152Jw-153Js See 151Jf (prereq 151J) Ar

- 153As See 151Af (prereq 151A) Drill I-II Th or VI-VII Th; lect I MWF; IV MWF
- 153Bs See 151Bf (prereq 152B) Drill I-II Th or VI-VII Th; lect I MWF; IV MWF
- 153Cs See 151Cf (prereq 152C) Drill I-II Th or VI-VII Th; lect I MWF; IV MWF
- 153Ds See 151Df (prereq 152D) Drill I-II Th or VI-VII Th; lect I MWF; IV MWF; VII MWF
- 153Es See 151Ef (prereq 152E) Drill I-II Th or VI-VII Th; lect I MWF; IV MWF
- 153Fs See 151Ff (prereq 152F) Drill I-II Th or VI-VII Th; lect I MWF; IV MWF; VII MWF
- 155Aw See 154Af (prereq 154A) II MTWThF; VIII MTWThF
- 155Bw See 154Bf (prereq 154B) II MTWThF; VIII MTWThF
- 155Cw See 154Cf (prereq 154C) II MTWThF; VIII MTWThF
- 155Dw See 154Df (prereq 154D) II MTWThF; VIII MTWThF
- 155Ew See 154Ef (prereq 154E) II MTWThF; VIII MTWThF
- 155Fw See 154Ff (prereq 154F) II MTWThF; VIII MTWThF
- 155Gw-156Gs See 154Gf (prereq 154G)
- 155Hw-156Hs See 154Hf (prereq 154H)
- 155Jw-156Js See 154Jf (prereq 154J) Ar
- 156As See 154Af (prereq 155A) Drill I-II Th or VI-VII Th; lect II MWF; VIII MWF
- 156Bs See 154Bf (prereq 155B) Drill I-II Th or VI-VII Th; lect II MWF; VIII MWF
- 156Cs See 154Cf (prereq 155C) Drill I-II Th or VI-VII Th; lect II MWF; VIII MWF
- 156Ds See 154Df (prereq 155D) Drill I-II Th or VI-VII Th; lect II MWF; VIII MWF
- 156Es See 154Ef (prereq 155E) Drill I-II Th or VI-VII Th; lect II MWF; VIII MWF
- 156Fs See 154Ff (prereq 155F) Drill I-II Th or VI-VII Th; lect II MWF; VIII MWF

MORTUARY SCIENCE (MORT)

Fall Quarter

- 4 Restorative Art** (1 cr; prereq soph)
 —1, VIII-IX T, 100NH, Roman
 —2, VIII-IX Th, 100NH, Roman
- 8 Orientation in Funeral Service** (no cr)
 VIII M, 107NH, Slater
- 13 Funeral Law** (3 cr)
 VII MWF, 150ForH, Carney
- 15 Funeral Mgt** (1 cr; prereq soph, 10)
 II T, 102F, Slater
- 18 Pathology for Embalmers** (2 cr; prereq soph, Zool 3)
 IV MWF, 104 IA, Brunson
- 20 Embalming Theory, Practice** (3 cr; prereq soph, 10, Zool 3)
 Lect III MWF, 115C, Slater
 —1, Lab VII T, 107NH, Slater
 —2, Lab VII Th, 107NH, Slater

- 23 **Psychology of Funeral Service** (2 cr; prereq soph, GC 41)
I TTh, 207NH, White

Winter and Spring Quarters

- 1w-2s **Anatomy for Embalmers** (3 cr; prereq soph, Zool 3) I-III TTh
3w **Business Methods** (2 cr; prereq soph, Econ 24) VII MW
-5w-6s See 4f (prereq 4)
7s **Bacteriology for Embalmers** (4 cr; prereq soph, Zool 3) Lect II MWF, lab II-IV MWF
-9w-10s See 8f (prereq 8)
11w-12s **Chemistry for Embalmers** (2 cr; prereq soph, InCh 2) Lect VIII MW, lab VII-IX F
-14w See 13f (prereq 13)
-16w-17s See 15f (prereq 15) II M(w); VII M(s)
-19w See 18f (prereq 18)
-21w-22s See 20f (prereq 20) Lect I MWF(s); III MWF(w); lab VII T or Th(w,s)
24w **Public Health, Minnesota Laws, Regulations** (3 cr; prereq soph) I MWF
25s **Medical Science Survey** (2 cr; prereq 7, 19) IV TTh

NAVAL SCIENCE (NAV)

Fall Quarter

- 11 **Naval Orientation** (3 cr)
-1, Lect III MWF, 205A, Tracy
-2, Lect IV MWF, 205A, Tracy
-3, Lect VI MWF, 205A, Tracy
-4, Lect VII MWF, 205A, Tracy
Lab II Th or III T, 205A, Tracy
Drill IV T, Tracy
21 **Naval Weapons** (3 cr; prereq 13)
-1, Lect II MWF, 202A, Wood
-2, Lect III MWF, 202A, Wood
-3, Lect IV MWF, 202A, Wood
-4, Lect VI MWF, 202A, Wood
Lab III T or V W, Wood
Drill IV T, Wood
51 **Navigational Instruments, Piloting, Maneuvering Board** (3 cr; prereq 23)
-1, Lect I-II TTh, 12aA, Filiatrault
-2, Lect VII-VIII TTh, 12aA, Filiatrault
Lab II T or VIII Th, 12aA, Filiatrault
Drill IV T, Filiatrault
54 **History of Art of War I** (3 cr; prereq 23)
Lect I MWF, 205A, James
Lab ar, James
Drill IV T, James
57 **Introductory Supply Corps, Naval Finance, Basic Naval Accounting** (3 cr; prereq 23)
Lect V MWF, 12aA, London
Lab IV F, 12aA, London
Drill IV T, London
61 **Theory, Construction Marine Power Plants** (3 cr; prereq 53)
Lect I MWF, 12aA, Bertsch
Lab ar, Bertsch
Drill IV T, Bertsch

- 64 **Amphibious Warfare I** (3 cr; prereq 56)
Lect V MWF, 205A, James
Lab ar, James
Drill IV T, James
67 **Adv Supply Afloat, Basic Ship's Store** (3 cr; prereq 59)
Lect V-VI T, V Th, 202A, London
Lab VI Th, London
Drill IV T, London

Winter and Spring Quarters

- 12w-13s See 11f (prereq 11)
-22w-23s See 21f (prereq 21)
-52w-53s See 51f
-55w See 54f
56s **United States Military History, Policy** (3 cr; prereq 55) Lect I MWF, lab ar, drill IV T
58w **Supply Ashore** (3 cr; prereq 57) Lect V MWF, lab IV F, drill IV T
59s **Basic Supply Afloat** (3 cr; prereq 58) Lect V MWF, lab IV F, drill IV T
62w **Diesel Engines, Ship Stability** (3 cr; prereq 61) Lect I MWF, lab ar, drill IV T
63s **Naval Admin, Prin Leadership** (3 cr; prereq 62) Lect I MWF; V MWF; lab ar; drill IV T
65w **Amphibious Warfare II** (3 cr; prereq 64)
Lect V MWF, lab ar, drill IV T
68w **Clothing, Small Stores, Commissary** (3 cr; prereq 67) Lect V-VI T, V Th, lab VI Th, drill IV T

PHYSICAL EDUCATION FOR MEN (PE M)

Nonprofessional

Fall Quarter

- 1A **Sports Education** (1 cr)
Swimming, Bgn
-1, II MWF, CH Pool, Boyce
-2, VII MWF, CH Pool, Thorpe
-3, III TThS, CH Pool, Boyce
Bowling, Bgn
-4, II MWF, CMU
-5, II TThS, CMU
Boxing, Bgn
-6, VII MWF, Stad N
Wrestling, Bgn
-7, VIII MWF, Stad N
Handball
-8, IV MWF, Stad N, Vancisin
Squash
-9, IV MWF, Stad N, Vancisin
Badminton, Bgn
-10, II MWF, CH Gym, Brain
Golf, Bgn
-11, II MTWThF until Nov. 7, Stad S, Bolstad
Adapted Activities
-12, III MWF, Stad S, Osell
-13, IV MWF, Stad S, Osell

- 14, VIII MWF, Stad S, Osell
- Freshman Sport
- 15, Ar
- 2A Sports Education (1 cr)
- Swim, Interm
- 1, II TThS, CH Pool, Boyce
- 2, VI MWF, CH Pool, Thorpe
- 3, IV MWF, CH Pool, Boyce
- Life Saving
- 4, III MWF, CH Pool, Boyce
- Swimming, Adv
- 5, IV TThS, CH Pool, Boyce
- Boxing, Adv
- 6, IX MWF, Stad N
- Wrestling, Adv
- 7, IX MWF, Stad N
- Gymnastics
- 8, VIII MWF, CH, Gym, Ostrander
- Weight Lifting
- 9, VIII MWF, CH Gym, Ostrander
- Touch Football, Volleyball
- 10, IV MWF, CH, Nash, Fisher, Svendsen
- Archery
- 11, II MWF, CH, Osell
- Fencing
- 12, VIII MWF, NGW, Bell
- Square, Folk Dancing
- 13, II MWF, NGW, Bell
- 14, VII TTh, NGW, Bell
- Ballroom Dancing
- 15, III TTh, NGW, Bell
- Golf, Adv
- 16, III MTWThF until Nov 7, Stad S, Bolstad
- Body Building
- 17, VIII MWF, Stad S, Osell
- Varsity Sport
- 18, Ar (cons coach)

Winter and Spring Quarters

- 1Bw Sports Education (1 cr)
- Adapted Activities III MWF; IV MWF
- Badminton, Bgn IV MWF
- Bowling, Bgn II MWF; II TThS
- Freshman Sport Ar (cons coach)
- Golf, Bgn II TThS; III MWF; III TThS; IV MWF
- Handball VII MWF
- Skating, Bgn II MWF; III MWF
- Swimming, Bgn II MWF; III TThS; VII MWF
- 1Cs Sports Education (1 cr)
- Adapted Activities III MWF; IV MWF; VIII MWF
- Bowling, Bgn II MWF; II TThS
- Boxing, Bgn VII MWF
- Freshman Sport Ar (cons coach)
- Golf, Bgn II MWF; II TThS; III MWF
- Handball IV MWF
- Swimming, Bgn II MWF; III TThS; VII MWF
- Tennis, Bgn II MWF
- Track, Bgn VII MWF

- 2Bw Sports Education (1 cr)
- Badminton, Adv III T; III-IV Th
- Basketball VII MWF
- Body Building VIII MWF
- Boxing, Adv IX MWF
- Boxing, Interm VIII MWF
- Dancing, Ballroom III TTh, 1 hr ar; VII TTh
- Dancing, Square, Folk III MWF
- Fencing VIII MWF
- Gymnastics VIII MWF
- Lifesaving III MWF
- Skating, Adv IV MWF
- Squash VII MWF
- Swimming, Adv IV TThS
- Swimming, Interm II TThS; IV MWF; VI MWF
- Varsity Sport Ar (cons coach)
- Volleyball III MWF
- Wrestling, Adv IX MWF
- Wrestling, Interm VIII MWF
- 2Cs Sports Education (1 cr)
- Archery II MWF
- Body Building VIII MWF
- Boxing, Interm VIII MWF; IX MWF
- Dancing, Ballroom III TTh, 1 hr ar
- Dancing, Folk VII TTh
- Dancing, Square, Folk II MWF
- Fencing VIII MWF
- Golf, Interm III TThS; IV MWF
- Gymnastics VIII MWF
- Lifesaving III MWF
- Squash IV MWF
- Swimming, Adv IV TThS
- Swimming, Interm II TThS; IV MWF; VI MWF
- Tennis, Adv III MWF
- Varsity Sport Ar (cons coach)
- Volleyball, Softball IV MWF
- Weight Lifting VIII MWF
- Wrestling, Interm VII MWF; VIII MWF

PHYSICAL EDUCATION FOR WOMEN (PE W)

Nonprofessional

Fall Quarter

- Aquatics
- Swimming, Bgn
- 1, IV MWF, 51NGW (1½ cr)
- 2, VI MWF, 51NGW (1½ cr)
- 3, VIII MWF, 51NGW (1½ cr)
- Swimming, Adv Bgn
- 1, III TTh, 51NGW (1 cr)
- 2, VI TTh, 51NGW (1 cr)
- Swimming, Interm
- 1, III TTh, 58NGW (1 cr)
- 2, VII MWF, 51NGW (1½ cr)
- Swimming, Adv
- 1, VIII MWF, 58NGW, 201NGW (1½ cr)
- American Red Cross Sr Life Saving
- 1, IV MWF, 58NGW, 201NGW (1½ cr)

Body Building

Individual Body Building

- 1, I MWF, 153aNGW, 201NGW (1½ cr)
- 2, III MWF, 153aNGW, 201NGW (1½ cr)
- 3, III TTh, 153aNGW, 201NGW (1 cr)
- 4, VI TTh, 153aNGW, 201NGW (1 cr)

Individual Sports

Archery, Elem

- 1, V MWF, 60NGW (1½ cr)

Badminton, Elem

- 1, II MWF, 60NGW (1½ cr)
- 2, IV MWF, 153NGW (1½ cr)
- 3, II TTh, 153NGW (1 cr)

Bowling, Elem

- 1, II MWF, 201NGW, CMU (1½ cr)
- 2, III MWF, 201NGW, CMU (1½ cr)
- 3, II TTh, 201NGW, CMU (1 cr)
- 4, III TTh, 201NGW, CMU (1 cr)

Rifemarksmanship

- 1, V TTh, 201NGW, Armory (1 cr)
- 2, VI TTh, 201NGW, Armory (1 cr)

Social Games, Mixers

- 1, VI TTh, 153NGW, 201NGW (1 cr)

Rhythms

Ballroom Dance, Elem

- 1, III TTh, 153NGW (1 cr)
- Folk, Square Dance
- 1, II MWF, 153NGW, 201NGW (1½ cr)
 - 2, VII TTh, 151NGW, 201NGW (1 cr)
- Modern Dance, Elem
- 1, IV MWF, 151NGW, 201NGW (1½ cr)
 - 2, VIII MWF, 151NGW, 201NGW (1½ cr)

Team Sports

Volleyball

- 1, I TTh, 151NGW (1 cr)
- 2, V TTh, 151NGW (1 cr)

Winter and Spring Quarters

American Red Cross Sr Life Saving (1½ cr) VI MWF(w); V MWF(s)

Archery, Elem (1 cr) V TTh(w)

Archery, Elem, Interm (1 cr) VI TTh(s)

Badminton, Elem (1½ cr) I MWF(w); III MWF(w); IV MWF(w); V MWF(w)

Ballroom Dance, Elem (1 cr) IV TTh(w); VII TTh(w); III TTh(s)

Basketball (1½ cr) I MWF(w); VI TTh(w)

Bowling, Elem (1½ cr) II MWF(w); (1½ cr) III MWF(w); (1 cr) II TTh(w); (1 cr) III TTh(w)

Canoeing (1 cr) VI TTh(s)

Folk, Square Dance (1½ cr) III MWF(w); (1½ cr) II MWF(s); (1 cr) VII TTh(s)

Golf, Elem (1½ cr) V MWF(s); (1½ cr) VI MWF(s); (1 cr) V TTh(s)

Golf, Interm (1 cr) VII TTh(s); (1½ cr) VIII MWF(s)

Golf, Adv Ar(s)

Horseback Riding (1 cr) VI Th(s); VII Th(s)

Individual Body Building (1½ cr) II MWF(w); (1½ cr) IV MWF(w); (1½ cr) VI MWF(w); (1½ cr) VII MWF(w); (1 cr) II TTh(w); (1 cr) III TTh(w); (1 cr) VII TTh(s)

Modern Dance, Elem (1½ cr) IV MWF(w); VII MWF(w); IV MWF(s); VII MWF(s)

Modern Dance, Interm, Adv (1½ cr) VI MWF(w); VI MWF(s)

Rifemarksmanship (1 cr) V TTh(w); VI TTh(w)

Skating, Elem (1½ cr) III MWF(w); IV MWF(w)

Social Games, Mixers (1 cr) VIII TTh(w)

Softball (1½ cr) III MWF(s); (1 cr) IV TTh(s)

Swimming, Bgn (1½ cr) VI MWF(w); II TTh(s)

Swimming, Adv Bgn (1 cr) III TTh(w); (1 cr) VII TTh(w); (1½ cr) VI MWF(s); (1 cr) III TTh(s)

Swimming, Interm (1½ cr) II MWF(s); VIII MWF(s)

Swimming, Interm Adv (1½ cr) VIII MWF(w)

Swimming, Springboard Diving (1½ cr) IV MWF(s)

Swimming, Synchronized (1½ cr) VIII MWF(s)

Tennis, Elem (1 cr) VIII TTh(w); (1½ cr) II MWF(s); (1½ cr) IV MWF(s); (1½ cr) V MWF(s); (1 cr) II TTh(s); (1 cr) IV TTh(s)

Tennis, Interm Adv (1 cr) III TTh(s)

Volleyball (1 cr) III TTh(w)

Water Safety Instructor's Course (1½ cr) VII MWF(s)

COURSE FEES

All fees are per quarter unless otherwise indicated.

Aeronautical Engineering

\$3.00—lab fee for all soph, jr, sr students in aero engr

4.50 per solo hr—20 (pay at U Airport)

7.50 per dual hr—20 (pay at U Airport)

42.00—46 (no fee for aero engr)

Agricultural Education

\$1.50 per cr—82, 91, 199E

Agricultural Engineering

\$1.00—5, 7, 13, 14, 19, 20, 21, 23, 24, 25, 33, 35, 40, 72

3.00—42

6.00—41, 43

Agronomy

\$2.00—136

Architecture

\$3.00—AD I, AD II, AD III, 40

10.00—AD IV

Art

\$1.00—1, 2, 3, 4, 5, 11, 12

2.00—20, 20A, 21, 21A, 22A, 43, 44, 45, 87, 88, 89, 97, 98, 99, 103, 104, 105, 153, 154, 155, 193, 194, 195

3.00—23A, 24A, 25A, 30, 31, 50, 51, 52, 60, 60A, 61, 61A, 62, 62A, 70, 71, 72, 110, 111, 112, 150, 151, 152, 200, 201, 202

5.00—10, 23, 24, 25, 40, 41, 42, 53, 54, 55, 63, 64, 65, 73, 74, 75, 80, 81, 82, 90, 91, 92, 93, 94, 95, 101, 102, 180, 181, 182, 190, 191, 192

7.50—140, 141, 142, 143, 144, 145

10.00—83, 83A, 84, 84A, 85, 85A, 123, 124, 125

15.00—133, 134, 135

Art Education

\$1.50—17, 18, 19

2.00 per cr—84, 86, 86A, 87, 87A, 88, 88A, 185

2.00—81A, 81B

3.00—56, 57, 58

Astronomy

\$1.00—20

Bacteriology

\$3.00—53, 102, 103, 104, 112, 113, 114, 115, 116, 122, 124

Biological Station

\$10.00 per summer term—lab fee

Botany

\$1.50—1, 2, 3, 50, 51, 52, 53, 54, 112, 113, 114, 115, 118, 119, 121, 127, 130, 132, 134, 137, 165, 194, 195, 196, 197, 198, 199

2.25—4, 5

3.00—120, 123, 154, 173, 174, 175, 179, 180, 181

Business Administration

\$1.00—170, 171

2.00—65, 66, 74, 130, 139, 150, 152

Civil Engineering

\$2.00—51, 52, 53, 137, 146

35.00 per term—23 (summer camp)

Communication

\$1.00—1

Curriculum and Instruction

\$2.00 per cr—all courses

Economics

\$2.50 for one or more courses—32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43

Education

\$2.00 per cr—51A, 51B, 51C, 55A, 55B, 71A, 71B, 71C

Educational Psychology

\$1.00—217, 218

1.50 per cr—142, 143, 144, 150

1.50—216A, 217A, 218A

Electrical Engineering

\$1.00—12, 14, 112, 114, 116, 118, 120, 127, 128, 129

2.00—16, 122, 124, 126, 164, 165, 166

Engineering English

\$1.00—4

Entomology

\$1.50—5, 21, 51, 52, 56, 63, 64, 114, 117, 118, 119, 120, 121, 125, 126, 127, 141, 142, 144, 145, 146, 150, 164, 165, 166, 170, 175, 176, 179

5.00—55, 128, 129, 140, 168, 169, 177

Family Life

\$3.00—14

General College

- \$1.00—10A
 1.50—22A, 22B, 22C, 22X, 23AX, 23BX,
 23CX, 23DX, 24A, 24B, 24C, 24AX,
 24BX, 24CX, 25A, 25B, 25C, 25D,
 25X, 28, 32A, 32B, 32C, 32D, 32AX,
 32BX, 32CX, 33A, 33B, 33C, 33AX,
 33BX, 33CX
 2.00—23A, 23B, 23C, 23D
 2.50—47A
 5.00—26A, 26B

Geology

- \$1.00—A, B, 23, 24
 5.00—175
 10.00—100, 115, 150

Home Economics

- \$2.00—25

Home Economics Education

- \$2.00 per cr—91, 93, 94, 197, 199E

Humanities

- \$1.00—1, 11, 21, 51, 61, 71

Hydromechanics

- \$2.00—104

Industrial Education

- \$1.50 per cr—1, 2, 3, 5, 6, 7, 10, 11, 12,
 15, 16, 20, 21, 25, 26
 2.00 per cr—50A, 50B, 50C, 70, 75

Journalism

- \$1.00 general fee for one or more
 courses, excluding Jour 5
 2.00 plus general fee—51, 58, 59, 67, 68
 3.00 plus general fee—41, 52, 55
 5.00 plus general fee—10, 66

Library Science

- \$3.75 per cr (max \$45.00)—for all
 courses for resident students, exclud-
 ing Lib 1
 8.50 per cr (max \$100.00)—for all
 courses for nonresident students, ex-
 cluding Lib 1

Note: Students paying max fee may
 take other courses with no college
 tuition charge

Mathematics and Mechanics

- \$1.00—87, 141

Mechanical Engineering

- \$2.00—1, 4, 5, 6, 7, 8, 15, 16, 17, 18, 33,
 34, 35, 61, 110, 111, 112, 113, 114, 118,
 149, 159, 169, 189, 198
 3.00—12, 13, 14

Methods and Student Teaching

- \$2.00 per cr—all courses

Modern Language Institute (Summer Session)

- \$20.00 per term—Russian (1a, 2a, or 51,
 52, 53)
 40.00 per term—French (22, 58, 109);
 or German (22, 66, 107); or Spanish
 (22, 58, 109)

Mortuary Science

- \$1.00—1, 2
 1.50—4, 5, 6
 3.00—7, 20, 21, 22

Music

- \$1.50—10, 31, 32, 33, 34, 35, 36, 50, 51,
 52, 53, 54, 55, 56, 57, 58
 15.00—Class lessons in 11C, 12C
 30.00 for one (no cr) individual lesson
 per week—A, B, C, D, E, F
 30.00 for one (2 cr), \$60.00 for two (4 cr)
 individual lessons per week—11, 12,
 13, 14, 15, 16, 17, 18, 19, 20, 21, 22,
 23, 24, 25, 26, 27
 60.00—204

Music Education

- \$1.50 per cr—4, 5, 6, 59, 63, 64, 65
 2.00 per cr—50A, 50B, 53, 60, 61, 62
 30.00 for one (2 cr), \$60.00 for two (4
 cr) lessons per week—225E

Natural Science

- \$1.00—1, 2, 3, 4, 5, 6
 2.00—7, 8, 9

Physical Education (men)

- \$1.00 per cr—1A, 1B, 1C, 2A, 2B, 2C
 1.50 per cr—4A, 4B, 4C, 5A, 5B, 5C,
 6A, 6B, 6C, 7A, 7B, 7C, 8, 9A, 9B,
 60B
 2.00 per cr—55, 73, 74, 75

Note: Towel and locker fee for stu-
 dents using PE facilities for activity,
 \$2.50 per qtr payable at dept. Uni-
 forms for class or recreational ac-
 tivity, \$2.00 per qtr payable at dept.

Physical Education (women)

\$2.00 per cr—47, 48, 57A, 57B, 90A, 90B, 90C, 94

2.00—50, 51 (or both)

2.50 (max \$5.00 per qtr)—All nonprofessional, 20A, 20B, 20C, 21A, 21B, 21C, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 41A, 41B, 42

Physical Medicine

\$3.00—75, 93

Physics

\$2.00—1a, 2a, 3a, 4, 5, 6, 7, 8, 9, 50, 52, 110, 112, 120, 121, 122, 134, 136, 144, 145, 146, 148, 154

Psychology

\$1.00—4, 5, 135, 136, 137

2.00—130, 290, 291

Public Health

\$1.00 per cr—65, 66, 67, 119, 125, 129, 138, 139, 173, 190

1.00—80, 140, 150

1.50—121, 122, 131

2.00 per cr—181

2.00—111

3.00—143, 144, 184, 185, 186, 187, 188

100.00—169, 190

Rhetoric

\$1.00—1, 12, 22, 28, 54, 59

Russian

\$20.00 per summer term—(1a-2a)

Social Work

\$5.00—210, 211, 212, 215, 216, 217

Soils

\$2.00—108, 111

Speech

\$1.00—1, 2, 3, 5, 6, 51, 55, 56, 57, 61, 65, 67, 81, 82, 83, 141, 142

2.00—31, 32, 33, 34, 66, 71, 72, 73, 78, 79, 91, 92, 93, 111, 112, 113, 131, 132, 133, 143, 153

Technical Aid

\$2.00—80A, 80B, 81, 81A, 81B, 82, 82A, 82B, 83, 83A, 84, 84A, 85A

Zoology

\$1.50—21, 51, 52, 53, 55, 57, 58, 59, 75, 81, 100, 101, 102, 107, 108, 109, 110, 111, 115, 116, 117, 118, 119, 120, 121, 125, 126, 127, 132, 143, 144, 145, 146, 149, 150, 155, 156, 157, 160, 161, 162, 170, 180, 183, 184, 185

2.00—1, 2, 3, 14, 15

3.00—50, 112, 113

3.00 per summer term—1, 2

5.00—128, 129, 140

8.00—182

10.00—22

FEES FOR COURSES REQUIRING DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry and biochemistry cards are \$10.00; all others are \$5.00.

The course fees listed below will be charged against your deposit card, together with laboratory, material and breakage, and the unused balance credited to your matriculation deposit at end of the course. You must present your deposit card to be assigned a lab desk. Veterans will receive information from their instructor concerning deposit cards and lab assignments.

Agricultural Biochemistry

\$2.00—2

5.00—103, 110, 117, 118, 129, 130, 131, 132, 133, 202, 203, 212

Analytical Chemistry

\$3.00—1, 2, 7, 9, 96, 97, 98, 101, 102, 103, 104, 105, 106, 107, 108, 109, 122, 123, 127, 131, 132, 134, 138, 140

Chemical Engineering

\$3.00—105, 106, 111, 112, 113, 151, 152, 153, 154, 155, 156, 160, 176, 177, 179

Food Technology

\$5.00—51, 52

Inorganic Chemistry

\$3.00—1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 96, 97, 98, 102, 109, 110

Organic Chemistry

\$3.00—61, 62, 64, 96, 97, 98, 102, 130
10.00—110, 139

Pharmacognosy

\$3.00—55, 56
5.00—162, 163

Pharmacy

\$5.00 deposit required of all soph, jr,
sr students in Pharmacy

Physical Chemistry

\$3.00—96, 97, 98, 104, 105, 106, 107, 108,
110, 111, 112, 113, 132, 133, 134, 211,
212, 213, 231

Physiological Chemistry

\$3.00—100, 101, 102, 103

SPECIAL FEES

Supplement to General Information Bulletin.

Music Practice

\$1.00 per qtr for one, \$2.00 for two, 50
cents for each addtl hr per week—
piano, practice room
.20 per hr—small organ, practice
room
.40 per hour—large organ, practice
room
2.00 per qtr for 10 hrs per week—
practice room for other instruments

Speech and Hearing Clinic—Students

\$5.00 per qtr—spec clinical treatment

**Speech and Hearing Clinic—Nonstu-
dents**

Articulatory cases, per 10 weeks—\$15.00
for 1, \$25.00 for 2, \$30.00 for 3, \$35.00
for 4, \$40.00 for 5 lessons per week

Stuttering, per session—\$100.00 for full
time remediation

Miscellaneous

\$2.50—Placement service, required of
degree candidates in IT
10.00—Graduation fee for Technical Aid
certificate
13.85—Duluth Branch incidental fee
15.00—Professional engineering thesis
exam
26.00—Exam to determine adv standing
in Dentistry
35.00—PhD thesis publication

BUILDING ABBREVIATIONS

A, Armory	PetH(StP), Peters Hall
Adm, Administration	Ph, Physics
AE, Aeronautical Engineering	PoH, Louise M. Powell Hall for Nurses
Ag(StP), Agronomy	PP(StP), Plant Pathology
AgrBot(StP), Agricultural Botany	Psy, Psychology
AH, Appleby Hall	Pt, Pattee Hall
Bo, Botany	SBH, State Board of Health
Bu, Burton Hall	ScH, Scott Hall
C, Chemistry	ShH, Shevlin Hall
CH, Cooke Hall	SnH(StP), Snyder Hall
ChE, Chemical Engineering	So(StP), Soils
CofH(StP), Coffey Hall	TCH, Temporary, Court of Hospitals
DCB(StP), Dairy Cattle Barn	TEH(StP), Temporary, East of Haecker Hall
E, Main Engineering	TNCE, Temporary, North Court of Engineering
EdH, Eddy Hall	TNHS, Temporary, North of Health Service
EE, Electrical Engineering	TNM, Temporary, North of Mines (Appleby Hall)
En(StP), Agricultural Engineering	TNUH, Temporary, North of University High School
Ex, Experimental Engineering	TSA(StP), Temporary, South of Administration (Coffey Hall)
F, Folwell Hall	TSCE, Temporary, South Court of Engineering
ForH, Ford Hall	TSF, Temporary, South of Folwell
FraH, Fraser Hall	TSH(StP), Temporary, South of Haecker Hall
GH(StP), Green Hall	TSMa, First Temporary, South of Mines (Appleby Hall)
Gy(StP), Gymnasium	TSMb, Second Temporary, South of Mines (Appleby Hall)
HE(StP), Home Economics	TSMc, Third Temporary, South of Mines (Appleby Hall)
HH(StP), Haecker Hall	TSP, Temporary, South of Powell Hall
HoB(StP), Home Building	TWH, Temporary, West of Hospitals
Hosp, University Hospitals	UHS, University High School
Hr(StP), Horticulture	VCHH, Variety Club Heart Hospital
IA, Institute of Anatomy	VetA(StP), Veterinary Anatomy
J, Jones Hall	VetC(StP), Veterinary Clinic
JohH, Johnston Hall	VetS(StP), Veterinary Science
Lib, Library	VH, Vincent Hall
LsPav(StP), Livestock Pavilion	WeH, Wesbrook Hall
MB(StP), Music Building	WuH, Wulling Hall
ME, Mechanical Engineering	Z, Zoology
MeH(StP), Meredith Hall	
MEx, Mines Experiment Station	
MH, Millard Hall	
MNH, Museum of Natural History	
MSh(StP), Meat Shop	
MurH, Murphy Hall	
NGW, Norris Gymnasium for Women	
NH, Nicholson Hall	
NMA, Northrop Memorial Auditorium	
OSL, Oak Street Laboratories	
Owre, Owre Hall	
P, Pillsbury Hall	

FINAL EXAMINATIONS

Final Examination Schedule—The time of examination is based on the hours and days the class is regularly scheduled during the quarter. For purposes of determining the proper examination time:

- Use the lecture hour rather than the laboratory or recitation periods.
- Use the MWF sequence if scheduled four or more days per week.
- Use the first full class hour if scheduled two or more hours a day.

This schedule does not apply to courses offered primarily to students registered in Pharmacy, Law, Medicine, and Dentistry; to classes meeting after 6:00 o'clock p.m.; and to courses numbered 200 and over which have no regularly scheduled classroom.

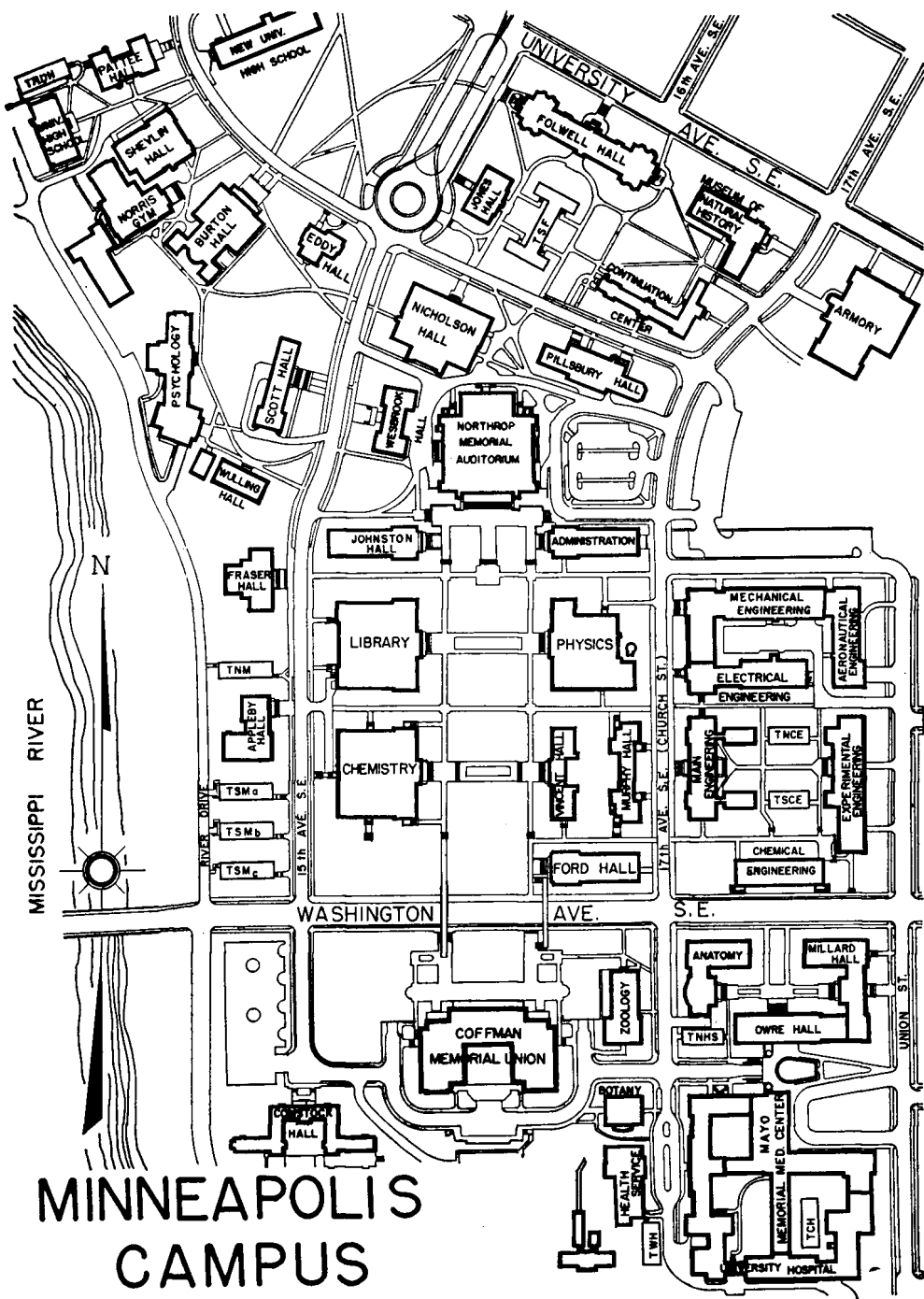
I MWF 1:30- 3:30 T Dec 16	VII MWF 8:00-10:00 Th Dec 18
I TThS 4:00- 6:00 T Dec 16	VII TTh 10:30-12:30 Th Dec 18
II MWF 1:30- 3:30 W Dec 17	VIII MWF 8:00-10:00 M Dec 15
II TThS 4:00- 6:00 W Dec 17	VIII TTh 10:30-12:30 M Dec 15
III MWF 1:30- 3:30 Th Dec 18	IX MWF 8:00-10:00 S Dec 13
III TThS 4:00- 6:00 Th Dec 18	IX TTh 10:30-12:30 S Dec 13
IV MWF 1:30- 3:30 M Dec 15	X MWF 1:30- 3:30 S Dec 13
IV TThS 4:00- 6:00 M Dec 15	X TTh 4:00- 6:00 S Dec 13
V MWF 8:00-10:00 T Dec 16	
V TTh 10:30-12:30 T Dec 16	Classes meeting on Saturdays only
VI MWF 8:00-10:00 W Dec 17	I,II S 10:30-12:30 S Dec 13
VI TTh 10:30-12:30 W Dec 17	III,IV S 1:30- 3:30 S Dec 13

Common Examinations—For courses having common examinations, all sections are examined together at one time irrespective of the regularly scheduled hours and days. A list of courses for which common examinations are given will be published in the Official Daily Bulletin.

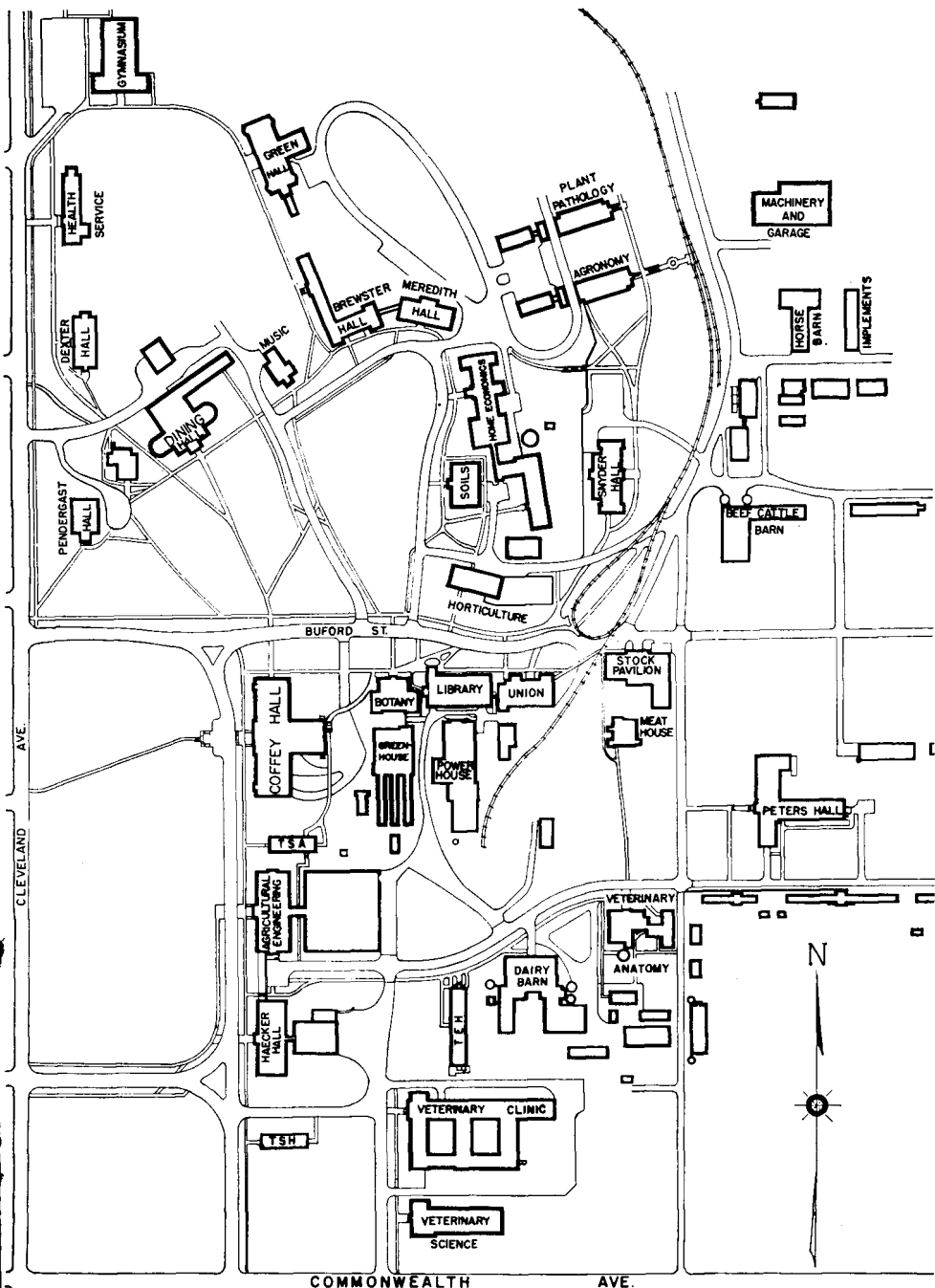
Length of Examinations—Examinations for classes scheduled four or more days a week may continue into the examination period established for TThS classes provided the instructor notifies the Room Scheduling Office of his intention to do this.

Conflicts—Students shall consult their college office, regarding procedure to follow in case of examination conflicts.

Rooms—Examinations are given in the regularly scheduled classroom unless the instructor arranges for and announces a different examination room.



MINNEAPOLIS CAMPUS



ST. PAUL CAMPUS

STUDENT'S COPY OF FALL QUARTER CLASSES

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
I						
II						
III						
IV						
V						

INTERCAMPUS CAR SCHEDULE

For the school year 1951-52, September 29 to June 12 inclusive, except during the Christmas and spring vacations. Watch the Official Daily Bulletin for changes in this schedule.

- Cars leave both the Minneapolis and St. Paul campuses on the following hours:

7:00*	9:00	11:00	1:00	3:00	5:10
7:20	9:20	11:20	1:20	3:20	5:30
7:40	9:40	11:40	1:40	3:40	5:50
8:00	10:00	12:00	2:00	4:00	6:10
8:20	10:20	12:20	2:20	4:20	6:30
8:40	10:40	12:40	2:40	4:40	6:50
					7:10†

Saturday Afternoons—Half hour schedule beginning at 1:20 on the Minneapolis Campus (last car 6:50) and 1:40 on the St. Paul Campus (last car 7:10).

Sundays—No cars.

Holidays—Schedule to be announced.

Changes in Schedule—Should it be necessary to make them, changes in the Intercampus Car Schedule will be published in the Official Daily Bulletin.

Passes—Passes for those who have classes on both campuses are issued at the University Post Office on the Minneapolis Campus and the Office of Admissions and Records on the St. Paul Campus.

Tickets—Tickets for the intercampus car may be purchased at the Cashier's Office on either campus.

* From Minneapolis Campus only.

† From St. Paul Campus only.

STUDENT'S COPY OF FALL QUARTER CLASSES

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
VI						HAVE YOU CHECKED ALL SECTION NUMBERS
VII						
VIII						
IX						
X						Course—Section Room—Building

SEPTEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

OCTOBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

DECEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

CALENDAR

FALL QUARTER

September

- 26 Fall registration (see page 3). Orientation program for new students
- 1 Holiday (Labor Day)
- 18 Fall quarter fees due for students registered through September 12
- 22-26 New Students' Week
- 26 Last day for registration and payment of fees in undergraduate colleges
- 29 Fall quarter classes begin

October

- 2 Opening convocation at 11:30 a.m.; IV hour classes excused
- 3 Last day for registration and payment of fees for the Graduate School, and for teachers in service
- 13 Holiday (Columbus Day, Sunday, October 12)

November

- 1 Homecoming Day
- 8 Dads football game
- 11 Holiday (Armistice Day)
- 20 Senate meeting, 3:30 p.m.
- 27 Holiday (Thanksgiving)
- 28-29 Classes excused

December

- 12-18 Final examination period
- 18 Commencement, 8:00 p.m.
- 20 Fall quarter closes

WINTER QUARTER

- 25 Holiday (Christmas)
- 26 Winter quarter fees due for students in residence fall quarter in undergraduate colleges

January

- 1 Holiday (New Year's Day)
- 2 Orientation and registration for new students
- 3 Orientation continues
- 5 Winter quarter classes begin; last day for registration and payment of fees for new students in all undergraduate colleges

- 9 Last day for registration and payment of fees for the Graduate School and for teachers in service

February

- 12 Holiday (Lincoln's Birthday)
- 19 Senate meeting, 3:30 p.m.
- 23 Holiday (Washington's Birthday, Sunday, February 22)
- 22-28 University of Minnesota Week
- 26 Charter day convocation at 11:30 a.m.; IV hour classes excused

March

- 13-19 Final examination period
- 19 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
- Commencement, 8:00 p.m.
- 21 Winter quarter closes

SPRING QUARTER

- 26-27 Orientation program; registration and payment of fees for new students in all undergraduate colleges
- 30 Spring quarter classes begin

April

- 2 Last day for registration and payment of fees for the Graduate School and for teachers in service
- 3 Holiday (Good Friday)
- 16 Parents Day

May

- 21 Cap and Gown Day convocation at 11:30 a.m.; IV hour classes excused
- Senate meeting, 3:30 p.m.
- 30 Holiday (Memorial Day)

June

- 6-12 Final examination period
- 7 Baccalaureate service, 3:00 p.m.
- 13 Spring quarter closes
- Commencement, 8:00 p.m.

REGISTRATION TALLY PROCEDURE

AGRICULTURE, FORESTRY, HOME ECONOMICS, AND VETERINARY MEDICINE

Tally at 203d CofH for all courses except the following (courses numbered 200 and over are not tallied):

AgEn 43, 52, 53, 63, 111, 171 tallied at 136E
HE 1, 20, 31, 40, 52, 76, 85, 120 tallied at 210JohH for SLA and 203d CofH for all other students
HE 30 tallied at 210JohH

BUSINESS ADMINISTRATION

Tally at 107VH for all courses except the following (courses numbered 200 and over are not tallied):

BA 183J, 198, 199 not tallied
Econ 32, 33, 34, 37, 40 not tallied
Econ 1, 3, 5, 6, 7 tallied at 136E for IT, 107VH for BA, and 210JohH for all other students
Econ 8, 28, 108 tallied at 136E
Other Econ courses tallied at 210JohH for all students except those registered in the School of Business Administration

EDUCATION

Tally at 206Bu for courses listed below unless otherwise indicated. Other courses are not tallied.

ArEd 17, 18
EdCI 109
Ed 55A, 71A
EPsy 125, 133, 159, 216a, 281
HEd 180
HEEd 90, 91, 92, 93, 94, 95, 192, 194A, 197, 199E tallied at 203d CofH
Ind 1, 5, 15, 20
MuEd 50A, 224
PE W 20A, 25, 70
PE W 54 tallied at 206Bu for Educ and 210JohH for all other students

GENERAL COLLEGE

Tally at 106NH for all courses.

INSTITUTE OF TECHNOLOGY

Tally at 136E for all courses except the following (courses numbered 200 and over are not tallied):

AnCh 7 tallied at 136E for IT and 210JohH for all other students
Draw 44, 45 tallied at 210JohH

InCh 1, 4 tallied at 203d CofH for Agric, 136E for IT, and 210JohH for all other students
InCh 6 tallied at 101WuH for Pharm, 136E for IT, and 210JohH for all other students
InCh 9, 11, 13 tallied at 136E for IT and 210JohH for all other students
OrCh 61 tallied at 101WuH for Pharm and 136E for all other students
PCh 107 tallied at 210JohH

MEDICAL SCIENCES

The courses listed below are tallied as indicated. Other courses are not tallied.

Bact 53 tallied at 203d CofH for Agric, 125 Owre for Nurs, 121MH for PH nurs, 605W Hosp for Med Tech, 209TWH for PT, and 210JohH for SLA students
PH52a, 52b tallied at 203d CofH
PH 62, 100, 111 tallied at 210JohH

SCIENCE, LITERATURE, AND THE ARTS

Courses listed below are tallied at 210JohH unless otherwise indicated. Other courses are not tallied.

Art 1, 10, 23, 24, 30, 33, 34, 40, 43, 45, 46, 53, 56, 60, 61, 62, 63, 66, 70, 71, 72, 73, 80, 81, 82, 90, 91, 92, 106, 110, 111, 112, 116, 116A, 123, 136, 140, 141, 142, 150, 151, 152, 156, 166, 190, 191, 192, 236, 237, 238
Art 23A, 60A, 61A, 62A tallied at 136E
Bot 1 tallied at 101WuH for Pharm, 203d CofH for Agric, and 210JohH for all other students
Bot 50, 119, 121, 130, 131
Comm 1, 2, 3
Comp 4 tallied at 106 Owre for Dent Hyg, 101 WuH for Pharm, and 210JohH for all other students
Comp 5, 6, 27, 28, 101
Comp 58 tallied at 107VH
Engl A, C, 21, 55, 56, 73, 97
FL 1, 15, 20, 25
Fren 1, 1A, 2, 3, 4
Geog 1, 4
Geog 41 tallied at 107VH for BA, and 210JohH for all other students
Geol A, B, 1, 2, 8, 107, 118
Geol 5 tallied at 136E
Geol 23 tallied at 136E for IT and 210JohH for all other students
Germ 1, 1A, 1B, 2, 3, 4
Germ 24, 27, 41 tallied at 136E
Hist 1, 3, 20 tallied at 136E for IT and 210JohH for all other students
Hist 4, 53, 59, 70
Hum 1, 2, 3, 4, 11, 21, 51 tallied at 136E for IT and 210JohH for all other students
Hum 61, 71

Jour 10 tallied at 203d CofH for Agric and 210 JohH for all other students
 Jour 11, 13, 15, 19, 51, 55, 59, 66, 67, 73, 86, 87, 106, 140
 Math 1, 6, 7 tallied at 203d CofH for Agric and 210JohH for all other students
 Math 8 tallied at 107VH for BA and 210JohH for all other students
 Math 15, 30, 50, 51, 52, 60, 106, 121, 136, 144, 157
 Mus 1T, 3T, 4T, 6T, 10, 11C, 12C, 43, 46
 Mus 43StP tallied at 203d CofH
 NSci 1, 4, 7
 Phil 1, 3 tallied at 136E for IT and 210 JohH for all other students
 Phys 7, 8, 11 tallied at 136E
 Phys 114, 116, 118 tallied at 136E for IT and 210 JohH for all other students
 Phys 120, 134, 144
 PO 1, 11
 Pol 123 tallied at 136E
 Psy 1 tallied at 203d CofH for Agric, 136E for IT, and 210JohH for all other students
 Psy 4 tallied at 136E for IT and 210JohH for all other students
 Psy 125, 144, 165, 171, 207, 290
 Russ 1
 Soc 1A, 14A tallied at 203d CofH
 Soc 45
 Soc 106 tallied at 136E
 Span 1, 1A, 2, 3, 4
 Spch 1 tallied at 106 Owre for Dent Hyg and 210JohH for all other students

Spch 2, 3, 5, 32, 34, 55, 61, 65, 66, 67, 71, 78, 81, 83, 101, 106, 115
 SSci 1, 2, 3, 11, 81 tallied at 136E for IT and 210JohH for all other students
 SW 220, 222
 Zool 1 tallied at 106 Owre for Dent Hyg and 210JohH for all other students
 Zool 14 tallied at 101WuH for Pharm, 203d CofH for Agric, and 210JohH for all other students
 Zool 51, 54, 112, 117, 121, 125, 144, 170, 185
 Zool 128 tallied at 203d CofH for Agric and 210 JohH for all other students

UNATTACHED UNIVERSITY DEPARTMENTS

Courses listed below are tallied as indicated. Other courses are not tallied.

Air 31 tallied as ROTC 1 at Armory Gym
 Air 34, 131A, 131B, 131C, 131D, 134A tallied at Armory Gym
 Mil 1 tallied as ROTC 1 at Armory Gym or 203d CofH (see 8 only)
 Mil 1J, 4J, 151J, 154J, tallied at 101WuH
 Mil 4A, 4B, 4C, 4D, 4E, 4F, 151A, 151B, 151C, 151D, 151E, 151F, 154A, 154B, 154C, 154D, 154E, 154F, tallied at Armory Gym
 Mort all courses tallied at 155NH
 Nav 11, 21, 51 tallied at 203A
 PE (men) 1A (secs 4, 5, 10 and 11), 2A (secs 11, 12, 15, 16) tallied at 210JohH

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The Bulletin of the
UNIVERSITY of MINNESOTA

Class Schedule
and Registration Instructions

Winter Quarter
1952

including

- Registration instructions
- Final examination schedule
- Courses tallied in college offices
- Registration dates
- Course fees
- Calendar

How to Use the Class Schedule

The *Class Schedule* lists hours and days and room schedules for courses offered by colleges of the University. Brief course titles and prerequisites are also shown, as well as last-minute changes in course offerings.

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

The following information should appear on your registration blank:

1. The departmental abbreviation listed after each departmental heading (divisional headings are abbreviated in some instances).
2. The course and section numbers for each lecture, recitation or laboratory period for which you are registering.
3. The abbreviated course title.
4. The number of credits shown for the course.
5. The hours and days scheduled for the class.

The University of Minnesota reserves the right to cancel any and all courses in which registration is insufficient to warrant continuation of the course.

Changes made subsequent to publication of the *Class Schedule* are published in the *Official Daily Bulletin*.

REGISTRATION INSTRUCTIONS

Step 1—Have your program approved by your college office.

This can be done on those days listed for your college on page 4. Supplementary instructions may be issued by the college in which you are registering.

Step 2—Get class reservation cards for courses tallied in the college offices.

Courses tallied in the college offices are listed on pages 78-79. These cards reserve a place for you in those courses.

Step 3—Turn in your Registration Permit, class reservation cards, and approved Registration Blank to your college window in the Office of Admissions and Records to get a fee statement.

Graduate students must first obtain approval of their program from the Graduate School office.

Step 4—Pay your fees to the bursar.

Fees for students in residence fall quarter in undergraduate colleges are due December 27.

Fees for new students in undergraduate colleges are due January 4.

Fees for students in the Graduate School are due January 11.

If you are a veteran:

First—Have your fee statement approved at the veterans' window in the Office of Admissions and Records for collection from the Veterans Administration (veterans must pay the \$5.00 matriculation fee for new students themselves).

Second—Take it to the bursar to get a receipt.

Third—Present this receipt with your Veterans' Course List to the Bureau of Veterans' Affairs, Shevlin Hall, to complete your registration with the Veterans Administration and to obtain books and supplies.

Note: *You will not be issued a fee statement if you do not have your registration permit card and necessary class reservation cards, or if your registration blank does not show proper approval by your college.*

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

CHANGE OF REGISTRATION

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

WITHDRAWAL FROM THE UNIVERSITY

Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. Veterans must also notify the Bureau of Veterans' Affairs.

COLLEGE OFFICES AND REGISTRATION DATES

Students in attendance fall quarter must register during the period set for their college.

Students returning to the University who are not in attendance fall quarter may register during the period set for their college or on January 3 and 4.

New students will register during the orientation program on January 3 and 4.

Agriculture, Forestry, and Home Economics

203d Coffey Hall
Seniors, November 28, 29
Juniors, November 30, December 3
Sophomores, December 4, 5, 6
All students, December 7-13

Business Administration

107 Vincent Hall
November 26-30

Dental Hygiene

106 Owre Hall
November 26-30

***Dentistry**

149 Owre Hall
January 3, 4

Education

204 Burton Hall
November 28-December 13

General College

106 Nicholson Hall
November 26-December 4

Graduate School

316 Johnston Hall
November 28-January 11

Institute of Technology

Architecture and Engineering,
133 Main Engineering Bldg.
Chemistry, 127 Chemistry Bldg.
Mines, Metallurgy, 103 Appleby
Hall
November 26-December 5

***Law School**

204 Fraser Hall
January 3, 4

***Medical School**

136 Owre Hall
January 3, 4

Medical Technology

605 West Hospitals
November 26-December 7

Mortuary Science

156 Nicholson Hall
November 26-27

Nursing

125 Owre Hall
November 26-December 7

Occupational Therapy

204 Temporary West Hospitals
November 26-December 7

Pharmacy

101 Wullung Hall
November 26-December 7

Physical Therapy

209 Temporary West Hospitals
November 26-December 7

Public Health

121 Millard Hall
November 26-December 7

Science, Literature, and the Arts

Junior College, 214 Johnston Hall
Senior College, 223 Johnston Hall
Special Students, 214 Johnston Hall
Starting dates: Issue of material,
November 26; Tally, November 28.
Students should complete registra-
tion by December 14 because ad-
visers generally will not be avail-
able after that date.

University College

223 Johnston Hall
Dates same as for Science, Lit-
erature, and the Arts

Veterinary Medicine

203d Coffey Hall
3rd and 4th year, November 28-29
1st and 2nd year, November 30,
December 3

* Students in these colleges have normally already registered for the entire year. Registration dates indicated are for students who have not already registered for winter quarter.

EXPLANATIONS

Course titles—When a course title appears in bold-face type, a student registering for that course must obtain a class reservation card in the college registration office in which the course is tallied (see pages 78-79).

Credits—The number of credits is listed in parentheses following the course title.

Prerequisites—Certain courses require for enrolment therein the completion of specific elementary courses, or the possession of some definite qualifications or minimum standing. These are listed in parentheses following the number of credits.

Unless otherwise indicated, courses are numbered as follows: courses primarily for freshmen and sophomores, 1 through 49; for juniors and seniors, 50 through 99; for juniors, seniors and graduate students, 100 through 199; for graduate students only, 200 and over.

Work substantially equivalent to courses listed as prerequisites is occasionally accepted in lieu of the prerequisite listed. See your college bulletin for further information.

When no departmental designation precedes the course number listed as a prerequisite, the prerequisite course is in the same department. Unless otherwise indicated a prerequisite reading "6 cr" means 6 credits in the same department.

Days and hours—MTWThF indicates that the class meets every day, Monday through Friday; TTh, that the class meets only on Tuesdays and Thursdays.

A class listed I-II MW meets the first through the second hour Mondays and Wednesdays, the hyphen always indicating *through*.

Building abbreviations—See page 74 for building abbreviations. Maps of the Minneapolis and St. Paul Campuses are also included at the back of the *Class Schedule*.

Information not listed—Course information not listed, or listed as "ar," should be obtained from the department offering the course.

Room changes—When necessary to make them, room changes are posted on classroom doors.

Class hour schedule—Class hours are identified by Roman numerals, and continue for fifty minutes after the beginning time listed below.

Hour	I	II	III	IV	V	VI	VII	VIII	IX	X
Minneapolis	8:30	9:30	10:30	11:30	12:30	1:30	2:30	3:30	4:30	5:30
St. Paul	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00

Symbols—The following symbols are used throughout the bulletin:

* Course may be taken with consent of the instructor irrespective of prerequisites.

† To receive credit for this course, you must complete all courses listed after the †.

§ Credit is not given if the equivalent course listed after the § has been taken for credit.

COLLEGE OF AGRICULTURE, FORESTRY, HOME ECONOMICS, AND VETERINARY MEDICINE

AGRICULTURAL BIOCHEMISTRY (AGBI)

- 2 Quantitative Methods** (5 cr; prereq 8 cr inorg chem)
VI-IX MWF, 116SnH, Hill
- 3 Introd Biochemistry** (3 cr; prereq 1)
I TThS, GHAud
- 116 Adv Animal Nutrition** (3 cr; prereq 6)
III TThS, 113SnH, Schultze
- 118 Lab Probs in Biochemistry** (3-5 cr; prereq sr, cons instr)
Ar
- 120 Proteins** (3 cr; prereq* sr, 119)
III MWF, 113SnH
- 121 Carbohydrates** (3 cr; prereq* sr, 119)
II MWF, 113SnH, Smith
- 130 Proteins Lab** (2 cr; prereq 2, concur regis 120)
VI-VIII TTh, 202SnH
- 131 Carbohydrate Lab** (2 cr; prereq 2, concur regis 121)
VI-VIII MW, 202SnH, Smith
- 203 Research Probs** (2-5 cr; prereq cons instr)
Ar
- 205 Special Topics in Biochemical Literature** (1-3 cr; prereq cons instr)
Ar
- 208 Cereal Chemistry Seminar** (1 cr; prereq* 108)
Ar, Geddes
- 213 Seminar—Dairy Chemistry** (1 cr; prereq 103, cons instr)
Ar, Jenness
- 216 Nutrition, Enzymes Seminar** (1 cr; prereq 116, 123, cons instr)
Ar, Schultze, Boyer
- 219 Colloid Chemistry Seminar** (1 cr; prereq 119, cons instr)
Ar, Briggs
- 220 Protein Chemistry Seminar** (1 cr; prereq 120, cons instr)
Ar
- 221 Carbohydrate Chemistry Seminar** (1 cr; prereq 121, cons instr)
Ar, Smith
- 222 Chemistry of Lipides Seminar** (1 cr; prereq 122, cons instr)
Ar, Lundberg
- 224 Gen Seminar** (1 cr)
Ar, Geddes

AGRICULTURAL ECONOMICS (AGEC)

- 1 Prin Economics I** (3 cr, †1-2; prereq soph, regis agric, forestry)
III MWF, 109HH, Lowe
- 2 Prin Economics II** (5 cr, †1-2; prereq 1)
—1, I MTWThF, 100HH, Lowe
—2, I MTWThF, Ar, Chappell

- 3 Prin Economics** (5 cr; prereq soph, maj HE)
II MTWThF, 109HH, Lowe
- 25 Prin Accounting** (4 cr; prereq soph, regis agric, forestry, HE)
Lect II TThS, 311HH, Dahl
Lab VIII-IX Th, 311HH, Dahl
- 102 Farm Organization** (3 cr; prereq 2)
II TThS, 100HH, Pond
- 131 Market Prices** (3 cr; prereq 30, 40)
III TThS, 210HH, Cochrane
- 141 Marketing Organization: Dairy, Poultry Products** (3 cr; prereq 40)
II MWF, 210HH, Jesness
- 143 Marketing Organization: Livestock, Meats** (3 cr; prereq 40)
III MWF, 311HH, Dowell
- 170 Land Economics** (3 cr; prereq 110)
1:30-3:00 WF, 109HH, Dowell
- 191 Adv Agricultural Statistics** (3 cr; prereq 90)
IV MWF, 311HH, Cochrane
- 206 Seminar—Agricultural Policy** (3 cr)
3:45-5:00 MW, 311HH, Jesness

AGRICULTURAL ENGINEERING (AGEN)

- 3 Mechanical Drawing** (3 cr)
III-IV MWF, 303En, Christopherson
- 11 Applied Mathematics** (5 cr; prereq plane geom)
IV MTWThF, 103En, Flikke
- 18 Agricultural Automotives** (3 cr; prereq ME 131, regis IT)
Lect I TTh, 216En, Strait
Lab VIII-X F, 37En, Strait
- 23 Gen Physics** (5 cr; prereq 11)
Lect II MTWF, 101En, Hustrulid
—1, Lab I-II Th, 102En
—2, Lab IX-X F, 102En
—3, Lab VI-VII Th, 102En
- 25 Agricultural Physics II** (4 cr; prereq 24)
Lect I TThS, 101En, Hustrulid
—1, VI-VII M, 102En
—2, Lab VI-VII F, 102En
—3, Lab IX-X M, 102En
—4, Lab VI-VII T, 102En
—5, Lab IX-X T, 102En
- 31 Prin Drainage** (3 cr; prereq Soil 4)
II MWF, 305En, Larson
- 32 Elements of Supplemental Irrigation** (2 cr; prereq Soil 4)
III TTh, 305En, Allred
- 36 Rural Sanitation, Water Supply** (3 cr; prereq MM 129, regis IT)
III MWF, 305En, Allred
- 41 Metal Work** (3 cr)
I-II TThS, 106, 20En, Dent

- 51 Soil Water Conservation (3 cr; prereq 21, Soil 4, Hyd 102 or concur regis, regis IT)
IV MWF, 105En, Manson
- 55 Electricity in Agriculture (2 cr; prereq 11, 23)
VI TTh, 101En, Hustrulid
- 61 Irrigation (3 cr; prereq 51, regis IT)
I MWF, 305En, Allred
- 73 Steam Boilers, Heat Engines (3 cr; prereq 18, ME 131, regis IT)
Lect VII MF, 105En, Strait
Lab VII-X W, 37En, Strait
- 106 Agricultural Hydrology (3 cr; prereq 61 or concur regis, regis IT)
VI MWF, 105En, Larson
- 112 Probs in Agricultural Engineering (2-6 cr; prereq 167, regis IT)
Ar
- 126 Mgt of Agricultural Machinery (3 cr; prereq 171, AgEc 102, regis IT)
Ar, Schwantes
- 167 Adv Farm Structures (3 cr; prereq 53, 63, ME 160, CE 146, regis IT)
Lect I TTh, 303En, Otis
Lab VIII-X F, 303En
- 212 Adv Problems, Research (2-6 cr; prereq 167)
Ar

AGRICULTURAL JOURNALISM (AGJO)

- 53 Publicity (3 cr; prereq rhet comm requir)
I TThS, 107AgrBot, Swanson

AGRONOMY AND PLANT GENETICS (AGRO)

- 21 Grain Crops (4 cr; prereq soph, 1)
Lect VI MWF, 202Ag, Dunham
Lab VII MWF, VIII W, 201Ag
- 31 Prin Genetics (4 cr; prereq soph)
Lect I TThS, 202Ag, Lambert
Lab Ar
- 52 Production, Grading of Cereal Crops (4 cr; prereq regis ME—Milling Option, 9 cr biol)
Lect III MWF, 101Ag, Dunham, Schmid
Lab III-IV TTh, 201Ag, Lambert, Caldwell
- 121 Grain Crops (4 cr)
Lect VI MWF, 202Ag, Dunham
Lab VII MWF, VIII W, 201Ag
- 131 Prin Genetics (4 cr)
Lect I TThS, 202Ag, Lambert
Lab Ar
- 132 Farm Crops Plant Breeding (4 cr; prereq 31)
VI-VIII TTh, 202Ag, Rinke
- 201 Research—Farm Crops (ar cr; prereq 121, 123)
Ar, Dunham, Schmid, Thomas
- 202 Farm Crops Seminar (1½ cr; prereq 9 cr farm crops)
Ar

- 203 Adv Studies in Agronomy (3 cr; prereq 121, 123)
Ar, Dunham, Schmid, Thomas
- 241 Research—Plant Genetics (ar cr)
Ar, Hayes, Burnham, Rinke, Thomas
- 246 Seminar—Genetics (2 cr)
Ar
- 247 Cytogenetics (3 cr; prereq Bot 119)
Ar, Burnham
- 248 Applied Statistics (3 cr; prereq PH 110)
Ar, Thomas
- 250 Cytogenetics, Specialized Agronomy (2 cr; prereq 247)
Ar, Burnham

ANIMAL HUSBANDRY (ANHU)

- 1 Livestock Production (4 cr)
—1, II MTWThF, CLSPav, Harvey
—2, II MTWThF, WLSpav, R M Anderson
- 8 Breeds of Livestock (4 cr; prereq soph 1)
—1 III-IV TThS, 3LSPav, Harvey
—2, III-IV TThS, WLSpav, Aunan
- 50 Meat Selection, Utilization (3 cr; prereq regis agric, HE)
III-IV TThS, MSh, P A Anderson
- 51 Meats, Meat Products (3 cr; prereq 1)
VI-VII MWF, MSh, P A Anderson
- 57 Livestock Feeding II (3 cr; prereq 56)
—1, III MWF, PetH Aud, Hanson
—2, IV MWF, 125VetC, R M Anderson
- 112 Animal Breeding (3 cr; prereq Agro 31)
IV MWF, PetH Aud, Winters
- 203 Adv Animal Breeding II (3 cr; prereq 112, 116)
III MWF, 108PetH, Winters
- 206 Adv Livestock Feeding I (3 cr; prereq 57, AgBi 6)
VI MWF, 108PetH, Hanson
- 209 Seminar—Animal Husbandry (1 cr)
IX M, 108PetH, Ferrin
- 213 Research—Animal Husbandry (3-9 cr)
Ar

DAIRY HUSBANDRY (DYHU)

- 10 Dairy Products Judging (1 cr; prereq soph 1)
IX-X Th, 9HH, Thomas, Morris
- 50 Dairy Bacteriology (5 cr, lect only 3 cr; prereq soph, Bact 53, cons instr to take lect only)
Lect VI MWF, 210HH, Olson
Lab VII-VIII MWF, 212HH, Olson
- 103 Dairy Stock Feeding (3 cr; prereq sr, 101, AnHu 56)
II TThS, 9H, Gullickson
- 106 Seminar II (1 cr; prereq 105)
III F, 210HH, Peterson
- 110 Ice Cream, Frozen Desserts (3 cr; prereq 1, 3)
Lect IV TS, 210HH, Combs, Thomas
Lab VI-VIII T

- 114 **Milk By-Products** (3 cr; prereq 3)
Lect I TTh, 210HH, Coulter, Morris
Lab VI-VIII Th
- 203 **Research—Dairy Production** (ar cr)
Ar
- 206 **Research—Dairy Manufacturing** (ar cr)
Ar
- 213 **Research—Dairy Bacteriology** (ar cr)
Ar

ENTOMOLOGY AND ECONOMIC ZOOLOGY (ENT)

- 5 **Economic Entomology** (5 cr; prereq soph, Zool 15)
Lect VIII MWF, 107AgrBot, Cutkomp
Lab VI-VII MWF, 302CofH
- 52 **Introed Entomology** (5 cr; prereq zool 15)
Lect VII MWF, 313Z, Mickel
—1, Lab V-VI MWF, 402Z
—2, Lab VIII-IX MWF, 402Z
- 56 **Forest Entomology** (5 cr; prereq Zool 15)
Lect: VIII MWF, 230TSH, Hodson
—1, Lab VI-VII MWF, 307CofH
—2, Lab IX-X MWF, 307CofH
- 63 **Mammalogy** (4 cr; prereq Zool 22)
Lect II MWF, 307CofH, Beer
—1, Lab I-II ThS, 100CofH
—2, Lab IV-V ThS, 100CofH
- 64 **Introed Fish, Wildlife Mgt** (5 cr; prereq Zool 3, Bot 50 or For 20)
III MTWThF, 107En, Beer
- 118 **Animal Ecology** (3 cr; prereq 15 cr zool or ent, cons instr)
VI-VIII TTh, 307CofH, Hodson
- 126 **Adv Gen Entomology** (3 cr; prereq 15 cr zool or ent)
Lect I TTh, 211Z, Mickel
Lab I-III S, 402Z
- 129 **Insect Physiology** (4 cr; prereq sr, 15 cr zool or ent, cons instr)
Lect VI WF, 8CofH, Richards
Lab VII-IX WF, 8CofH
- 142 **Insects in Relation to Plant Diseases** (3 cr; prereq 8 cr ent or pl path)
I-II MWF, 302CofH, Christensen, Granovsky
- 145 **Parasitic Protozoa** (3 cr; prereq 15 cr zool, cons instr)
VII-IX TTh, 208Z, Wallace
- 169 **Fishery Biology, Mgt** (5 cr, 168-169; prereq* Zool 53, 118, 119, 121, Bot 57, PH 110, 111)
Lect VI MWF, 100CofH, Smith
Lab VII-VIII MWF, 100CofH
- 197 **Introed Research** (1 or more cr; prereq sr, cons dept)
Ar

FOOD TECHNOLOGY (FOOD)

- 52 **Food Analysis** (2 cr; prereq AgBi 2, 3)
VI-VIII TTh, 102SnH, Jenness, Boyer

- 102 **Food Technology** (3 cr; prereq 52, AgBi 3, Bact 53, course in phys)
II TThS, 116SnH, Geddes, Liener
- 104 **Frozen Food Processing, Storage** (3 cr; prereq* Bact 53, AgBi 5 or 6)
IV MWF, 102Hr, Winter
- 105 **Frozen Food Probs** (2-4 cr; prereq 104)
Ar, Winter

FORESTRY (FOR)

- 1 **Introed Forestry** (3 cr)
II MWF, GHAud, Hall
- 8 **Forest Measurements** (3 cr; prereq Math 1, 6)
Lect IV MW, GHAud, Brown
—1, Lab VI-VIII W, 206GH, Brown
—2, Lab II-IV S, 206GH, Brown
- 20 **Introed Range Mgt** (3 cr; prereq soph)
II TThS, 203GH, Allison
- 54 **Wood Structure, Identification** (3 cr; prereq 4)
—1, Lab VI-VIII MW, 211GH, Rees
—2, Lab VI-VIII TTh, 211GH, Rees
- 55 **Forest Protection** (3 cr)
II MWF, 203GH, Weinstein
- 57 **Wood Utilization** (3 cr; prereq 53, 54)
I MWF, 211GH, Kaufert, Kemp
- 101 **Adv Dendrology** (3 cr; prereq 4)
Ar, Rees
- 111 **Adv Forest Measurements** (3 cr; prereq sr, 9)
VI-X T, 206GH, Brown
- 113 **Wood Pulp, Paper** (3 cr)
IX MWF, 203GH, Hossfeld
- 115 **Mechanical, Physical Properties of Wood** (3 cr; prereq 114)
I-II TThS, 3GH, Rees
- 124 **Introed to Forest Mgt** (3 cr; prereq 123)
I MWF, 203GH, Spurr
- 127 **Introed to Silviculture** (3 cr; prereq 126)
IV TThS, 201GH, Hansen
- 131 **Forest Policy** (3 cr; prereq sr)
I MWF, 202GH, Allison
- 140 **Forest Mgt** (5 cr; prereq sr, 124, 127)
III MTWThF, 203GH, Spurr
- 141 **Prin Silvics** (3 cr; prereq grad, 127)
II TThS, Greenhouse, Hansen
- 143 **Forest Recreation** (3 cr)
IV MWF, 202GH
- 157 **Maj Report** (2 cr; prereq grad)
I TTh, 203GH
- 201 **Research Probs—Silviculture** (ar cr)
Ar
- 204 **Research Probs—Forest Mgt, Forest Mgt Plans** (ar cr)
Ar
- 206 **Research Probs—Forest Economics** (ar cr)
Ar
- 208 **Research Probs—Wood Technology** (ar cr)
Ar
- 214 **Special Probs—Forest Utilization** (ar cr)
Ar

- 219 Research Probs—Forest Measurements (ar cr)
Ar
- 224 Forestry Seminar (1 cr)
VIII-IX T

HOME ECONOMICS (HE)

- 1 Choice, Care of Clothing (4 cr, §GC15; not open to HE sr or men)
II MTWTh, 313HE
- 3 Clothing Construction A (3 cr; prereq 1, 3rd qtr fresh)
—1, VI-VII MWF, 304HE, Ahlstrand
—2, VI-VIII TTh, 304HE, Carlson
- 4 Clothing Construction B (3 cr; prereq soph, 3 or 20)
—1, III-IV MWF, 304HE
—2, VI-VIII TTh, 305HE, Gorham
- 6 Institution Experience (3 cr; prereq maj instit mgt, cons instr)
Cafeteria, Scholl
- 17 Personal, Family Living (3 cr; prereq no sr)
—1, IV MWF, 213HE, Gallagher
—2, VII MWF, 213HE, Gallagher
- 20 Introd Related Art (4 cr, §56; prereq no HE sr)
—1, IV MTWF, 203HE, Esteros
—2, VIII MTWF, 203HE, Myren
- 21 Color, Design I (3 cr; prereq 20)
—1, VI-VII MWF, 402HE
—2, VI-VIII TTh, 402HE
- 22 Color, Design II (3 cr; prereq 1, 20)
—1, II-III MWF, 402HE, Petersen
—2, VI-VII MWF, 401HE, Petersen
- 25 Design Applied to Crafts (3 cr; prereq 21 or 22)
VI-VIII TTh, 110HE, Petersen
- 27 Related Art Probs (3 cr; prereq soph, 21)
II-III MWF, 401HE, Myren
- 31 Introd Nutrition (3 cr, §30; prereq no sr)
—1, II MWF, 213HE, Rehfeld
—2, 10:00-11:15 TTh, Rehfeld
- 35 Nutrition II (4 cr; prereq soph, 33)
Lect II MWF, 307HE, Nymon
Lab VI-VIII T, 211HE
- 40 Food Preparation (5 cr; prereq 2 qtrs chem)
—1, III-IV MTWThF, 103HE, Gordon
—2, VI-VII MTWThF, 103HE, Asp
—3, VIII-IX MTWThF, 103HE, Trammell
- 41 Food Mgt, Marketing (5 cr; prereq soph, 31, 40)
—1, III-IV TWThF, V WF, 207HE, Trammell
—2, III-IV MTWTh, V TTh, 207HE, Jones
- 45 Quantity Cookery (6 cr; prereq soph, 40, 41)
Lect V TTh, 213HE, Billings
—1, Lab I-IV TThS, Cafeteria
—2, Lab I-IV MWF, Cafeteria
- 46 Cafeteria Experience (3 cr; prereq soph)
Lect IV W, Cafeteria, Higgins
—1, Lab IV-VI MF, Cafeteria
—2, Lab IV-VI TTh, Cafeteria

- 49 Household Equipment (3 cr; prereq* soph, AgEn 35)
—1, VI-VIII TTh, 106HE, Bonnell
—2, VII-VIII MWF, 106HE, Bonnell
- 50 Textiles (3 cr; prereq 1)
—1, III-IV MWF, 307HE, Gorham
—2, VI-VII MWF, 307HE, Carlson
- 53 Adv Clothing (3 cr; prereq 4, 50 or concur regis)
VI-VII MWF, 305HE, Gorham
- 56 Applications of Color, Design I (3 cr, §20; prereq no HE students, writ permis from jr col office)
II-III TTh, 402HE, Myren
- 70 Adv Food Preparation (3 cr; prereq 40, AgBi 1)
VI-VIII TTh, 107HE, Gordon
- 85 Home Mgt Principles (3 cr; prereq 40, 41 advised)
VII MWF, 203HE, Jeary
- 86 Home Mgt Lab (4 cr; prereq 85 or concur regis, PH 52a, 52b; 40, 41 advised)
—1, I S and ar, Home Mgt House, Jeary
—2, I S and ar, Home Mgt House, Stephens
- 89 Special Probs in Household Equipment (3 cr; prereq 49, AgEn 35, cons instr)
Ar, Bonnell
- 98 Home Economics Extension (3 cr; prereq sr, HEED 91 or concur regis)
Ar
- 107 Textile Analysis (3 cr; prereq 50, AgBi 1, 2)
VI-VIII MWF, 311, 313HE, Phelps
- 120 Art History (3 cr; prereq sr)
VIII MWF, Esteros
- 121 Textile Design (3 cr; prereq 27, 50; 23 advised)
II-III MWF, 110HE
- 142 Experimental Cookery (3 cr; prereq 40, AgBi 1)
VI-VIII MW, 107HE, Jones
- 170 Family Nutrition (3 cr; prereq 31, 40, AgBi 1, 3 cr physiol)
III MWF, 313HE, Biester
- 171 Child Nutrition (3 cr; prereq 170, HEED 90)
III MW, St. Paul Campus, 203HE, Leichsenring
III F, Mpls Campus, 111Bu, 1 day ar
- 178 Clinical Probs in Nutrition (2 cr; prereq 170, 35 or concur regis)
Lect V M, 313HE, Rehfeld
—1, Lab VI-VIII T, U Hosp
—2, Lab VI-VIII Th, U Hosp
- 179 Readings in Nutrition (2 cr; prereq 170)
V WF, 110HE, Nymon
- 180 Home Planning, Furnishings (5 cr, §GC 16, FL 15, HE 24, 57; prereq 27, 49, 120 advised)
IV-V MTWF, 401HE, Ludwig
- 202 Animal Fibers (2 cr; prereq adv textiles, cons instr)
Phelps

- 204 Plant, Other Cellulosic Fibers (2 cr; prereq bot, adv textiles, cons instr)
Phelps
- 208 Microanalysis of Textile Fibers (ar cr; prereq bot, zool, adv textiles, cons instr)
Ar, Phelps
- 209 Seminar—Textiles, Clothing (1 cr; prereq cons instr)
Ar, Phelps
- 247 Special Food Probs (3 cr; prereq 142, AgBi 1, cons instr)
Ar, Noble
- 249 Seminar—Foods (1 or 2 cr; prereq cons instr)
Ar, Noble
- 279 Seminar—Nutrition (1 cr; prereq cons instr)
Ar, Biester
- 295 Home Economics Probs (1-5 cr; prereq cons instr)
Ar
- 296 Home Economics Probs (1-5 cr; prereq cons instr)
Ar
- 299 Home Economics Probs (ar cr; prereq cons instr)
Ar

HORTICULTURE (HORT)

- 1 Gen Horticulture (3 cr)
III MWF, GHAud, Alderman, Weir
- 36 Plant Propagation (3 cr; prereq 6 cr bot)
III TTh, VI-VIII T, 8Hr, Widmer
- 61 Prin of Planting Composition (3 cr; prereq* 60)
VI-VIII MF, 108Hr, Phillips
- 62 Special Probs in Landscape Design, Composition (2-4 cr; prereq sr, 61)
Ar, Phillips
- 110 Horticultural Crop Breeding (3 cr; prereq Agro 31)
III TThS, 302Hr, Wilcox
- 121 Small Fruit Culture (3 cr; prereq* hort maj or min, 6 or 32, 9 cr bot)
II MWF, 102Hr, Brierley
- 139 Vegetable Crops II (3 cr; prereq 32, 9 cr bot)
VII MWF, 302Hr, Nylund
- 191 Special Probs (2-4 cr; prereq cons instr)
Ar, Alderman, Staff
- 194 Horticultural Seminar (1 cr; prereq sr, 9 cr hort)
IX W, 301Hr, Alderman, Staff
- 241 Organization of Horticultural Research (2 cr)
Ar, Alderman, Krantz
- 244 Adv Topics in Horticulture (3 cr)
Ar, Alderman, Brierley, Krantz, Nylund
- 247 Report on Special Horticultural Topics (9 cr or less)
Ar

- 249 Research—Horticultural Crop Breeding (ar cr)
Ar, Krantz, Currence, Hutchins, Wilcox

ORIENTATION (ORIE)

- 1 College Orientation Lectures (1 cr)
V M, 105En, McFarland

PLANT PATHOLOGY AND AGRICULTURAL BOTANY (PLPA)

- 9 Seed Technology, Testing (3 cr; prereq soph, 9 cr bot)
II-III TThS, 106AgrBot, Larson
- 10 Forest Pathology (5 cr, §1; prereq soph, 6 cr bot)
Lect VII MWF, 103, 105PP, French
Lab VIII-IX MWF, 103, 105, 106PP
- 102 Physiology of Seeds (3 cr; prereq* 15 cr pl sci)
Lect III MW, 107AgrBot, Heggeness
Lab III-IV F, 107AgrBot
- 104 Industrial Mycology (3 cr; prereq 1 or 10 or 56)
Lect II MW, 103, 105, 106PP, C Christensen
Lab II-III F
- 106 Mycology (3 or 5 cr; prereq 1 or 10)
VI-VIII TTh, 103, 105, 110PP, Dossdall
- 111 Diseases of Field Crops (4 cr; prereq 1 or 10)
III-IV TThS, 103, 105, 106PP, J Christensen, Kernkamp
- 114 Adv Forest Pathology (3 cr; prereq 1 or 10)
VI-VIII T, VII-VIII Th, C Christensen
- 120 Adv Plant Pathology (3 cr, §1, 10; prereq* 14 cr pl sci)
Lect VII MWF, 103, 105, 106PP, French
Lab VIII-IX MWF
- 142 Insects in Relation to Plant Disease (3 cr; prereq 8 cr ent or pl path)
I-II MWF, 302CofH, J Christensen
- 162 Temperature Relations of Crop Plants (3 cr; prereq* 15 cr pl sci)
Ar, Landon
- 204 Research—Plant Pathology (ar cr)
Ar, Stakman, Staff
- 208 Special Probs in Mycology (ar cr; prereq 105-106-107)
Ar, Stakman, C Christensen, Dossdall
- 211 History of Plant Pathology (2 cr)
Ar, Stakman
- 213 Seminar (2 cr)
IX-X T, 401PP, Stakman, Staff
- 218 Prin of Plant Pathology (5 cr; prereq 1 or 10, Bact 53, 6 cr pl path)
III-IV MWF, 401PP, Stakman, Eide
- 252 Seminar—Applied Plant Physiology (1 cr)
Ar, Landon
- 255 Research Probs in Applied Plant Physiology (ar cr)
Ar, Landon

- 261 Research Probs in Agricultural Botany (3 or 5 cr)
Ar, Stakman, Larson

POULTRY HUSBANDRY (POHU)

- 1 Poultry Production (4 cr)
II MTWF, 110PetH, Canfield
- 55 Special Probs (1-3 cr; prereq 6 cr)
Ar, Sloan
- 102 Poultry Breeding (4 cr; prereq 1, Agro 31)
Lect I MWF, 200PetH, Shoffner
Lab ar
- 214 Research—Poultry Husbandry (ar cr; prereq 9 cr)
Ar
- 215 Research—Poultry Nutrition (ar cr; prereq 9 cr agric biochem)
Ar, Sloan
- 216 Research—Poultry Breeding (ar cr; prereq 9 cr genetics)
Ar, Shoffner
- 217 Poultry Husbandry Seminar (1 cr)
Ar, Sloan

RHETORIC (RHET)

- 1-2-3 Communications I, II, III (3 cr per qtr)
All entering freshmen will meet in 217En the first period every day for the first week of the quarter. At this time they will be given diagnostic tests in the communication skills, and at the end of the week will be sectioned according to their needs and abilities. After the first week, all sections will continue to meet during the first hour but a student will be assigned to a MWF or a TThS sequence.
- Students transferring to this college with fewer than nine credits of freshman English earned elsewhere are also required to take these diagnostic tests.
- All students who have taken at least one course in Communications on this campus but who have not completed their Freshman Communications requirement will be given their section assignment in 107En the first period of the first class day of the quarter.
- 22 Public Speaking (3 cr; prereq soph, rhet comm requir)
—1, II MWF, 312En, Woods
—2, III MWF, 307En, Nichols
—3, IV MWF, 307En, Nichols
—4, VI MWF, 120TSA, Sandquist
—5, VII MWF, 120TSA, Sandquist
—6, II TThS, 120TSA, Hagen
—7, III TThS, 312En, Woods
- 26 Original Writing (3 cr; prereq soph, rhet comm requir)
III MWF, 312En, Woods

- 28 Play Production (3 cr; prereq soph, rhet comm requir)
III MWF, 220TSA, Drake
- 31 English Literature I (5 cr; prereq soph, rhet comm requir)
III MTWThF, 308En, Thurston
- 32 English Literature II (3 cr; prereq soph, rhet comm requir)
II TThS, 210TSA, Rosegrant
- 33 American Life in American Literature (3 cr; prereq soph, rhet comm requir)
II MWF, 307En, Rodabaugh
- 47 Efficient Reading (3 cr)
—1, VI MWF, 311En, Brown
—2, VII MWF, 311En, Wright
- 51 Exposition (3 cr; prereq rhet comm requir)
—1, III MWF, 120TSA, Bahlke
—2, IV MWF, 120TSA, Rodabaugh
—3, VI MWF, 308En, Thurston
—4, III TThS, 307En, Brown
—5, IV TThS, 307En, Rosegrant
- 54 Adv Public Speaking (3 cr; prereq 22)
—1, II MWF, 120TSA, Drake
—2, II TThS, 307En, Sandquist
- 60 Contemporary Literature (3 cr; prereq rhet comm requir)
IV MWF, 312En, Woods
- 91 American Speech for Foreign Students (no cr)
Ar, Woods

SOILS (SOIL)

- 4 Soils (3 cr; prereq soph, InCh 2 or 5)
II MWF, 204So, Caldwell
- 108 Physical Properties of Soils (3 cr; prereq 4)
Lect VI TTh, 204So, McMiller
Lab VII-IX TTh, 204So
- 110 Chemistry of Soil (3 cr; prereq 4)
I TThS, 204So, MacGregor
- 202 Research Probs in Soils (2-5 cr)
Ar, Rost, Burson, McMiller, Caldwell, MacGregor
- 205 Soil Colloids (3 cr; prereq AgBi 119)
Ar, Caldwell
- 207 Adv Soils (3 cr; prereq 1 yr chem)
II MWF, 204So, Caldwell
- 208 Soil Fertility (3 cr; prereq 4)
II TThS, 204So, Rost

VETERINARY MEDICINE (VET)

- 51 Anatomy, Physiology, Hygiene of Domestic Animals (3 cr; prereq 50)
I TThS, 103VetA, Sellers
- 102 Animal Anatomy (5 cr; prereq regis 1st yr vet med; grad, cons instr)
Lect VI MW, 103VetA, Kitchell
Lab VI-IX WF, V-VII Th, 102VetA
- 104 Special Studies in Animal Anatomy (1-3 cr; prereq 101)
Ar, Kitchell, Weber

- 106 **Veterinary Surgical Anatomy** (1 cr; prereq* regis 3rd yr vet med, 103, 170; grad, cons instr)
VI-VII M, 102VetA, Kitchell
- 108 **Special Animal Gross, Microscopic Anatomy** (3 cr; prereq 107)
Ar, Kitchell, Weber
- 109 **Anatomy, Physiology, Hygiene of Poultry** (3 cr; prereq Zool 15, PoHu 1)
VII MWF, 210HH, Pomeroy
- 112 **Animal Histology, Embryology** (5 cr; prereq regis 1st yr vet med; grad, cons instr)
Lect I MW, 103VetA, Weber
Lab II-IV MWF, 204VetA, Weber
- 114 **Special Studies in Animal Histology, Embryology** (1-3 cr; prereq 111)
Ar, Kitchell, Weber
- 119 **Seminar on Animal Anatomy** (1 cr; prereq* 101, 111)
Ar, Kitchell, Weber
- 123 **Animal Bacteriology** (4 cr; prereq 122)
Lect II MW, 207TEH, Malmquist
Lab III-IV MW, II-III F, 100TEH
- 136 **Animal Physiology** (7 cr; prereq* 135)
Lect I MTWThF, 207TEH, Sellers
Lab II-IV TTh, 103TEH
- 137 **Probs in Animal Physiology** (ar cr; prereq 135, 136 or Phsl 107)
Ar, Sellers
- 140 **Seminar—Animal Physiology** (2 cr; prereq* 136)
Ar, Sellers
- 143 **Veterinary Clinical Pharmacology** (3 cr; prereq regis 3rd yr vet med, Phcl 105; grad, cons instr)
Lect VI W, VII F, 220TSH, Stowe
Lab VII-IX W, 70VetC
- 152 **Animal Pathology** (5 cr; prereq* 151)
Lect VI MWF, 207TEH, Sautter
Lab VII-IX WF, 100TEH
- 157 **Veterinary Post-mortem Pathology** (1-3 cr; prereq 153, cons instr)
Ar, Kernkamp, Sautter
- 158 **Veterinary Surgical Pathology** (1-3 cr; prereq 153, cons instr)
Ar, Kernkamp, Sautter
- 161 **Animal Parasitology** (4 cr; prereq* sr, 103, 113)
Lect VII M, IV F, 207TEH, Griffiths
Lab VI-VIII TTh, 100TEH
- 168 **Diseases of Fur-Bearing Animals** (2 cr; prereq 123, 186, regis 4th yr vet med; grad, cons instr)
VI TTh, 125VetC, Fenstermacher
- 169 **Veterinary Jurisprudence, Business Administration** (2 cr; prereq regis 4th yr vet med; grad, cons instr)
VII TTh, 125VetC, Campbell
- 171b **Clinical Conference** (1 cr, †171a-171b-171c; prereq regis 3rd yr vet med, 170; grad, cons instr)
VI F, 125VetC, Bartlett
- 171e **Clinical Conference** (1 cr, †171d-171e-171f; prereq regis 4th yr vet med, 170)
VI F, 125VetC, Bartlett
- 173 **Special Animal Surgery** (5 cr; prereq* regis 3rd yr vet med)
Lect VI TTh, 220TSH, I S, 109HH, Arnold
Lab VII-IX TTh, 70VetC
- 178 **Large Animal Medicine** (5 cr; prereq* regis 3rd yr vet med)
I MTWThF, 109HH, Campbell
- 180 **Infectious Diseases of Domestic Animals** (5 cr; prereq 179, regis 4th yr vet med; grad, cons instr)
I MTWThF, 125VetC, Hoyt
- 189 **Clinical, Lab Practice** (5 cr; prereq regis 3rd yr vet med, 170)
II-III MWF, II-IV TThS, 70VetC, Campbell, Staff
- 192 **Clinical, Lab Practice** (5 cr; prereq regis 4th yr vet med, 190; grad, cons instr)
II-IV MTWThFS, 55VetC, Campbell, Staff
- 195 **Veterinary Obstetrics, Probs of Animal Reproduction** (5 cr; prereq regis 4th yr vet med, 190; grad, cons instr)
Lect VI MW, VII F, 125VetC, Bartlett
Lab VII-IX MW, 70VetC
- 201 **Adv Animal, Poultry Pathology** (ar cr; prereq cons instr)
Ar, Fenstermacher, Sautter
- 205 **Adv Animal Bacteriology** (ar cr; prereq cons instr)
Ar, Pomeroy, Fenstermacher
- 209 **Adv Clinical Technique** (ar cr; prereq cons instr)
Ar, Campbell, Boyd, Staff
- 213 **Veterinary Obstetrics, Gynecology** (ar cr; cons instr)
Ar, Boyd
- 217 **Seminar—Veterinary Medicine** (ar cr)
V Th, 125VetC, Kernkamp
- 230 **Research—Veterinary Medicine** (ar cr)
Ar, Staff
- 235 **Research—Animal Physiology** (ar cr; prereq 135, 136 or Phsl 107)
Ar, Sellers
- 240 **Adv Veterinary Parasitology** (ar cr; prereq 161, 162)
Ar, Griffiths
- 245 **Research—Veterinary Parasitology** (ar cr; prereq cons instr)
Ar, Griffiths

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION (BA)

- 51 **Contracts** (3 cr, †51, 52, or 53; prereq Econ 7)
8:30-10:00 TTh, 4VH, Wright
- 52 **Agency, Partnership, Corporations** (3 cr, †51, 52, or 53; prereq 51)
Lect IV T, NHAud, Wright, Larson
—1, I TTh, 1VH
—2, II TTh, 1VH
—3, III TTh, 1VH
—4, III TTh, 4VH
- 54 **Elem Accounting, Combined Course** (4 cr, §Econ 22, 24-25)
II MWThF, 307VH, Heilman, others
- 55 **Elem Accounting** (4 cr, §Econ 23, 26)
—1, I MWThF, 6VH, Heilman, others
—2, V MWThF, 2VH
- 58 **Elements of Public Finance** (3 cr, §Econ 189, or 191-192; prereq Econ 7)
—1, II MWF, 4VH, Heller, Borak
—2, VII MWF, 6VH
- 65 **Analysis of Financial Statements** (3 cr, §139, 151; prereq Econ 26)
10:00-11:30 TTh, 2VH, Reighard
- 66 **Managerial Costs** (3 cr, §130, 152; prereq Econ 26)
I MWF, 306VH, Ostlund
- 70 **Statistics Survey** (3 cr, §Econ 5, Soc 45; prereq Econ 7)
VI MWF, 205VH
- 71 **Transportation Services, Charges I** (3 cr, §Econ 172; prereq Econ 7)
—1, II MWF, 1VH, Nightingale, others
—2, VI MWF, 4VH
- 74 **Business Statistics** (3 cr, §112; prereq Econ 5)
—1, II MWF, 306VH, Mudgett, others
—2, III MWF, 6VH
- 77 **Survey, Marketing** (3 cr, §Econ 185; prereq Econ 7)
Lect III T, 55ForH, Vaile, others
—1, II TTh, 6VH
—2, IV TTh, 1VH
—3, VI TTh, 2VH
- 89 **Production Mgt** (3 cr, §187; prereq Econ 7)
—1, I MWF, 4VH, Filipetti, others
—2, II MWF, 301VH
—3, VII MWF, 1VH
- 91 **Tabulating Equipment Lab** (1 cr; prereq Econ 5, 26)
Lect VI T, 1VH, Leary
—1, VI Th, 307VH
—2, VII T, 307VH
—3, VII Th, 307VH
- 93 **Accounting Lab** (1 cr; Prereq Econ 26)
VII-VIII Th, 306VH, Lund
- 94 **Cost Accounting Lab** (1 cr; prereq concur regis 153)
—1, III-IV Th, 306VH, Bacon
—2, VII-VIII T, 306VH
- 112 **Time Series Analysis, Quality Control** (3 cr, §74; prereq Econ 5)
II MWF, 306VH, Mudgett
- 113 **Sales Mgt** (3 cr, §68; prereq 77)
10:00-11:30 TTh, 207VH, Lewis
- 114 **Retail Store Mgt** (3 cr, §69; prereq 77)
III MWF, 301VH, Canoyer
- 116 **Fire, Marine Insurance** (3 cr, §60; prereq Econ 50)
1:30-3:00 TTh, 207VH, Graves
- 118 **Auditing Principles, Procedures** (4 cr; prereq 151)
Lect VI TTh, 301VH, Lund
Lab VII-VIII TTh, 301VH
- 136 **Controlership Functions, Procedure** (3 cr; prereq 151)
IV MWF, 307VH, Reighard
- 139 **Corporate Statements** (3 cr, §65, 151; prereq Econ 26)
10:00-11:30 TTh, 2VH, Reighard
- 141 **Real Estate** (3 cr; prereq Econ 7)
I MWF, 205VH, Sutton
- 146 **Investments** (3 cr; prereq Econ 75 or 155)
II MWF, 207VH, Stehman
- 150 **Intermed Accounting I** (3 cr; prereq Econ 26, Math 20)
IV MWF, 306VH, Nelson
- 151 **Intermed Accounting II** (3 cr, §65, 139; prereq 150)
II MWF, 6VH, Heilman
- 152 **Cost Accounting** (3 cr, §66, 130; prereq Econ 26)
III MWF, 306VH, Wheeler
- 153 **Cost Accounting** (3 cr; prereq 152)
IV MWF, 301VH, Ostlund
- 156 **Finance Mgt** (3 cr; prereq Econ 75 or 155)
VII MWF, 113VH, Stehman
- 167 **Introd Industrial Relations** (3 cr; prereq Econ 73 or 161)
I MWF, 1VH, Turnbull
- 170 **Methods Analysis, Work Measurement** (3 cr; prereq 89 or 187)
Lect I TTh, 202ME
Lab VII-IX W, 180ME
- 173 **Market Analysis, Research** (3 cr; prereq sr, 77, Econ 5)
VI MWF, 6VH, Holloway
- 174 **Transportation: Services, Charges II** (3 cr, §72; prereq 71 or Econ 172)
IV MWF, 2VH, Nightingale
- 181B **Sr Topics—Business Finance** (3 cr; prereq sr)
2:30-4:00 TTh, 2VH, Upgren
- 181C **Sr Topics—Marketing** (3 cr; prereq sr, 77)
2:30-4:00 TTh, 113VH, Lewis
- 181D **Sr Topics—Industrial Relations** (3 cr; prereq sr, 167)
3:00-4:30 TTh, 1VH, Yoder

- 181E Sr Topics—Office Mgt (3 cr; prereq sr, 180E)
IV MWF, 205VH, Donaldson
- 181F Sr Topics—Statistics (3 cr; prereq sr, 180F)
2:00-3:30 TTh, 205VH, Mudgett
- 181G Sr Topics—Production Mgt (3 cr; prereq sr, 89 or 187)
—1, VI MWF, 2VH, Filipetti
—2, VIII MWF, 2VH
- 181I Sr Topics—Transportation (3 cr; prereq* sr, 174)
2:30-4:00 TTh, 6VH, Nightingale
- 183 Practice Course (ar cr; prereq cons advis)
Ar
- 188 Advertising (3 cr, §87, 88; prereq 77, Psy 56)
III MWF, 205VH, Lewis
- 198 Internship: Public Accounting (ar cr; prereq cons instr)
Ar
- 199 Internship, Internal Accounting (ar cr; prereq cons instr)
Ar
- 263 Seminar—Accounting Theory—Valuation, Principles (3 cr)
VI-VII T, 210VH

ECONOMICS (ECON)

- 2 Business History (5 cr; prereq 1)
Lect III TTh, 150Ph, Heaton, others
—1, I MWF, 211Z
—2, II MWF, 420MurH
—3, III MWF, 420MurH
—4, V MWF, 6VH
—5, VII MWF, 306VH
- 5 Elements of Statistics (5 cr, §Soc 45, BA 70; prereq soph)
—1, II MTWThF, 211Z, Randolph
—2, VII MTWThF, 180ForH
- 6 Prin Economics (5 cr, §8, 62; prereq soph)
Lect VII TTh, 150Ph, S Smith, others
—1, I MWF, 308MurH
—2, II MWF, 30ForH
—3, IV MWF, 50ForH
—4, VII MWF, 4VH
- 7 Prin Economics (5 cr, §9, 63; prereq 6, 3 advised)
Lect I TTh, NHAud, S Smith, others
—1, I MWF, 420MurH
—2, II MWF, 140ForH
—3, III MWF, 308MurH
—4, IV MWF, 60ForH
—5, V MWF, 4VH
—6, VI MWF, 301VH
—7, VII MWF, 301VH
- 8 Gen Economics (3 cr, §6, 62; prereq soph)
—1, III MWF, 311MurH, Filipetti, others
—2, VI MWF, 306VH
- 9 Gen Economics (3 cr, §7, 63; prereq 8)
—1, I MWF, 311MurH, Filipetti
—2, II MWF, 150ForH

- 24 Prin Accounting (3 cr, §22, BA 54; prereq soph)
—1, I MWF, 301VH, Heilman, others
—2, II MWF, 111C
—3, IV MWF, 420MurH
—4, V MWF, 301VH
- 25 Prin Accounting (3 cr, §23, BA 55; prereq 24)
—1, I MWF, 307VH, Heilman, others
—2, II MWF, 215C
—3, III MWF, 307VH
—4, IV MWF, 70ForH
—5, VI MWF, 307VH
—6, VII MWF, 307VH
- 26 Prin Accounting (3 cr, §23, BA 55; prereq 25)
III MWF, 4VH, Heilman
- 28 Business Law (3 cr, §BA 51; prereq soph or jr with 6 cr econ, sr)
I MWF, 335EE, Palmer
- 30 Elements of Retail Accounting (3 cr, for pharmacy students; prereq 10)
I MWF, 201WuH, Tuttle
- 32 Bgn Typing (1 cr)
—1, VI MTWThF, 211VH
—2, VII MTWThF, 209VH
- 33 Intermed Typing (1 cr, †33-34; prereq 30 words a min)
VII MTWThF, 211VH, Peterson
- 34 Typing Procedures (2 cr, †33-34; prereq soph, 33, 45 words a min)
III MTWThF, 211VH, Peterson
- 35 Office Practice for Dental Hygienists (3 cr; prereq jr, 30 words a min)
IV MWF, 209VH, Peterson
- 38 Shorthand (3 cr, †37-38-39; prereq 37, or 1 yr high school shorthand)
II MTWThF, 209VH, Donaldson
- 41 Adv Shorthand: Secretarial Procedure (3 cr, †40-41; prereq* 40)
III MTWThF, 209VH, Donaldson
- 50 Insurance Prin (3 cr; prereq 7)
—1, IV MWF, 1VH, Graves
—2, VIII MWF, 207VH
- 64 Economics of Money, Banking (3 cr, §142; prereq 3, 7)
—1, III MWF, 113VH, H Smith
—2, IV MWF, 4VH
- 73 Manpower Economics, Labor Probs (3 cr, §161; prereq 7)
Lect II T, 4ME, Yoder, others
—1, I TTh, 2VH
—2, III TTh, 205VH
—3, V TTh, 1VH
—4, VI TTh, 113VH
- 75 Corporation Finance (3 cr, §155; prereq 3, 7)
—1, III MWF, 207VH, Stehman, Borak
—2, VII MWF, 2VH

- 80 **Intermed Economic Analysis** (3 cr, †80-81, §103; prereq 20 cr soc sci incl 7)
 —1, I MWF, 113VH, Boddy, others
 —2, III MWF, 2VH
 —3, VI MWF, 207VH
- 81 **Intermed Economic Analysis** (3 cr, §104; prereq 80)
 —1, I MWF, 207VH, Brownlee, McKenna, others
 —2, II MWF, 113VH
 —3, V MWF, 1VH
 —4, VI MWF, 113VH
 —5, VII MWF, 207VH
- 85 **Govt Regulation of Business** (3 cr; prereq 7)
 2:00-3:30 TTh, 4VH, Papandreou
- 101 **Econometrics I** (3 cr; prereq* elem statistics and Math 50-51 or concur regis Math 51)
 VIII-IX WF, 205VH, Hurwicz
- 103 **Adv Economic Theory** (3 cr, †103-104, §80; prereq 20 cr soc sci incl 7)
 IV MWF, 113VH, Brownlee
- 104 **Adv Economic Theory** (3 cr, †103-104, §81; prereq 103)
 VII MWF, 205VH, Boddy
- 106 **Development of Economic Thought: Socialistic Critics, Neo-Classical Theory** (3 cr; prereq 104)
 IV MWF, 6VH, Papandreou
- 122 **Theory of Statistics** (3 cr, †121-122; prereq 121)
 II MWF, 205VH, Mudgett
- 149 **Business Cycles** (3 cr; prereq* sr, 64 or 142)
 III MWF, 1VH, Upgren
- 155 **The Modern Corporation** (3 cr, §75; prereq jr, sr with cons instr; grad 3, 7)
 III MWF, 207VH, Stehman
- 161 **Gen Manpower Economics, Labor Probs** (3 cr, §73; prereq jr and sr with cons instr or grad, 7)
 Lect II T, 4ME, Yoder, others
 Rec VI TTh, 113VH, Ulman
- 163 **Union Organization, Administration** (3 cr; prereq 73 or 161)
 I MWF, 2VH, Ulman
- 169 **Labor Legislation: Economic Security** (3 cr; prereq 73 or 161)
 IV MWF, 207VH, Turnbull
- 178 **Economics of Consumption** (3 cr; prereq 7)
 VIII MWF, 1VH, Canoyer
- 185 **Economics of Marketing** (3 cr, §BA 77; prereq 7)
 VI MWF, 1VH, Vaile
- 186 **Int'l Economic Relations** (3 cr; prereq 176)
 II MWF, 2VH, Upgren
- 192 **Public Finance** (3 cr, †191-192, §189, BA58; prereq 191)
 10:00-11:30 TTh, 113VH, Heller
- 201 **Theory of Employment Resources** (3 cr, †200-201; prereq 200)
 VIII-IX T, 210VH, Brownlee
- 214 **Theory of Monopolistic Competition** (3 cr)
 VIII-IX Th, 210VH, Boddy
- 234 **Seminar—Public Finance** (3 cr, †233-234; prereq 233)
 VIII-IX M, 210VH, Heller
- 251 **Seminar—Industrial Relations** (3 cr)
 VI-VII M, 210VH, Yoder

SCHOOL OF DENTISTRY

CROWN AND BRIDGE (CRBR)

- 61 **Crown, Bridge** (4 cr; prereq regis 2nd yr dent, Anat 52)
 Lect I W, 12 Owre, Yock
 Lab II-IV TTh, VII-IX W, 1 Owre
- 81 **Crown, Bridge** (2 cr; prereq regis 3rd yr dent, 62)
 Clinic, Yock
- 91 **Crown, Bridge** (2 cr; prereq regis 4th yr dent, 82)
 Clinic, Yock

DENTAL HYGIENE (DHYG)

- 8 **Oral Anatomy** (2 cr; prereq 7)
 Lect VI F, 12 Owre, Hall
 —1, Lab VII-IX W, 104 Owre, Hall
 —2, Lab VII-IX F, 104 Owre, Hall

- 21 **Dental Prophylaxis** (2 cr)
 Lect VI T, 142ChE, Jackson
 Lab VII-VIII T, VI-VIII Th, 104 Owre
- 41 **Educational School Work** (2 cr; prereq 40)
 I T, 401 Owre, Bruning
 Lab ar
- 58 **Prosthetic Dentistry, Dental Lab** (2 cr; prereq 57)
 Lect I M, 401 Owre, Hall
 Lab II-IV T, 104 Owre, Hall
- 60 **Oral Histology, Pathology** (2 cr; prereq 56)
 I TF, Ar, Radusch

DENTAL JURISPRUDENCE (JURI)

- 91 **Dental Jurisprudence** (1 cr; prereq regis 4th yr dent)
 Lect I W, 111 Owre, Brand

DENTURE PROSTHESIS (PROS)

- 51 Prosthetics Lab (4 cr; prereq 50)
Lect VI T, 12 Owre, Hall, Listiak
Lab VII-IX TTh, I-III F, 1 Owre, Hall,
Listiak
- 81 Denture Prosthesis (Lect 1 cr, clinic 3 cr;
prereq 80)
Lect VI F, 111 Owre, Listiak
Clinic ar, Listiak
- 91 Denture Prosthesis Clinic (2 cr; prereq 90)
Clinic ar, Listiak

OPERATIVE DENTISTRY (OPER)

- 61 Operative Dentistry (4 cr; prereq Anat 52)
Lect I M, 12 Owre, Thiers
Lab I-III MS, VII-IX F, 1 Owre
- 81 Operative Dentistry Clinic (3 cr; prereq
regis 3rd yr dent)
Ar, Simon
- 91 Operative Dentistry Clinic (3 cr; prereq
regis 4th yr dent)
Ar, Simon

ORAL ANATOMY (ANAT)

- 51 Oral Anatomy (3 cr; prereq 50)
Lect VI M, 12 Owre, Hall
Lab VII-IX M, I-III W, 1 Owre

ORAL DIAGNOSIS (DIAG)

- 238 Adv Clinical Oral Diagnosis (ar cr)
Ar, Simon, staff
- 239 Adv Clinical Oral Diagnosis (ar cr)
Ar, Simon, staff
- 240 Adv Clinical Oral Diagnosis (ar cr)
Ar, Simon, staff
- 241 Adv Clinical Oral Diagnosis (ar cr)
Ar, Simon, staff

**ORAL HISTOLOGY AND PATHOLOGY
(PATH)**

- 242 Research—Oral Pathology (ar cr)
Ar, Mitchell
- 243 Seminar—Dental Research (1 cr)
Ar
- 244 Clinical Oral Pathology Conference (1 cr)
Ar, Clark, Mitchell

**ORAL HYGIENE AND PERIODONTIA
(PERI)**

- 81 Periodontia (lect 1 cr, clinic 1 cr)
Lect VI Th, 111 Owre, Mitchell
Clinic ar

ORAL SURGERY (OSUR)

- 91 Oral Surgery (2 cr; prereq regis 4th yr
dent)
Lect I TF, 111 Owre, Clark

- 141 Adv Oral Surgery (ar cr)
Ar, Clark, staff
- 142 Seminar—Oral Surgery (1 cr)
Ar, Clark
- 143 Research—Oral Surgery (ar cr)
Ar, Clark, staff
- 144 Probs—Oral Surgery (ar cr)
Ar, Clark, staff

ORTHODONTIA (ORTH)

- 51 Development of Occlusion (2 cr)
Lect I TTh, 15 Owre, Speidel
- 61 Development of Occlusion (2 cr)
Lect I TTh, 15 Owre, Speidel
- 81 Development of Occlusion (2 cr)
Lect I TTh, 15 Owre, Speidel
- 150 Adv Orthodontic Techniques (4 cr)
Ar
- 151 Treatment Procedures—Orthodontics (2 cr)
Ar, Speidel, Steadman, McIver
- 152 Case Analysis (2 cr)
Ar, Speidel, Steadman, McIver
- 153 Treatment Planning (2 cr)
Ar, Speidel, Steadman, McIver
- 154 Adv Clinical Orthodontics (ar cr)
Ar, Speidel, Steadman, McIver
- 155 Osteology, Myology of Head (2 cr)
Ar, Steadman
- 156 Growth of Head (2 cr)
Ar, Speidel, Steadman, McIver
- 157 Comparative Anatomy of Head (1 cr)
Ar, Steadman
- 158 Seminar—Orthodontics (1 cr)
Ar, Speidel, Steadman, McIver
- 245 Probs Research—Orthodontics (ar cr)
Ar, Speidel, Steadman, McIver

PEDODONTICS (PEDS)

- 91 Pedodontics (3 cr; prereq regis 4th yr
dent)
Clinic ar, Wittich

RESTORATIVE DENTISTRY (REST)

- 91 Restorative Dentistry (1 cr)
Lect I Th, 111 Owre, Listiak, Simon, Yock
- 130 Adv Oral Anatomy (ar cr)
Ar, Hall
- 131 Adv Oral Anatomy (ar cr)
Ar, Hall
- 132 Adv Oral Anatomy (ar cr)
Ar, Hall
- 133 Adv Oral Anatomy (ar cr)
Ar, Hall
- 134 Adv Technical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch
- 135 Adv Technical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch
- 136 Adv Technical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch

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| <p>137 Adv Dental Radiographic Technique (ar cr)
Ar, Simon, staff</p> <p>138 Adv Oral Diagnosis (ar cr)
Ar, Simon</p> <p>139 Adv Oral Pathology (ar cr)
Ar</p> <p>140 Preventive Dentistry (ar cr)
Ar</p> <p>230 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> <p>231 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> <p>232 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> | <p>233 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> <p>234 Research—Probs in Restorative Dentistry
(ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> <p>235 Research—Probs in Restorative Dentistry
(ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> <p>236 Research—Probs in Restorative Dentistry
(ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> <p>237 Research—Probs in Restorative Dentistry
(ar cr)
Ar, Simon, Wittich, Thom, Listiak, Radusch</p> |
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 COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AGED)

- 54 Rural Education, Community Leadership
(3 cr)
IV-V T, 1 hr ar, 301Hr, Swanson, McFarland
- 81 Teaching Agriculture (3 cr; prereq Ed 55B)
IV MWF, 301Hr, Kitts, Swanson
- 91 Supervised Student Teaching (6 cr; prereq
82, C+ aver in maj)
Ar, Kitts
- 101 Young Farmer Education in Agriculture
(2 cr; prereq 81)
III WF, 301Hr, Kitts
- 102 Adult Education in Agriculture (2 cr;
prereq 81)
III TTh, 301Hr, Kitts, Swanson
- 104 Planning Programs (2 cr; prereq 3rd qtr
sr)
Ar, Peterson
- 154 Rural Education, Community Leadership
(3 cr; addtl reading or spec probs re-
quired; prereq* grad)
IV-V T, 1 hr ar, 301 Hr, Peterson, Kitts
- 221 Field Probs (3 cr)
Ar, Peterson, Kitts
- 232 Research—Agricultural Education (3-9 cr)
Ar, Peterson, Kitts
- 286 Current Probs in Agricultural Education
(3 cr; prereq cons instr)
III-IV S, 301Hr, Peterson, Kitts

ART EDUCATION (ARED)

- 17 Survey of Art in Life, Education (3 cr)
I-II MWF, 213TNUH, Bratlee
- 18 Survey of Art in Life, Education (3 cr)
—1, III-IV MWF, 213TNUH, Bratlee
—2, VI-VII MWF, 213TNUH, Page
—3, VI-VIII TTh, 213TNUH, Page

- 57 Basic Prin, Experiences in Art Education
(5 cr; prereq concur regis Ed 55A-B)
III-IV MTWThF, 109J, Hastie, Page
- 84 Teaching Art in Elem School (3 cr; prereq*
17, 18)
VII-VIII MW, 109J, Gayne
- 85 Art in Life, Education (3 cr, §17-18-19, not
open to art educ maj)
VI MWF, ar, 109J, Bratlee
- 87 Student Teaching, Supervision of Art (2 cr,
†86-87-88; prereq sr, 56-57, Ed 55B, cons
dir stud tchg, concur regis 87A)
Ar, Hastie, Bratlee
- 87A Teaching, Supervision of Art (2 cr, †86A-
87A-88A; prereq 56-57, Ed 55B, cons dir
stud tchg, concur regis 87)
IX-X T, 109J, Hastie
- 151 Curriculum Building in Art Education (3
cr)
III-IV S, 109J, Hastie
- 284 Research—Art Education (2 cr)
IX M, hr ar, 109J, Gayne
- 295 Probs in Art Education (ar cr; prereq
cons maj advis)
Ar, 106J, Gayne
- 296 Seminar—Art Education (no cr)
IX Th, 106J, Gayne, staff

CURRICULUM AND INSTRUCTION
(EDCI)

- 58 Core Curriculum Foundations (1 cr; prereq
cons instr)
IX-X Th, 5ShH, Adkins
- 62B Teaching Arithmetic in Intermed Grades
(3 cr; prereq Ed 71B)
VII MWF, 133Ph, Brueckner
- 63 Children's Literature (2 cr)
—1, VI TTh, 2P, Smith
—2, VI TTh, 213NH, Walters

- 64 Teaching English in Elem School (3 cr; prereq Ed 71B)
VI MWF, 2P, Smith
- 65 Teaching Science in Elem School (3 cr; prereq Ed 71B, 10 hrs nat sci)
VII-VIII T, VII Th, 112Bu, Boeck
- 105 Visual Materials in Education (3 cr; prereq sr)
III-IV S, 1 hr ar, 211NH, Pearson
- 106 Coordinating a Visual Education Program (3 cr; prereq* 105)
IX-X Th, 206WeH, Pearson
- 108 Radio in Education (2 cr; prereq 9 cr educ)
IX-X Th, 302MurH, Tyler
- 109 Audio-Visual Materials, Equipment Lab (3 cr; prereq* 105 or concur regis)
IX W, 2 hrs lab ar, 206WeH, Pearson
- 113 High School Curriculum (3 cr; prereq Ed 55A-B)
III-IV S, 207NH, Davies
- 117 Rural Education for Administrators, Teachers (3 cr; prereq cons instr)
I-II S, 5ShH, Archer
- 119 Elem School Curriculum (3 cr; prereq Ed 71C)
I-II S, 213NH, Goossen
- 125 Occupational Information Lab (1 cr)
VI M, 5ShH, Dugan
- 134 Material, Methods in Consumer Education (3 cr; prereq* 133)
I-II S, 202TNUH, Price
- 139 Coordination Techniques in Business Education (3 cr)
IX-X W, 112Bu, Meyer
- 144 Teaching Reading in Secondary Schools (3 cr; prereq 9 cr educ)
I-II S, 202WeH, Bond
- 150 Supervision, Improvement of Instruction (3 cr; prereq Ed 71C)
III-IV S, 202WeH, Brueckner
- 156 Trends in Business Education (3 cr)
IX-X Th, 202TNUH, Price
- 169 Extracurricular Activities (4 cr; prereq Ed 55A-B, cons instr)
VII-VIII TTh, 309JohH, Davies
- 173B Organizing Units of Instruction in the Secondary School (3 cr; prereq cons instr)
III-IV S, 209NH, Adkins
- 174 Clinical Methods, Practice in Speech Pathology (3 cr; prereq Spch 61, 67, 85, 162, 163 or concur regis)
VII-VIII W and ar, 305F, Bryngelson, staff
- 175 Clinical Methods, Practice in Speech Pathology (3 cr; prereq Spch 61, 67, 85, 162, 163 or concur regis)
VII-VIII W and ar, 305F, Bryngelson, staff
- 176 Clinical Methods, Practice in Speech Pathology (3 cr; prereq Spch 61, 67, 85, 162, 163 or concur regis)
VII-VIII W and ar, 305F, Bryngelson, staff
- 199E Internship (ar cr)
Ar, Grim
- 201 Probs in Teaching Social Studies (3 cr; prereq cons instr)
VIII T, 207NH, McCune, Morse, West
- 204 Social Studies Curriculum (3 cr)
I-II S, 207NH, McCune
- 205 Probs in Visual Education (ar cr; prereq* 105, 106)
Ar, Pearson
- 207 Probs in Radio Education (1-3 cr; prereq 107)
Ar, Tyler
- 215 Probs in School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 216 Field Work in School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 217 Seminar—School Health Education Program (ar cr; prereq cons instr)
Ar, Grout
- 222 Seminar—Current Probs in Techniques of High School Instruction (ar cr; prereq 113, Ed 51B)
IX-X W, 5ShH, D V Smith
- 225 Special Probs—Supervision, Instruction in Secondary Schools (ar cr; prereq cons instr)
Ar, Boardman, Stout
- 226 Seminar—Elem School Probs (no cr)
IX-X Th, 3UHS, Archer, Bond, Brueckner, Cook, Goossen
- 227 Probs of Rural Education (ar cr; prereq 117)
Ar, Archer
- 228 Probs of Higher Education, Teacher Training (ar cr; prereq cons instr)
Ar, Grim, Eckert
- 238 Probs in Distributive Education (ar cr)
Ar, Meyer
- 239 Probs in Business Education (ar cr)
Ar, Price
- 251 Curriculum Trends in American Colleges (3 cr; prereq* 18 cr educ)
I-II T, I Th, 5ShH, Eckert
- 261 Special Probs in Improvement of Instruction (ar cr; prereq cons instr)
Ar, Brueckner
- 264 Research—Educational Diagnosis (3 cr; prereq 151)
IX-X M, 5ShH, Brueckner
- 271 Probs in Curriculum Construction (3-9 cr; prereq cons instr)
Ar, Cook, Birkmaier, Goossen, D Johnson
- 273 Probs in Reading (3-9 cr; prereq* 143 or 144)
Ar, Bond
- 284 Probs in Student Teaching (ar cr; prereq cons instr)
Ar, Grim
- 285 Professional Education of Teachers (3 cr; prereq* 15 cr educ incl HEd 182 or EdCI 184 and 250 or EPsy 250)
III-IV S, 5ShH, Grim

- 296 Special Probs in Teaching English (ar cr)
Ar, Smith

EDUCATION (ED)

- 55A Introd Secondary School Teaching (5 cr;
prereq Psy 1-2)
Lect I TThS, BuAud, Mork
—1, II-III TTh, 2P, Bowers
—2, II-III TTh, 122JohH, Zwetschke
—3, VI-VII TTh, 206WeH, Bowers
- 55B Introd Secondary School Teaching (5 cr;
prereq 55A)
Lect I MWF, BuAud, Mork
—1, II-III TTh, 110P, Van Wagenen
—2, II-III MW, 111Bu, Dugan
—3, III-IV TTh, 213NH, Brandhorst
—4, III-IV TTh, 112Bu, Lahey
—5, II-III TTh, 227E, Edson
—6, VI-VII TTh, 202WeH, Van Wagenen
—7, VI-VII MW, 112Bu, Wrenn
- 71B Introd Elem School Teaching (5 cr; prereq
71A)
Lect III MWF, 4ME, Bond
—1, I-II TTh, 111Bu, Archer
—2, III-IV TTh, 111Bu, Archer
—3, III-IV TTh, 202Pt, Goossen
—4, VI-VII TTh, 115Psy, Goossen
—5, VI-VII TTh, 111Bu, Archer
- 81 Introd Education for Public Health Nurses
(3 cr, not open to educ degree cand)
I MWF, 140ForH, Grout

EDUCATIONAL ADMINISTRATION (EDAD)

- 115 Organization of Elem School (3 cr; prereq
6 cr educ)
III-IV S, 213NH, Neale
- 218 Recent Literature in Secondary Education
(ar cr)
IX-X W, 5ShH, Boardman, Stout
- 227 Teacher, Employee Administration (3 cr;
prereq 225)
I MWF, 5ShH, Neale
- 228 Special Probs in Educational Administra-
tion (ar cr; prereq 225)
Ar, Neale
- 235 Seminar—Education Administration (no cr)
Ar, Neale
- 264 Administration of Instructional Activities
in Secondary School (3 cr)
IV MWF, 112Bu, Boardman
- 270 Special Probs in Secondary Education (ar
cr)
Ar, Boardman, Keller, Stout
- 274 The Jr College (3 cr; prereq cons instr)
III MWF, 112Bu, Boardman

EDUCATIONAL PSYCHOLOGY (EPSY)

- 114 Psychology of Elem School Subjects (2 cr;
prereq 9 cr psy, educ)
IX-X W, 301Psy, Van Wagenen

- 120 Basic Prin Measurement (3 cr; prereq 60)
VII MWF, 211NH, Cook
- 125 Social Structure of Student Groups (3 cr;
prereq sr)
VI-VII TTh, 140ForH, Flanders
- 134 School Counseling Procedures (3 cr; prereq
120, 133, cons instr, for MA students in
high school counselor trng)
IV MWF, 111Bu, Dugan
- 140 Instruments, Techniques of Measurement
(3 cr; prereq sr, 120)
VII-VIII TTh, 211NH, Cook
- 144 Individual Adult Testing (3 cr; prereq 120)
VIII MWF and ar, 112Bu, Reynolds
- 150 Psychoeducational Clinic (sec 1 ar cr, sec 2
3 cr; prereq 142 or EdCI 145, cons instr)
—1, IX T and ar, 108Pt, Reynolds (testing)
—2, IX T and ar, Bond (reading)
- 208 Methods in Education Research (3 cr)
VIII MWF, 111Bu, P O Johnson
- 217 Statistical Methods in Education (3 cr)
II MWF, 112Bu, P O Johnson
- 217a Statistical Methods in Education Lab (2
cr)
—1, II-III TTh, 221Bu, P O Johnson, Moon-
an (for students taking entire seq 216-
217-218 concur)
—2, VII-VIII TTh, 221Bu, P O Johnson,
Moonan (for students electing 1 or more
qtrs)
- 220 Adv Theory of Measurement (2 cr; prereq
60 or 120, 216)
IX-X T, 301Psy, Van Wagenen
- 225 Diagnosis, Counseling in Student Personnel
Program (3 cr; prereq 133, 140 or concur
regis)
IV MWF, 5ShH, Wrenn
- 233 Probs in Guidance, Personnel Work (ar cr)
Ar, Dugan, Edwards, Wrenn
- 240 Probs in Measurement (3 cr)
Ar, P O Johnson
- 243 Probs in Statistics for Students in Educa-
tion, Psychology (3 cr)
Ar, P O Johnson
- 253 Research—Probs (ar cr)
Ar, staff
- 260 Educational Psychology Seminar (no cr)
VIII-IX F, 5ShH
- 280 Practice in Student Group Work (3 cr;
prereq cons instr)
VI-VII TTh and ar, 140ForH, Flanders
- 281 Practice in Personnel Work (sec 1 3 cr,
sec 2 ar cr; prereq 225, 226)
—1, VI-VII F and ar, 101EdH, Hagenah
—2, Ar, Edwards, Wrenn
- 282 Practice in High School Personnel Work
(3 cr; prereq 133, 120, cons instr)
Ar, Dugan
- 293 Psychology of Learning (3 cr; prereq 12
cr psy, educ psy)
III MWF, 133Ph, Mork

HISTORY AND PHILOSOPHY OF EDUCATION (HED)

- 102 History of Modern Secondary, Higher Education (3 cr)
VI MWF, 109Psy, Alexander
- 110 Intercultural Education (3 cr)
I-II S, 209NH, Hornung
- 131 Comparative Education (3 cr)
IX-X T, 314JohH, Beck
- 180 The School, the Social Order (3 cr; prereq sr)
—1, VII-VIII T, VII Th, 308F, Beck
—2, VII-VIII M, VII W, 2P, Beck
—3, VIII MW, IX W, 211NH, Kosaki
- 241 Probs in History, Philosophy of Education (ar cr; prereq cons instr)
Ar, Beck, Alexander

HOME ECONOMICS EDUCATION (HEED)

- 91 Observation, Materials, Teaching Home Economics (5 cr; prereq HE 4, 21, 22, 41, Ed 55B, home exper, concur regis 93)
VIII MWF, IX M and 1 hr ar, 114HE, Rose, Kafka, Ford
- 92 Teaching Probs Home Economics (2 cr; prereq sr, 91, 93, concur regis 94, 192, 194A)
Ar, Rose
- 93 Supervised Teaching in Home Economics (6 cr; prereq HE 4, 21, 22, 41, Ed 55B, home experience)
3 consec hrs, MTWThF, Rose, Ford, Kafka, and others
- 94 Supervised Teaching in Home Economics (6 cr; prereq 93)
Ar, Rose, Ford, Kafka, and others
- 95 Field Experience for Home Agents (6 cr; prereq 91, 93, cons HEEd head, dir agric ext)
Ar, Rose, others
- 192 Evaluation in Home Economics (2-3 cr; prereq 93, Ed 55A-B)
Ar, Army, Rose
- 193B Home Economics Curriculum (3 cr; prereq sr, cons instr)
III MWF, Army
- 194A Adult Education Home Economics (3 cr; —1, Ar, Ford
—2, VIII TTh and 1 hr ar, 114HE, Ford)
- 197 Organization, Methods for Related Art Teaching (1-3 cr; prereq sr, 91, HE180 or concur regis, or cons instr)
Ar, Esteros
- 199E Internship (ar cr; prereq grad, cons instr)
Ar, Rose
- 243 Trends in Home Economics (3 cr; prereq cons instr)
III-IV S, 114HE, Rose

- 293 Probs in Home Economics Education (1-9 cr; prereq cons instr)
Ar, Rose, Esteros, Army, Ford
- 295 Seminar—Home Economics Education (1-3 cr)
IX Th, 114HE, Army, Rose, Esteros

INDUSTRIAL EDUCATION (IND)

- 2 Machine Woodwork (3 cr; prereq 1)
VIII-X TTh, 6Pt, Tinkham
- 6 Applied Gen Drawing (3 cr; prereq 5)
II-IV TTh, 201TNUH, Kavanaugh
- 12 Electricity, Radio (3 cr; prereq 10)
III-IV MWF, 15TNUH, Kavanaugh
- 15 Basic Graphic Arts (3 cr)
I-II MWF, 16TNUH, Bryson
- 42 Course Organization (3 cr; prereq 40)
IX-X W, Ar, 202TNUH, Micheels
- 50A Student Teaching (3 cr; prereq 70 or 100, 80, Ed 55B, 1.5 HPR, cons instr)
Ar, Anderson
- 50B Student Teaching (3 cr; prereq 50A)
Ar, Anderson
- 50C Student Teaching (3 cr; prereq 50B)
Ar, Anderson
- 61 Practice in Vocational Education (2 cr; prereq 60)
IX-X M, 202TNUH, Widdowson
- 102 The General Shop (2 cr; prereq 80)
IX-X F, 202TNUH, Micheels
- 103 Instructional Aids (3 cr; prereq 70)
III MWF, 202TNUH, Micheels
- 105 Administration of Industrial Education (3 cr; prereq 61, 80, cons instr)
IV MWF, 202TNUH, Smith
- 109 Conference Leading for Industry (3 cr; prereq cons instr)
VIII-X T, 116TNUH, Widdowson
- 200 Research Probs (3, 6, or 9 cr)
Ar, Micheels, Smith
- 251 Literature of Industrial Education (3 cr; prereq cons instr)
II MWF, 202TNUH, Smith
- Dunwoody Shopwork: Drawing (ar cr)
Ar, Smith
- Off-Campus Courses, Services (ar cr)
Ar, Widdowson

METHODS AND STUDENT TEACHING (EDT)

- 51A Teaching Nursing (4 cr; prereq Ed 55B)
I MWF, ar, Norris, Weise
- 51B Teaching Nursing (6 cr; prereq 51A)
I TTh, VIII ThF, Norris, Weise
- 52 Student Teaching (ar cr; prereq spec methods course or exper, cons dir student tchg)
Ar, Grim
- 53A Teaching Exceptional Children (5 cr, †53A-B; prereq Ed 71C)
Ar, Reynolds

- 53B Teaching Exceptional Children (5 cr, †53A-B; prereq 53A)
Ar, Reynolds
- 54A Student Teaching in Elem School (5 cr, †54A-B; prereq Ed 71C)
Ar, Chase, Curtis, Hughes, McRae
- 54B Student Teaching in Elem School (5 cr, †54A-B; prereq 54A)
Ar, Chase, Curtis, Hughes, McRae
- 57 Nursery School, Kindergarten Lab in Art, Literature, Social Studies (5 cr; prereq 56)
VIII MTWThF, 209NH, Headley
- 67 Student Teaching Mathematics (2 cr; prereq sr, concur regis 67A-B-C, C+ aver maj)
Ar, D Johnson
- 67B Teaching Secondary School Mathematics (1 cr, †67A-B-C; prereq 67A, concur regis 67)
VIII-IX M, 105UHS, D Johnson (for majors only)
- 68 Student Teaching in Natural Science (2 cr; prereq sr, concur regis 68A-B-C, C+ aver maj)
Ar, Boeck
- 68B Teaching Secondary School Science (1 cr, †68A-B-C; prereq 68A, concur regis 68)
IX-X M, 3UHS, Boeck (for majors only)
- 69 Student Teaching Social Studies (2 cr; prereq sr, concur regis 69A-B-C, C+ aver maj)
Ar, West
- 69B Teaching Social Studies in Secondary School (1 cr, †69A-B-C; prereq concur regis 69)
VIII MW, 206UHS, West (for majors only)
- 70 Student Teaching of Modern Languages (2 cr; prereq sr, concur regis 70A-B-C, C+ aver maj)
Ar, Birkmaier
- 70B Teaching Modern Languages (1 cr, †70A-B-C; prereq 70A, concur regis 70)
IX-X W, 110UHS, Birkmaier (for majors only)
- 71 Student Teaching in Latin (2 cr; prereq sr, concur regis 71A-B-C, C+ aver maj)
Ar, Birkmaier
- 71B Teaching Latin (1 cr, †71A-B-C; prereq 71A, concur regis 71)
IX-X W, 110UHS, Birkmaier (for majors only)
- 72A Student Teaching Distributive Education Subjects (2 cr, †72A-B-C; prereq Ed 55B, cons instr)
Ar, Meyer
- 72B Student Teaching Distributive Education Subjects (2 cr, †72A-B-C; prereq 72A)
Ar, Meyer
- 72C Student Teaching Distributive Education Subjects (2 cr, †72A-B-C; prereq 72B)
Ar, Meyer
- 73A Student Teaching Business Subjects (2 cr, †73A-B-C; prereq Ed 55B, cons instr)
Ar, Price
- 73B Student Teaching Business Subjects (2 cr, †73A-B-C; prereq 73A)
Ar, Price
- 73C Student Teaching Business Subjects (2 cr, †73A-B-C; prereq 73B)
Ar, Price
- 74 Teaching Journalism (3 cr; prereq* Jour 41 or 51, Ed 55B)
VII MWF, 311MurH, Kildow
- 75 Student Teaching Language Arts (2 cr; prereq sr, concur regis 75A-B-C, C+ aver maj)
Ar, Burton
- 75B Teaching Language Arts (1 cr, †75A-B-C; prereq 75A, concur regis 75)
IX-X Th, 112Bu, Smith (for majors only)
- 77 Student Teaching Nursery School (5 cr; prereq see col bul)
IX M, 202Pt, Fuller
- 78 Student Teaching Kindergarten (5 cr; prereq see col bul)
IX M, 202Pt, Fuller
- 79 Student Teaching Primary Grades (5 cr; prereq see col bul)
IX M, 202Pt, Fuller
- 81 Teaching Shorthand (2 cr; prereq Ed 55B or concur regis)
IX-X M, 112Bu, Price
- 84A Practice, Field Work in Recreation Leadership (2 cr; prereq cons instr)
V W, 3 hr ar minors, 6 hr ar majors, CH, Giles
- 84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
V W, 3 hr ar minors, 6 hr ar majors, CH, Giles
- 84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
V W, 3 hr ar minors, 6 hr ar majors, CH, Giles
- 85A Practice, Field Work in Recreation Leadership (1 or 2 cr; prereq cons instr)
V W, 3 hr ar minors, 6 hr ar majors, CH, Giles
- 85B Practice, Field Work in Recreation Leadership (1 or 2 cr; prereq 85A)
V W, 3 hr ar minors, 6 hr ar majors, CH, Giles
- 85C Practice, Field Work in Recreation Leadership (1 or 2 cr; prereq 85B)
V W, 3 hr ar minors, 6 hr ar majors, CH, Giles
- 90B Teaching Distributive Education Subjects (2 cr; prereq cons instr)
IX-X T, 112TNUH, Meyer
- 93 Teaching of Core Curriculum (2 cr; prereq Ed 55B, C+ aver maj)
Ar, Adkins

MUSIC EDUCATION (MUED)

- 5 Applied Instrumental Technique (2 cr; prereq mus educ maj)
VI MTWF, 4NMA, Prescott
- 50A Teaching Music Primary Grades (2 cr; prereq Mus 1)
VIII-IX T, 4ScH, Winslow
- 50B Teaching Music Intermed Grades (2 cr; prereq 50A)
—1, III TTh, 4ScH, Winslow
—2, VIII-IX Th, 4ScH, Winslow
- 59 Choral Literature, Conducting (2 cr sr, 1 cr others)
V TTh, 4ScH, Winslow
- 60 Supervision, Teaching of Music (3 cr, †60-61-62; prereq sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Winslow
- 61 Supervision, Teaching of Music (3 cr, †60-61-62; prereq sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Winslow
- 62 Supervision, Teaching of Music (3 cr, †60-61-62; prereq sr, 50B, 53, Ed 55B, cons instr)
IX-X W, 5 hrs ar, 4ScH, Winslow
- 63 Band Conducting (2 cr; prereq 4-5-6)
VII TTh, 4NMA, Prescott
- 65 Instrumentation (3 cr; prereq sr, Mus 6T)
II TThS, 104ScH, Ivory
- 105E Adv Topics in Instrumental Music Education (3 cr; prereq sr, cons instr)
IV MWF, 4ScH, Ivory
- 224E Seminar—Individual Research Probs (2-6 cr)
Ar, Winslow, Ivory
- 225E Adv Applied Music (2-4 cr)
Ar

NURSING EDUCATION (NUED)

- 60 Ward Administration (5 cr)
VI-VII MF and ar, 113 Owre, Grainger
- 63 Motion Study (2 cr)
Ar
- 67 Field Practice in Ward Administration (6 cr; prereq 60, 65, 73, EdT 51B or concur regis, cons instr)
III MF, 111 Owre, Grainger
- 73 Prin Economics in Nursing Service Administration (1 cr)
VII F, 111 Owre, Stephan
- 74 Sciences in a School of Nursing Curriculum (5 cr; prereq cons instr)
Ar, Coe
- 162 Personnel Work in Nursing (3 cr)
II MWF, 111 Owre, Johnson
- 165 Probs in Nursing Care (3 cr; prereq cons instr)
Ar, Hanson

- 167 Studies, Experience in Ward Administration (8 cr; prereq 60, 65, 73, EdT 51B or concur regis)
III MF, ar, 111 Owre, Grainger
- 171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51A-B or concur regis)
IV MWF, 111 Owre, Harrington
- 197E Adv Teaching of Nursing (2 cr; prereq introd to statistics, cons instr)
VII-VIII T, Harrington

PHYSICAL EDUCATION (PE)**Professional Courses****Undergraduate Courses for Men**

- 4A Football Fundamentals (1 cr)
VI-VII TTh, CH, Svendsen
- 5B Gymnastics (1 cr)
III-IV TTh, CH, Piper, Ostrander
- 6B Intramural Sports (1 cr)
IV-V TTh, CH, Svendsen, Romnes
- 6C Aquatics (1 cr)
IV MWF, CH, Thorpe
- 7B Boxing, Wrestling (1 cr)
II-III TTh, CH, Bartelma, Chisholm
- 9A Fundamental Rhythms (1 cr)
V-VI TTh, NGW, Piper
- 11B Survey Recreation Activities (1 cr; prereq 11A)
V M, CH, Starr
- 23B Intro Recreation Leadership (1 cr; prereq 23A)
V F, CH, Ostrander
- 52 Leadership in Social Activities (2 cr)
VI TTh, CH, Ostrander
- 55 Methods, Materials in Physical Education (4 cr; prereq 5A-B-C, 6A-B-C, 7A-B-C)
III MWF, 3 hr ar, CH, Bartelma
- 57 Operation, Conduct of Play Centers (3 cr)
VII MWF, CH, Giles
- 60B Athletic Training Lab (1 cr; prereq 60A)
30 hrs ar, CH, Stein
- 65 Adapted Physical Education (3 cr; prereq 51, Anat 57)
II MWF, CH, Osell
- 72 Baseball Coaching (2 cr; prereq cons instr)
VI MWF, Siebert
- 73 Directed Teaching (2 cr)
V M, hrs ar, CH, Bartelma
- 74 Directed Teaching (2 cr)
Ar, Bartelma
- 75 Directed Teaching (2 cr)
Ar, Bartelma
- 78 Scout Leadership (2 cr)
VII MW, CH, Osell

Undergraduate Courses for Women

- 21A Adv Basketball (½ cr)
VII TTh, 151NGW, Hauptfuehrer
- 21B Rhythmic Fundamentals, Elem Folk Dance (1 cr)
V-VI TTh, 153NGW, 153A NGW, Bockstruck

- 21C Recreational Activities (1 cr)
III MWF, 153NGW, 60NGW, Tinker
- 21D Stunts, Tumbling (1 cr)
I MWF, 153NGW
- 21E Winter Sports (½ cr)
III TTh or VIII-IX, Pataky
- 25 First Aid (1 cr)
IV MW, 201NGW, 153NGW
- 41A Adv Aquatics (1 cr)
VII MWF, 58NGW, Spears
- 41B Officiating Basketball (½ cr; prereq 21A)
I TTh, 151NGW, Hauptfuehrer
- 47 Teaching of Dance, Rhythmic Activities (3 cr; prereq cons instr)
II MTWThF, 151NGW, 201NGW, Bockstruck
- 51 Mechanics of Movement (3 cr; prereq Anat 57)
2:00-3:30 TTh, 3NGW, Wilson
- 53 Role of Physical Educator in Recreation (3 cr; prereq phys educ maj)
II MWF, 201NGW, 153NGW, Tinker
- 57B Teaching Aquatics (1 cr; prereq 57A)
II TThs, 58NGW, 201NGW, Spears
- 58 Introd Elem Physical Education Program (3 cr; prereq 3rd qtr soph, elem educ maj)
VII MWF, 201NGW, 153NGW, Lampe
- 83 School Health Education (3 cr; prereq PH 59)
III MWF, 201NGW, Ericson
- 87 Dance Composition (2 cr; prereq cons instr)
VIII MWF, 151NGW, Bell
- 89 Dance Production (3 cr; prereq cons instr)
IV MWF, 3NGW, 153NGW, Bockstruck
- 90A Student Teaching in Physical Education (ar cr, †90A-B-C; prereq sr, Ed 55B)
II Th, ar, 3NGW, Hauptfuehrer

- 90B Student Teaching in Physical Education (ar cr, †90A-B-C; prereq sr, Ed 55B)
IX-X M, ar, 3NGW, Hauptfuehrer
- 90C Student Teaching in Physical Education (ar cr, †90A-B-C; prereq sr, Ed 55B)
II TTh, ar, 3NGW, Hauptfuehrer
- 94 Student Teaching in School Health Education (2 cr; prereq sr, EdT 83, cons instr)
IV Th, ar, 201NGW, Ericson

Advanced Courses for Men and Women

- 101 Prin Physical Education (3 cr; prereq 55)
I MWF, CH, Keller
- 107 Camp Administration (3 cr; prereq 47, cons instr)
IX-X W, CH, Osell, Ostrander, Thorpe
- 110 Recreation Surveys (2 cr; prereq 58)
VI MW, CH, Fitzgerald
- 113 Physical Education in Elem Schools (3 cr; prereq cons instr)
3:30-5:00 TTh, 3NGW, Baker
- 117 Adv Course in School Health Instruction (3 cr; prereq EdT 83)
3:30-5:00 MW, 3NGW, Ericson
- 135 Tests, Measurement in Physical Education (3 cr; prereq sr, EPsy 60)
III MWF, 3NGW, Wilson
- 142 Leadership of Hospital Recreation (3 cr; prereq 141 or cons instr)
VIII-IX M, 1 hr ar, CH, ar
- 233 Special Administrative Probs in Physical Education in Secondary Schools (3 cr)
II MWF, CH, Nordly
- 241 Administration, Supervision of Public Recreation (3 cr)
IV MWF, CH, Fitzgerald
- 247 Probs in Health Physical Education, Recreation (ar cr)
CH, Nordly

GENERAL COLLEGE (GC)

- 1A Individual Orientation (4 cr)
—1, III MTThF, 105JohH, Hoover
—2, VI MTThF, 105JohH, Hoover
- 2 Vocational Orientation (5 cr; prereq cons instr or counselor)
IV MTWThF, 122NH, Cunningham
- 3 Home Life Orientation (5 cr)
—1, IV MTWThF, 207NH, Anderson
—2, VII MTWThF, 213NH, Anderson
- 4 Probs of Contemporary Society (5 cr)
II MTWThF, 211NH, McCune
- 6B Related Physical Sciences (5 cr, §7C; prereq* 6A)
III MTWThF, 166Ph, J Harris
- 7A Elements of Physics (5 cr, §6A)
I MTWThF, 150Ph, Vaughan
- 7C Elements of Chemistry (5 cr, §6B)
VIII MTWThF, 166Ph, Christensen

- 8 Applied Mathematics (5 cr; prereq 1 yr high school math)
—1, II MTWThF, 207NH, McCutcheon
—2, V MTWThF, 114F, McCutcheon
- 10A Human Biology: Fundamental Similarities in Living World (3 cr)
—1, I MWF, 207NH, Alrutz
—2, III MWF, 207NH, Alrutz
- 10B Human Biology—Living Machinery in Man (3 cr; prereq 10A)
—1, V MWF, 211NH, Cieslak
—2, VI MWF, 211NH, Cieslak
- 11B Basic Wealth—Utilization, Conservation of Plant Life (3 cr)
II MWF, 2P, Wilcox
- 14 Food Selection, Purchase (3 cr)
VII MWF, 202WeH, Nymon

- 19A Probs of Business Transactions (4 cr)**
IV MWThF, 209NH, Determan
- 21 Gen Arts (3 cr)**
III MWF, 213NH, Hill
- 22B Art Today (3 cr)**
IV MWF, 213NH, Safer
- 23A Art Lab (3 cr)**
—1, I-II MW, 100NH, Roman
—2, VI-VII MW, 100NH, Safer
—3, VI-VII TTh, 100NH, Frise
- 23C Introd to Commercial Art (3 cr)**
II-III TTh, 100NH, Safer
- 24B Music Today (2 cr)**
—1, III TTh, 111NH, Hill
—2, VI TTh, 111NH, Hill
- 26A Photography (3 cr)**
Lect V T, 308MurH, Liebling
—1, Lab VI-IX T, 20MurH
—2, Lab VI-IX Th, 20MurH
- 30A Literature Today: Individual, Literature (3 cr)**
I MWF, 210P, Kivits
- 30B Literature Today: Critical Standards in Reading (3 cr)**
VII MWF, 207NH, Wright
- 30D Literature Today: American Ideals in Literature (3 cr)**
IV MWF, 2P, Sheldon
- 30E Literature Today: Introd World Literature (3 cr)**
V MWF, 213NH, Appel
- 31A Writing Lab: Descriptive Writing (3 cr)**
—1, I-II M, I WF, 209NH, Appel
—2, I-II TTh, 216NH, Appel
—3, V-VI M, V WF, 209NH, Wright
—4, V-VI TTh, 209NH, Draxten
—5, VI-VII W, VI MF, 216NH, Kivits
- 31B Writing Lab: Organization in Writing (3 cr; prereq 31A)**
—6, I-II W, I MF, 216NH, Wright
—7, I-II TTh, 209NH, Draxten
—8, III-IV T, III ThF, 209NH, Draxten
—9, V-VI TTh, 216NH, Reisman
- 31C Writing Lab: Report Writing (3 cr; prereq 31A; 31B advised)**
—10, VI-VII WF, 209NH, Reisman
- 31D Writing Lab: Business Writing (3 cr; prereq 31A, 31B advised)**
—11, II-III W, III M, II F, 209NH, Sheldon
—12, IV-V M, V WF, 216NH, Liebeler
—13, VII-VIII TTh, 216NH, Sheldon
- 31E Writing Lab: Individual Writing (3 cr; prereq 31A, cons instr)**
—14, III-IV TTh, 216NH, Liebeler
- 32A Oral Communication: Basic Prin (3 cr)**
—1, I MWF, 107NH, Unes
—2, III MWF, 107NH, Olson
—3, IV MWF, 107NH, Unes
—4, VI MWF, 107NH, Olson
—5, VII MWF, 107NH, Olson
- 32B Oral Communication: Applications of Speech (3 cr; prereq 32A)**
—6, III MWF, 111NH, Unes
—7, VI MWF, 122NH, Unes
- 32C Oral Communication: Speech Organization (3 cr; prereq 32A)**
V MWF, 107NH, Goodrich
- 32D Oral Communication: Group Discussion (3 cr; prereq 32A)**
II MWF, 107NH, Olson
- 33A Oral Communication: Speech Studio (3 cr)**
III-IV T, III Th, 107NH, Goodrich
- 38 Gen Geography (5 cr)**
I MTWThF, 211NH, Jennings
- 39 Gen Anthropology (3 cr)**
V MWF, 207NH, Cooper
- 41 Practical Application of Psychology (5 cr)**
11:30-12:50 MWF, NHAud, Jenkins
- 42A Human Development (3 cr)**
VI MWF, 213NH, Templin
- 43A Background of Modern World (5 cr)**
III MTWThF, 211NH, F Harris
- 43B Historical Biography (3 cr)**
I MWF, 213NH, Moen
- 45A Growth of American Democracy (5 cr)**
VI MTWThF, 207NH, Stout
- 45C Minnesota, Upper Midwest (5 cr)**
II MTWThF, 213NH, Stout
- 45D Community Probs (1-3 cr; prereq cons instr)**
Ar, McCune
- 46C Int'l Relations (3 cr)**
IV MWF, 211NH, Mills
- 47Cx Bookkeeping, Accounting Lab (3 cr; prereq cons instr)**
VI-VII TTh, 115ForH, Ellis
- 47E Office Organization, Procedure (2 cr; prereq cons instr)**
IV W, III-IV F, 216NH, Liebeler
- 48B Probs of Production, Finance, Credit (3 cr; prereq 48A)**
VII MWF, 110P
- 49B Retailing and Selling: Store Organization (5 cr; prereq* 49A)**
Lect II M, 122NH, Determan
—1, Lab II-III TTh, 122NH
—2, Lab 6:30-10:00 p.m. T, 122NH

INSTITUTE OF TECHNOLOGY
**AERONAUTICAL ENGINEERING
(AERO)**

- 1 Aeronautics (3 cr; prereq MM 24)**
II MWF, 227AE, Hermann

- 20 Flying (2 cr)**
Ar, Lincoln
- 21 Flying (2 cr)**
Ar, Lincoln

- 22 **Flying** (2 cr)
Ar, Lincoln
- 46 **Orientation Course** (2 cr; prereq sr, or cons dept)
Ar, Lincoln
- 101 **Aerodynamics** (3 cr; prereq 100)
IV MWF, 227AE, Stolarik
- 104 **Adv Aerodynamics** (3 cr; prereq 103)
IV MWF, 211AE, Cronk
- 106 **Adv Aerodynamics** (3 cr; prereq 102)
II MWF, 327AE, Upson, Stolarik
- 115 **Airplane Stresses** (3 cr; prereq 83)
Lect III TTh, 211AE, Staff
Lab VII-VIII T, 215AE
- 117 **Adv Airplane Stresses** (3 cr; prereq 115)
I MWF, 327AE, Wise
- 121 **Airplane Design** (2 cr; prereq 120)
II TTh, 327AE, Upson
- 124 **Adv Airplane Design** (2-5 cr; prereq 123)
Ar, Staff
- 127 **Adv Probs in Airscrew Design** (2-5 cr; prereq 126)
Ar, Stolarik
- 131 **Airplane Design Lab** (2 cr; prereq concur regis 121)
VI-VIII MW, 317AE, Stolarik
- 158 **Physics of the Atmosphere** (2 cr)
VII MWF, 227AE, Piccard
- 166 **Adv Aeronautical Lab** (2-4 cr; prereq 165)
Ar, Akerman
- 174 **Applied Meteorology** (4 cr; prereq 173)
Ar, Mantis
- 180 **Instrumentation, Techniques for Supersonic Flow** (2 cr; prereq 106 or ME 134)
Ar, Bradfield
- 190 **Seminar** (1 cr; prereq 101)
VI T, 227AE, Piccard
- 192 **Seminar** (1 cr; prereq 191)
Ar, Piccard
- 193 **Adv Probs in Aeronautical Engineering** (2-5 cr; prereq sr in AE)
Ar, Staff
- 194 **Adv Probs in Aeronautical Engineering** (2-5 cr; prereq 193)
Ar, Staff
- 195 **Adv Probs in Aeronautical Engineering** (2-5 cr; prereq 194)
Ar, Staff
- 202 **Aerodynamics of Compressible Fluid** (3 cr; prereq* 106)
I T, I-II Th, 227AE, Bradfield
- 220 **High Speed Performance, Design** (3 cr; prereq* 202)
Ar, Upson
- 231 **Aerodynamics, Flight Performance of Supersonic Missiles** (3 cr; prereq 230)
V MWF, 211AE, Hermann

ARCHITECTURE (ARCH)

- AD I Architectural Design, Grade I** (6 cr; prereq soph for IT or jr for SLA students, cons school)
Lect VII MTWThF, 305E, McClure, Heath, Rafferty
Lab VI, VIII MTWThF, 400E
- AD II Architectural Design, Grade II** (6 cr; prereq AD I)
VI-VIII MTWThF, 3 hrs ar, 306E, Vivrett
- AD III Architectural Design, Grade III** (9 cr; prereq AD II)
VI-VIII MTWThF, 12 hrs ar, 315E, Cerny, Nagle, others
- AD IV Architectural Thesis** (12 cr; prereq AD III)
VII-VIII MTh and 30 hrs ar, 400E, Roy Jones
- 52 **History of Architecture** (4 cr; prereq 51)
IV MTWF, 305E, Koepfer
- 58 **Building Materials, Methods, Part II** (4 cr; prereq 57)
II MTWF, 305E, Robert Jones
- 72 **Building Equipment** (2 cr; prereq 71)
III T, III-IV Th, 305E, Close
- 102 **Tutorial Work in History of Architecture** (2 cr; prereq sr, 53)
Ar, Koepfer
- 105 **Professional Relations** (3 cr; prereq sr)
III-IV MW, 302E, Cavin

CHEMICAL ENGINEERING (CHEN)

- 102 **Unit Operations** (5 cr; prereq 101)
III TThS, 240ChE, Stoppel
—1, Rec II MWF, 158ChE
—2, Rec III MWF, 158ChE
- 112 **Unit Operations Lab** (1 cr; prereq 102)
—1, VI-IX T, 3rd fl ChE
—2, VI-IX W, 3rd fl ChE
- 118 **Chemical Engineering Equipment Design** (3 cr; prereq 117)
Lab VI-VII M, VI-IX Th, 50ChE, Piret
- 120 **Chemical Engineering Thermodynamics** (3 cr; prereq 119)
II MW, 240ChE, Isbin, Preckshot
—1, Rec II TF, 150ChE
—2, Rec IV TF, 154ChE
- 125 **Reaction Kinetics in Chemical Engineering** (3 cr; prereq cons instr)
III MF, 142ChE, Piret
- 132 **Organic Technology** (3 cr; prereq 103, 131 for chem engrs, 90 for chemists)
I MWF, 142ChE, Madden
- 154 **Special Probs** (3 cr or more)
Ar
- 172 **Instrumentation, Control** (3 cr; prereq 171)
IV MWF, 158ChE, Ceaglske
- 187 **Inspection Trip** (2 cr; prereq 131, 132)
Ar
- 192 **Seminar** (1 cr; prereq sr)
VIII M, 240ChE, Staff

- 202 Seminar (1 cr)
VIII M, 240ChE, Staff
- 209 Adv Unit Operations (3 cr; prereq 208)
II MWF, 162ChE, Madden
- 212 Process, Plant Design, Nuclear Reactor Design (3 cr; prereq 211)
Ar, Isbin
- 226 Fluid Flow and Related Topics (3 cr; prereq cons instr)
V MWF, 162ChE, Amundson
- 302 Research—Chemical Engineering (ar cr)
Ar

CHEMISTRY

Analytical Chemistry (ANCH)

- 1 Quantitative Analysis (5 cr; prereq InCh 13 for chemists, InCh 12 for chem engrs)
Lect VI MWF, 410C, Meehan
—1, Lab VII-IX MWF, 310C
—2, Lab V-IX TTh, 310C
- 9 Quantitative Analysis (3 cr; prereq InCh 11 or 12)
Lect VI TTh, 225C, O'Connor
Lab VII-IX TTh, 310C
- 97 Sr Thesis (5 cr; prereq sr)
Ar
- 101 Quantitative Analysis (5 cr; prereq InCh 13)
VI-IX MWF, 310C, Meehan
- 105 Polarizing Microscope (3 cr; prereq PCh 101)
Lect VI F, 315C, Sandell
Lab ar
- 107 Gen Technical Analysis (2-3 cr; prereq 1-2)
Ar, Sandell
- 109 Rock Analysis (3 cr; prereq 1-2, cons instr)
Ar, Goldich
- 132 Electrometric Measurements, Titrations (3 cr with lab, 2 cr without lab; prereq 1-2, PCh 103)
Lect VI MW, 225C, Kolthoff
Lab ar
- 134 Voltammetry, Amperometric Titrations (2 cr; prereq 133 or concur regis)
Ar, Kolthoff
- 136 Seminar—Modern Probs in Analytical Chemistry (1 cr; prereq 1-2, PCh 103)
IV T, 315C, Staff
- 140 Water Analysis (2 cr; prereq 1-2)
Ar, Sandell
- 202 Selected Topics in Analytical Chemistry (3 cr; prereq 1-2, 123)
Ar, Kolthoff
- 302 Research—Quantitative Analysis (ar cr)
Ar, Kolthoff, Sandell, Meehan

Inorganic Chemistry (INCH)

- 1 Gen Inorganic Chemistry (4 cr, †1-2)
Lect V MWThF, 100C, Pray
—1, Lab I-IV M
—2, Lab VI-IX Th
- 2 Gen Inorganic Chemistry (4 cr, †1-2; pre-req 1)

- 1, Lect III MWF, 225C, VII Th, 410C, Pray
Lab I-IV T
—2, Lect III MWF, 225C, VII Th, 410C, Pray
Lab I-IV Th
—3, Lect VI MWF, 100C, V Th, 410C, Pervier
Lab VI-IX T
—4, Lect VIII MWThF, 100C, Barber
Lab VI-IX T

- 5 Gen Inorganic Chemistry (4 cr, †4-5; pre-req 4)
—1, Lect I MTWF, 100C, Heisig
Lab VI-IX Th
—2, Lect VII MWF, VIII T, 100C, Maynard
Lab VI-IX Th
—3, Lect VII MTThF, 325C, Brasted
Lab VI-IX W
—4, Lect VIII MWF, 225C, VIII Th, 410C, Johnson
Lab VI-IX T

- 6 Gen Inorganic Chemistry (5 cr, †6-7)
II MWF, V W, 410C, Johnson
Lab V-VII MW

- 7 Gen Inorganic Chemistry (5 cr, †6-7; pre-req 6)
II MWF, I Th, 325C, O'Brien
Lab I-III TTh

- 10 Gen Inorganic Chemistry (5 cr, †9-10; pre-req 9)
II MWF, III T, 100C, Sneed
Lab I-III TTh

- 11 Semimicro Qualitative Analysis (4 cr; pre-req 2, 5, 7, or 10)
Lect V MTF, 225C, Barber
Lab V-VIII W

- 53 Seminar (1 cr; prereq sr)
VIII T, 215C, Heisig

- 97 Sr Thesis (5 cr)
Ar, Staff

- 104 Adv Inorganic Chemistry (3 cr; prereq AnCh 1-2, OrCh 62)
III TThS, 325C, Brasted

- 109 Synthetic Inorganic Chemistry (3-5 cr; prereq OrCh 63)
Ar, Heisig

- 135 Seminar (1 cr; prereq grad)
VIII T, 215C, Heisig

- 302 Research—Inorganic Chemistry (ar cr)
Ar, Staff

Organic Chemistry (ORCH)

- 61 Elem Organic Chemistry (4 cr, †61-62; pre-req 12-15 cr chem)
—1, Lect IV MTWThF, 100C, Koelsch
—1, Lab VI-IX W, 390C
—2, Lab VI-IX Th, 390C
—3, Lab I-IV Th, 390C
—4, Lab VI-IX F, 390C
—2, Lect III MTWThF, 410C, Fenton
—5, Lab VI-IX M, 390C
—6, Lab VI-IX T, 390C
—7, Lab VI-IX Th, 390C
—8, Lab VI-IX F, 390C

- 62 **Elem Organic Chemistry** (4 cr, †61-62; pre-req 61)
 -1, Lect I MTWF, II T, 410C, Fenton
 -1, Lab VI-IX T, 390C
 -2, Lab VI-IX W, 390C
 -3, Lab I-IV Th, 390C
 -2, Lect III MWThFS, 100C, Truett
 -4, Lab VI-IX M, 390C
 -5, Lab II-V T, 390C
 -6, Lab VI-IX T, 390C
 -7, Lab VI-IX Th, 390C
- 97 **Sr Thesis** (5 cr; prereq 63, 64)
 Ar, Staff
- 101 **Intermed Organic Chemistry** (3 cr; prereq 14 cr)
 III MWF, 325C, Lauer
- 106 **Adv Organic Chemistry** (3 cr; prereq 105)
 IV MWF, 325C, Smith
- 116 **Heterocyclic Compounds** (3 cr; prereq 64)
 III TThS, 315C, Parham
- 139 **Adv Organic Chemistry Lab Work** (2-5 cr; prereq 64, read German, cons instr)
 Ar, Arnold
- 152 **Organic Chemistry Seminar** (1 cr; prereq sr)
 7:45 pm-8:45 pm, 325C, Staff
- 202 **Heterocyclic Chemistry Seminar** (1 cr)
 7:45 pm-8:45 pm, 325C, Staff
- 302 **Research—Organic Chemistry** (ar cr; prereq 110, cons div)
 Ar, Staff

Physical Chemistry (PCH)

- 97 **Sr Thesis** (5 cr; prereq sr)
 Ar
- 102 **Physical Chemistry** (3 cr; prereq 101)
 IV MWFS, 410C, Crawford
- 105 **Physical Chemistry Lab** (1-2 cr; prereq 102 or concur regis)
 -1, Lect VI M, 325C, Wertz
 Lab VII-VIII M, VI-VIII W, 190C
 -2, Lect VI Th, 325C
 Lab VI-VIII T, VII-VIII Th, 190C
 -3, Lect VI M, 325C
 Lab III-IV T, II-IV Th, 190C
- 106 **Elem Physical Chemistry** (3 cr; prereq 107)
 Lect IV MWF, 225C, Livingston
 -1, Lab II-IV T, 190C
 -2, Lab II-IV Th, 190C
 -3, Lab VI-IX F, 190C
- 111 **Experimental Research Techniques II** (2-3 cr; prereq 110, cons instr)
 Ar, Wertz
- 114 **Kinetics of Reactions in Liquid, Heterogeneous Systems** (3 cr; prereq 113)
 Ar, Livingston
- 117 **Adv Physical Chemistry** (3 cr; prereq 116)
 II TThS, 225C, Lipscomb
- 120 **Introd Molecular Structure** (3 cr; prereq 103)
 Ar, Crawford
- 129 **Adsorption, Catalysis** (3 cr; prereq 128)
 IV MWF, 111C, Reyerson

- 133 **Colloid Chemistry Lab** (1-2 cr; prereq sr, 128)
 Ar, Reyerson
- 151 **Seminar** (1 cr; prereq sr)
 7:30 pm M, 325C, Livingston
- 162 **Nuclear Chemistry, Radioactivity** (3 cr; prereq 161)
 III MWF, 315C, O'Connor
- 202 **Thermodynamics, Chemistry** (4 cr; prereq 103, calculus)
 II MWF, 225C, MacDougall
- 212 **Adv Physical Chemistry Lab** (ar cr; prereq 103)
 Ar, MacDougall, Staff
- 222 **Colloid Seminar** (1 cr)
 Ar, Reyerson
- 231 **Radioactivity Lab** (1-2 cr; prereq 161 or concur regis)
 Ar, O'Connor
- 251 **Physical Chemistry Seminar** (1 cr)
 7:30 pm M, 325C, Livingston
- 257 **Research Seminar—Crystal Structure** (ar cr)
 Ar, Lipscomb
- 302 **Research—Physical Chemistry** (ar cr)
 Ar, Staff

CIVIL ENGINEERING (CE)

- 12 **Surveying** (3 cr; prereq MM 12, Draw 2)
 -1, I-IV TTh, 220TNCE
 -2, VI-IX TTh, 220TNCE
 -3, VI-IX WF, 220TNCE
- 15 **Surveying** (2 cr; prereq 12)
 -1, Lect IV T, 215E
 Lab I-III W, 220TNCE
 -2, Lect IV Th, 215E
 Lab I-III Th, 210TNCE
 -3, Lect VI T, 215E
 Lab VII-IX T, 210TNCE
 -4, Lect VI Th, 215E
 Lab VII-IX W, 210TNCE
- 21 **Route Surveying** (2 cr; prereq 13)
 -1, Lect II M, 215E
 Lab I-III T, 210TNCE
 -2, Lect II F, 227E
 Lab I-III Th, 120TSCE
 -3, Lect VII Th, 215E
 Lab VII-IX M, 210TNCE
 -4, Lect VIII Th, 215E
 Lab VII-IX T, 120TSCE
- 32 **Design in Steel** (3 cr; prereq 31, Draw 23, MM 128)
 -1, Lect IV MWF, 110Ex
 -2, Lect VI MWF, 206E
 -1, Lab I-III T, 120TSCE
 -2, Lab VII-IX M, 120TSCE
 -3, Lab VII-IX F, 210TNCE
- 39 **Elem Structural Design—Steel, Timber** (3 cr; prereq 38)
 III MWF, 104E

- 52 **Highways, Pavements** (3 cr; prereq 51)
 —1, Lect V F, III W, 227E
 —2, Lect V F, 227E, V T, 205E
 —3, Lect V F, 227E, V Th, 205E
 —1, Lab I-IV T, 210Ex
 —2, Lab I-IV Th, 210Ex
 —3, Lab VI-IX M, 210Ex
 —4, Lab VI-IX W, 210Ex
 —5, Lab VI-IX F, 210Ex
- 53 **Elements of Soil Mechanics** (3 cr; prereq 52)
 Lect V TTh, 206E
 Lab VII-IX F, 10Ex
- 112 **Aerial Surveying Photogrammetry** (3 cr; prereq 23)
 Lect VI M, 227E
 Lab VII-IX MTh, 217E
- 124 **Transportation** (3 cr; prereq 22)
 Lect IV TTh, 206E
 Lab VII-IX F, 217E
- 131 **Structural Analysis** (2 cr; prereq 130)
 —1, Lect IV M, 206E
 —2, Lect IV W, 206E
 —1, Lab VII-IX M, 225E
 —2, Lab VII-IX M, 229E
 —3, Lab VII-IX W, 217E
- 137 **Structural Lab** (3 cr; prereq 141, concur regis 131)
 Lect II TF, 215E
 —1, Lab I-III M, 208Ex
 —2, Lab I-III W, 208Ex
- 142 **Reinforced Concrete Design** (3 cr; prereq 130, 141)
 —1, Lect III Th, VII T, 215E
 —2, Lect V TTh, 215E
 —1, Lab III-IV T, 225E
 —2, Lab VIII-IX W, 225E
 —3, Lab VIII-IX Th, 225E
- 146 **Concrete, Concrete Materials** (3 cr; prereq MM 141)
 Lect II MW, 227E
 Lab VI-IX M, 8Ex
- 147 **Foundations** (3 cr; prereq 32)
 —1, III MWF, 305E
 —2, VI MWF, 110Ex
- 148 **Adv Concrete** (2 cr; prereq 146)
 VII-IX TTh, 8Ex
- 158 **Airport Design** (3 cr; prereq 52)
 I MWF, 227E
- 159 **Soil Mechanics** (3 cr; prereq 53)
 III MWF, 206E
- 160 **Applied Hydraulics** (3 cr; prereq Hyd 102, 104)
 Lect V MW, 227E
 Lab I-IV Th, 229E
- 161 **Hydrology** (3 cr; prereq Hyd 102)
 Lect IV M, VI Th, 227E
 Lab VI-IX W, 229E
- 166 **Water Power** (3 cr; prereq 161)
 Lect V TTh, 227E
 Lab VI-IX T, 229E
- 170 **Water Supply** (3 cr; prereq 160)
 —1, Lect III MF, 227E
 —1, Lab I-IV T, 229E
 —2, Lab I-IV T, 217E
 —2, Lect V MW, 305E
 —3, Lab VI-IX Th, 100TNCE
 —4, Lab VI-IX Th, 229E
- 174 **Sanitary Engineering Probs—Sewage, Industrial Wastes** (3 cr; prereq 171)
 Ar
- 177 **Sanitary Engineering Seminar** (1 cr; prereq 176)
 I-II W, 217E
- 243 **Dynamics of Structures** (3 cr; prereq 132)
 Ar
- 251 **Adv Soil Mechanics Lab** (3 cr; prereq 159 or concur regis)
 Ar
- 261 **Water, Sewage Plant Design** (3-5 cr; prereq 173 or 174)
 Ar

DRAWING AND DESCRIPTIVE GEOMETRY (DRAW)

- 1 **Engineering Drawing** (3 cr; prereq solid geometry)
 —1, III-IV TWThF, 201E
 —2, VII-VIII MTWF, 201E
- 2 **Engineering Drawing** (3 cr; prereq 1)
 —1, I-II MTWF, 100TNCE
 —2, I-II MTWF, 120TNCE
 —3, III-IV MWThF, 100TNCE
 —4, III-IV MWThF, 120TNCE
 —5, III-IV MWThF, 100TSCE
 —6, V-VI MTWF, 201E
 —7, V-VI MTWF, 100TNCE
 —8, VII-IX MW, VII-VIII F, 100TNCE
 —9, VII-IX MW, VII-VIII F, 120TNCE
- 3 **Descriptive Geometry** (3 cr; prereq 2, MM 11)
 I-II MTWF, 100TSCE
- 8 **Engineering Drawing** (3 cr; prereq 7)
 —1, V-VI MWThF, 120TNCE
 —2, VII-VIII MWThF, 100TSCE
- 10 **Solid Geometry** (no cr; prereq plane geometry)
 II MWF, 211AE
- 21 **Drafting** (2 cr; prereq 3)
 I-II MWF, 201E
- 22 **Structural Detailing** (2 cr; prereq 21)
 —1, I-II MWF, 18E
 —2, III-IV MWF, 18E
- 34 **Lettering** (1 cr; prereq 1)
 VI Th, 201E
- 44 **Lettering** (1 cr)
 IV T, 18E
- 45 **Alphabets** (2 cr; prereq soph, 44)
 III TTh, 18E
- 50 **Diagrams, Charts** (2 cr; prereq 1)
 IV TTh, 101E
- 52 **Alignment Charts** (3 cr; prereq 2, MM12)
 I TTh, 1 hr ar, 18E

- 112 Adv Descriptive Geometry (3 cr; prereq 111)
Ar
- 116 Curve Fitting (3 cr; prereq 115)
Ar
- 118 Short Course in Curve Fitting (3 cr; prereq* 3, MM 25)
Ar
- 153 Nomography (3 cr; prereq 152)
Ar
- 158 Graphical Mathematics (2 cr; prereq 157)
Ar

ELECTRICAL ENGINEERING (EE)

- 11 Elements of Electrical Engineering (3 cr; prereq MM 24 or concur regis)
III MWF, 335EE
- 12 Elements of Electrical Engineering Lab (1 cr; prereq 11 or concur regis)
-1, I-II Th, 9EE
-2, VII-VIII W, 9EE
- 13 Elements of Electrical Engineering (3 cr; prereq 11, concur regis 25)
-1, III MWF, 237EE
-2, III MWF, 138EE
-3, VII MWF, 237EE
-4, VII MWF, 138EE
- 14 Elements of Electrical Engineering Lab (1 cr; prereq 13 or concur regis)
-1, I-II T, 9EE
-2, I-II W, 9EE
-3, I-II F, 9EE
-4, VII-VIII T, 9EE
-5, VII-VIII Th, 9EE
-6, VIII-IX M, 9EE
- 36 Electrical Engineering Survey (3 cr; prereq CHE or ME sr, Phys 9)
Lect I TTh, 138EE
-1, Lab V-VI T, 207bEE
-2, Lab VII-VIII F, 207bEE
- 37 Electrical Engineering Survey (3 cr; prereq ME and ChemE sr, 36)
-1, Lect II TTh, 237EE
-2, Lect II TTh, 138EE
-3, Lect VII TTh, 138EE
-1, Lab III-IV T, 207aEE
-2, Lab III-IV Th, 207aEE
-3, Lab V-VI T, 207aEE
-4, Lab V-VI Th, 207aEE
-5, Lab VII-VIII M, 207aEE
-6, Lab VII-VIII W, 207aEE
-7, Lab VII-VIII F, 207aEE
-8, Lab VIII-IX T, 207aEE
- 41 Electrical Engineering Survey (3 cr; prereq mines jr, Phys 8)
Lect IV TTh, 238EE
Lab I-II Th, 207bEE
- 42 Electrical Engineering Survey (3 cr; prereq CE sr, Phys 8)
I MWF, 238EE

- 47 Electrical Engineering Survey, Aeronautical Radio (3 cr; prereq 46)
Lect IV TTh, 138EE
Lab VII-VIII W, 207cEE
- 81 Electrical Engineering Measurements (3 cr; prereq 111)
Lect VI TTh, 138EE
Lab ar
- 113 Electrical Engineering (3 cr; prereq 111, 112)
-1, II MWF, 237EE
-2, VI MWF, 237EE
- 114 Electrical Engineering Lab (1 cr; prereq concur regis 113)
-1, I-II T, 107bEE
-2, I-II Th, 107bEE
-3, VI-VII T, 107bEE
-4, VI-VII Th, 107bEE
-5, VIII-IX W, 107bEE
- 117 Engineering Electronics (3 cr; prereq 111, 112)
-1, I MWF, 138EE
-2, VII MWF, 335EE
- 118 Engineering Electronics Lab (1 cr; prereq concur regis 117)
-1, I-II Th, 227EE
-2, III-IV T, 227EE
-3, VI-VII Th, 227EE
-4, VIII-IX M, 227EE
-5, VIII-JX Th, 227EE
- 121 Electrical Engineering (3 cr; prereq 115, 116, 119)
IV MWF, 335EE
- 122 Electrical Engineering Lab (2 cr; prereq 116, concur regis 121)
-1, II-IV T, 107aEE
-2, VII-IX W, 107aEE
- 123 Electrical Engineering (3 cr; prereq 121)
-1, I MWF, 237EE
-2, V MWF, 138EE
- 124 Electrical Engineering Lab (2 cr; prereq 122, concur regis 123)
-1, VI-VIII M, 107aEE
-2, VI-VIII T, 107aEE
-3, VI-VIII Th, 107aEE
- 128 Transient Electrical Phenomena (3 cr; prereq 127)
Lect IV TTh, 237EE
-1, Lab VI-VII T, 129EE
-2, Lab VII-VIII Th, 129EE
-3, Lab VII-VIII W, 129EE
- 133 Electronic Circuit Design (3 cr; prereq 131)
Lect III TTh, 237EE
Lab V-VI W, 36EE
- 134 Electric Design (3 cr; prereq 132)
II MWF, 238EE
- 139 Power Systems (3 cr; prereq 138)
III MWF, 238EE
- 158 Industrial Electronics (3 cr; prereq 157)
Lect I TTh, 238EE
-1, Lab VII-VIII M, 35EE
-2, Lab VII-VIII F, 35EE

- 161 Electric Communication (4 cr; prereq 119)
Lect V MWF, 237EE
Lab VII-VIII F, 317EE
- 162 Electric Communication (4 cr; prereq 161)
-1, Lect II MWF, 138EE
-2, Lect VI MWF, 238EE
-1, Lab VI-VII T, 307EE
-2, Lab VI-VII Th, 307EE
-3, Lab VIII-IX M, 307EE
-4, Lab VIII-IX F, 307EE
- 163 Electric Communication (4 cr; prereq 162)
Lect IV MWF, 237EE
Lab VII-VIII W, 307EE
- 165 Communication Circuits (3 cr; prereq 164)
Ar
- 168 Radio Communication (3 cr; prereq 167)
Lect V TTh, 238EE
Lab VI-VII F, 308EE
- 180 Electrical Pulses and Transients (3 cr;
prereq 127, 163)
Ar
- 184 Special Electrical Lab (1-3 cr)
Ar
- 188 Communication Seminar (1 cr; prereq 187)
VII M, 133EE
- 212 Adv Network Analysis (3 cr; prereq cons
instr)
IV MWF, 138EE
- 228 Stability of A C Power Systems (3 cr;
prereq 140)
VII MWF, 238EE, Caverley
- 264 Communication Seminar (1-3 cr; prereq
cons instr)
VIII M, 133EE, Shepherd
- 273 Electromechanical Vibrating Systems, En-
gineering Acoustics (3 cr; prereq cons
instr)
IV MWF, 238EE, Lambert
- 288 Adv Vacuum Tube Analysis (3 cr; prereq
cons instr)
Ar, Shepherd
- 322 Electronics Seminar (1-3 cr; prereq cons
instr)
VII T, 133EE, van der Ziel

ENGINEERING ENGLISH (ENGL)

- 4 Written, Spoken Communication (3 cr;
prereq placement test)
-1, IV MWF, 111AH
-2, VI MWF, 111AH
- 5 Written, Spoken Communication (3 cr;
prereq 4)
-1, I MWF, 111AH
-2, I MWF, 227AE
-3, II MWF, 50ChE
-4, II MWF, 143Ph
-5, III MWF, 111C
-6, III MWF, 115C
-7, IV MWF, 15AE
-8, IV MWF, 162ChE
-9, V MWF, 202AH
-10, V MWF, 215E

- 11, VI MWF, 202AH
-12, VI MWF, 106ME
-13, VII MWF, 106ME
-14, VII MWF, 206E
- 85 Adv Technical Communication (3 cr; prereq
6)
-1, II MWF, 160ForH
-2, V MWF, 111AH
- 86 Adv Technical Communication (3 cr; prereq
85)
-1, II MWF, 142ChE
-2, II MWF, 154ChE
-3, III MWF, 154ChE
-4, III MWF, 140ForH
-5, V MWF, 238EE
-6, V MWF, 102ME
-7, VII MWF, 215E

GENERAL ENGINEERING (GE)

- 70 Slide Rule (1 cr; prereq MM 11 or concur
regis)
VI T, 205E
- 101 Contracts, Specifications (3 cr; prereq sr)
-1, III MWF, 215E, Fixen
-2, IV MWF, 215E, Fixen
-3, VI MWF, 215E, Fixen
- 103 Professional Probs (1 cr; prereq sr)
(This course will not be offered spring
quarter)
VI Th, 335EE

GEOPHYSICS (GPHY)

- 109 Introd Gen Geophysics (3 cr; prereq 108)
III MWF, 109AH, Mooney
- 126 Prin Seismic Exploration (2 cr; prereq 125)
III TTh, 108AH, Mooney
- 130 Special Probs (ar cr; prereq cons instr)

HYDROMECHANICS (HYDR)

- 101 Fluid Mechanics (3 cr; prereq MM 26 or 84)
II MWF, 110Ex
- 102 Fluid Mechanics (4 cr; prereq MM 26)
-1, III MWThF, 110Ex
-2, V MTWTh, 110Ex
- 103 Fluid Mechanics (5 cr; prereq MM 26 or 84)
I MTWThF, 203E
- 104 Hydraulics Lab (1 cr; prereq cr or regis
in 101, 102, 103, or ChEn 101)
-1, VIII-IX M, Ex
-2, VIII-IX T, Ex
-3, VIII-IX W, Ex
-4, VIII-IX Th, Ex
-5, VIII-IX F, Ex
-6, VI-VII F, Ex
- 190 Mechanics of Similitude, Dimensional
Analysis (3 cr; prereq* 101, MM 127,
128)
Ar

- 191 Hydraulic Motors, Pumps (3 cr; prereq* 187)
Ar
- 195 Adv Hydraulics Lab (2 cr; prereq 194)
Ar
- 294 Hydrodynamics (3 cr; prereq* 187, differ equations or adv calculus)
Ar

INDUSTRIAL ENGINEERING (IE)

- 91 Industrial Assignment (3 cr; prereq regis in work study program)
Ar, Block
- 93 Industrial Assignment (3 cr; prereq regis in work study program)
Ar, Block
- 150 Elements of Industrial Engineering, Mgt (3 cr; prereq* ME 15)
III MWF, 102ME, Block
- 153 Methods Engineering, Work Measurement (3 cr; prereq 150)
Lect I TTh, 102ME, MacKenzie
-1, Lab VII-IX T, 180ME
-2, Lab VII-IX F, 180ME
- 165 Industrial Plants (3 cr; prereq 153 or 155)
Lect III TTh, 102ME, Whitson
Lab VII-IX M, 180ME
- 167 Materials Handling and Packaging (3 cr; prereq 165 or ME 105)
IV MWF, 102ME, MacKenzie
- 172 Elements of Quality Control (3 cr; prereq 150; ME 115 advised)
II MWF, 102ME, Block
- 173 Engineering Economic Analysis, Cost Control (3 cr; prereq 165, BA 66)
III MWF, 110ME, Whitson
- 180 Elements of Supervision (3 cr; prereq 150)
VI MWF, 102ME, MacKenzie
- 191 Industrial Engineering Seminar (1 cr)
VI T, 102ME, Staff
- 251 Adv Industrial Engineering, Mgt (3 cr; prereq cons instr)
Ar, Whitson
- 252 Adv Industrial Engineering, Mgt (3 cr; prereq cons instr)
Ar, Whitson
- 253 Adv Industrial Engineering, Mgt (3 cr; prereq cons instr)
Ar, Whitson
- 261 Production Engineering Probs (3-5 cr; prereq cons instr)
Ar, Whitson
- 262 Production Engineering Probs (3-5 cr; prereq cons instr)
Ar, Whitson
- 263 Production Engineering Probs (3-5 cr; prereq cons instr)
Ar, Whitson
- 271 Industrial Engineering Research (3-5 cr; prereq cons instr)
Ar, Whitson

- 272 Industrial Engineering Research (3-5 cr; prereq cons instr)
Ar, Whitson
- 273 Industrial Engineering Research (3-5 cr; prereq cons instr)
Ar, Whitson

MATHEMATICS AND MECHANICS (MM)

- 11 College Algebra (5 cr; prereq MM9)
-1, IV MTWThF, 108AH
-2, IV MTWThF, 143Ph
-3, VI MTWThF, 327AE
- 12 Trigonometry (5 cr; prereq 11)
-1, II MTWThF, 15AE
-2, II MTWThF, 2ME
-3, II MTWThF, 202AH
-4, III MTWThF, 111AH
-5, III MTWThF, 2ME
-6, IV MTWThF, 327AE
-7, IV MTWThF, 21AE
-8, IV MTWThF, 19AE
-9, V MTWThF, 202ME
-10, V MTWThF, 227AE
-11, V MTWThF, 21AE
-12, VI MTWThF, 110ME
-13, VI MTWThF, 104E
-14, VII MTWThF, 104E
- 13 Analytic Geometry (5 cr; prereq 11, 12)
V MTWThF, 106ME
- 24 Calculus I—Differential (5 cr; prereq 13)
-1, I MTWThF, 19AE
-2, I MTWThF, 211AE
-3, III MTWThF, 15AE
-4, III MTWThF, 162ChE
- 25 Calculus II—Integral (5 cr; prereq 24)
-1, I MTWThF, 110Ex
-2, I MTWThF, 21AE
-3, II MTWThF, 106ME
-4, III MTWThF, 21AE
-5, III MTWThF, 19AE
-6, V MTWThF, 104E
-7, V MTWThF, 110ME
-8, VI MTWThF, 106E
- 26 Mechanisms, Kinematics (5 cr; prereq MM 24)
IV MTWThF, 321ME
- 80 Elem Differential Equations (3 cr; prereq 25)
-1, I MWF, 104E
-2, I MWF, 206E
-3, III MWF, 211AE
-4, VI MWF, 227AE
- 85 Strength of Materials (3 cr; prereq 26 or 84)
-1, III MWF, 106ME
-2, III MWF, 302ME
- 87 Materials Testing Lab (1 cr; prereq 85 or concur regis)
-1, III-IV T, Ex
-2, VI-VII Th, Ex

- 90 Elem Engineering Statistics (3 cr; prereq 13)
III MWF, 327AE
- 92 Mechanics for Architects (4 cr; prereq 91)
-1, I MTWF, 305E
-2, I MTWF, 215E
- 127 Technical Mechanics—Dynamics (5 cr; prereq 26)
-1, II MTWThF, 21AE
-2, II MTWThF, 19AE
-3, IV MTWThF, 302ME
-4, IV MTWThF, 214ME
- 128 Strength of Materials (5 cr; prereq 26)
-1, II MTWThF, 110ME
-2, II MTWThF, 302ME
-3, IV MTWThF, 208ME
- 133 Industrial Statistics (3 cr; prereq 132)
V MWF, 106E
- 141 Materials Testing Lab (1 cr; prereq 128 or concur regis)
-1, VI-VII T, Ex
-2, VIII-IX T, Ex
-3, VIII-IX W, Ex
-4, VIII-IX Th, Ex
- 150 Calculus III (3 cr; prereq 25)
IV MWF, 205E
- 151 Ordinary Differential Equations (3 cr; prereq 80)
V MWF, 206E, Turrittin
- 152 Calculus IV (3 cr; prereq 150)
-1, I MWF, 205E, Loye
-2, III MWF, 205E, Thompson
- 154 Vector Analysis (3 cr; prereq 25)
V MWF, 205E, Polansky
- 155 Vector Analysis, Dyadics with Applications (3 cr; prereq 154)
II MWF, 205E, Polansky
- 162 Adv Technical Mechanics (3 cr; prereq 161)
IV MWF, 106E, Wilcox
- 168 Elem Theory of Complex Variables (3 cr; prereq 152)
III-IV TTh, 203E, Fulks
- 174 Elem Partial Differential Equations with Applications (3 cr; prereq 173)
II MWF, 206E, Munro
- 182 Applied Elasticity (3 cr; prereq 181)
II MWF, 203E, Miller
- 185 Adv Numerical Analysis in Engineering (3 cr; prereq 151, 153, 184)
III MWF, 106E, Munro
- 191 Problem Seminar (3 cr; prereq 190)
VI MWF, 205E, McElrath
- 197 Special Functions in Math Analysis (3 cr; prereq 196)
IV MWF, 104E, Fulks
- 228 Mathematics of Computers, Control Devices (3 cr; prereq 186)
V MWF, 203E, Munro
- 262 Functions of a Complex Variable (3 cr; prereq 153)
II-III TTh, 205E, Warschawski
- 265 Conformal Mapping (3 cr; prereq* 261)
IV MWF, 203E, Warschawski
- 275 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 151, 153)
II MWF, 104E, Rosenbloom
- 285 Nonlinear Mechanics (3 cr; prereq 127, 151, 153)
III MWF, 203E, Turrittin
- 288 Banach Spaces and Functional Analysis (3 cr; prereq 287)
Ar, Rosenbloom
- 295 Mathematical Theory of Elasticity (3 cr; prereq 128, 153)
VI MWF, 203E, Young

MECHANICAL ENGINEERING (ME)

- 12 Molding and Casting Processes (3 cr)
Lect I TTh, 106ME, Holtby
-1, Lab VII-IX M, 70ME
-2, Lab VII-IX W, 70ME
- 13 Metal Processing (3 cr)
Lect I TTh, 110ME, Hughes
-1, Lab VII-IX M, 50ME
-2, Lab VII-IX F, 50ME
- 14 Machine Tool Operation (3 cr)
Lect I TTh, 4ME, Crowder
-1, Lab VII-IX M, 171ME
-2, Lab VII-IX W, 171ME
-3, Lab VII-IX F, 171ME
- 20 Elem Machine Design (2 cr; prereq Draw 2)
Lect VII T, 321ME, Palmer
Lab VII-IX Th, 314ME
- 21 Kinematics (3 cr; prereq Draw 3)
Lect II TTh, 321ME, Kemler
-1, Lab VII-VIII M, 308ME
-2, Lab VII-VIII T, 308ME
-3, Lab VII-VIII W, 308ME
-4, Lab VII-VIII Th, 308ME
- 22 Mechanisms (2 cr; prereq 21, MM 24)
Lect III Th, 321ME, Bailiff
Lab VI-VIII Th, 325ME
- 23 Dynamics of Machinery (3 cr; prereq 22, 127 or concur regis)
Lect VI WF, 321ME, Larsen
Lab V-VII T, 314ME
- 24 Elements of Machine Design (3 cr; prereq MM 128)
Lect VI TTh, 321ME, Kemler
Lab VII-IX W, 314ME
- 33 Mechanical Engineering Lab I (2 cr; prereq 131 or concur regis, regis Phys 7 for work-study program)
Lect I T, 302ME, Fitz
-1, Lab VII-VIII MW, 370ME
-2, Lab VII-VIII WF, 370ME
-3, Lab VII-VIII TTh, 370ME
- 34 Mechanical Engineering Lab II (2 cr; prereq 33, 132 or concur regis, regis Phys 8 for work-study program)
Lect VI T, 302ME, Fitz
-1, Lab VI-IX T, 370ME
-2, Lab VI-IX Th, 370ME

- 35 **Mechanical Engineering Lab III** (2 cr; prereq 34)
Lect I Th, 302ME, Fitz
—1, Lab VII-IX M, 370ME
—2, Lab VII-IX F, 370ME
- 40 **Heat Engines** (3 cr; prereq Phys 7)
Lect V TTh, 114ME
—1, Lab VII-IX T, 260ME
—2, Lab VII-IX W, 260ME
- 41 **Heat Engines** (3 cr; prereq 40)
Lect I TTh, 114ME, Lee
—1, Lab VII-IX M, 260ME
—2, Lab VII-IX F, 260ME
- 91 **Industrial Assignment** (3 cr; prereq regis in coop work-study program)
Ar, Algren
- 93 **Industrial Assignment** (3 cr; prereq regis in coop work-study program)
Ar, Algren
- 101 **Milling II** (3 cr; prereq 100)
III MWF, 114ME, MacKenzie
- 103 **Milling Lab I** (2 cr; prereq ME 35, 100 or concur regis)
VII-IX TTh, 13SnH, MacKenzie
- 106 **Milling Design II** (2 cr; prereq 104, 105)
VII-IX MW, 208ME, MacKenzie
- 111 **Adv Foundry Practice** (3 cr; prereq 110)
Lect ar, Holtby
Lab VII-IX F, 70ME
- 114 **Adv Welding** (3 cr; prereq 13, Met 156)
Lect ar, Hughes
Lab VII-IX W, 50ME
- 118 **Adv Processing Technology** (3 cr; prereq ME 12, 13, 14, 24, MM 141)
Lect II TTh, 18ME
—1, Lab VII-IX T, ME Shops
—2, Lab VII-IX Th, ME Shops
- 121 **Machine Design** (2 cr; prereq 24)
Lect I Th, 321ME
—1, Lab VII-IX T, 325ME
—2, Lab VII-IX W, 325ME
—3, Lab VII-IX F, 314ME
- 123 **Mechanical Engineering Design II** (3 cr; prereq 121)
Lect VI T, 106ME, Ryan
Lab VII-IX MF, 325ME
- 125 **Machine Design Lab** (2 cr; prereq 24)
Lect I W, 106ME, Ryan
Lab I-III Th, 357ME
- 128 **Photoelastic Stress Analysis** (3 cr; prereq MM 128)
Lect IV MW, 106ME, Ryan
Lab I-III T, 351ME
- 131 **Thermodynamics** (3 cr; prereq MM 25, Phys 8)
VI MWF, 208ME
- 132 **Thermodynamics** (3 cr; prereq 131)
—1, I MWF, 208ME
—2, III MWF, 208ME
—3, VI MWF, 214ME
- 134 **Thermodynamics of Fluid Flow** (3 cr; prereq 132 or Phys 73)
I MWF, 110ME, Hall
- 138 **Gen Lab** (2 cr; prereq Min 122)
VI-IX Th, 260ME, Lee
- 141 **Heat Power Engineering** (3 cr; prereq 132)
—1, III MWF, 321ME, Lee
—2, V MWF, 321ME, Lee
- 142 **Adv Heat Power Engineering** (3 cr; prereq 141)
II MWF, 321ME, Andeen
- 146 **Fuels, Combustion** (3 cr; prereq 141)
V MWF, 114ME, Andeen
- 148 **Design of Power Plant Units** (3 cr; prereq 147)
Lect I F, 106ME, Andeen
Lab VII-IX TTh, 102ME
- 149 **Adv Steam Lab** (2 cr; prereq 35, 141)
VI-IX W, 260ME
- 150 **Internal Combustion Engines** (4 cr; prereq 131)
Lect II MWF, 214ME
Lab I-III T, 460ME
- 150A **Internal Combustion Engines** (4 cr; prereq 131 or Phys 73)
II MTWF, 208ME, Murphy
- 152 **Diesel Engines** (3 cr; prereq 55 or 150)
V MWF, 208ME, Lindquist
- 154 **Design of Internal Combustion Engines** (3 cr; prereq 121, 150)
Lect I M, 214ME
Lab I-III TTh, 308ME
- 154A **Design of Airplane Engines** (2 cr; prereq 150 or 150A)
I-III TTh, 325ME
- 155 **Design of Internal Combustion Engines** (3 cr; prereq 154)
Lect I M, 214ME
Lab I-III TTh, 308ME
- 159 **Internal Combustion Engine Lab** (2 cr; prereq 150 or concur regis)
VI-IX T, 480ME
- 160 **Heating, Ventilation** (3 cr; prereq MM 127, Hyd 102 or 103)
—1, I MWF, 102ME
—2, IV MWF, 110ME
- 161 **Heating, Ventilation, Air Conditioning Design** (3 cr; prereq 160)
Lect VI M, 302ME
Lab VII-IX MW, 302ME
- 165 **Adv Heating, Ventilation, Air Conditioning** (3 cr; prereq 160)
II MWF, 114ME
- 169 **Heating, Ventilation Lab** (2 cr; prereq 35, 160 or concur regis)
VI-IX F, 358ME
- 170 **Tool Design** (3 cr; prereq 15, IE 150)
Lect I W, 114ME, Crowder
Lab VII-IX TTh, 302ME
- 180 **Refrigeration** (3 cr; prereq 132, 160 or concur regis)
—1, IV MWF, 114ME
—2, VI MWF, 114ME

- 189 Refrigeration Lab (2 cr; prereq 180 or concur regis)
VI-IX W, 362ME
- 190 Seminar (1 cr; prereq sr)
V M, 214ME
- 191 Seminar (1 cr; prereq 190)
—1, I M, 114ME
—2, I F, 114ME
—3, VI T, 202ME
- 192 Seminar (1 cr; prereq 191)
V W, 214ME
- 194 Adv Engineering Probs (2-4 cr; prereq sr with C+ aver, cons div chief)
Ar
- 198 Industrial Instrumentation, Automatic Control (3 cr; prereq sr)
Lect V TTh, 321ME, LaJoy
—1, Lab VII-IX T, 359ME
—2, Lab VII-IX Th, 359ME
- 199 Servomechanisms (3 cr; prereq MM 80, EE 37 or concur regis)
III MWF, 214ME, LaJoy
- 225 Adv Applied Dynamics (3 cr; prereq 224)
III MWF, 202ME, Young
- 229 Adv Vibration Engineering (3 cr; prereq 129)
Ar, Kemler
- 233 Adv Heat Transmission (3 cr; prereq* 133, MM 153)
II MWF, 202ME, Hall
- 253 Adv Gas Turbines (3 cr; prereq 157)
Lect VII WF, 214ME, Hall, Murphy
Lab VII-IX M, 214ME
- 266 Adv Ventilation, Air Distribution (3 cr; prereq* 160, 265)
IV MWF, 202ME, Algren
- 281 Applied Refrigeration (3 cr; prereq 180)
VI MWF, 202ME, Jordan
- 291 Mechanical Engineering Research (ar cr; prereq perm div chief)
Ar

MINES AND METALLURGY

Metallography (MET)

- 164 Metallography (4 cr; prereq 153)
Lect II MWF, 315AH, Jerabek
Rec VI Th, 315AH
Lab VII-IX Th, 307AH
- 156 Metallography for Mechanical, Mining, Petroleum Engineers (3 cr)
Lect III MF, 315AH, Mackay
—1, VI-VII T
—2, VIII-IX T
—3, VI-VII W
- 160 Metallography (3 cr; prereq AnCh 1, 2)
Lect III MF, 315AH, Jerabek
—1, Lab VI-VII T
—2, Lab VIII-IX T
—3, Lab VI-VII W

- 161 Adv Metallography (2-3 cr; prereq 152, 156 or 160)
Lect II TTh, 315AH, Mackay
Lab VII-IX W
- 164 Adv Metallography (3 cr; prereq 6 cr)
Lect III MWF, 306AH, Dowdell
- 167 Lab (1-3 cr; prereq 155)
Ar, Dowdell, Jerabek
- 171 Special Probs in Metallography (1-3 cr; prereq Met E sr)
Ar, Dowdell, Jerabek
- 205 Seminar in Metallography (ar cr)
IV T, 315AH, Jerabek

Metallurgy (MET)

- 107 Nonferrous Metallurgy (3 cr; prereq 106)
Lect II MWF, 108AH, Bitsianes
- 111 Mineral Dressing (3 cr; prereq 110)
Lect III TTh, 202AH, Cooke
—1, Rec VII T, 202AH
—2, Rec VII F, 202AH
—1, Lab VI, VIII T
—2, Lab VI, VIII F
- 122 Adv Mineral Dressing (3 cr; prereq 112)
Lect VI M, II T, 109AH, Cooke
Rec VII M, 109AH
- 124 Special Probs in Mineral Dressing (ar cr; prereq 112)
Ar, Cooke
- 125 Special Probs in Mineral Dressing (ar cr; prereq 124)
Ar, Cooke
- 126 Special Probs in Mineral Dressing (ar cr; prereq 125)
Ar, Cooke
- 133 Electrometallurgy (3 cr; prereq 12)
Lect II TTh and hr ar, 108AH, Martin
- 135 Adv Metallurgy of Pig Iron (4 cr; prereq 134)
Lect II MWF, 109AH, Joseph
Lab VI-IX T, Martin

Mining Engineering (MIN)

- 12 Surveying (3 cr; prereq 11)
II MTThF, 111AH, Heilig
- 106 Mine Mapping (2 cr; prereq 15)
Lab VI-IX TTh, 303AH, Heilig
- 112 Elements of Mining (3 cr; prereq 111)
I MTWF, 202AH, Yardley
- 121 Mine Plant Design (2 cr; prereq MM 127, ME 131, Hyd 102)
Lab VII-IX MW, 206AH, Hartman
- 127 Engineering Construction (3 cr; prereq 126)
Lab I-III TTh, VI-VIII F, 205AH, Hartman
- 142 Surface Mining (3 cr; prereq 113)
IV MTWF, 202AH, Pfeider
- 144 Adv Mining (2 cr; prereq 141)
Lab VI-VIII MW, 205AH, Pfeider

- 145 **Adv Mining** (4 cr; prereq 144)
Lab VI-VIII MW, VI-IX F, 205AH,
Pfeider
- 152 **Special Probs in Mining** (ar cr; prereq 151)
Ar
- 160 **Industrial Minerals, Rocks** (2 cr; prereq
sr)
I MF, 315AH, Heilig

Petroleum Engineering (PETE)

- 112 **Oil Field Production** (3 cr; prereq 111)
I MTWF, 109AH, Lacabanne
- 134 **Natural Gas Engineering** (2 cr; prereq 152)
IV TTh, 109AH, Lacabanne
- 144 **Adv Petroleum Engineering** (2 cr; prereq
Min 141)
Lab VI-VIII MW, 205AH, Pfeider
- 153 **Petroleum Production Technology** (3 cr;
prereq 152)
Lect III Th, 109AH, Lacabanne
—1, Lab VI-VIII TF, 112AH, Yardley
—2, Lab VI-VIII MW, 112AH

TECHNICAL AID (TA)

- 12 **Engineering Drafting** (5 cr; prereq 11)
—1, VII-IX MTWThF, 18E
—2, VII-IX MTWThF, 101E
- 17 **Slide Rule** (1 cr)
VII W, 227E

- 22 **Applied Mathematics** (6 cr; prereq 21)
I-II MTWThF, 106E
- 25 **Applied Mathematics** (6 cr; prereq 24)
V-VI MTWThF, 15AE
- 35 **Technical Writing** (3 cr; prereq 34)
—1, III MWF, 50ChE
—2, III MWF, 70ForH
- 41 **Engineering Drafting** (5 cr; prereq 14)
I-III MTWThF, 101E
- 42 **Engineering Materials** (2 cr)
VII MF, 227E
- 73 **AC Circuits, Machines, Equipment** (3 cr;
prereq 71)
Ar
- 74 **AC Lab** (2 cr; prereq 72, concur regis 73)
Ar
- 81 **Gen Shop** (2 cr)
Lect III TTh, 106ME
—1, Lab IV-V MW, 50ME
—2, Lab IV-V TF, 50ME
- 84 **Machine Shop** (2 cr; prereq 83)
Lect VIII MW, 18ME
—1, VII-IX T, 171ME
—2, VII-IX Th, 171ME
- 84A **Shop Practice, Machine Shop** (2 cr;
prereq 83A)
Lect I TTh, 18ME
Lab VII-IX F, 171ME
- 86 **Elements of Production** (3 cr; prereq 83A)
III MWF, 75ForH

COLLEGE OF MEDICAL SCIENCES

ANATOMY (ANAT)

- 101 **Gross Human Anatomy** (8 cr; prereq 100)
Lect VI MWThF, 102 IA, Boyden
Lab VII-IX MWThF, 306, 307, 308, 312,
313 IA
- 107 **Human Embryology** (5 cr; prereq regis 1st
yr med; or grad 100-101)
Lect I TF, IV Th, 102 IA, Wells
—1, Lab II-III T, I-II Th, 212-215 IA
—2, Lab I-II M, II-III F, 212-215 IA
- 132 **Anatomical, Functional Aspects of Repro-**
duction (2 cr)
Ar, Wells
- 149 **Experimental Neurology** (ar cr; prereq 111)
Ar, Campbell
- 150 **Special Topics in Neurology** (ar cr; prereq
111)
Ar, Rasmussen
- 152 **Prosection** (ar cr; prereq 100-101)
Ar, Boyden
- 154 **Adv Anatomy** (ar cr)
Ar
- 160 **Seminar—Probs of Reproduction** (1 cr; pre-
req 107)
Ar, Wells
- 164 **Segmental, Topographic Anatomy of Lungs**
(2 cr; prereq 101)
7:00 pm-10:00 pm Th, 304 IA, Boyden
- 166 **Hematology** (4 cr; prereq 165)
VII TTh, 304 IA, Sundberg
Lab VIII-IX TTh, 213 IA
- 202 **Research—Anatomy** (ar cr)
Ar
- 206 **Anatomical Seminar** (1 cr)
IV S, 226 IA

BACTERIOLOGY (BACT)

- 1 **Elem Bacteriology** (4 cr, offered by the
Ext Div, open to PT, dent hyg students
without fee winter qtr, by cons dept)
Lect III MWF, 214MH, Brumfield
Lab I-II MWF, 201MH
- 53 **Gen Bacteriology** (5 cr; prereq soph, C+
aver in prereq courses, 10 cr chem, 4 cr
biol sci or cons instr)
Lect VII MWF, 214MH, Staff
Lab VIII-IX MWF, 201MH

- 102 Medical Bacteriology (5 cr; prereq 53, no med students)
Lect II MWF, 214MH, Staff
Lab III-IV MWF, 201MH
- 106 Prin Infectious Disease (6 cr; prereq 105)
Lect I TTh, 12 Owre, Syverton
Lab II-IV TTh, 201MH
- 113 Actinomycetes, Yeasts (3 cr; prereq 112)
Lect VI TTh, 113 Owre, Roth
Lab VII-VIII TTh, 201MH
- 122 Physiology of Bacteria (3 cr; prereq 121)
Lect VIII M, 214MH, Lichstein
Lab VI-VII MWF, 201MH
- 203 Seminar (1 cr)
IX Th, 214MH, Watson

BIOPHYSICS (BPHY)

- 138 Seminar—Gen Physiology, Biophysics (ar cr)
Ar, Staff
- 155 Biophysics (3 cr; prereq 28 cr in physics, biol, cons instr)
Ar, Schmitt
- 156 Biophysics (3 cr; prereq 28 cr in physics, biol, cons instr)
Ar, Schmitt
- 157 Biophysics (3 cr; prereq 28 cr in physics, biol, cons instr)
Ar, Schmitt
- 170 Probs—Biophysics (ar cr)
Ar, Stenstrom
- 204 Research—Biophysics, Physiology of Radiation (ar cr)
Ar, Stenstrom
- 221 Research—Biophysics (ar cr)
Ar, Schmitt
- 223 Research—Biophysics (ar cr)
Ar, Schmitt

CANCER BIOLOGY (BIOL)

- 140 Seminar—Cancer Biology (1 cr)
Ar, Bittner
- 141 Probs—Cancer Biology (ar cr)
Ar, Bittner
- 207 Research—Cancer Biology (ar cr)
Ar, Bittner

MEDICAL TECHNOLOGY (MEDT)

- 52 Intro Medical Technology (3 cr; prereq 51)
I TWTh, Evans, staff
- 61 Intro Medical Technology (4 cr; prereq regis med tech)
Ar, Evans, staff
- 101 Methods, Clinical Orientation (ar cr; prereq concur regis 102)
I T, Evans, staff
- 102 Sr Practical Training (see col bul)
Ar, Evans, staff

MEDICINE (MED)

- 101 Orientation in Clinical Medicine (3 cr; prereq regis 2nd yr med, Anat 100, Phsl 106)
Lect VI TW, Todd Amph, Hosp
—1, Lab III-IV MF
—2, Lab III-IV WS
- 104 Intro Internal Medicine (2 cr; prereq regis 3rd yr med, 101, 102)
8:00-8:50 am T, Todd Amph, Hosp
- 110 Medicine Clinic (no cr; prereq regis 4th yr med)
8:00-8:50 am Th, PoHAMph, Hosp, Watson, others
- 111 Clinical Clerkship—Medicine (6 cr; prereq regis 3rd yr med, cons instr)
Ar
- 112 Sr Clerkship—Internal Medicine (6 cr; prereq regis 4th yr med)
Ar
- 123 Dermatology, Syphilology (1 cr; prereq regis 4th yr med, 101, 102)
4:00-4:50 pm M, Eustis Amph, Michelson
- 124 Sr Clerkship—Dermatology (2 cr; prereq regis 4th yr med)
Ar
- 124x Sr Clerkship—Dermatology (2 cr; prereq regis 4th yr med)
Ar
- 201 Clinical Medicine (ar cr)
Watson, staff
- 202 Diseases of Cardiovascular Apparatus (ar cr)
Fahr
- 203 Research—Medicine (ar cr)
Watson, staff
- 205 Tuberculosis (ar cr)
Myers
- 206 Clinical Conference (1 cr)
Watson, Ebert, staff
- 207 Clinical Pathological Conference (1 cr)
Bell, Watson, Ebert, staff
- 208 Clinical Radiological Conference (1 cr)
Rigler, Watson, Ebert, staff
- 209 Psychosomatic Medicine (1 cr)
Hastings
- 210 Infectious Disease Seminar (1 cr)
Spink
- 211 Electrocardiographic Conference (1 cr)
Ar
- 225 Clinical Dermatology, Syphilology (ar cr)
Michelson, staff
- 226 Dermatology, Syphilology (ar cr)
Michelson, staff
- 227 Histopathology of Skin (ar cr)
Michelson, staff
- 228 Research—Dermatology, Syphilology (ar cr)
Michelson, staff
- 235 Adv Clinical Lab Medicine (ar cr; prereq Anat 165-166)
Evans, staff

- 236 Research on Clinical Lab Probs (ar cr)
Evans, staff

NURSING (NURS)

- 17B Introd Clinical Nursing (4 cr; prereq 17A)
—1, I MWF, PoHAMph, I TTh ar, Love
—2, II MTWThF, PoHAMph, Love
- 37A Maternal, Child Nursing (12 cr)
Ar, Robertson
- 37B Maternal, Child Nursing (12 cr; prereq 37A)
VIII MWF, PoHAMph, Gautefald
- 54 Introd Medical Sciences (2 cr)
Ar, Coe
- 57B Medical, Surgical Nursing (12 cr; prereq 57A)
IV MTWTh, VI-VII MTWTh, VIII TTh, PoHAMph, Vennes, Brennan
- 67 Nursing Care of Neuropsychiatric Patients (8 cr)
Ar, Anderson
- 77A Nursing in the Operating Room (6 cr)
Ar, Skooglund
- 77B Gynecologic Nursing (6 cr)
Ar, Robertson
- 79 Tuberculosis Nursing (3 cr)
Ar, Einerson
- 87A Public Health Field Experience (10 cr)
Ar, Burns, Griffin
- 87B Rural Nursing Experience (5 cr)
Ar
- 97A Medical, Surgical Nursing (7 cr)
Ar, Sobotka
- 97B Nursing in Outpatient Dept (5 cr)
Ar, Shey
- 106 Neuropsychiatric Nursing (4 cr)
Ar, Anderson
- 145A Prin of Psychiatric Nursing (5 cr; prereq cons instr)
Ar, Black
- 145B Field Practice in Psychiatric Nursing (7 cr, †145B-C; prereq cons instr)
Ar, Black
- 151B Adv Medical Nursing (6 cr, †151A-B-C; prereq cons instr)
Lect I TF, VI TTh, Coe
Lab II-IV TTh
- 152B Adv Obstetric Nursing (6 cr, †152A-B-C; prereq cons instr)
I FS, II F, IX W, ar, Pike
- 153B Adv Operating Room Nursing (6 cr, †153A-B-C; prereq cons instr)
VII MW, I Th, ar, Hinman
- 154B Adv Pediatric Nursing (6 cr, †154A-B-C; prereq cons instr)
I W, IV MWF, ar, Mooney
- 155B Adv Psychiatric Nursing (6 cr, †155A-B-C; prereq cons instr)
Ar, Linehan
- 156B Adv Course in Rural Nursing (6 cr, †156A-B-C; prereq cons instr)
Ar, Low

- 157B Adv Surgical Nursing (6 cr, †157A-B-C; prereq cons instr)
I Th, VII MW, ar, Hanson
- 158B Adv Tuberculosis Nursing (6 cr, †158A-B-C; prereq cons instr)
Ar
- 191 Prin of Adm Applied to Nursing Service
Adm (5 cr; prereq grad, cons instr)
Ar

OBSTETRICS AND GYNECOLOGY (OBST)

- 121 Obstetrics (1 cr; prereq 120)
8:00-8:50 am T, Eustis Amph, Hosp, McKelvey, staff
- 135 Clinical Clerkship in Obstetrics, Gynecology (6 cr)
Ar
- 135x Clinical Clerkship in Obstetrics, Gynecology (6 cr)
Ar
- 202 Adv Obstetrics, Gynecology (ar cr)
Ar
- 206 Adv Obstetrics, Gynecology (ar cr)
Ar
- 210 Adv Obstetrics, Gynecology (ar cr)
Ar

OPHTHALMOLOGY AND OTOLARYNGOLOGY (OO)

- 100 Ophthalmology (1 cr, primarily 4th yr med)
8:00-8:50 am M, Eustis Amph, Hosp, Boies, Hansen, others
- 102 Rhinology (1 cr; prereq regis 4th yr med)
8:00-8:50 am M, Eustis Amph, Hosp, Boies, Hansen, others
- 104 Clinic, Conferences in Diseases of Ear (2 cr)
Ar
- 105 Clinic, Conferences in Diseases of Nose, Throat (2 cr)
Ar
- 106 Clerkship in Diseases of Eye (2 cr)
Ar
- 201 Adv Refraction (3 cr)
Ar, Tracht
- 202 Clinical Ophthalmology (6 cr)
Ar, Staff
- 205 Perimetry (1 cr)
Ar, Schmidtko
- 206 Surgery of Eye (3 cr)
Ar, Staff
- 212 Seminar—Ophthalmology (1 cr)
Ar, Hansen
- 230 Clinical Otology (3 cr)
Ar, Staff
- 231 Clinical Rhinology, Laryngology (3 cr)
Ar, Staff
- 232 Surgery of Ear, Nose, Throat (3 cr)
Ar, Staff

- 237 Endoscopy (2 cr)
Ar, Staff
- 241 Seminar—Otolaryngology (1 cr)
Ar, Staff

PATHOLOGY (PATH)

- 102 Special Pathology (8 cr; prereq regis 2nd yr med, 101)
Lect VII MTWThF, 102 IA, Dawson, others
—1, Lab I-II MF, III-IV WS
—2, Lab III-IV MF, I-II WS
- 104 Autopsies (ar cr; prereq regis 3rd, 4th yr med; or grad, 102)
Ar, Staff
- 107 Tumors (3 cr; prereq 102)
VII-VIII TTh, 104 IA, Hebbel, McCartney
- 107a Surgical Pathology (3 cr; prereq 102)
Ar, Hebbel, McCartney
- 107c Diseases of Kidney (3 cr; prereq 102)
VII-VIII MW, 104 IA, Hebbel
- 110 Seminar—Pathology (1 cr; prereq 102)
12:30-1:30 M, 104 IA, Staff
- 111 Conference on Autopsies (1 cr; prereq 102)
12:30-1:30 T, 104 IA, Dawson
- 201 Research (ar cr)
Ar, Staff

PEDIATRICS (PED)

- 121 Clinical Diagnosis in Infancy, Childhood (1 cr; prereq regis 3rd yr med, 120)
8:00-8:50 am W, Eustis Amph, Hosp
- 124 Jr Clinical Clerkship in Pediatrics (6 cr)
Ar
- 135 Sr Clinical Clerkship in Pediatrics (3 cr)
Ar
- 135a Allergy Clinic
Ar, Stoesser
- 150 Physiology, Diseases of Newborn (1 cr)
Ar, Adams
- 152 Fundamental Prin Nutrition, Metabolism Applied to Children (1 cr)
Ar, McQuarrie, May, Ziegler, Ulstrom
- 154 Endocrinology Applied to Pediatrics (1 cr)
Ar, McQuarrie, Ulstrom
- 156 Adv Study of Noncontagious Diseases (1 cr)
Ar, McQuarrie, Top, Thomas, May, Adams, Good, Huenekens, Engel
- 158 Adv Study of Contagious Diseases (1 cr)
Ar, Top, Stoesser, Platou, Seham
- 160 Allergic Disorders in Childhood (1 cr)
Ar, Stoesser, Siegel
- 162 Pediatric Psychiatry (1 cr)
Ar, Jensen, Benton, Quast
- 163 Hematology of Infancy, Childhood (1 cr)
Ar, May, Nelson
- 164 Rare, Unusual Diseases of Infancy, Childhood (1 cr)
Ar, McQuarrie, Platou
- 166 Weekly Seminar for Basic Subjects Related to Pediatrics (1 cr)
Ar, Ziegler

- 167 Weekly Seminar for Review of Current Literature (1 cr)
Ar, McQuarrie, staff
- 168 Speech Disturbances in Childhood (1 cr)
Ar, Jensen, Brown, Stenswick, Quast
- 170 Rheumatic Infection, Heart Diseases in Childhood (1 cr)
Ar, Top, Thomas, Adams, Dwan, Good
- 202 Pediatric Clinic (1-7 cr)
Ar, McQuarrie, Stoesser, Adams, Jensen, May, Ulstrom, Engel, Brown, Siegel
- 204 Residency in Pediatrics (1-7 cr)
Ar, McQuarrie, Huenekens, Platou, Seham, Top, Thomas, Adams, Jensen, May, Good, Richdorf
- 208 Pediatric Research (3-7 cr)
Ar, McQuarrie, Top, Thomas, May, Jensen, Adams, Good, Ulstrom, Ziegler, staff

PHARMACOLOGY (PHCL)

- 101 Introd Pharmacology (2 cr; prereq regis 2nd yr med or grad, Phsl 107)
VI ThF, 15 Owre, Bieter, others
- 105 Gen Experimental Pharmacology (6 cr; prereq regis pharmacy or 3rd yr dent or grad, 101)
I MWF, VI T, 15 Owre, Wright
- 109 Pharmacological Probs (ar cr; prereq 102)
Ar, Staff
- 110 Toxicology (2-5 cr; prereq 102)
Ar, Wright
- 111 Adv Toxicology (3 cr; prereq 110 or concur regis)
Ar, Wright
- 112 Spectrochemical Toxicology (3 cr; prereq 110)
Ar, Wright
- 123 Special Topics (ar cr)
Ar, Staff
- 124 Pharmacology of Special Systems (ar cr)
Ar, Staff
- 203 Research—Pharmacology (ar cr; prereq 102, cons instr)
Ar, Staff
- 204 Adv Pharmacology (1 cr; prereq 101, cons instr)
Ar, Staff
- 205 Gen Discussions in Pharmacology (1 cr; prereq 101 or 102, cons instr)
Ar, Staff

PHYSIOLOGICAL CHEMISTRY (PHCH)

- 101 Physiological Chemistry (6 cr, \$50; prereq 100)
Lect IV MTWF, 15 Owre, Armstrong
—1, Lab I-III MW, 310MH, Barnum
—2, Lab I-III ThS, 310MH, Cohen

- 102 Physiological Chemistry (6 cr, primarily for 1st yr vet med; prereq org chem)
Lect VI M, IV T, III-IV S, 214MH, Armstrong
-1, Lab VII-IX M, I-III T, 310MH, Barnum, Cohen
-2, Lab VI-VIII TTh, 310MH, Glick, Frame
- 105 Physiological Chemistry (6 cr; prereq 104)
Lect IV WF, III MT, 12 Owre, Singer
Lab VI-VIII WF, 310MH
- 153 Probs in Physiological Chemistry (ar cr; prereq 101)
Ar
- 200 Seminar—Physiological Chemistry (1 cr)
V Th, 214MH
- 205 Research—Physiological Chemistry (ar cr)
Ar
- 207 Radiotracers, Mineral Metabolism (3 cr; prereq 101)
IX MWF, 214MH, Armstrong
- 212 Histochemistry Lab (ar cr; prereq 101, cons instr)
Ar, Glick
- 236 Radioisotope Seminar (1 cr)
V W

PHYSIOLOGY (PHSL)

- 60 Human Physiology (6 cr, §106-107, primarily for med tech, 5 yr nurs, PT students; prereq physiol chem, human or mammalian anat)
I MWThF, 113 Owre
Conf II F, 113 Owre
Lab II-IV W, 301MH
- 101 Human Physiology (10 cr, §106-107, primarily for 2nd yr dents; prereq physiol chem, anat)
Lect VI MTWThF, IV S, 129MH
-1, Lab VI-IX MTh
-2, Lab VII-IX T, II-IV F
- 114 Seminar—Physiology (ar cr; prereq 106-107)
Ar
- 124 Adv Neurophysiology (1 or 2 cr; prereq 107 with grade B or spec exam)
Ar
- 201 Seminar—Physiology (ar cr)
V M, 214MH
- 202 Readings—Physiology (ar cr)
Ar
- 203 Research—Physiology (ar cr)
Ar

PSYCHIATRY AND NEUROLOGY (NPSY)

- 101 Neurology (1 cr; prereq regis 3rd yr med)
8:00-8:50 am S, Todd Amph, Hosp, Baker
- 103 Junior Didactic Clerkship—Psychiatry, Neurology (2 cr)
Ar, Staff

- 103x Junior Clinical Clerkship—Psychiatry, Neurology (4 cr)
Ar, Staff
- 105 Psychiatric, Neurologic Clinic (1 cr; prereq regis 4th yr med)
8:00-8:50 am S, Todd Amph, Hosp, Hastings, others
- 120 Psychosomatics (1 cr; prereq regis 1st yr med)
VI T, 214MH, Hastings
- 121 Introd Psychiatry in Practice of Medicine (1 cr; prereq regis 2nd yr med)
VI M, Eustis Amph, Hosp, Hastings, others
- 145 Reading in Psychiatry (ar cr)
Ar, Hastings
- 145x Reading in Neurology (ar cr)
Ar, Baker
- 208 Clinical Neurology (8 cr)
Ar, Baker
- 208x Clinical Psychiatry (8 cr)
Ar, Hastings
- 208y Clinical Child Psychiatry (8 cr)
Ar, Staff
- 209 Research—Neurology (ar cr)
Ar, Baker
- 211 Intracranial Neoplasms (2 cr)
Ar, Tichy
- 212 Survey of Neuropathology (1 cr)
Ar, Tichy
- 214 Psychiatry of Childhood (1 cr)
Ar, Jensen
- 215 Seminar—Application of Psychological Methods (1 cr)
Ar, Hathaway
- 219 Personality Structure, Normal, Abnormal (1 cr)
Ar, Hathaway
- 220 Adv Clinical Neurology (ar cr)
Ar, Baker
- 221 Psychometric Clerkship (2 cr)
Ar, Hathaway, Schofield
- 222 Interviewing Techniques in Psychiatry (1 cr)
Ar, Schiele
- 225 Neuro-ophthalmology (1 cr)
Ar, Baker
- 226 Neurological-Neurosurgical Conference (1 cr)
Ar, Baker
- 227 Clinical Seminar for Psychologists (1 cr)
Ar, Schiele, Schofield
- 228 Research—Neuropathology (ar cr)
Ar, Baker
- 231 Applied Electroencephalography, Myography (1 cr)
Ar, Baker, Brown
- 232 Applied Neuroroentgenology (1 cr)
Ar, Baker
- 233 Applied Neuropathology (ar cr)
Ar, Baker
- 236 Normal Personality Development, Psychopathology (1 cr)
Ar, Challman

- 237 Psychoanalytic Therapy (1 cr)
Ar, Lippman
- 240 Neuropathology Conference (1 cr)
Ar, Baker
- 243 Prolonged Psychotherapy (1 cr)
Ar, Staff
- 244 Seminar—Psychosomatic Medicine (1 cr;
prereq MD degree, cons instr)
Ar, Aldrich
- 245 Case Conference for Psychologists (ar cr;
prereq clinical psych)
Ar, Hathaway
- 247 Neurological Speech Disorders (1 cr; prereq
MD degree)
Ar, Schuell

PUBLIC HEALTH (PH)

- 3 Personal Health (2 cr, §GC 10C)
VI MW, BuAud, Thomson
- 4 Health Probs of the Community (2 cr; pre-
req 3 or GC 10C)
VI TTh, 4ME, Fox
- 50 Personal, Community Health (3 cr, §3, 4,
51, 52, 100 or GC 10C)
III MWF, 15 Owre, Thomson
- 51 Community Hygiene (3 cr, §4, 50, 52 or
100; prereq 3 or GC 10C)
IV MWF, 214MH, Cowan
- 52b Home Nursing, Family Care (1 cr; prereq
52a or concur regis)
—1, VII-VIII T, 01MeH, Sandve
—2, VII-VIII Th, 01MeH, Sandve
- 55 Nursing, Social Probs in Gonorrhoea, Syphi-
lis Control (2 cr, for PH nurs, soc maj;
prereq 53 or 100, 62; or Soc 50-51 for
pre-SW maj)
VII MW, 111 Owre, Taylor
- 59 Health of School Child (3 cr; prereq 3, 4;
or 3, 51; or GC 10C, 4; or GC 10C, 51;
or 50, or 52, or 100)
IV MWF, 4ME, Thomson, Anderson
- 62 Prin Public Health Nursing I (5 cr, †62-63;
prereq regis PH nurs, others cons instr,
100 or concur regis)
V-VI MW, V F, 111 Owre, Taylor
- 63 Prin Public Health Nursing II (5 cr, †62-63;
prereq regis PH nurs, others cons instr,
62, 53 or 100 or concur regis)
II-III MW, 113 Owre, II F, 12 Owre, Taylor
- 64 Cancer Nursing, Nursing in Other Chronic
Diseases (3 cr; prereq regis PH nurs,
others cons instr)
IV MWF, 113 Owre
- 65 Field Work—School Nursing (ar cr; prereq
regis PH nurs, 53 or 100, 62, 67)
Ar, Taylor
- 66 Field Work—Rural Nursing (ar cr; prereq
regis PH nurs, 53 or 100, 62, 67)
Ar, Taylor
- 67 Field Work—Urban Nursing (ar cr; prereq
regis PH nurs, 53 or 100, 62)
Ar, Taylor
- 70 Practice Teaching Home Nursing or Child
Care for Public Health Nurses (ar cr;
prereq* 67, Ed 81)
Ar, Sandve
- 80 Elem Vital Statistics (3 cr; prereq* regis
PH nurs)
VII-IX TTh, 129MH, Treloar
- 92 Prin Human Function (4 cr, †91-92; prereq
91)
IV MWF, VI T, 104 IA, Taylor, Brozek
- 101 Public Health Administration, Field Work
(2 cr; prereq regis 4th yr med)
Ar, Thomson
- 103 Public Health Bacteriology (ar cr; prereq
Bact 102, 116, cons instr)
II-III MWF, SBH Lab, Bauer
- 105 Epidemiology (3 cr; prereq see PH bul)
III TThS, VII-VIII W, 113 Owre, Top
- 106 Public Health Administration (3 cr, for
physicians, engrs, nurs, SW, others cons
instr; prereq 53 or 100)
I TThS, 129MH, Anderson
- 107 Child, Adult Hygiene (3 cr, for physicians,
grads in PH nurs or med-SW; prereq
53 or 100)
I-IV MF, 130ForH, Boynton
- 110 Biometric Principles (3 cr; prereq sr, 18 cr
biol sci or math through anal geom,
concur regis 111)
II MWF, 129MH, Staff
- 111 Biostatistics Lab (3 cr; prereq concur regis
110)
—1, III-IV MWF, 118MH, Staff
—2, VI-VII MWF, 118MH, Erickson
- 112 Water Supply Sanitation (4 cr, §114; prereq
102, 100 or 104)
Ar, Bosch, Pierce, Olson
- 114 Environmental Sanitation II (2 cr, §112,
113, 116, for physicians, nurs, veterinari-
ans, others by cons; prereq 102)
VI-IX MF, Bosch, Pierce, Olson
- 115 Food Sanitation (3 cr; prereq 102, 100 or
104)
Ar, Olson
- 118 Sanitary Biology (3 cr; prereq cons instr)
Ar, Olson
- 119 Field Practice in Environmental Sanitation
(ar cr; prereq cons instr)
Ar
- 123 Topics in Public Health (ar cr; prereq cons
instr)
Ar
- 129 Field Work in Industrial Nursing (ar cr;
prereq 67)
Ar, Taylor
- 130 Random Sampling Distribution (3 cr; prereq
110, concur regis 131)
III MWF, 129MH, Elveback
- 131 Sampling Lab (2 cr; prereq concur regis
130)
—1, I-II MWF, 118MH, Elveback
—2, I-II TThS, 118MH, Elveback
—3, VI-VIII TTh, 118MH, Elveback

- 133 Mental Hygiene (3 cr; prereq 62 or PH nurs exper)
I TThS, 240ChE, Wood
- 138 Field Work in Child Hygiene (ar cr; prereq sr, cons instr)
Ar
- 139 Field Work in Mental Hygiene (ar cr; prereq cons instr)
Ar, von Bergen
- 150 Life Tables (3 cr; prereq cons instr)
Ar, Elveback
- 152 Industrial Hygiene Engineering (3 cr; prereq cons instr)
Ar, Pierce
- 163 Prin Organization, Mgt of Hospitals (6 cr; prereq 162)
III-IV MIWThFS, 105TSP, Stephan, Hamilton
- 165 Hospitals in Community Organization (1 cr)
VI-IX T, 105TSP, Stephan
- 166 Hospital Clerkship (3 cr)
Ar, Stephan
- 169 Administrative Residency (ar cr)
Ar, Stephan
- 170 Supervision in Public Health Nursing (3 cr; prereq* 53 or 100, 133, or PH nurs exper)
IV TThS, 113 Owre, Taylor
- 171 Probs in Public Health Nursing (ar cr; prereq* 170)
Ar, Taylor
- 173 Field Work in Supervision in Public Health Nursing (ar cr, for PH nurs; prereq* 170)
Ar, Taylor
- 174 Supervision Lab (ar cr, for PH nurs)
V TTh, 130ForH, Taylor
- 181 Prin, Methods—Community Health Education (ar cr; prereq cons instr)
VI-VII MF, 244ForH, Grout
- 190 Field Work in Community Health Education Program (ar cr; prereq 125, 181, 227, see PH bul)
Ar, Grout
- 191 Science of Human Nutrition (3 cr; prereq 8 cr org chem or biochem, 91, 92 or Phsl 103, cons instr)
Ar, Anderson, Keys
- 192 Physiology of Exercise (4 cr; prereq 92 or Phsl 103, cons instr)
Ar, Keys, staff
- 200 Research (ar cr)
Ar
- 201 Topics in Biometry (ar cr; prereq 120, 130, cons instr)
Ar, Treloar, others
- 210 Seminar—Public Health (ar cr)
IX-X M, 15 Owre
- 211 Seminar—Biometry (ar cr)
Ar, Treloar
- 215 Maternal, Child Health (ar cr, for physicians; prereq cons instr)
Ar, Boynton

- 220 Reading in Probs of Physiological Hygiene (ar cr; prereq cons instr)
Ar, Keys, staff
- 227 Probs in Community Health Education Program (ar cr; prereq cons instr)
Ar, Grout, others

RADIOLOGY AND PHYSICAL MEDICINE

Physical Medicine (PMED)

- 1 Orientation to Occupational Therapy (1 cr)
Ar, Bragg
- 2 Orientation to Physical Medicine (1 cr)
I-II Th, 142ChE, Hamilton (for occupational therapy students only)
- 58 Asepsis, Bandaging, Contagious Technique (2 cr; prereq regis PT)
I-II W, 150ChE
- 64 Senior Clinic in Physical Medicine (1 cr; prereq regis PT, OT)
III W, Kottke
- 68 Applied Anatomy (3 cr; prereq regis PT)
I-III M, 150ChE, Lecklitner
- 70 Theory, Technique of Massage (3 cr; prereq regis PT)
Lect I T, 142ChE
Lab VI-VII MW
- 72 Theory of Occupational Therapy (3 cr; prereq regis OT)
Ar, Hansen
- 74 Therapeutic Recreation (2 cr; prereq regis OT)
Ar, Hansen
- 78 Prin, Practice of Occupational Therapy (3 cr; prereq regis OT)
Ar, Bragg
- 80 Theory, Technique of Therapeutic Exercises (5 cr; prereq regis PT)
Lect IV W, I F, 150ChE, Hamilton
Lab III-IV TTh, II-III F
- 83 Theory, Techniques of Muscle Function, Measurements, Tests (5 cr; prereq regis PT)
Lect II T, IV F, 142ChE
Lab VI-VII TThF
- 92 Preliminary Hospital Practice in Occupational Therapy (3 cr; prereq regis OT)
Ar, Phelps, Bragg
- 122 Physical Therapy (1 cr; prereq regis 4th yr med)
8:00-8:50 am, Eustis Amph, Hosp, Knapp

Radiology (RAD)

- X-Ray Technology
IX MTThF, Theater, VCHH
- 102 X-ray Conference (1 cr)
X T, Eustis Amph, Rigler
- 104 Roentgen, Radium Therapy (1 cr; prereq regis 3rd, 4th yr med; or grad)
IX T, Eustis Amph, Stenstrom

- 111 Medical Roentgenologic Conference for Medical Clerks (1 cr)
II M, Todd Amph, Rigler
- 121 Roentgen Diagnosis, Radiation Therapy (2 cr; prereq regis 3rd yr med)
8:00-8:50 am MF, Todd Amph, Hosp, Rigler, Stenstrom
- 124 Pediatric-Roentgenologic Conference for Pediatric Clerks (1 cr)
II T, Eustis Amph, Rigler
- 126 Clinical Lectures in Roentgen Diagnosis, Therapy (1 cr; prereq regis 4th yr med, 121)
8:00-8:50 am S, Eustis Amph, Rigler, others
- 127 Fluoroscopy of Thorax (1 cr; prereq regis 4th yr med)
1:00-3:00 MF, UD
- 137 Surgical Roentgenologic Conference for Surgical Clerks (1 cr)
II S, Todd Amph, Rigler
- 163a Neurosurgical-Roentgenological Conference for Neurosurgical Clerks (1 cr)
VI F, Todd Amph, Peterson
- 208 Seminar—Radiology (1 cr)
X Th, Eustis Amph, Rigler
- 211 Roentgen Diagnosis of Diseases of Gastrointestinal Tract (ar cr)
IX W, Theater, VCHH
- 214 Roentgen Diagnosis of Diseases of Bones, Joints (ar cr)
IX W, Theater, VCHH
- 216 Roentgen Diagnosis of Traumatic Lesions of Skeleton (ar cr)
Ar
- 220 Urologic-Roentgenologic Conference for Graduate Students (1 cr)
X M, PoHAmph, Baggenstoss
- 236 Radio Isotope Seminar (1 cr)
V W, 12 Owre
- 238 Roentgen-Surgical Pathology Conference
I W, Todd Amph, Hosp, Rigler, Hebbel
- 240 Radiation Therapy Conference (1 cr)
IX Th, Eustis Amph, Hosp, Stenstrom
- SURGERY (SURG)**
- 104 Prin Anesthesia (1 cr)
Ar, Knight
- 129 Surgical Clinics for Juniors (1 cr; prereq regis 3rd yr med)
8:00-8:50 am Th, Todd Amph, Hosp, Wangenstein, others
- 135 Clinical Clerkship (6 cr; prereq regis 3rd yr med)
Ar, Wangenstein, staff
- 135a Clinical Pathology of Tumors
Ar, Wangenstein, staff
- 135b Reading Course
Ar, Wangenstein, staff
- 135c Medical-Surgical Pathological Conference
Ar, Wangenstein, staff
- 135d Roentgenological-Surgical Conference
Ar, Wangenstein, staff
- 135e Surgical Ward Conference
Ar, Surg staff
- 135f Outpatient Surgical Clinic, Gen Surgery, Proctology
Ar, Surg staff
- 135g Applied Surgical Anatomy
Ar, Surg staff
- 135k Physiological-Surgical Conference
Ar, Surg staff
- 135l Individual Instruction in Anesthesia (pre-req regis 3rd yr med)
Ar, Anes staff
- 135m Clinical Conferences in Anesthesia (prereq regis 3rd yr med)
Ar, Anes staff
- 138 Clerkship in Fractures, Common Dislocations (prereq 4th yr med)
Ar
- 139 Operative Surgery (ar cr)
Ar, Wangenstein, staff
- 145 Orthopedic Outpatient Clinic
Ar, Cole
- 152 Probs in Clinical Investigations (ar cr)
Ar, Wangenstein, staff
- 160 Clinic in Urology—Mpls Gen Hosp (prereq regis 4th yr med)
Ar, Sweetser
- 161 Clinic in Urology at Ancker Hospital (prereq regis 4th yr med)
Ar, Foley
- 162 Outpatient Clinic in Neurosurgery
Ar, Peyton, staff
- 163 Clinical Clerkship in Neurosurgery
Ar, Peyton, staff
- 165 Clinical Anesthesia
Ar, Knight
- 167 Probs in Experimental Surgery (ar cr)
Ar, Wangenstein, staff
- 169 Diagnostic Bedside Surgical Clinic (ar cr)
Ar, Wangenstein, staff
- 170 Clinical Clerkship in Urology
Ar, Creevy
- 170a Cystoscopic Clinic (ar cr)
Ar, Creevy
- 170b Outpatient Clinic in Urology (prereq regis 4th yr med)
Ar, Creevy
- 173 Clinic in Urology (1 cr; prereq regis 4th yr med)
8:00-8:50 am F, Eustis Amph, Hosp, Creevy
- 200 Outpatient Clinic in Surgery (1 cr)
Ar, Staff
- 202 Applied Surgical Anatomy on Cadaver (1 cr)
Ar, Staff
- 203 Proctoscopy, Sigmoidoscopy (1 cr)
Ar, Staff
- 204 Tumor Clinic (1 cr)
Ar, Staff
- 205 Surgical Diagnosis (1 cr)
Ar, Staff
- 208 Surgical Service (1 cr)
Ar, Staff

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| <p>211 Operative Surgery (1 cr)
Ar, Staff</p> <p>214 Surgical Ward Conference (1 cr)
Ar, Wangensteen, staff</p> <p>215 Roentgenological-Surgical Conference (1 cr)
Ar, Knight, staff</p> <p>216 Surgical Research (4 cr)
Ar, Knight, staff</p> <p>218 Medico-Surgical Pathological Conference (1 cr)
Ar, Knight, staff</p> <p>245 Surgical Literature Conference (1 cr)
Ar, Knight, staff</p> <p>250 Urological Surgery (ar cr)
Ar, Creevy, staff</p> <p>251 Cystoscopy, Urological Diagnosis (ar cr)
Ar, Creevy, staff</p> <p>252 Urological Conference (ar cr)
Ar, Creevy, staff</p> <p>253 Research—Urology (ar cr)
Ar, Creevy, staff</p> <p>254 Urological Seminar (ar cr)
Ar, Creevy, staff</p> <p>255 Urological Radiological Conference (ar cr)
Ar, Creevy, staff</p> <p>256 Urological Pathological Conference (ar cr)
Ar, Creevy, staff</p> | <p>265 Regional Anesthesia (4 cr)
Ar, Knight, staff</p> <p>266 Genl Anesthesia (12 cr)
Ar, Knight, staff</p> <p>267 Pre-, Postoperative Evaluation (2 cr)
Ar, Knight, staff</p> <p>268 Research—Anesthesia (ar cr)
Ar, Knight, staff</p> <p>269 Seminar—Anesthesia (2 cr)
Ar, Knight, staff</p> <p>305 Neurosurgical Diagnosis (ar cr)
Ar, Peyton, staff</p> <p>308 Neurosurgical Service (ar cr)
Ar, Peyton, staff</p> <p>311 Operative Neurosurgical Surgery (ar cr)
Ar, Peyton, staff</p> <p>316 Neurosurgical Research (3 cr)
Ar, Peyton, staff</p> <p>318 Neurosurgical Conference (ar cr)
Ar, Peyton, staff</p> <p>405 Orthopedic Diagnosis (1 cr)
Ar, Cole, staff</p> <p>408 Orthopedic Service (1 cr)
Ar, Cole, staff</p> <p>411 Orthopedic Operative Surgery (1 cr)
Ar, Cole, staff</p> <p>416 Orthopedic Research (1 cr)
Ar, Cole, staff</p> |
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COLLEGE OF PHARMACY

PHARMACEUTICAL CHEMISTRY
(PHMC)

- | | |
|---|--|
| <p>2 Inorganic Pharmaceutical Products (4 cr; prereq soph, 1)
Lect IV MW, 202WuH, Soine
—1, Lab VI-VIII MW, 301WuH
—2, Lab I-III Th, VI-VIII F, 301WuH</p> <p>55 Quantitative Pharmaceutical Chemistry (5 cr; prereq sr, 54)
Lect VIII TTh, VII Th, 202WuH, DiGangi
—1, Lab II-IV WF, 1WuH
—2, Lab II-IV MTh, 1WuH</p> <p>162 Organic Pharmaceutical Products (3 cr; prereq jr, 161)
III MWF, 202WuH, Gisvold</p> <p>164 Special Analytical Methods (3 cr; prereq sr, 2, 54, OrCh 62)
Lect I T, Ar DiGangi
Lab II-IV T, VI-VIII F, 1WuH</p> <p>201 Pharmaceutical Chemistry Seminar (1 cr)
Ar, Gisvold</p> <p>203 Adv Analytical Methods (ar cr; prereq 165)
Ar, Rogers, Netz</p> <p>206 Chemistry of Medicinal Products (ar cr; prereq* 163, OrCh 2)
Ar, Gisvold</p> <p>212 Fats, Waxes, Sterols, Related Compounds (ar cr; prereq* 163)
Ar, Gisvold</p> | <p>213 Special Probs (ar cr; prereq* 163)
Ar</p> <p>214 Research—Pharmaceutical Chemistry (ar cr)
Ar</p> |
|---|--|

PHARMACOGNOSY (PHCG)

- | | |
|---|--|
| <p>2 Vegetable Drug Histology, Microscopy (2 cr; prereq soph, 1)
Lect III T, 104WuH, Fischer
—1, Lab VI-VIII M, 104WuH
—2, Lab VI-VIII F, 104WuH</p> <p>56 Identification, Medicinal Properties of Vegetable Drugs (3 cr; prereq jr, 55)
II MWF, 104WuH, 8WuH, White</p> <p>60 Pharmacognosy, Pharmaco-Histology (3 cr; prereq sr, 54)
Lect I T, Ar, Fischer
Lab II-IV T, VI-VIII F</p> <p>162 Biological Assay of Drugs (3 cr; prereq sr, 57, PhmC 56)
Lect I T, 104WuH, White
Lab II-IV T, VI-VIII F, 8WuH</p> <p>202 Adv Pharmacognosy (ar cr; prereq 56, 57)
Ar, Fischer</p> <p>206 Technical Microscopy (ar cr; prereq 56, 57)
Ar, Fischer</p> | |
|---|--|

- 208 Special Pharmacodynamic Methods (ar cr)
Ar, White
- 210 Adv Experimental Drug Testing Techniques
(ar cr)
Ar, White

PHARMACY (PHCY)

- 55 Pharmaceutical Preparations (5 cr; prereq jr, 54)
Lect VI MW, IV Th, 202WuH, Hadley
—1, Lab VII-IX MW, 302WuH
—2, Lab VI-VIII TTh, 302WuH
- 59 Prescription Compounding (4 cr; prereq sr, 58)
Lect VII T, VI Th, 202WuH, Netz

- 1, Lab II-IV MTh, 203WuH, Netz, Miller
—2, Lab II-IV WF, 302WuH, Netz, Miller
—1, Spec lect II MTh, 201WuH, Netz
—2, Spec lect II WF, 201WuH, Netz

- 66 Pharmaceutical Manufacturing (3 cr; prereq sr, 56)
Lect I T, 201WuH, Miller
Lab II-IV T, VI-VIII F, 2WuH
- 68 Hospital Pharmacy (3 cr; prereq sr, 58)
Lect I T, Ar, Bruce
Lab II-IV T, VI-VIII F, W114Hosp
- 72 Veterinary Products (3 cr; prereq sr, 56)
II T, I Th, VI F, 202WuH, Hadley
- 73 Special Probs (ar cr; prereq sr, 56, PhmC 163)
Ar

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AMST)

- 91 Proseminar in American Studies (2 cr; prereq sr, cons instr)
VIII-IX T, 103F, Bowron
- 201 Introd American Studies (2 cr; prereq MA cand in Amer stud)
VIII-IX T, 4F, Hornberger
- 211 Seminar—American Studies (3 cr; prereq cons instr)
VIII-IX T, 108F, Smith
- 252 Readings in American Civilization (ar cr; prereq cons dept chm)
Ar

ANTHROPOLOGY (ANTH)

- 1 Introd Anthropology (5 cr)
VII MTWThF, 55ForH, Wallis
- 2 Introd World Ethnology (5 cr)
VI MTWThF, 15ForH, Spier
- 80 American Indian (3 cr)
IV MWF, 15ForH, Spier
- 81 Archeology of North America (3 cr)
III MWF, 15ForH, Wilford
- 111 Adv Physical Anthropology (3 cr; prereq* 110 or Zool 22 or 175 or course in human anat)
II MWF, 15ForH, Wallis
- 123 Probs in Anthropology (ar cr; prereq* 122)
Ar, Staff
- 125 Peoples of SE Asia, Indonesia (3 cr)
VIII MWF, 15ForH, Spencer
- 127 Races, Cultures of China (3 cr)
IV TThS, 15ForH, Spencer
- 131 Islamic Culture Sphere (3 cr)
III TThS, 15ForH, Spencer
- 205 Seminar—Anthropology (3 cr)
VIII-IX Th, 346ForH
- 252 Seminar—Culture, Personality (3 cr; prereq MD degree)
Ar, Spencer

ART (ART)

- 1 Prin Art (4 cr)
Lect III MWF, NHAud, Torbert, faculty
—1, Lab I-II M, 203TSF
—2, Lab I-II T, 203TSF
—3, Lab III-IV T, 203TSF
—4, Lab V-VI T, 203TSF
—5, Lab IX-X T, 203TSF
—6, Lab I-II W, 203TSF
—7, Lab I-II Th, 203TSF
—8, Lab III-IV Th, 203TSF
—9, Lab V-VI Th, 203TSF
—10, Lab I-II F, 203TSF
- 2 Masters of Art (3 cr; prereq 1)
III MWF, 207bJ, Thomas
- 10 Photography (3 cr; prereq soph)
Lect V T, 308MurH, Downs
Lab II-III WF, 20MurH, Downs (for art, art educ maj only)
- 23 Drawing, Design I (5 cr; prereq 1 or concur regis)
VII-IX MWF, 104J, Young
- 23A Drawing, Painting I (2 cr)
II-IV T, II-III Th, 417E, Young (for arch only)
- 24 Drawing, Design I (5 cr; prereq 1 or concur regis)
—1, I-III MWF, 104J, Collins
—2, IV-VI MWF, 104J, Downs
- 24A Drawing, Painting I (2 cr; prereq 23A)
II-IV T, II-III Th, 417E, Young (for arch only)
- 25 Drawing, Design I (5 cr; prereq 23)
VI-VIII MWF, 2J, Frazier
- 30 Elements of Drawing (2 cr; prereq 1)
—1, III-IV MW, 207aJ, Doseff
—2, VI-VII TTh, 207aJ, Quirt
- 31 Elements of Drawing (2 cr; prereq 30)
—1, I-II MW, 207aJ, Doseff
—2, I-II TTh, 207aJ, Quirt
—3, V-VII MW, 207aJ, Rollins

- 34 **Textile Design: Weaving** (3 cr; prereq 33)
VI-VII MWF, 4J, Berglund
- 40 **Sculpture I** (3 cr; prereq 1)
VI-VIII MW, 405E, Rood
- 41 **Sculpture I** (3 cr; prereq 40)
VI-VIII TTh, 405E, Tovish
- 42 **Sculpture I** (3 cr; prereq 40)
VI-VIII TTh, 405E, Tovish
- 47 **Hellenistic Art to Christian Art** (3 cr)
IV MWF, 207bJ, Eitner
- 51 **Pictorial Design** (3 cr; prereq 50)
VI-VIII TTh, 200aJ, Booth
- 53 **Design II** (3 cr; prereq 24, 25)
I-II MWF, 11J, Morton
- 54 **Design II** (3 cr; prereq 53)
I-II MWF, 11J, Morton
- 57 **Renaissance, Baroque Art 1500-1650** (3 cr;
prereq* 1)
II MWF, 207bJ, Thomas
- 60 **Drawing, Painting II** (3 cr; prereq* 31 or
24)
—1, II-III MWF, 200aJ, Rollins
—2, IV-V MWF, 200aJ, Rollins
—3, VI-VII MWF, 417E, Doseff
—4, VI-VIII TTh, 200bJ, Arnest
- 60A **Drawing, Painting II** (2 cr; prereq 21)
III-V Th, II-IV S, 417E, Arnest, Tovish (for
arch only)
- 61 **Drawing, Painting II** (3 cr; prereq 60)
—1, II-III MWF, 200aJ, Rollins
—2, IV-V MWF, 200aJ, Rollins
—3, VI-VII MWF, 417E, Doseff
—4, VI-VIII TTh, 200bJ, Arnest
- 61A **Drawing, Painting II** (2 cr; prereq 60A)
III-V Th, II-IV S, 417E, Arnest, Tovish (for
arch only)
- 62 **Drawing, Painting II** (3 cr; prereq 61)
—1, II-III MWF, 200aJ, Rollins
—2, IV-V MWF, 200aJ, Rollins
—3, VI-VII MWF, 417E, Doseff
—4, VI-VIII TTh, 200bJ, Arnest
- 62A **Drawing, Painting II** (2 cr; prereq 61A)
III-V Th, II-IV S, 417E, Arnest, Tovish
- 64 **Prob in Design** (5 cr; prereq 63)
VII-IX MWF, 203TSF, Torbert
- 67 **Modern Art: Realism, Impressionism** (3 cr;
prereq* 1)
VII MWF, 207bJ, Eitner
- 70 **Drawing, Painting III** (3 cr; prereq 62)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, ar, 200bJ, Quirt
- 71 **Drawing, Painting III** (3 cr; prereq 70)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, ar, 200bJ, Quirt
- 72 **Drawing, Painting III** (3 cr; prereq 71)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, ar, 200bJ, Quirt
- 74 **Presentation Techniques** (3 cr; prereq 73)
I-III TTh, 104J, Collins
- 80 **Sculpture II** (3 cr; prereq 42)
VI-VIII TTh, 24F, Tovish, faculty
- 81 **Sculpture II** (3 cr; prereq 80)
VI-VIII TTh, 24F, Tovish, faculty
- 82 **Sculpture II** (3 cr; prereq 81)
VI-VIII TTh, 24F, Tovish, faculty
- 83 **Design, Photography** (3 cr; prereq* 54, 55)
VI-VIII WF, 104J, Liebeling
- 89 **Textile Design: Weaving** (3 cr; prereq 88)
VIII-IX MWF, 4J, Berglund
- 90 **Printmaking** (3 cr; prereq* 62)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 91 **Printmaking** (3 cr; prereq 90)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 92 **Printmaking** (3 cr; prereq 91)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 93 **Ceramic Processes** (3 cr; prereq* 25 or 42)
I-II MWF, 10J, Frazier
- 94 **Ceramic Design** (3 cr; prereq 93)
I-II MWF, 10J, Frazier
- 95 **Ceramic Design** (3 cr; prereq 93)
I-II MWF, 10J, Frazier
- 97 **Textile Design: Printing Processes** (3 cr;
prereq* 23)
II-III MWF, 2J, Berglund
- 101 **Ceramic Sculpture** (3 cr; prereq 93)
III-IV MWF, 10J, Frazier
- 102 **Ceramic Sculpture** (3 cr; prereq 101)
III-IV MWF, 10J, Frazier
- 103 **Design in Industry** (3 cr; prereq 54, 55)
Ar
- 104 **Design in Industry** (3 cr; prereq 103)
Ar
- 105 **Design in Industry** (3 cr; prereq 104)
Ar
- 110 **Adv Drawing** (3 cr; prereq 62)
VI-VIII TTh, 200bJ, Arnest
- 111 **Adv Drawing** (3 cr; prereq 110)
VI-VIII TTh, 200bJ, Arnest
- 112 **Adv Drawing** (3 cr; prereq 111)
VI-VIII TTh, 200bJ, Arnest
- 117 **Development of Renaissance Art** (3 cr;
prereq 9 cr art hist, or 9 cr lit or hist,
cons instr)
V MWF, 207bJ, Thomas
- 123 **Adv Photography** (3 cr; prereq 54, 55)
VII-IX MW, 104J, Downs
- 127 **Baroque Art of Northern Europe** (3 cr;
prereq 9 cr art hist, or 9 cr lit or hist,
cons instr)
III TTh, 207bJ, Lilljegen
- 137 **Art in the United States** (3 cr; prereq 9
cr art hist, or 9 cr lit or hist, cons instr)
VIII MWF, 207bJ, Tselos
- 140 **Metal Sculpture, Jewelry** (3 cr; prereq* 55)
—1, III-IV MWF, 11J, Morton
—2, VI-VII MWF, 11J, Morton

- 141 **Metal Sculpture, Jewelry** (3 cr; prereq* 140)
—1, III-IV MWF, 11J, Morton
—2, VI-VII MWF, 11J, Morton
- 142 **Metal Sculpture, Jewelry** (3 cr; prereq* 141)
—1, III-IV MWF, 11J, Morton
—2, VI-VII MWF, 11J, Morton
- 147 **European, American Architecture 1850-1900** (3 cr; prereq 1, 9 cr art hist; or 1, 9 cr lit or hist, cons instr)
VI MWF, 207bJ, Tselos
- 150 **Probs in Painting** (ar cr; prereq 72, cons instr)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, ar, 200bJ, Quirt
- 151 **Probs in Painting** (ar cr; prereq 150)
—1, III-V, MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, ar, 200bJ, Quirt
- 152 **Probs in Painting** (ar cr; prereq 151)
—1, III-V MW, 200bJ, Booth
—2, I-III TTh, 200aJ, Arnest
—3, I-IV S, ar, 200bJ, Quirt
- 157A **20th Century European, American Painting** (3 cr; prereq 1, 9 cr art hist; or 9 cr hist or lit, cons instr)
II MWF, 316NMA, Arnason
- 177 **Scandinavian Art** (3 cr; prereq 9 cr art hist; or 9 cr hist or lit, cons instr)
VI TTh, 207bJ, Liljegren
- 180 **Probs in Sculpture** (ar cr; prereq* 82, 102 or 142)
Ar
- 181 **Probs in Sculpture** (ar cr; prereq 180)
Ar
- 182 **Probs in Sculpture** (ar cr; prereq 181)
Ar
- 190 **Probs in Printmaking** (ar cr; prereq* 92)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 191 **Probs in Printmaking** (ar cr; prereq 190)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 192 **Probs in Printmaking** (ar cr; prereq 191)
—1, II-IV MW, 203J, Myers
—2, VI-VIII MW, 203J, Myers
—3, VI-VIII TTh, 203J, Myers
- 193 **Adv Probs in Design** (3 cr; prereq* one design course above 53-54, 55)
Ar
- 194 **Adv Probs in Design** (3 cr; prereq 193)
Ar
- 195 **Adv Probs in Design** (3 cr; prereq 194)
Ar
- 196 **Readings in Art History, Criticism** (3 cr; prereq cons instr)
Ar
- 197 **Readings in Art History, Criticism** (3 cr; prereq cons instr)
Ar
- 198 **Readings in Art History, Criticism** (3 cr; prereq cons instr)
Ar
- 200 **Adv Probs in Studio Work** (ar cr; prereq cons instr)
Ar
- 201 **Adv Probs in Studio Work** (ar cr; prereq cons instr)
Ar
- 202 **Adv Probs in Studio Work** (ar cr; prereq cons instr)
Ar
- 206 **Seminar—European, American Architecture** (3 cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 207 **Seminar—European, American Architecture** (3 cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 208 **Seminar—European, American Architecture** (3 cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 216 **Seminar—European, American Painting** (3 cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 217 **Seminar—European, American Painting** (3 cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 218 **Seminar—European, American Painting** (3 cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 236 **Seminar—Probs in Art History, Criticism** (ar cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 237 **Seminar—Probs in Art History, Criticism** (ar cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 238 **Seminar—Probs in Art History, Criticism** (ar cr; prereq cons instr)
Ar, Arnason, Tselos, faculty
- 250 **Thesis Seminar** (ar cr; prereq cons grad advis)
Ar, Booth, Arnest
- 251 **Thesis Seminar** (ar cr; prereq cons grad advis)
Ar, Booth, Arnest
- 252 **Thesis Seminar** (ar cr; prereq cons grad advis)
Ar, Booth, Arnest

ASTRONOMY (AST)

- 20 **Astronomy for Celestial Navigation** (5 cr)
III MTWF, 359Ph, lab ar, Luyten
- 51 **Gen Astronomy**, (3 cr, §11; prereq Math 6)
IV MWF, 133Ph, Luyten
- 52 **Astrophysics** (4 cr; prereq 51 or 11, Math 6, cons instr)
II MTWF, 359Ph, Luyten

BOTANY (BOT)

- 2 Gen Botany (3 cr; prereq 1)
 —1, Lect III TTh, 06Bo, Hall
 —2, Lect VI TTh, 06Bo, Hall
 —1, Lab III-IV TTh, 1, 4, 5Bo
 —2, Lab V-VI TTh, 1, 4, 5Bo
 —3, Lab VII-VIII TTh, 1, 4, 5Bo
 —4, Lab IX-X TTh, 1, 4, 5Bo
 —5, Lab III-IV WF, 1, 4, 5Bo
 —6, Lab V-VI WF, 1, 4, 5Bo
 —7, Lab VII-VIII WF, 1, 4, 5Bo
- 12 Plants Useful to Man (3 cr)
 IV TThS, 1Bo
- 53 Introductory Plant Anatomy (3 cr; prereq 3 or 5 or NSci 9)
 II-IV TTh, 209Bo, Abbe
- 106 Survey of Angiosperm Families I: Lower Angiosperms (3 cr; prereq* 52)
 II-IV TTh, 401Bo, Morley
- 112 Aquatic Flowering Plants (3 cr; prereq* 10 cr bot or zool)
 Lect IV MW, 401Bo, Ownbey
 Lab VI-VII MW, 401Bo
- 118 Extracellular Cytology (3 cr; prereq* 10 cr bot or zool)
 VI-VII MWF, 202Bo, Dahl
- 127 Morphology of Vascular Plants (5 cr; prereq 10 cr)
 II-IV MWF, 209Bo, Abbe
- 177 Photosynthesis (3 cr; prereq* sr, 51 or 140, 20 cr chem or biochem, PCh 103 or 108)
 9:00-10:30 TTh, 110Bo, Brown, Frenkel
- 180 Adv Physiology Lab (2 cr; prereq sr, 177 or concur regis)
 VI-X T or Th, 104Bo, Brown, Frenkel
- 198 Problems (1-5 cr; prereq 20 cr nat sci, cons instr)
 Ar
- 202 Research Probs—Morphology of Vascular Plants (ar cr)
 Ar, Abbe
- 206 Research Probs—Taxonomy, Floristic Plant Geography (ar cr)
 Ar, Ownbey, Morley
- 210 Research Probs—Paleobotany (ar cr)
 Ar, Hall
- 222 Research Probs—Ecology (ar cr)
 Ar, Lawrence
- 226 Research Probs—Plant Physiology (ar cr)
 Ar, Brown, Frenkel
- 230 Research Probs—Cytology (ar cr)
 Ar, Dahl
- 241 Seminar—Morphology (1 cr)
 Ar, Abbe
- 244 Seminar—Taxonomy (1 cr)
 Ar, Ownbey, Morley
- 247 Seminar—Paleobotany (1 cr)
 Ar, Hall
- 250 Seminar—Ecology (1 cr)
 Ar, Lawrence, Hulbert
- 253 Seminar—Plant Physiology (1 cr)
 Ar, Brown, Frenkel

- 256 Seminar—Cytology (1 cr)
 Ar, Dahl

CLASSICS

Classics (CLAS)

- 32 Greek, Latin Drama (2 cr; prereq soph)
 IV MW, 6F, McDonald
- 43 Ancient Mythology in Relation to Literature, Art (2 cr; prereq soph)
 V MW, 6F, Anderson
- 107 Introd Study of Language (3 cr; prereq 106)
 VIII MWF, 103F, Swanson
- 192 Classical Literary Traditions (3 cr; prereq 9 cr Engl above C or foreign lit)
 IV MWF, 113F, DeWitt

Greek (GRK)

- 2 Bgn Greek (5 cr, 1-2; prereq 1)
 II MTWThF, 103F, McDonald
- 52 Homer (3 cr; prereq 3)
 IX MWF, 103F, Anderson
- 172 Reading (3 cr; prereq cons dept)
 Ar, McDonald
- 202 Seminar—Greek Literary Bibliography, Criticism (3 cr)
 Ar, Swanson

Latin (LAT)

- 2 Bgn Latin (5 cr, 1-2; prereq 1)
 IV MTWThF, 103F, Forbes
- 40 Vergil (5 cr; prereq 30 or 3 yr high school Lat, or cons dept)
 III MTWThF, 103F, Forbes
- 82 Latin Literature (3 cr; prereq 40, or 4 yr high school Lat)
 Ar, Swanson
- 172 Reading (3 cr; prereq cons dept)
 Ar, Swanson

ENGLISH

Composition (COMP)

- 4 Freshman Composition (3 cr; prereq assign to category 1, 2, or 3; 4-5-6 corresponds to GED test 1)
 —1, IV TThS, 3F
 —2, V MWF, 306F
 —3, VIII MWF, 206F
- 5 Freshman Composition (3 cr; prereq 4)
 —1, I MWF, 6F
 —2, II MWF, 205F
 —3, III MWF, 311F
 —4, IV MWF, 213F
 —5, V MWF, 303F
 —6, VI MWF, 5F
- 6 Freshman Composition (3 cr; prereq 5)
 I MWF, 3F

- 27 **Adv Writing** (3 cr; prereq see col bul)
 —1, II MWF, 213F
 —2, III MWF, 205F
 —3, IV MWF, 209½F
 —4, V MWF, 107F
- 28 **Adv Writing** (3 cr; prereq see col bul)
 —1, I MWF, 304F
 —2, I MWF, 10F
 —3, III MWF, 108F
 —4, IV MWF, 114F
 —5, V MWF, 205F
 —6, VI MWF, 304F
 —7, VII MWF, 304F
 —8, II TThS, 205F
- 58 **Business Reports, Letters** (3 cr; prereq* 6 or Comm 3 or Engl C or exempt, regis BA)
 —1, II MWF, 5F, Guthrie, others
 —2, IV MWF, 5F
- 65 **Writing of Research Papers, Articles** (3 cr; prereq 6 or Comm 3 or Engl C, and 6 addtl cr Engl or comp; or 10 cr in Engl 21-22-23, B aver in prereq courses)
 III T, ar, 108F, Buckley
- 68 **Probs of Style** (3 cr; prereq B aver 2 qtrs 27, 28, 29, 65)
 VI MWF, 204F, Atkins
- 102 **Writing Fiction** (3 cr; prereq* 6 cr above 50 or grad)
 —1, VIII-IX M, 304F, Blum
 —2, VIII-IX W, 304F, Ross
- 201 **Seminar—Writing** (3 cr; prereq 200)
 VIII-IX T, 109F, Tate
 Workshop VII-VIII Th, 304F, Blum
- English (ENGL)**
- A Freshman English** (5 cr; prereq assign to category 1 or 2, ABC corresponds to GED tests 1, 4)
 I MTWThF, 311½F
- B Freshman English** (5 cr; prereq A)
 —1, I MTWThF, 206F
 —2, II MTWThF, 206F
 —3, III MTWThF, 303F
 —4, IV MTWThF, 11F
 —5, V MTWThF, 204F
 —6, VI MTWThF, 207F
 —7, VII MTWThF, 321F
- C Freshman English** (5 cr; prereq B)
 II MTWThF, 302JohH
- 22 **Introd Literature** (5 cr; prereq C or Comp 6 or Comm 3 or exempt)
 —1, III MTWThF, 308F, Moore
 —2, IV MTWThF, 308F, Montgomery
 —3, VI MTWThF, 305F, Buckley
- 38 **Modern Literature** (3 cr; prereq soph, C or Comp 6 or Comm 3 or exempt)
 VII MWF, 308F, O'Connor
- 53 **English Novel** (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
 VII MWF, 206F, Moore
- 55 **Shakespeare: Comedies** (3 cr; prereq see col bul)
 —1, III MWF, 5F, Hessler
 —2, VI MWF, 311F, Unger
- 56 **Shakespeare: Tragedies** (3 cr; prereq see col bul)
 —1, II MWF, 107F, Atkins
 —2, IV MWF, 303F, Armstrong
 —3, VI MWF, 209½F, Christie
 —4, VII MWF, 109F, Buckley
- 67 **Literature of the Bible** (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
 III TThS, 102F, Jackson
- 73 **American Literature** (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
 III MWF, 2F, McDowell
- 74 **American Literature** (3 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
 —1, II MWF, 308F, Hornberger
 —2, VII MWF, 303F, H N Smith
- 75 **Chaucer** (4 cr; prereq C or Comp 6 or Comm 3, and 6 addtl cr; or 10 cr in 21-22-23)
 III MWF, 107F, Atkins
- 98 **Independent Reading** (3 cr; prereq 97)
 Ar, Hessler
- 102 **Readings—Old English Prose, Verse** (3 cr; prereq 100)
 I MWF, 305F, Armstrong
- 105 **Hawthorne, Melville** (3 cr; prereq 6 cr above C)
 III MWF, 213F, Marx
- 110 **Romantic Poets: Early 19th Century** (3 cr; prereq 6 cr above C)
 IV TThS, 107F, Jackson
- 121 **Interpretation of Poetry** (3 cr; prereq 120)
 VII MWF, 207F, Tate
- 124 **Technique of the Novel** (3 cr; prereq sr, 123)
 IX-X T, 204F
- 127 **Drama: 1660-1870** (3 cr; prereq 126)
 IV MWF, 204F, Coxé
- 130 **English Poetry 1832-1914** (3 cr; prereq 6 cr above C)
 III MWF, 204F, Montgomery
- 138 **19th Century English Literature** (3 cr; prereq 137)
 II TThS, 303F, Erdman
- 143 **20th Century Literature** (3 cr; prereq 6 cr above C)
 I MWF, 204F, O'Connor
- 148 **English Literature—Middle Ages Exclusive of Chaucer** (3 cr; prereq 147)
 VII MWF, 204F, Clark
- 155 **American Novel** (3 cr; prereq 6 cr above C)
 III TThS, 205F, Bowron
- 162 **Milton** (3 cr; prereq 21-22 or 55-56)
 IV MWF, 207F, Unger

- 165 **Introd Modern English** (3 cr; prereq 6 cr above C)
VI MWF, 205F, Spicer
- 170 **Shakespeare's Later Contemporaries** (3 cr; prereq 55-56)
IV MWF, 205F, Brown
- 182 **Far West in Literature** (3 cr; prereq 6 cr above C)
II MWF, 305F, H N Smith
- 185 **Interpretation of Drama** (3 cr; prereq 184)
IX-X W, 303F, Coxe
- 188 **18th Century Literature** (3 cr; prereq 6 cr above C)
II MWF, 207F, Monk
- 198 **17th Century Literature** (3 cr; prereq 197)
III MWF, 206F, Unger
- 200 **Adv Chaucer** (3 cr; prereq 75, sr cons dept)
VI MWF, 303F, Clark
- 203 **Elizabethan Nondramatic Literature** (3 cr; prereq grad, sr cons dept)
VI MWF, 206F, Brown
- 226 **Elizabethan Drama** (3 cr; prereq 136 or 152 or 170)
IX-X T, 312Lib, Brown
- 241 **The Canterbury Tales** (3 cr)
IX-X Th, 312Lib, Clark
- 247 **English Literary Criticism** (3 cr; prereq sr, cons instr)
IV MWF, 304F, O'Connor
- 254 **American Romanticism I: New England** (3 cr; prereq cons instr)
IX-X W, 4F, McDowell
- 263 **19th Century Novel II** (3 cr)
IX-X Th, 339Lib
- 278 **American Realism** (3 cr; prereq cons instr)
VIII-IX Th, 108F, Hornberger
- 285 **Dryden, His Age** (3 cr)
VIII-IX T, 304F, Monk
- 288 **Studies in Victorian Literature** (3 cr)
VIII-IX W, 312Lib, Erdman
- 291 **Studies in Literary Theory** (3 cr; prereq cons instr)
VII-VIII Th, 205F, Tate
- 298 **Independent Reading** (3 cr; prereq MA degree or equiv)
Av, Grad staff

GENERAL STUDIES

Communication (COMM)

- 1 **Communication** (4 cr; prereq assign to category 1, 2, or 3; corresponds to GED test 1)
-1, I MTWF, 114TNM
-2, V MTWF, 8TNM
-3, VII MTWF, 8TNM
- 2 **Communication** (4 cr; prereq 1)
-1, I MTWF, 8TNM
-2, II MTWF, 114TNM
-3, III MTWF, 114TNM
-4, IV MTWF, 114TNM

- 5, V MTWF, 114TNM
-6, VI MTWF, 114TNM
-7, VII MTWF, 114TNM

- 3 **Communication** (4 cr; prereq 2)
V MTWF, 14TNM

Family Life (FL)

- 1 **Preparation for Marriage** (3 cr)
-1, II MWF, 107TNM, Dyer, Hansen, Levine, Neubeck, others
-2, V MWF, 107TNM
-3, VII MWF, 107TNM
-4, II TThS, 115TNM
- 15 **The Home: Its Furnishings** (3 cr)
VII MWF, 206WeH, Ludwig
- 20 **Consumer Education** (3 cr)
II MWF, 122JohH, Price
- 25 **Child Development, Adjustment** (3 cr)
III MWF, 115Psy, Brieland

Humanities (HUM)

- 1 **Humanities in the Modern World I** (5 cr)
-1, I MTWThF, 122JohH, Keeler
-2, II MTWThF, 114JohH, Livingston
-3, VI MTWThF, 122JohH, Hult
- 2 **Humanities in the Modern World II** (5 cr; prereq 1)
-1, I MTWThF, 9F, Kwiat
-2, I MTWThF, 114JohH, Hult
-3, II MTWThF, 321F, Coxe
-4, II MTWThF, 301F, D K Smith
-5, III MTWThF, 85ForH, Blum
-6, III MTWThF, 18ME, Hult
-7, IV MTWThF, 122JohH, Ross
-8, IV MTWThF, 18ME, Gudas
-9, IV MTWThF, 115JohH, Shirey
-10, V MTWThF, 113JohH, Nelson
-11, VI MTWThF, 113JohH, Bryan
-12, VII MTWThF, 113JohH, Taylor
- 3 **Humanities in the Modern World III** (5 cr; prereq 2)
III MTWThF, 113JohH, Ramsland
- 4 **Humanities in the Modern World IV** (5 cr; prereq 1 or 2 or 3)
IV MTWThF, 114JohH, Livingston
- 12 **Roman, Medieval Heritage** (5 cr)
III MTWThF, 114JohH, Livingston
- 22 **American Life II** (3 cr)
-1, II MWF, 9F, Kwiat
-2, III MWF, 9F, Chambers
-3, IV MWF, 9F, Marx
-4, VII MWF, 9F, McBride
- 52 **Humanities in the Modern World** (5 cr, §2)
-1, III MTWThF, 80ForH, Wood
-2, V MTWThF, 80ForH, Bowditch
-3, VI MTWThF, 115JohH, Ames
- 62 **Roman, Medieval Heritage** (5 cr, §12)
-1, II MTWThF, 115JohH, Ames
-2, III MTWThF, 115JohH, Shaw
- 72 **Humanities in the United States** (3 cr, §22)
VII MWF, 6F, Marx

- 132 Proseminar (2 cr; prereq sr)
IX-X W, 105JohH, Ross

Natural Science (NSCI)

- 2 Orientation in the Natural Sciences (5 cr; prereq 1)
II MTWThF, 166Ph, Graubard
- 5 Physical World (3 cr; prereq 4)
Lect IV MWF, 166Ph, Kruglak
Lab, ar during first 2 days of class
- 8 Gen Biology (3 cr, †7-8-9; prereq 7)
Lect V WF, 06Bo, Moir, Merrell
-1, Lab I-II MF
-2, Lab I-II TTh
-3, Lab IX-X MF
- 172 Development of the Sciences (3 cr; prereq* 171)
IV MWF, 241Ph, Graubard

Personal Orientation (PO)

- 1 How to Study (2 cr)
-1, I MWF, 106TNM, Harrell
-2, II MWF, 106TNM, Harrell
-3, VI MWF, 106TNM, Renzaglia
-4 VII MWF 106TNM, Renzaglia
- 11 Choosing a Vocation (2 cr)
II TTh, 106TNM, Hewer

Social Science (SSCI)

- 1 Introd Social Science (4 cr)
-1 I MWF, ar, 113JohH, Nelson
-2, II MWF, ar, 113JohH, Nelson
-3, II MWF, ar, 314JohH, Cooperman
-4, III MWF, ar, 301F, Kroeger
-5, IV MWF, ar, 113JohH, Nelson
-6, II-III TTh, 303JohH, Page
- 2 Introd Social Science (4 cr; prereq 1)
-1, II MWF, ar, 20ForH, Calhoun
-2, III MWF, ar, 20ForH, Calhoun
-3, III MWF, ar, 314JohH, Rozental
-4, III MWF, ar, 313JohH, Potter
-5, IV MWF, ar, 315AH, Potter
-6, V MWF, ar, 114JohH, Calhoun
-7, VI MWF, ar, 114JohH
-8, III-IV TTh, 185ForH, Naftalin
- 3 Introd Social Science (4 cr; prereq 2)
-1, II TThS, 180ForH, Sibley
-2, IV MWF, 20ForH, Raniele
- 12 Int'l Relations (3 cr)
III MWF, 122JohH, Turner, Cooper
- 82 Public Affairs Forum (3 cr)
IV MWF, V F, 305F, Ziebarth

GEOGRAPHY (GEOG)

- 1 Geography—Physical Resources (5 cr, †old 11)
Lect II MWF, 18ME, Borchert
-1, I MW, 261ForH
-2, I TTh, 261ForH
-3, II TTh, 261ForH
-4, III WF, 261ForH

- 5, V TTh, 261ForH
-6, VI TTh, 261ForH

- 4 Human Geography (5 cr, †old 45)
Lect III MWF, 155ForH, Sopher
-1, II MW, 261ForH
-2, III TTh, 261ForH
-3, IV MW, 261ForH
-4, IV TTh, 261ForH
-5, V MW, 261ForH
-6, VII TTh, 261ForH
- 41 Commercial Production (5 cr)
Lect IV MWThF, 55ForH, Weaver
-1, I F, 261ForH
-2, I F, 261ForH
-3, III M, 261ForH
-4, V F, 261ForH
-5, VI M, 261ForH
-6, VIII M, 261ForH
- 90 Readings (ar cr; prereq 12 cr, cons instr)
Ar
- 102 Historical Geography of Europe (3 cr; prereq* 5 cr)
VI MWF, 285ForH, East
- 105 Mediterranean Lands (3 cr; prereq* 5 cr)
II MWF, 285ForH, East
- 106 Scandinavia (3 cr; prereq* 5 cr)
V MWF, 285ForH, Kress
- 107 Soviet Union (3 cr; prereq* 5 cr)
IV MWF, 285ForH, Borchert
- 113 Eastern Anglo-America (3 cr, †old 71; prereq* 5 cr)
I MWF, 285ForH, Weaver
- 121 India, Southeast Asia (3 cr, †old 120; prereq* 5 cr)
III MWF, 285ForH, Broek
- 134 Adv Climatology (3 cr; prereq* 133 or Aero 173)
VII MWF, 261ForH, Borchert
- 138 Adv Cartography (3 cr; prereq* 70)
V-VI TTh, 275ForH, Sopher
- 144 Political Geography (3 cr, †old 43; prereq* 12 cr geog, hist, pol sci)
VII MWF, 285ForH, Broek
- 252 Seminar—Agricultural Geography (ar cr)
VII-VIII Th, 290cForH, Weaver
- 255 Seminar—Political Geography of Soviet Union (ar cr)
VII-VIII T, 290cForH, East
- 301 Research Probs (ar cr)
Ar

GEOLOGY (GEOL)

- A Gen Geology Lab (2 cr; prereq 1 or concur regis)
-1, I-II MW, 22P
-2, III-IV MW, 22P
-3, VIII-IX TTh, 22P
- B Gen Geology Lab (2 cr; prereq A)
-1, I-II TTh, 20-22P
-2, VI-VII MW, 20-22P
-3, VI-VII TTh, 20-22P

- 1 **Gen Geology** (3 cr, 1-2 except forestry students)
—1, IV MWF, 210P
—2, VII MWF, 210P
- 2 **Gen Geology** (3 cr, 1-2; prereq 1)
—1, II MWF, 110P, Bell
—2, VI MWF, 110P, Swain
- 6 **Engineering Geology** (3 cr; prereq 5)
I MWF, 2P, Lewis
- 8 **Earth Features, Their Meaning** (5 cr, §1, NSci 6)
III MTWThF, 210P, Thiel
- 24 **Mineralogy** (5 cr; prereq 23)
Lect I MWF, 110P, Gruner
Rec VIII T, 110P
—1, Lab VI-VII TTh, 100P
—2, Lab VII-VIII MW, 100P
- 102 **Methods of Study of Sediments** (3 cr; prereq 101, 106)
Lect VI T, 210P, Thiel
Lab VII-VIII TTh, 208P
- 103 **Micropaleontology** (3 cr; prereq 107)
III-IV TTh, 101P, Swain
- 108 **Adv Invertebrate Paleontology** (3 cr; prereq 107)
VIII-IX F, Bell
- 111 **Economic Geology** (3 cr; prereq 110)
II MWF, 210P, Schwartz
- 119A **Geomorphology of Eastern United States** (3 cr; prereq 118 or 125)
Lect II TTh, 210P, Wright
Lab ar
- 131 **Petrology** (4 cr; prereq 106)
Lect III MW, 110P, Goldich
Rec III F, 110P
—1, Lab VI-VII WF, 200P
—2, Lab VI-VII TTh, 200P
- 140 **Applied Petrography** (3 cr; prereq 131)
Lect ar
Lab VIII-IX MW, 200P
- 144 **Geologic Maps** (3 cr; prereq 125)
Lab VI-VIII MW, 220P, Wright
- 147 **Soil Mineralogy** (4 cr; prereq 146)
Ar, Gruner
- 151 **Stratigraphy** (3 cr; prereq 107)
IV MWF, 110P, Bell
- 161 **Adv Mineralogy** (3 cr; prereq 25, 121)
Ar, Gruner
- 166 **Mineralography** (3 cr; prereq sr, 111, 131)
VI-VII MWF, 207P, Schwartz
- 170 **Geologic Probs** (ar cr; prereq cons maj advis)
Ar
- 248 **Pleistocene Geology** (1-2 cr; prereq cons instr)
Ar, Wright
- 2 **Bgn German** (5 cr; prereq 1 or 1 yr high school German)
—1, I MTWThF, 209F
—2, II MTWThF, 209F
—3, III MTWThF, 209F
—4, IV MTWThF, 209F
—5, V MTWThF, 209F
- 2b **Bgn Reading German** (5 cr; prereq 1b)
II MTWThF, 11F, Ramras
- 3 **Bgn German** (5 cr; prereq 2 or 2 yr high school German)
—1, III MTWThF, 207F
—2, VII MTWThF, 209F
- 4 **Intermed German** (5 cr; prereq 3 or 3a or 3b or 3 yr high school German)
—1, I MTWThF, 209½F
—2, VI MTWThF, 209F
- 20 **Reading, Speaking German** (5 cr; prereq 4)
III MTWThF, 209½F, Wangness
- 25 **Chemical German** (3 cr; prereq 24 for chemists, miners)
II MWF, 115C
- 28 **Chemical Prose** (3 cr; prereq 27; for chemists, miners, pharmacy students)
II MWF, 108F
- 42 **Reading German Chemical Periodicals** (2 cr; prereq 41)
I TTh, 208F
- 51 **Composition** (2 cr; prereq 50)
VI MF, 208F, Downs
- 54 **Conversation** (2 cr; prereq 53)
VI TTh, 208F, Menze
- 57 **Essay Writing** (3 cr; prereq 56)
III TThS, 208F, Pfeiffer
- 60 **Modern Writers** (3 cr; prereq 4)
II MWF, 302F, Menze
- 64 **19th Century Drama** (3 cr; prereq 3 cr above 59)
IV MWF, 208F, Ramras
- 71 **Survey of Literature** (3 cr; prereq 70)
III MWF, 208F, Menze
- 74 **Classics in Translation** (2 cr; prereq 73)
VII MF, 208F, Wood
- 91 **German Civilization, Culture** (3 cr; prereq 90)
II MWF, 208F, Wood
- 114 **Gothic** (3 cr; prereq 113)
VIII-IX W, 208F, Downs
- 144 **Classical Period—Schiller** (3 cr; prereq 143)
VIII-IX Th, 208F, Ramras
- 161 **Lyric Poetry** (3 cr; prereq sr, 160)
VIII-IX F, 208F, Wood
- 167 **History of German Literature** (1 cr; prereq 166)
VIII M, 208F
- 174 **German, English Literary Relations** 17th, 18th, 19th, 20th Centuries (3 cr; prereq 173)
VIII-IX T, 208F, Pfeiffer

GERMAN (GERM)

- 1 **Bgn German** (5 cr)
—1, I MTWThF, 207F
—2, II MTWThF, 209½F

HISTORY (HIST)

- 1 Civilization of the Modern World (3 cr)
Lect II MW, 4ME, Bowditch
-1, II Th, 75ForH
-2, II F, 366ForH
-3, II Th, 140ForH
-4, III F, 366ForH
-5, IV Th, 75ForH
-6, I Th, 75ForH
- 2 Civilization of the Modern World (3 cr)
Lect II TTh, BuAud, Bowditch
-1, I M, 70ForH
-2, I T, 60ForH
-3, I W, 70ForH
-4, I Th, 60ForH
-5, II M, 60ForH
-6, II W, 60ForH
-7, II F, 60ForH
-8, II F, 175ForH
-9, III T, 60ForH
-10, III W, 60ForH
-11, III Th, 60ForH
-12, IV T, 60ForH
-13, IV Th, 60ForH
-14, IV Th, 170ForH
-15, VI Th, 70ForH
-16, VII M, 70ForH
- 5 English History (3 cr)
Lect II MW, 55ForH, Burt
-1, I Th, 70ForH
-2, II T, 75ForH
-3, II Th, 70ForH
-4, III T, 70ForH
-5, III Th, 75ForH
- 12 Medieval History (3 cr; prereq maj music or art)
IV MWF, 115ForH, Thompson
- 15 Ancient Civilization (3 cr)
VII TWTh, 120ForH, Jones
- 15a Ancient Civilization with Readings (5 cr)
VII MTWThF, 120ForH, Jones
- 21 American History (3 cr; prereq soph)
-1, Lect II TTh, NHAud, Osgood
-2, Lect VIII TTh, 155ForH, Osgood
-1, II F, 40ForH
-2, IV T, 75ForH
-3, IV Th, 70ForH
-4, IV F, 40ForH
-5, VI W, 70ForH
-6, VI F, 70ForH
-7, VII F, 70ForH
-8, VII M, 40ForH
- 51 Ancient Civilization (3 cr, \$15)
VII TWTh, 120ForH, Jones
- 53 Civilization of the Modern World (3 cr, \$1)
Lect II MW, 4ME, Bowditch
-1, I F, 30ForH
-2, II F, 55ForH
- 54 Civilization of the Modern World (3 cr, \$2)
Lect II TTh, BuAud, Bowditch
-1, VII Th, 40ForH
-2, II F, 75ForH
-3, III F, 60ForH
- 57 English History (3 cr, \$5)
Lect II MW, 55ForH, Burt
Quiz II F, 70ForH
- 60 American History (3 cr, \$21)
-1, Lect II TTh, NHAud, Osgood
-2, Lect VIII TTh, 155ForH, Osgood
-1, IV T, 70ForH
-2, III Th, 70ForH
-3 VII T, 70ForH
-4, VII Th, 75ForH
- 63 Cultural History of China from 600 AD to Present (3 cr)
VII MWF, 175ForH, Mather
- 66a Medieval European History (3 cr)
III MWF, 115ForH, Krey
- 68 American History since 1900 (3 cr)
VII MWF, 185ForH, Chambers
- 71 English Constitutional History (3 cr; prereq see col bul)
-1, I MWF, 115ForH, Thompson
-2, I MWF, 180ForH, Willson
- 77 Canadian History (3 cr)
III TThS, 130ForH, Burt
- 87 American Colonies (3 cr)
II MWF, 115ForH, Tyler
- 91 American West (3 cr)
III TThS, 115ForH, Osgood
- 94 American Diplomatic History (3 cr)
VI MWF, 180ForH, Beatty
- 98 Minnesota, the Northwest (3 cr)
III MWF, 120ForH, Jordan
- 101 History—Ancient Near East (3 cr)
I TThS, 160ForH, Jones
- 104a Renaissance, Reformation (3 cr)
III MWF, 115ForH, Krey
- 107 Continental Europe (3 cr)
IV MWF, 160ForH, Steefel
- 110 Europe in the 20th Century (3 cr)
I MWF, 155ForH, Deutsch
- 113 Economic History of Europe (3 cr)
II TThS, 170ForH, Heaton
- 121 Modern France (3 cr; prereq 9 cr hist or 15 cr soc sci or Fren maj)
VI MWF, 175ForH, Bowditch
- 123 History of Scandinavian Countries (3 cr)
III MWF, 12F
- 126 Russia (3 cr)
IV MWF, 180ForH, Anderson
- 126a Eastern Europe, the Middle East in the 19th, 20th Centuries (3 cr; prereq 1, 2, 3)
III MWF, 170ForH, Anderson
- 129 Modern England: 1588 to 1642 (3 cr)
II MWF, 170ForH, Willson
- 135 World War II (3 cr)
II MWF, 180ForH, Deutsch
- 144 American Folklore (3 cr)
I MWF, 185ForH, Jordan
- 147 American Economic, Social History (3 cr)
II TThS, 150ForH, Kohlmeyer

- 150 Social, Intellectual History of United States (3 cr)
III MWF, 185ForH, Tyler
- 155 Canadian History, Canadian-American Relations (3 cr)
III TThS, 130ForH, Burt
- 158 Latin-American History (3 cr)
IV MWF, 170ForH, Beatty
- 168 Readings in Works of Great Historians (3 cr; prereq sr)
VIII-IX M, 170ForH, Steefel
- 171 Readings in Ancient History (3 cr, †170-171-172; prereq sr)
Ar, Jones
- 174 Readings in Medieval, Renaissance History (3 cr, †173-174-175; prereq sr)
VIII-IX W, 244ForH, Krey
- 174a Selected Readings in Medieval English History (3 cr)
Ar, Thompson
- 177a Russian History (3 cr, †176a-177a-178a; prereq* sr, 125-126-127, knowl Russ or Ger or Fren)
VII-VIII M, 130ForH, Anderson
- 177b Scandinavian History (3 cr, †176b-177b-178b; prereq sr)
Ar
- 177c Recent European History (3 cr, †176c-177c-178c; prereq* sr, course in 20th cent Europe)
VI-VII W, 244ForH, Deutsch
- 180 Readings in European Economic History since 1700 (3 cr, †179-180-181; prereq sr)
VI-VII T, 359ForH, Heaton
- 183 Readings in English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq sr)
VIII-IX Th, 301Lib, Willson
- 186 Early American Social, Intellectual History (3 cr, †185-186-187; prereq sr)
VI-VII Th, 175ForH, Tyler
- 186a West in American History (3 cr, †185a-186a-187a; prereq sr)
VIII-IX M, 175ForH, Osgood
- 186b American Diplomatic History (3 cr, †185b-186b-187b; prereq sr)
VI-VII T, 420MurH, Beatty
- 186c Third Party Movements since Civil War (3 cr, †185c-186c-187c; prereq sr)
VI-VII T, 312Lib, Stephenson
- 186d Minnesota, the Northwest (3 cr; prereq sr)
VIII-IX W, 175ForH, Jordan
- 192 Readings in Canadian History (3 cr; prereq sr)
VIII-IX T, 249ForH, Burt
- 209a Seminar—American History (3 cr, †208a-209a-210a)
VIII-IX F, 244ForH, Osgood
- 209b Seminar—American History (3 cr, †208b-209b-210b)
VII-VIII F, 130ForH, Stephenson
- 222 Seminar—Economic History (3 cr, †221-222-223)
VI-VII Th, 356ForH, Heaton

- 225 Seminar—Modern European History (3 cr, †224-225-226; prereq* knowl Fren or Ger)
Ar, Steefel
- 231 Seminar—Ancient History (3 cr, †230-231-232)
VIII-IX F, Jones

JOURNALISM (JOUR)

- 10 Photography (3 cr; prereq soph, jour maj only)
Lect V T, 308MurH, Liebling
Lab VI-IX M, 20MurH
- 11 Intro Reporting (3 cr; prereq see col bul)
II TThS, 311MurH, Ford
- 13 Intro Reporting for Majors (3 cr; prereq see col bul)
—1, I-II MWF, 212MurH, Jensen
—2, III-IV MWF, 212MurH, Park
—3, VI-VII MWF, 212MurH, Herington
- 14 Newspaper Reporting (3 cr; prereq see col bul)
—1, III-IV MWF, 210MurH, Kildow
—2, I-II TThS, 212MurH, Herington
—3, VI-VIII TTh, 212MurH, Charnley
- 18 Prin Advertising (3 cr; prereq soph, 13 with C aver, Comp 27-28 or concur regis)
I TThS, 308MurH, Seehafer
- 41 Editing for Nonmajors (3 cr; prereq jr, 11 or 13, SLA students with cons dept)
Lect IV MW, 308MurH, Ford
—1, Lab I-II T, 207MurH, Jones
—2, Lab I-II Th, 207MurH, Jones
—3, Lab III-IV F, 206MurH, Ford
—4, Lab VI-VII F, 206MurH, Wilson
—5, Lab VIII-IX W, 206MurH, Wilson
- 51 News Editing (3 cr; prereq 15 or B aver in 13-14; or 13, 18 for adv maj)
Lect V T, 105MurH, Swanson
—1, Lab I-II TTh, 206MurH, Emery
—2, Lab VI-VII TTh, 206MurH, Jensen
- 55 Advertising, Newspaper Typography (3 cr; prereq jour maj, sr col stand, for others 11 or 13 and 41)
—1, Lect V Th, 302MurH, Barnhart
—2, Lect V Th, 105MurH, Wilson
—1, Lab VIII-IX MW, 315MurH, Barnhart
—2, Lab I-II MW, 315MurH, Wilson
—3, Lab I-II TTh, 315MurH, Wilson
—4, Lab VI-VII MW, 315MurH, Wilson
- 58 Adv Typography (2 cr; prereq 55, cons instr)
VI-VII TTh, 315MurH, Barnhart
- 66 Pictorial Journalism (3 cr; prereq 10, 13, cons instr)
Lect VIII M, 311MurH, Kildow
Lab VIII-IX WF, 20MurH
- 67 Radio News Writing (3 cr; prereq 15)
Lect VII WF, 302MurH, Charnley
Lab III-IV ar, 207MurH, Jensen
- 74 Magazine Writing, Editing (3 cr; prereq 55, 73, cons instr)
V-VI M, 302MurH, Charnley

- 86 Advertising Copy Writing (3 cr; prereq 41 or 51, 55, 65)
III TThS, 311MurH, Seehafer
- 87 Radio Advertising (3 cr; prereq sr, 18, 120, cons instr; or 69, BA 88, cons instr)
III MWF, 302MurH, Seehafer
- 88 Radio, Television Station Administration (3 cr; prereq* 120)
I MWF, 302MurH, Paulu
- 94 Newspaper Advertising (3 cr; prereq 51, 55; or 41, 55, cons instr)
II TTh, 105MurH, Barnhart
- 101 Reporting Public Affairs (3 cr; prereq sr, 51)
III TThS, 308MurH, Herington
- 109 History of Journalism (3 cr)
—1, II MWF, 105MurH, Ford
—2, II MWF, 311MurH, Emery
- 112 Comparative Foreign Journalism (3 cr; prereq* 111)
II MWF, 308MurH, Park
- 115 Communication Media Analysis (3 cr; prereq 51, cons instr; or Econ 5 or Psy 70, cons instr)
VI MWF, 311MurH, Swanson
- 118A Selected Topics: Adv Reporting of Public Affairs (3 cr; prereq sr, 101, cons instr)
VI-IX MW, Ar
- 118B Selected Topics: Projects in Media Analysis (3 cr; prereq sr, 115, cons instr)
VIII-IX TF, 405MurH, Jones
- 118C Selected Topics: Readings in Journalism (3 cr; prereq sr, jour maj with B aver, cons instr)
Ar, Casey
- 121 The Press in a Dynamic Society (3 cr; prereq* 15 or 18)
IV MWF, 311MurH, Gerald
- 131 Communications Agencies, Propaganda, Public Opinion (3 cr; prereq 130)
III MWF, 105MurH, Casey
- 141 Interpretation of Contemporary Affairs (3 cr; prereq 140)
Lect VI-VII TTh, 105MurH, Gerald
—1, VI-VII TTh, 302MurH, Gerald
—2, VI-VII TTh, 308MurH, Park
—3, VI-VII TTh, 311MurH, Emery
- 208 Communications Agencies as Social Institutions (3 cr; prereq cons advis)
Ar, Gerald

LINGUISTICS

Chinese (CHIN)

- 2 Bgn Chinese (5 cr; prereq 1)
V MTWThF, 108F, Mather
- 52 Intermed Chinese (3 cr; prereq 51)
Ar, Mather
- 102 Adv Chinese (2 cr; prereq 101)
Ar, Mather

Japanese (JAP)

- 2 Bgn Japanese (5 cr; prereq 1)
V MTWThF, 307F, Brower
- 52 Adv Japanese (3 cr; prereq 51)
VIII MWF, 302F, Brower
- 57 Composition (2 cr; prereq 56)
II TTh, 307F, Brower
- 62 Adv Japanese Reading (3 cr; prereq 61)
Ar, Brower
- 91 Japanese Literature in Translation (3 cr; prereq 3 cr lit)
VII MWF, 307F, Brower

Linguistics (LING)

- 114 Old Church Slavic (3 cr; prereq 113)
Ar, Magner
- 122 Intro Arabic (3 cr; prereq 121)
I MWF, 302F, Irving
- 128 Readings in Sanskrit (3 cr; prereq sr, cons instr; grad 2 sr col courses in early European lang)
Ar, Magner
- 151 Honors Course (1-3 cr; prereq cons instr)
Ar

Russian (RUSS)

- 2 Bgn Russian (5 cr; prereq 1)
—1, V MTWThF, 302F, Magner
—2, VII MTWThF, 302F, Niemi
- 52 Adv Russian (3 cr; prereq 51)
VII MW, VI Th, 103F, Magner
- 57 Conversation (3 cr; prereq 56)
Ar, Blinoff
- 62 Composition (2 cr; prereq 61)
Ar, Blinoff
- 72 Rapid Reading of Russian Literature (3 cr; prereq 71)
VI MWF, 6F, Niemi
- 75 Russian Civilization (3 cr; prereq 10 cr in hist or lit)
V MWF, 5F, Blinoff
- 102 Russian Literature (3 cr; prereq 101)
V MWF, 304F, Niemi
- 126 History of Russian Language (3 cr; prereq 125)
Ar, Magner
- 132 Adv Interpretation: Pushkin to Tolstoy (3 cr; prereq 131)
Ar, Niemi

MATHEMATICS (MATH)

- 1 Higher Algebra (5 cr; prereq see col bul)
—1, I MTWThF, 101F
—2, V MTWThF, 301F
—3, VI MTWThF, 102F
- 6 Trigonometry (5 cr; prereq plane geom, 1)
—1, III MTWThF, 113F
—2, VI MTWThF, 110F

- 7 **College Algebra** (5 cr; §8 or 15; prereq 6; or high school trig with cons dept chm following proficiency test)
-1, II MTWThF, 110F
-2, VII MTWThF, 102F
- 8 **Commerce Algebra** (5 cr; §7 or 15; prereq 1)
I MTWThF, 109F
- 15 **Elem Mathematical Analysis** (5 cr; §7 or 8; prereq plane geom, 1; or high school higher algebra)
-1, I MTWThF, 104F
-2, V MTWThF, 105F
- 16 **Elem Mathematical Analysis** (5 cr; prereq 15)
-1, III MTWThF, 104F
-2, V MTWThF, 104F
- 20 **Mathematics of Investment** (5 cr; prereq 8; or 6, 7; or 15, 16)
-1, IV MTWThF, 301F
-2, VII MTWThF, 101F
- 30 **Analytic Geometry** (5 cr; prereq 6, 7; or 6, 8; or 15, 16)
-1, II MTWThF, 105F
-2, VI MTWThF, 104F
- 50 **Calculus I** (5 cr; prereq 30)
-1, IV MTWThF, 104F
-2, I MTWThF, 113F
- 51 **Calculus II** (5 cr; prereq 50)
-1, III MTWThF, 105F
-2, VI MTWThF, 105F
- 52 **Intermed Calculus** (5 cr; prereq 51)
I MTWThF, 102F, Olmsted
- 62 **Introd Theory of Equations** (3 cr; prereq 50 or concur regis, cons instr)
VI MWF, 101F, Gibbens
- 106 **Differential Equations** (3 cr; prereq 51)
II MWF, 104F, Hatfield
- 107 **Adv Calculus** (3 cr; prereq* 52 or 50, 51 with A grade in SLA, work in solid anal geom)
V MWF, 101F, Loud
- 110 **Tutorial Course, Adv Mathematics** (ar cr; prereq 51)
Ar
- 119 **Matrices, Groups** (3 cr; prereq 51)
III MWF, 102F, Nering
- 122 **Mathematical Theory of Statistics** (3 cr; prereq 121)
IV MWF, 105F, Hart
- 145 **Fourier Series, Orthogonal Functions** (3 cr; prereq 144)
IV TThS, 105F, Cameron
- 158 **Methods of Applied Mathematics** (3 cr; prereq 157)
II TThS, 104F, Donsker
- 204 **Adv Topics in Mathematical Statistics** (3 cr; prereq 203)
VII MWF, 105F, Donsker
- 207 **Theory of Functions** (3 cr; prereq 206)
II MWF, 102F, Hart
- 216 **Topological Groups** (3 cr; prereq 215)
II MWF, 101F, Kalisch
- 247 **Integration in Function Space** (3 cr; prereq 245, cons instr)
II TThS, 101F, Cameron
- 252 **Linear Spaces** (3 cr; prereq 245)
IV MWF, 101F, Olmsted

MUSIC (MUS)

- B **Piano** (no cr; prereq A)
Ar
- E **Voice** (no cr; prereq D)
Ar
- 1 **Fundamentals of Music** (2 cr, for nonmusic maj)
V MW, 4ScH, V TTh, 104ScH, Berryman
- 1T **Music Theory** (3 cr; prereq see col bul)
III MTWThF, 3ScH, George
- 2T **Music Theory** (3 cr; prereq 1T)
-1, I MTWThF, 3ScH, George
-2, III MTWThF, 3ScH, Fetler
-3 VII MTWThF, 3ScH, 103ScH, Fetler
- 4T **Music Theory** (4 cr; prereq 3T)
V MTWThF, 103ScH, Malcolm
- 5T **Music Theory** (4 cr; prereq 4T)
-1, I MTWThF, 103ScH, Malcolm
-2, III MTWThF, 103ScH, Malcolm
-3 IV MTWThF, 3ScH, George
- 10 **Introd Music** (4 cr)
III MTWThF, 2ScH, Jung
- 11 **Piano—Individual Lessons** (2-4 cr; prereq entr exam, see col bul)
VIII Th, hr ar, ScHAud, Kendall, Rymer, McConkie, Stephens
- 11C **Piano—Class Lessons** (2 cr; prereq cons instr)
-1, VIII TTh, ScHAud, Kendall
-2, II, VI TTh, 208ScH
-3 III TTh, 212ScH, McConkie
- 12 **Voice—Individual Lessons** (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Birnbach, Hull, Schuessler
- 12C **Voice—Class Lessons** (2 cr; prereq cons instr)
-1, VIII Th, ScHAud, III TTh, 211ScH, Schuessler
-2, VI TTh, 211ScH, Schuessler
-3, VII MW, 211ScH, Schnessler
- 13 **Violin** (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Cullen, Druian, Scheurer
- 14 **Viola** (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Barton
- 15 **Cello** (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Maltzer
- 16 **Double Bass** (2-4 cr; prereq entr exam, see col bul)
VIII Th, ScHAud, hr ar, Fitch

- 17 Flute (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, Winkler, Arnez
- 18 Oboe (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, Angelucci
- 19 Clarinet or Saxophone (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, Handlon, Fitch
- 20 Bassoon (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, Santucci
- 21 Trumpet (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, MacKay
- 22 French Horn (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, Linder
- 23 Trombone (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, MacKay
- 24 Tuba (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, MacKay
- 25 Percussion (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, Denecke
- 26 Harp (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar
- 27 Organ (2-4 cr; prereq entr exam, see col bul)
VIII Th, SchAud, hr ar, Berryman, Jennings
- 32 Music Literature (2 cr)
II MWF, SchAud, Ivory
- 35 History of Music (2 cr; prereq soph)
II MTWThF, 4ScH, Downes
- 38 Keyboard Harmony (1 cr; prereq 37)
II TTh, 3ScH, Jennings
- 41 Orchestra (1 cr; prereq cons dir)
—1, 7:30 pm T, NMA, Oberg
—2, VIII-IX F, 4NMA, Samuel
- 44 University Chorus (1 cr, †43-44-45; prereq cons dir)
—1, IV MW, 4, 5 NMA, 7:30 T, NHAud, Aliferis
—2, VIII MW, 5NMA, 7:30 T, NHAud, Aliferis
- 44A Church Music Choir (1 cr)
VI TTh, 4ScH, Berryman
- 44SP St Paul Campus Chorus (1 cr)
4:30-5:30 TTh, 102Hr, Rymer
- 47 Concert Band (1 cr; prereq cons dir)
—1, IX MTTh, 4NMA, Prescott
—2, IX MWF, 5NMA, Prescott
- 54 Romantic Movement (2 cr; prereq 53)
VII WF, 104ScH, Kendall
- 61 Instrumental Ensemble (2 cr; prereq 60)
VI MWF, 104ScH, Stephens, Ivory
- 64 Vocal Ensemble (2 cr; prereq 63)
VIII MWF, 104ScH, Hull
- 67 The Chamber Singers (2 cr; prereq 66)
VII MWF, NHAud, 4NMA, Aliferis
- 71 Normal Piano (2 cr; prereq 70)
I MWF, 104ScH, Kendall
- 78 Composition (2 cr; prereq 77)
II MW, 103ScH, George
- 81 Adv Normal Piano (2 cr; prereq 80)
VIII-IX M, 2, 4, 103ScH, Kendall
- 91 Adv Instrumental Ensemble (2 cr; prereq 90)
VI MWF, 104ScH, Stephens, Ivory
- 94 Improvisation (1 cr; prereq 93)
Ar, Berryman
- 98 Counterpoint (2 cr; prereq 97)
IV MWF, 103ScH, Fetler
- 105 American Music (2 cr; prereq 104)
III TTh, 104ScH, Oberg
- 122 Adv Harmony (2 cr; prereq 121)
II TTh, 2ScH, George
- 125 History of Opera (3 cr; prereq 124)
VI MWF, 4ScH, Downes
- 128 Composition (2 cr; prereq 127)
Ar, Fetler
- 135 History of Church Music (2 cr; prereq 134)
IX TTh, 104ScH, Berryman
- 142 Orchestration (2 cr; prereq 141)
II WF, 3ScH, Aliferis
- 145 Bach through Beethoven (3 cr; prereq 144)
VI-VII TTh, 104ScH, Downes
- 165 Music in the Baroque Era (2 cr; prereq 164)
II MWF, 2ScH, Oberg
- 198 Adv Counterpoint (2 cr; prereq 197)
IV TTh, 103ScH, Fetler
- 204 Graduate Applied Music (2-4 cr; prereq placement test)
Ar
- 210 Adv Topics in Musical Analysis (3 cr; prereq 76)
II MWF, 104ScH, hr ar, Oberg
- 212 Special Probs in Music (3-9 cr; prereq 202 or 211)
Ar, Oberg
- 228 Graduate Composition (3 cr)
Ar, Aliferis

PHILOSOPHY (PHIL)

- 1 Probs of Philosophy (5 cr, §1A; prereq* soph)
—1, Lect III MWF, 202WeH, Brodbeck
—1, Quiz III TTh, 202WeH
—2, Quiz IV TTh, 202WeH
—2, Lect VII MTWThF, 114JohH, Conger
- 2A Selected Probs of Logic (3 cr, §2; prereq* soph)
VI MWF, 202WeH, Wiggins
- 2 Logic (5 cr, §2A; prereq* soph)
—1, I MTWThF, 202WeH, Terrell
—2, IV MTWThF, 313JohH, Holmer
- 3 Ethics (5 cr, §3A; prereq* soph)
II MTWThF, 309JohH, Hospers
- 51 Gen History of Philosophy (5 cr)
II MTWThF, 202WeH, Shaw
- 71 Design for America (5 cr; prereq* sr)
III MTWThF, 206WeH, Wiggins

- 82 Science, Civilization (3 cr; prereq* sr)
IV MWF, 310JohH, Brodbeck
- 102 Prin Philosophy (4 cr, §1, 2; prereq 101)
III MTThF, 309JohH, Feigl
- 107 Plato (3 cr; prereq 106)
III MWF, 310JohH, Sellars
- 111 Empiricism (3 cr; prereq* 52)
VI MWF, 302JohH, Shaw
- 113 Kierkegaard, Scandinavian Philosophy (3 cr; prereq* 50 or 51 or 52)
VI MWF, 309JohH, Holmer
- 114A American Philosophy since James (3 cr; prereq* 114)
VI MWF, 206WeH, Brodbeck
- 115 Contemporary Philosophy (3 cr; prereq* 52, cons instr)
VII MWF, 302JohH, Terrell
- 118 Readings in Recent Philosophy (3 cr; prereq 52, cons instr)
Ar, Holmer
- 122 Introd to Indian Philosophy (3 cr; prereq* 1 course from 50-51-52)
IV MWF, 202WeH, Datta
- 127 Rationalism: Leibnitz (2 cr; prereq* 125)
VIII-IX W, 104WeH, Sellars
- 143 Theory of Knowledge (4 cr; prereq* 2)
II MTWF, 206WeH, Sellars
- 160 Prin Esthetics (3 cr; prereq 159)
III MWF, 3Lib, Hospers
- 181 Psychology of Religion (3 cr; prereq 6 cr)
VIII MWF, 202WeH, Conger
- 192 Seminar—Philosophy (3 cr; prereq* 191)
Ar, Conger, Feigl, Sellars, others
- 206 Seminar in Comparative Philosophy (3 cr; prereq* 123)
VIII-IX Th, 105JohH, Datta
- 211 Seminar—Moral Philosophy (3 cr; prereq* 164)
VIII-IX T, 104WeH, Sellars
- 231 Adv History of Philosophy (3 cr; prereq see col bul)
VI-VII TTh, 6F, Hospers
- 241 Seminar—Philosophy of Physical Sciences (3 cr; prereq cons instr)
VIII-IX Th, 104WeH, Feigl
- 245 Seminar—Philosophy, Psychology (3 cr; prereq cons instr)
VIII-IX M, 104WeH, Feigl
- 8 Gen Physics (5 cr; prereq regis in diff calculus)
Lect II MTWThF, 150Ph, Collins
Lab ar during first 2 days of class
- 9 Gen Physics (5 cr; prereq 8)
—1, Lect IV MTWThF, 150Ph, Freier
—2, Lect VI MTWThF, 150Ph, Wall
Lab ar during first 2 days of class
- 103 Theoretical Physics (5 cr; prereq 101)
I MTWThF, 133Ph, Nier
- 109 Modern Physics (3 cr; prereq 107)
VI MWF, 166Ph, Collins
- 114 Elem Physical Investigation (3 cr; prereq 15 cr, Math 51, cons dept chm)
Ar
- 121 Exper Nuclear Physics I (3 cr; prereq 9, Math 51)
VI-JX TTh, Ar
- 133 Physical Optics (3 cr; prereq 15 cr, Math 51)
II TThS, 143Ph, Valasek
- 134 Experimental Optics (3 cr; prereq 15 cr)
Lect VII T, 143Ph, Valasek
Lab VIII-IX T, VII-IX Th, 348Ph
- 136 Spectrum Analysis (3 cr; prereq 15 cr)
VII-IX TTh, 348Ph, Valasek
- 146 Vacuum Tubes, Associated Circuits (3 cr; prereq 144, cons instr)
Ar
- 183 Atomistics, Elem Quantum Mechanics (3 cr; prereq 181)
IV MWF, 145 Ph, Williams
- 192 Introd Mathematical Physics (3 cr; prereq 191)
III MWF, 145Ph, Hill
- 208 Electrodynamics, Theoretical Optics (3 cr)
III MWF, 143Ph, Teng
- 211 Quantum Mechanics (3 cr)
VII MWF, 143Ph, Teng
- 216 Seminar—Contemporary Theoretical Physics (3 cr)
Ar, Critchfield, Ney, Winckler
- 228 Adv Nuclear Theory (3 cr)
VI MWF, 145Ph, Hill

POLITICAL SCIENCE (POL)

PHYSICS (PHYS)

- 2 Introd Physical Science (3 cr, †1-2; prereq 1)
III MWF, 150Ph, Wall
- 2a Introd Physical Science with Lab (4 cr, †1a-2a; prereq 1a)
Lect III MWF, 150Ph, Wall
Lab ar during first 2 days of class
- 5 Gen Physics (5 cr; prereq 4)
Lect I MTWThF, 166Ph, Buchta
Lab ar during first 2 days of class

- A State in the Modern World (3 cr, †A-B, §9-10, or 15)
II MWF, 85ForH, Turner
- B State in the Modern World (3 cr, †A-B, §15; prereq A)
III MWF, 55ForH, Lippincott
- 1 American Govt, Politics (3 cr, †1-2, §5)
I MWF, 120ForH, Hein
- 2 American Govt, Politics (3 cr, †1-2, §5; prereq 1)
—1, IV MWF, BuAud, Christensen
—2, I TThS, 180ForH, Rourke
- 5 American Govt, Politics (5 cr, §1-2)
VI MTWThF, 155ForH, Taylor

- 52 Field Work in Govt, Politics (3 cr; prereq 51)
VI-VII T, 75ForH, Naftalin
- 102 Prin American Constitution II (3 cr; prereq 101)
III MWF, 175ForH, Anderson
- 108 Legislative Organization, Procedure (3 cr; prereq 6 cr)
IV MWF, 120ForH, Short
- 116 Local Govt (3 cr, †116-117; prereq* 9 cr)
I MWF, 175ForH, Anderson
- 121 Municipal Administration (3 cr; prereq* 120)
II TThS, 115ForH, Ludwig
- 126 Govt, Economic Order (3 cr; prereq 9 cr)
IV TThS, 160ForH, Rourke
- 129 Social Legislation, Institutions in Scandinavian Countries (3 cr; prereq* Soc 1)
VI MWF, 12F
- 132 Public Administration: Personnel (3 cr; prereq* 131)
II MWF, 80ForH, Short
- 142 Comparative European Govts (3 cr, †141-142; prereq 141)
VI MWF, 120ForH, Turner
- 154 Chinese Govt, Politics (3 cr; prereq* 6 cr)
IV MWF, 150ForH, Quigley
- 155 Govt, Int'l Relations in Latin America (3 cr; prereq* 6 cr)
II MWF, 185ForH, Christensen
- 161 Probs of Democracy (3 cr; prereq* 6 cr pol or 12 cr soc sci)
III TThS, 155ForH, Sibley
- 165 Political Thought: Middle Ages (3 cr; prereq* 6 cr pol or 12 cr soc sci)
IV TThS, 85ForH, Sibley
- 167 Political Behavior (3 cr; prereq* cons instr)
1:00-3:30 MF, 366ForH, McClosky
- 176 Conduct of American Foreign Relations (3 cr; prereq 175)
III TThS, 150ForH, McLaughlin
- 181 Int'l Law (3 cr, †180-181; prereq* 180)
I TThS, 85ForH, McLaughlin
- 185 Int'l Organization II (3 cr; prereq* 6 cr)
I MWF, 80ForH, Levi
- 197 Mediterranean Area in World Affairs (3 cr; prereq 25 or Hist 125a-126a-127a)
III MWF, 180ForH, Mills
- 211 Seminar—Public Administration (3 cr, †210-211-212; prereq cons staff)
VIII-IX W, 13Lib, Ludwig
- 217 Seminar—Comparative European Govt (3 cr; prereq* 12 cr)
IV-V M, 356ForH, Levi
- 226 Readings in Classics of Politics (3 cr; prereq* 12 cr incl 6 cr pol theory)
VIII-IX TTh, 366ForH, Lippincott
- 239 Int'l Law, Diplomacy II (3 cr; prereq* sr, 181, cons instr)
VIII-IX F, 366ForH, McLaughlin
- 243 Colonization, Imperialism (3 cr; prereq* 196)
VIII-IX W, 448ForH, Mills
- 246 Seminar—Far Eastern Govt, Politics (3 cr; prereq 153-154)
VII-VIII W, 366ForH, Quigley
- 248 Seminar—Int'l Organization (3 cr; prereq cons instr)
IV-V F, 356ForH, Levi

PSYCHOLOGY (PSY)

- A Elem Psychology (5 cr, †1-2, GC 41; prereq see col bul)
11:30-1:00 MWF, NHAud, Jenkins
- 1 Gen Psychology (3 cr, †1-2, †A or GC 41; prereq soph)
—1, II MWF, BuAud, MacCorquodale
—2, VIII MWF, 213NH, Heron
- 2 Gen Psychology (3 cr, †1-2, †A or GC 41; prereq 1)
—1, III MWF, BuAud, Bird
—2, V MWF, BuAud, Bird
- 4 Psychology Lab (2 cr, †4-5; prereq soph, 1-2 or concur regis)
—1, I-II MW, 211Psy, Tinker, others
—2, III-IV ThS, 211Psy
—3, IX-X TTh, 211Psy
- 5 Psychology Lab (2 cr, †4-5; prereq 4)
—1, I-II TTh, 211Psy, Tinker, others
—2, V-VI TTh, 211Psy
—3, VII-VIII TTh, 211Psy
—4, V-VI MW, 211Psy
—5, VII-VIII MW, 211Psy
—6, III-IV MW, 211Psy
—7, IX-X MW, 211Psy
- 56 Psychology of Advertising (3 cr; prereq 2, Econ 7)
VII MWF, 202WuH, Longstaff
- 91 Readings in Psychology (ar cr; prereq 2, 3 addtl cr, cons instr)
Ar
- 102 Experimental Psychology (3 cr, †101-102; prereq 101)
Lect VII M, 109Psy, Tinker
Lab VII-VIII WF
- 114 Human Behavior (3 cr; prereq sr, 2, 5 or Zool 3, or Phil 1)
II TThS, 115Psy, Elliott
- 126 Psychology of Individual Differences (3 cr; prereq 125)
—1, II MWF, 115Psy, Paterson
—2, II MWF, 133Ph, Jenkins
- 127 Projects in Individual Differences (3 cr; prereq sr, 126)
Ar
- 129 Psychology of Learning (3 cr; prereq 128)
II MWF, 109Psy, Heron
- 130 Vocational, Occupational Psychology (3 cr; prereq 9 cr)
Lect IV TTh, 211Psy, Paterson
—1, Lab V-VI F, 211Psy
—2, Lab VII-VIII F, 211Psy

- 133 Psychology of Motivation (3 cr; prereq 9 cr)
VII MWF, 310JohH, Russell
- 136 Occupational Counseling (2 cr; prereq* sr, 9 cr)
VIII-IX M, 115Psy, Kirchner
- 140 Social Psychology (3 cr; prereq 2, 5, 9 cr soc sci)
II TThS, 308F, Bird
- 145 Abnormal Psychology (3 cr, †144-145; prereq 144)
—1, IV TThS, MurHAud, Bird
—2, IV TThS, 166Ph, Rosen
- 148 Physiological Psychology (3 cr; prereq* 2, 5 or Zool 3)
IV MWF, 115Psy, Hathaway
- 152 Individual Investigations in Animal Psychology (ar cr; prereq 151)
Ar, Heron
- 160 Psychology in Personnel Work (3 cr; prereq* 2, 5 or 3 cr stat, Econ 7)
III MWF, 2P, Longstaff
- 167 Techniques of Public Opinion Analysis (3 cr; prereq for sr, 140 or 147; for grad, a course in stat)
VII MWF, 115Psy, Clark
- 172 Clinical Psychology (3 cr, †171-172; prereq 171)
VI MWF, 115Psy, Meehl
- 201 History of Psychology I: European (1 cr, †200-201-203; prereq cons instr)
III S, 115Psy, Tinker
- 211 Research Probs (ar cr)
Ar
- 221 Personality, Its Structure, Dynamics (2 cr, †220-221-222; prereq 172, 219 and 86, 246, 286, cons instr)
Ar, Meehl
- 230 Field Work in Psychometrics, Applied Psychology (ar cr; prereq cons instr)
Ar
- 236 Clinical Practice in Student Counseling Bureau (ar cr; prereq cons instr)
Ar, Berdie
- 241 Seminar—Student Personnel Work (1 cr; prereq cons instr)
Ar, Williamson
- 251 Topics in Psychology (ar cr)
Ar
- 254 Clinical Use of Projective Techniques (1 cr)
Ar, Hales
- 256 Adv Psychology of Advertising (3 cr)
VII MWF, 202WuH, Longstaff
- 258 Lab Seminar in Group Dynamics (3 cr; prereq one yr grad work, cons instr)
III TTh, 301Psy, Schachter
- 261 Seminar—Applications of Psychological Methods to Study of Psychiatry (1 cr; prereq cons instr)
Ar, Hathaway
- 272 Seminar—Recent Literature of Psychology (1 cr; prereq cons instr)
IX F, MacCorquodale
- 281 Psychology for Fellows in Psychiatry or Neurology (1 cr)
Ar, Meehl
- 291 Practicum in Interpretation of Projective Techniques (3 cr; prereq 290, cons instr)
VIII-IX T, 109Psy, Rosen
- 296 Seminar—Individual Differences, Applied Psychology (1 cr; prereq cons instr)
VIII-IX alt W, Paterson
- 299 Tabulating Equipment Lab (1 cr; prereq PH 110, 111)
Ar, Clark

ROMANCE LANGUAGES

French (FREN)

- 1 Bgn French (5 cr, §1a)
—1, III MTWThF, 226F
—2, VII MTWThF, 226F
- 2 Bgn French (5 cr, §2a; prereq 1, or 1 yr high school Fren)
—1, I MTWThF, 202F
—2, IV MTWThF, 226F
—3, VI MTWThF, 202F
- 2a Bgn French: Conversational Section (5 cr, §2; prereq 1a)
Dem III MTWThF, 227F
—1, Lab VI MTWThF, 4F
—2, Lab VII MTWThF, 4F
- 3 Intermed French (5 cr, §3a; prereq 2, or 2 yr high school Fren)
III MTWThF, 202F
- 4 Intermed French (5 cr; prereq 3 or 3a or 3 yr high school Fren)
—1, III MTWThF, 201F
—2, VII MTWThF, 201F
- 50 Pronunciation (3 cr; prereq 4)
II TTh, hr ar, 203F, Sullivan
- 54 Conversation (3 cr; prereq 53 or 20)
VI MWF, 203F, Desgranges
- 64 Adv Composition (3 cr; prereq 63)
VII MWF, 203F, Blinoff
- 71 Survey of French Literature (3 cr, §73-74; prereq 70)
IV MWF, 201F, Clefthon
- 73 Survey of French Literature (5 cr, §70-71-72; prereq 4)
III MTWThF, 307F, Brackney
- 76 French Civilization, Culture (3 cr; prereq 75)
III MWF, 6F, Blinoff
- 104 Syntax, Composition (1 cr; prereq 103)
VI F, 201F, Barton
- 116 17th Century Literature (3 cr; prereq 115)
IV MWF, 307F, Desgranges
- 119 18th Century Literature (3 cr; prereq 72 or 74, cons instr)
IV TTh, V Th, 201F, Sirich

- 146 Contemporary Dramatic Literature (3 cr; prereq 72 or 74)
II MWF, 201F, Barton
- 172 History of French Language (1 cr, †171-172-173; prereq 171)
VIII Th, 307F, Brackney
- 182 Movement of Ideas in French Literature (3 cr; prereq 72 or 74, cons instr)
IX-X W, hr ar, 301Lib, Desgranges
- 202 Old French Phonology, Morphology (2 cr)
IX-X Th, 307F, Brackney
- 205 Readings in Old French Literature (2 cr)
VIII-IX T, 307F, Brackney
- 208 Old Provençal (2 cr)
Ar, Brackney

Italian (ITAL)

- 2 Bgn Italian (4 cr; prereq 1)
IV MTWF, 302F, Nissen
- 71 Modern Poetry (3 cr; prereq 3 or 4; 1-2 for students beginning Ital in sr col with cons instr)
Ar, Nissen
- 162 The 16th Century (3 cr; prereq 161)
III MWF, 302F, Nissen

Portuguese (PORT)

- 2 Bgn Portuguese (5 cr; prereq 1)
VII MTWThF, 202F, Luckey
- 70 Brazilian Literature, Culture in English (3 cr; prereq soph with C aver, 9 cr in any lit)
Ar, Luckey

Spanish (SPAN)

- 1 Bgn Spanish (5 cr, §1a)
—1, III MTWThF, 3F
—2, VII MTWThF, 227F
- 2 Bgn Spanish (5 cr, §2a; prereq 1 or 1 yr high school Span)
—1, I MTWThF, 226F
—2, IV MTWThF, 227F
—3, VI MTWThF, 107F
- 2a Bgn Spanish—Conversational Section (5 cr, §2; prereq 1a)
Dem II MTWThF, 10F
Lab VII MTWThF, 10F
- 3 Intermed Spanish (5 cr, §3a; prereq 2 or 2 yr high school Span)
II MTWThF, 4F
- 4 Intermed Spanish (5 cr; prereq 3 or 3a or 3 yr high school Span)
—1, III MTWThF, 8F
—2, IV MTWThF, 8F
- 20 Oral, Written Spanish (5 cr; prereq* 4 or 4 yr high school Span)
VII MTWThF, 114F
- 38 Spanish Shorthand, Technical Vocabulary (3 cr; prereq B grade in 53, 30 words a min typing)
Ar

- 52 Pronunciation, Diction (1-2 cr; prereq* 4, cand for Span play)
Ar, Cuneo
- 54 Conversation (3 cr; prereq 53 or 20)
—1, II MWF, 203F, Floripe
—2, III MWF, 203F, Luckey
- 57 Commercial Spanish (5 cr; prereq 53 or 20)
VII MTWThF, 110F, Cuneo
- 61 Adv Conversation (3 cr; prereq 60)
II MWF, 307F, LeFort
- 66 Literature of Spain (3 cr, §68-69; prereq 65)
VII MWF, 103F, Grismer
- 68 Survey of Literature of Spain (5 cr, §65-66-67; prereq 4)
VI MTWThF, 3F
- 71 Latin-American Civilization, Culture (3 cr; prereq* 70)
—1, III TThS, 203F, Cuneo
—2, IV MWF, 203F, LeFort
- 75 Literature of Spanish America (3 cr; prereq 74)
II MWF, 226F, Irving
- 104 Syntax, Composition (1 cr; prereq 103)
IV T, 307F, Irving
- 116 17th Cent Literature (3 cr; prereq 115)
VII MWF, 108F, Grismer
- 141 Contemporary Latin-American Literature (3 cr; prereq 140)
VIII MWF, 307F, LeFort
- 175 Contemporary Spanish Literature (3 cr; prereq 174)
IV MWF, 108F, Floripe
- 244 Readings in Old Spanish Literature (2 cr)
IX-X Th, 203F, Irving
- 250 Spanish Seminar (2 cr)
VIII-IX W, 203F

SCANDINAVIAN (SCAN)

- 2 Bgn Norwegian (5 cr; prereq 1)
VI MTWThF, 10F
- 5 Adv Norwegian (3 cr; prereq 4)
VII MWF, 12F
- 8 Bgn Swedish (5 cr; prereq 7)
II MTWThF, 12F, Lorenzen
- 11 Adv Swedish (3 cr; prereq 10)
III MWF, 304F, Lorenzen
- 161 Scandinavian Novel I (3 cr; prereq 6 or 12, or 8 cr lit, no knowl Scan lang)
II MWF, 6F, Gustafson
- 172 Strindberg—Drama in Revolt, Transition (3 cr; prereq 6 or 12, or 8 cr lit, no knowl Scan lang)
IV MWF, 12F, Gustafson
- 182 Readings in Scandinavian Literatures (3 cr; prereq 191)
Ar, Gustafson
- 216 Studies in Scandinavian Romanticism (3 cr)
Ar, Gustafson
- 222 Dramatic Interpretative Probs in Strindberg (3 cr)
Ar, Gustafson

SOCIAL WORK (SW)

- 206 Topics in Social Work (ar cr)
Ar
- 209 Seminar—Social Agencies, Institutions (ar cr)
Ar
- 211 Initial Field Training in Social Work (ar cr; prereq 220 or 282A, concur regis)
Staff
- 216 Adv Field Training in Social Work (ar cr; prereq 221 or 282B)
Staff
- 219 Seminar for Field Training Supervisors (ar cr; prereq supervision of students in field work)
Staff
- 221 Case Work II (2 cr; prereq 220, plus 211, 236 or concur regis)
—1, II-III T, 175ForH, Connery
—2, II-III Th, 175ForH, Connery
- 222 Adv Case Work (2 cr; prereq 221)
—1, IV-V T, 175ForH, Mueller
—2, VI-VII Th, 467ForH, Boehm
—3, VI-VII Th, 457ForH, Duffin
- 225 Seminar—Family Case Work (2 cr; prereq* 221)
VI-VII T, 447ForH, Boehm
- 227 Seminar—Case Work in Psychiatric Setting (ar cr; prereq 221, concur regis 215-216-217)
VI-VII T, 467ForH, Duffin
- 236 Personality Development as It Affects Social Work (2 cr; prereq 220 or concur regis)
VI-VII T, 185ForH, Winer
- 240 Dynamics of Human Behavior Based on Psychoanalytic Theory (3 cr; prereq 235)
IX-X Th, 175ForH, Lippman
- 250 Medical Information for Social Workers (3 cr; prereq PH 50 or 51)
IX T, VIII-IX Th, 111 Owre, Mueller
- 259 Seminar—Medical Social Work (ar cr; prereq 222 or concur regis)
IV-V Th, 457ForH, Mueller
- 266 Seminar—Child Welfare (ar cr)
VI-VII T, 447ForH, Boehm
- 268 Public Welfare II (3 cr; prereq 267)
I TThS, 115ForH, Stinson
- 269 Seminar—Public Welfare Administration (ar cr; prereq 268)
IX-X F, 467ForH, Kidneigh
- 282B Prin of Group Work II (2 cr; prereq 211 plus 282A, 236 or concur regis)
II-III T, 160ForH, Konopka
- 283 Use of Program in Groups I (2 cr; prereq 282A)
II-III Th, 160ForH, Saloshin
- 288 Supervision, Administration in Group Work II (2 cr; prereq 287)
VI-VII T, 175ForH, Pernell
- 289 Seminar—Group Work (ar cr)
IX-X T, 457ForH, Konopka

- 293 Special Studies in Social Work (ar cr)
Ar
- 299 Seminar—Recent Research in Social Work (ar cr)
Ar, Stinson
- 300 Gen Seminar in Social Work (ar cr)
VIII-IX W, 467ForH, Kidneigh

SOCIOLOGY (SOC)

- 1 Introd Sociology (3 cr)
II MWF, BoAud, Martindale
- 1A Introd Sociology (3 cr, for agric, forestry, HE students)
III TThS, 102AgrBot
- 2 Intermed Sociology (3 cr)
I TThS, 20ForH, Caplow
- 14 Rural Sociology (3 cr)
IV MWF, 140ForH, Nelson, Marshall
- 14A Rural Sociology (3 cr; for agric, forestry, HE students)
IV TThS, 102Hr, Nelson, Marshall
- 45 Social Statistics (5 cr)
Lect IV MWF, 85ForH, Johnson, others
—1, VI-VII MW, 85ForH
—2, VI-VII TTh, 85ForH
- 49 Social Problems (3 cr)
II MWF, 155ForH, Mouratides
- 50 Areas of Social Work (3-4 cr; prereq 49)
II TThS, 120ForH, Yerxa
- 51 Areas of Social Work (3-4 cr; prereq 50)
III TThS, 120ForH, Yerxa
- 53 Elements of Criminology (3 cr; jr, sr; prereq 1 or 1A)
II MWF, 120ForH, Vold
- 98 Tutorial—Selected Fields (3 cr; prereq 97)
Ar
- 104 Police Probs, Practices in United States (3 cr; prereq* 1, 53, 15 cr soc sci, CW, educ, phil, or psy)
VII MWF, 170ForH, Vold
- 111 Population Trends (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
VII MWF, 115ForH, Marshall
- 115 Social Aspects of Housing, Standards of Living (3 cr; prereq* sr, 1, 15 cr soc sci, CW, educ, phil, or psy)
III TThS, 170ForH, Caplow
- 120 Social Psychology (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
II TThS, 185ForH, Weinberg
- 122 Sociology of Conflict (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 185ForH, Vold
- 140 Social Organization (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
II TThS, 20ForH, Chapin
- 141 The Family (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV TThS, 120ForH, Johnson
- 162 Rural Social Institutions (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
I MWF, 55ForH, Nelson

- 171 Social Life, Cultural Change (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 80ForH, Martindale
- 183 Probs in Social Measurement (3 cr; prereq 45 or 182)
IV TThS, 115ForH, Monachesi
- 185 Field Work, Lab Training in Social Research (2-3 cr; prereq 184)
Ar, Monachesi
- 201 Seminar—Social Psychology (ar cr)
VIII-IX T, 448ForH, Weinberg
- 202 Seminar—Research in Urban Sociology (ar cr)
VIII-IX M, 457ForH, Caplow
- 204 Seminar—Social Theory (ar cr)
VI-VII W, 448ForH, Martindale
- 207 Seminar—Statistical Theory, Relation to Social Theory, Practice (ar cr)
VIII-IX F, 448ForH, Chapin
- 210 Seminar—Probs in Population Research (ar cr)
VI-VII M, 448ForH, Marshall
- 216 Seminar—Rural Community (ar cr)
Ar, Nelson
- 239 Prin Sociology (3 cr, †238-239; prereq 238)
3:30-6:00 M, 448ForH, Monachesi
- 240 Gen Seminar (ar cr)
Ar

SPEECH AND THEATER ARTS (SPCH)

- 1 Fundamentals of Speech (3 cr, †1-2; prereq* soph)
—1, I MWF, 322F, Gilkinson, Smith, others
—2, II MWF, 322F
—3, III MWF, 40ForH
—4, IV MWF, 3F
—5, VI MWF, 2F
- 2 Fundamentals of Speech (3 cr, †1-2; prereq 1)
—1, I MWF, 306F, Gilkinson, Smith, others
—2, II MWF, 311F
—3, III MWF, 115TNM
—4, IV MWF, 322F
—5, VI MWF, 218F
—6, VII MWF, 311F
- 3 Fundamentals of Speech (3 cr; prereq* soph, 2)
III MWF, 150ForH, Gilkinson, Smith, others
- 5 Fundamentals of Speech (5 cr; prereq* soph)
—1, I MTWThF, 311F, Gilkinson, Smith, others
—2, II MTWThF, 311½F
—3, III MTWThF, 4F
—4, IV MTWThF, 311½F
—5, VI MTWThF, 322F
- 6 Fundamentals of Speech (5 cr; prereq 5)
—1, III MTWThF, 311½F, Gilkinson, Smith, others
—2, IV MTWThF, 311F
—3, VI MTWThF, 311½F

- 9 Freshman Discussion, Debate (1 cr, by petition; fresh with C aver)
Ar, Bystrom
- 32 Bgn Acting (3 cr; prereq soph, 31)
—1, II MWF, 19ScH, Whiting
—2, II MWF, 302NH, Morgan
—3, III TThS, 19ScH, Moulton
- 33 Bgn Acting (3 cr; prereq 32)
II TThS, 19ScH, Moulton
- 56 Speech Writing, Platform Speaking (3 cr; prereq 2 or 5)
III MWF, 305F, Gilkinson
- 65 Radio, Television Speech (3 cr; prereq 2 or 5)
II MWF, 302MurH, Ziebarth
- 66 Radio Drama (3 cr; prereq 2 or 5; 65 advised)
IV MWF, 302MurH, Morgan
- 67 Phonetics (3 cr; prereq 2 or 5)
II MWF, 306F, Fletcher
- 72 Play Production (3 cr; prereq 71)
IV MWF, 302NH, Walker
- 78 Adv Acting (3 cr; prereq 32)
III MWF, 302NH, Graham
- 82 Interpretative Reading (3 cr; prereq 81)
—1, IV MWF, 306F, Thompson
—2, VI MWF, 308F, Thompson
- 91 Stage Design (3 cr; prereq 31)
III TThS, IV TS, 302NH, Walker
- 97 Intercollegiate Oratory, Debate (1-3 cr; by petition soph with C aver)
Ar, Howell
- 102 Argumentation, Persuasion (3 cr)
—1, III MWF, 306F, Howell
—2, VI MWF, 306F, Howell
- 106 Discussion (3 cr; prereq 3 or 6)
VII MWF, 11F, Howell
- 112 Stage Direction (3 cr, prereq 111)
III MWF, Sem Rm ScH, Whiting
- 116 Playwriting, Production (3 cr; prereq 115)
II MWF, 105JohH, Thompson
- 124 Experiments in Gen Speech (3 cr; prereq 2 or 5, Psy 2)
II TThS, 306F, Gilkinson
- 131 Creative Dramatics (3 cr; prereq* 31 or elem ed maj)
VI MWF, 302NH, Graham
- 142 Physical Bases of Speech (3 cr; prereq 2 or 5)
VII MWF, 306F, Fletcher
- 153 Audiometry, Hearing Aids (3 cr; prereq 152)
IV MWF, 105JohH, Lassman
- 162 Speech Pathology (3 cr; prereq 2 or 5, 61, 67, 119)
VI TTh, VII Th, 306F, Bryngelson
- 165 Clinical Methods, Practice in Speech Pathology (3 cr; prereq 163)
VII-VIII W, 305F, Bryngelson
- 169 Speech, Language in Human Behavior (3 cr; prereq cons instr)
VII MWF, 213F, Henrikson

- 172 History of Theater (3 cr; prereq 2 or 5, 31)
VII TTh, VI Th, 302NH, Graham
- 182 Readings in Speech (1-3 cr; prereq 2 or 5, 6 addtl cr, cons instr)
Ar, Staff
- 192 Adv Technical Probs (3 cr; prereq 191)
III-IV S, Sem Rm Sch, Whiting
- 201 Gen Seminar (1 cr)
Ar, Gilkinson
- 204 Debate Coaching (2 cr; rereq 1-2 or 5, 101-102-103, Psy 1-2, 10 cr soc sci)
Ar, Howell
- 208 Seminar—Rhetoric, Persuasion (3 cr; prereq 3 or 6, 103, Psy 2, 140, 10 cr soc sci)
Ar, Howell
- 212 Seminar—Dramatic Theory (3 cr; prereq 113, 173 or 176, 9 cr Engl, Fren, or Ger drama)
Ar, Thompson
- 232 Seminar—Adv Speech Probs (3 cr; prereq undergrad maj spch, cons instr)
Ar, Gilkinson
- 242 Seminar—Radio Research (2 cr; prereq cons instr)
Ar, Ziebarth
- 262 Seminar—Speech Pathology (3 cr; prereq 2 or 5, 61, 67, 122, 163, Psy 2)
Ar, Henrikson
- 282 Seminar—Organic Disorders of Speech (2 cr)
Ar, Brown
- 292 Research—Special Probs (ar cr)
Ar, Staff

ZOOLOGY (ZOO)

- 2 Gen Zoology (3 cr, †1-2-3; prereq 1)
—1, Lect II TTh, 06Bo, Minnich
—2, Lect IV WF, 06Bo, Minnich
—3, Lect VII TTh, 313Z, Olson
—1, Lab I-II MF, 101Z
—2, Lab III-IV MF, 101, 107Z
—3, Lab V-VI MF, 101, 107Z
—4, Lab VII-VIII MF, 101, 107Z
—5, Lab III-IV TTh, 101, 107Z
- 15 Gen Zoology (3 cr, †14-15; prereq 14)
Lect VII TTh, 06Bo, Dawson
—1, Lab V-VI TTh, 101, 107Z
—2, Lab VIII-IX TTh, 101, 107Z
- 22 Comparative Anatomy (5 cr; prereq soph, 3)
Lect III TThS, 313Z, Eddy
—1, Lab VI-VIII TTh, Sub3Z
—2, Lab VI-VIII MW, Sub3Z
—3, Lab III-IV MWF, Sub3Z
- 52 Introd Entomology (5 cr; prereq 3)
Lect VII MWF, 313Z, Mickel
—1, Lab V-VI MWF, 401Z
—2, Lab VIII-IX MWF, 401Z
- 57 Introd Ornithology (3 cr, †57-58; prereq 3 or 15)
Lect VII TTh, 307MNH, Warner
—1, Lab V-VI TTh, 307MNH
—2, Lab VIII-IX TTh, 307MNH
- 59 Comparative Embryology (5 cr; prereq 3, 21)
Lect I TTh, 313Z, Spratt
Conf II or III S
—1, Lab II-IV TTh, 201Z
—2, Lab VI-VIII TTh, 201Z
- 82 Organic Evolution (3 cr; prereq 3 or Bot 3)
II MWF, 313Z, Dawson
- 101 Zoological Techniques (ar cr; prereq grad)
Ar
- 109 Sense Organs (3 cr; prereq cons instr)
IV MWF, 211Z, Minnich
- 113 Adv Gen Physiology (3 cr; prereq 15 cr, cons instr)
Lect VI MF, 211Z, Steinbach
Lab VI-IX W, 18Z
- 118 Animal Ecology (3 cr; prereq 15 cr zool or ent, cons instr)
Lect VI TTh, 307CofH, Hodson
Lab VII-VIII TTh, 307CofH
- 126 Adv Gen Entomology (3 cr; prereq 125)
Lect I TTh, 211Z, Mickel
Lab I-III S, 401Z
- 129 Insect Physiology (4 cr; prereq 128)
Lect VI WF, 8CofH, Richards
Lab VII-IX WF, 8CofH
- 145 Parasitic Protozoa (3 cr; prereq 15 cr, cons instr)
Lect VII TTh, 211Z, Wallace
Lab VIII-IX TTh, 208Z
- 156 Biophysics (3 cr; prereq 28 cr distributed between phys and biol, cons instr)
Ar, Schmitt
- 171 Genetics of Speciation (3 cr; prereq* 15 cr incl 83)
—1, VI MWF, 323Z, Merrell
—2, VIII MWF, 323Z, Merrell
- 198 Prob (ar cr; prereq 197)
Ar
- 202 Research—Entomology (ar cr)
Ar
- 212 Research—Ecology (ar cr)
Ar
- 218 Research—Physiology (ar cr)
Ar
- 222 Research—Biophysics (ar cr)
Ar
- 230 Research—Histology (ar cr)
Ar
- 234 Research—Embryology (ar cr)
Ar
- 238 Research—Cytology (ar cr)
Ar
- 242 Research—Protozoology (ar cr)
Ar

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| <p>252 Research—Genetics (ar cr)
Ar</p> <p>262 Research—Parasitology (ar cr)
Ar</p> | <p>292 Gen Seminar (ar cr)
Ar</p> <p>297 Seminar—Special Research Fields (ar cr)
Ar</p> |
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UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE AND TACTICS (AIR)

- 32 Air Science I** (1 cr; prereq 31)
 —1, I MWF, 309AE, Callow
 —2, II MWF, 309AE, Callow
 —3, III MWF, 259TSF, 309AE, Booher, Callow
 —4, IV MWF, 259TSF, 309AE, Booher, Callow
 —5, V MWF, 309AE, Jurgensen
 —6, VI MWF, 259TSF, 309AE, Booher, Jurgensen
 —7, VII MWF, 259TSF, 309AE, Booher, Jurgensen
 —8, VIII MWF, 309AE, Jurgensen
- 35 Air Science II** (1 cr; prereq 34)
 —1, I MWF, 9, 305AE, Young
 —2, II MWF, 9, 305AE, Young
 —3, III MWF, 9, 305AE, Young
 —4, IV MWF, 9, 305AE, Young
 —5, V MWF, 305AE, Brown
 —6, VI MWF, 9, 305AE, Brown
 —7, VII MWF, 9, 305AE, Brown
 —8, VIII MWF, 305AE, Brown
- 132A Air Science III: Supply, Administration** (3 cr; prereq 131)
 —1, I MTWThF, 12A, Kraus
 —2, IV MTWThF, 12A, Kraus
 —3, VII MTWThF, 12A, Kraus
- 132B Air Science III: Communications** (3 cr; prereq 131)
 —1, I MTWThF, 9A, Freund
 —2, IV MTWThF, 9A, Freund
- 132C Air Science III: Gen Technical Training** (3 cr; prereq 131)
 —1, III MTWThF, 9A, Aasheim
 —2, VIII MTWThF, 9A, Aasheim
- 132D Air Science III: Flight Operations** (3 cr; prereq 131)
 —1, II MTWThF, 12A, Widen
 —2, VI MTWThF, 12A, Widen
- 135A Air Science IV: Supply, Administration** (3 cr; prereq 134A)
 —1, II MTWThF, 116A, Kraus
 —2, III MTWThF, 12A, Kraus
 —3, VI MTWThF, 116A, Kraus
- 135B Air Science IV: Communications** (3 cr; prereq 134B)
 —1, II MTWThF, 9A, Freund
 —2, VI MTWThF, 9A, Freund

INSTITUTE OF CHILD WELFARE (CW)

- 40 Child Training** (3 cr; prereq soph, Psy 2)
 —1, V MW, 202Pt, Peterson
 —2, VI TTh, 202Pt, Fuller
- 80 Child Psychology** (3 cr; prereq Psy 2)
 IV MWF, 206WeH, Harris
- 131 Personality, Emotional, Social Development** (3 cr; prereq sr, 12 cr psy)
 II MWF, 202Pt, Templin
- 140 Behavior Probs in Younger Children** (2 cr; prereq sr, 12 cr psy, educ psy, or soc)
 VIII-IX T, 202Pt, Blodgett
- 141 Behavior Probs in Older Children** (2 cr; prereq sr, 12 cr psy, educ psy, or soc)
 VIII-IX Th, 202Pt, Blodgett
- 151 Childhood Education** (2 cr; prereq sr, 12 cr psy)
 VIII TTh, 5ShH, Fuller
- 160 Physical Growth, Development** (3 cr; prereq sr, 12 cr psy)
 IV MWF, 202Pt, Roff
- 170 Parent Education** (3 cr; prereq sr, 15 cr CW, HE, educ, psy, soc, or PH)
 VIII-IX F, 202Pt, Cummings
- 200 Observation, Study of Children** (1 cr; prereq 12 cr psy, 3 cr stat)
 Ar, Harris
- 221 Seminar—Current Research** (1 cr)
 VIII-IX alt W, 202Pt, Roff
- 224 Seminar—Developmental Theory** (1 cr; prereq cons instr)
 Ar, Anderson
- 231 Seminar—Recent Literature** (1 cr)
 VIII-IX alt W, 202Pt, Anderson
- 233 Research Methods** (2 cr; prereq sr, 10 cr psy or educ psy incl stat)
 VII-VIII TTh, Roff
- 241 Practicum—Behavior Probs** (ar cr; prereq cons instr)
 Ar, Harris, Blodgett
- 250 Internship—Professional Work with Children** (ar cr; prereq cons instr)
 Ar, Anderson
- 271 Readings, Research in Child Development** (ar cr)
 Ar
- 274 Technique, Field Work in Parent Education** (ar cr; prereq cons instr)
 Ar, Cummings

- 290 Mental Examination of Preschool Child (4 cr; prereq cons instr)
Ar, Blodgett

LIBRARY INSTRUCTION (LIB)

- 1 Use of Books, Libraries (3 cr)
—1, II MWF, 3Lib, Moen
—2, VII MWF, 3Lib, Makivirta
- 53 Prin School Library, Organization, Mgt (3-4 cr; prereq cons instr)
VI MWF, 5Lib, Hayner
- 61 Library Practice (3 cr; prereq 18 cr or lib exper)
Ar
- 63 Reference II (3 cr; prereq 62)
IV MWF, 5Lib, Shove
- 70 Reading Guidance (3 cr)
I MWF, 5Lib, Methven
- 82 Subject Organization of Library Materials (3 cr)
II MWF, 5Lib, Simonton
- 85 Special Probs (1-3 cr; prereq cons dir)
Ar
- 152 History of Printing to Modern Times (2 cr)
Ar, Shove
- 165 Adv Bibliography (2 cr)
III TTh, 5Lib, Shove
- 171 Prin, Probs in Reading Guidance for Children (3 cr; prereq 70)
III MWF, 5Lib, Hayner
- 256 Seminar—Library Administration (3 cr)
Ar, McDiarmid
- 261 Seminar—Adv Bibliography (3 cr)
Ar, Russell
- 272 Seminar—Library Work with Children, Young People (3 cr)
Ar, Hayner
- 275 Seminar—Reading Guidance (3 cr)
Ar, Hayner

MILITARY SCIENCE AND TACTICS (MIL)

- 2 First Year Basic Course (1 cr; prereq 1)
—1, I MWF, Armory Gym
—2, II MWF, Armory Gym
—3, III MWF, Armory Gym
—4, IV MWF, Armory Gym
—5, VI MWF, Armory Gym
—6, VII MWF, Armory Gym
—7, VIII MWF, Armory Gym
—8, II MWF, 107AgrBot
- 2G First Year Basic Medical Course (1 cr; prereq 1G)
VII T, 12 Owre
- 2H First Year Basic Dental Course (1 cr; prereq 1H)
Ar
- 2J First Year Basic Pharmaceutical Course (1 cr; prereq 1J)
Ar

- 5A Antiaircraft Artillery (1 cr; prereq 4A)
—1, III MWF, 201A, Pully
—2, III MWF, 116A, Pully
—3, VI MWF, 201A, Pully
—4, VII MWF, 116A, Pully
- 5B Engineers (1 cr; prereq 4B)
—1, III MWF, 116aA, Aliotta
—2, VI MWF, 116aA, Aliotta
- 5C Ordnance (1 cr; prereq 4C)
—1, III MWF, 105A, Wood
—2, VI MWF, 105A, Wood
- 5D Quartermaster (1 cr; prereq 4D)
—1, III MWF, 159TSF, Sullivan
—2, VI MWF, 159TSF, Sullivan
—3, VII MWF, 159TSF, Sullivan
- 5E Signal Corps (1 cr; prereq 4E)
—1, III MWF, 206A, Copley
—2, VI MWF, 206A, Copley
- 5F Transportation (1 cr; prereq 4F)
—1, III MWF, 103A, Bitler
—2, VI MWF, 103A, Bitler
—3, VII MWF, 103A, Bitler
- 5G Medical Corps (1 cr; prereq 4G)
VIII T, 12 Owre
- 5H Dental Corps (1 cr; prereq 4H)
Ar
- 5J Pharmaceutical Corps (1 cr; prereq 4J)
Ar
- 152A Antiaircraft Artillery (3 cr; prereq 151A)
—1, I MTWThF, 201A, Pully
—2, IV MTWThF, 201A, Pully
- 152B Engineers (3 cr; prereq 151B)
—1, I MTWThF, 116aA, Aliotta
—2, IV MTWThF, 116aA, Aliotta
- 152C Ordnance (3 cr; prereq 151C)
—1, I MTWThF, 105A, Wood
—2, IV MTWThF, 105A, Wood
- 152D Quartermaster (3 cr; prereq 151D)
—1, I MTWThF, 159TSF, Sullivan
—2, IV MTWThF, 159TSF, Sullivan
- 152E Signal Corps (3 cr; prereq 151E)
—1, I MTWThF, 206A, Copley
—2, IV MTWThF, 206A, Copley
- 152F Transportation (3 cr; prereq 151F)
—1, I MTWThF, 103A, Bitler
—2, IV MTWThF, 103A, Bitler
- 152G Medical Corps (1 cr; prereq 151G)
3:00-3:50 Th, 12 Owre
- 152H Dental Corps (1 cr; prereq 151H)
Ar
- 152J Pharmaceutical Corps (1 cr; prereq 151J)
Ar
- 155A Antiaircraft Artillery (3 cr; prereq 154A)
—1, II MTWThF, 201A, Pully
—2, VIII MTWThF, 201A, Pully
- 155B Engineers (3 cr; prereq 154B)
—1, II MTWThF, 116aA, Aliotta
—2, VIII MTWThF, 116aA, Aliotta
- 155C Ordnance (3 cr; prereq 154C)
—1, II MTWThF, 105A, Wood
—2, VIII MTWThF, 105A, Wood

- 155D **Quartermaster** (3 cr; prereq 154D)
 —1, II MTWThF, 159TSF, Sullivan
 —2, VIII MTWThF, 159TSF, Sullivan
- 155E **Signal Corps** (3 cr; prereq 154E)
 —1, II MTWThF, 206A, Copley
 —2, VIII MTWThF, 206A, Copley
- 155F **Transportation** (3 cr; prereq 154F)
 —1, II MTWThF, 103A, Bitler
 —2, VIII MTWThF, 103A, Bitler
- 155G **Medical Corps** (1 cr; prereq 154G)
 4:00-4:50 Th, 12 Owre
- 155H **Dental Corps** (1 cr; prereq 154H)
 Ar
- 155J **Pharmaceutical Corps** (1 cr; prereq 154J)
 Ar

MORTUARY SCIENCE (MORT)

- 2 **Anatomy for Embalmers** (3 cr; prereq 1)
 Lect I ThS, 102 IA, Swigart
 Lab II-III ThS, 301, 302, 303 IA, Swigart,
 assts
- 5 **Restorative Art** (1 cr; prereq 4)
 —1, III-IV F, 100NH, Safer
 —2, VIII-IX T, 100NH, Safer
 —3, VIII-IX Th, 100NH, Safer
- 9 **Orientation in Funeral Service** (no cr; pre-
 req 8)
 IX W, 207NH, Slater
- 12 **Chemistry for Embalmers** (2 cr; prereq 11)
 IX MWF, 225C, Pervier
- 14 **Funeral Law** (3 cr; prereq 13)
 VIII MWF, 207NH, Carney
- 16 **Funeral Mgt** (1 cr; prereq 15)
 I-II T, 218P, Slater
- 19 **Pathology for Embalmers** (2 cr; prereq 18)
 Lect III MW, 304 IA, Brunson
 Lab IV W, 304 IA, Brunson
- 21 **Embalming Theory, Practice** (3 cr; prereq
 20)
 Lect I MWF, 206WeH, Slater
 —1, Quiz III T, 207NH, Slater
 —2, Quiz VII T, 207NH, Slater
 —3, Quiz VII Th, 207NH, Slater
- 24 **Public Health, Minnesota Laws, Regulations**
 (3 cr; prereq soph)
 VI MWF, 104 IA, Brower
- 30 **Accounting** (3 cr)
 —1, II MWF, 50ForH
 —2, VII MWF, 15ForH

NAVAL SCIENCE (NAV)

- 12 **Naval Orientation** (3 cr)
 —1, Lect III MWF, 205A, Tracy
 —2, Lect IV MWF, 205A, Tracy
 —3, Lect VII MWF, 205A, Tracy
 —4, Lect VI MWF, 205A, Tracy
 Lab II Th or VIII T, Ar, Tracy
 Drill IV T, Tracy

- 22 **Naval Weapons** (3 cr)
 —1, Lect II MWF, 202A, Wood
 —2, Lect VI MWF, 202A, Wood
 —3, Lect VII MWF, 202A, Wood
 —4, Lect III MWF, 202A, Wood
 Lab II Th or VIII T, Wood
 Drill IV T, Wood
- 52 **Navigation** (3 cr)
 —1, Lect I-II TTh, 12aA, Rawie
 —2, Lect VII-VIII TTh, 12aA, Rawie
 Lab II Th or VIII T, 12aA, Rawie
 Drill IV T, Rawie
- 55 **History of the Art of War** (3 cr)
 Lect, lab ar
 Drill IV T, Lewis
- 58 **Supply Afloat** (3 cr; prereq 57)
 Lect II-III TTh, 202A, London
 Lab II Th or VIII T, London
 Drill IV T
- 62 **Diesel Engines, Ship Stability** (3 cr)
 —1, Lect II MWF, 12aA, McGuire
 —2, Lect IV MWF, 12aA, McGuire
 Lab II Th or VIII T, McGuire
 Drill IV T
- 65 **Amphibious Warfare** (3 cr)
 Lect, lab ar, Lewis
 Drill IV T
- 68 **Clothing, Small Stores, Commissary**
 (4 cr; prereq 67)
 Lect V MTWTh, 202A, London
 Lab VIII T, 202A, London
 Drill IV T

PHYSICAL EDUCATION FOR MEN (PE M)

Nonprofessional

- 1B **Sports Education** (1 cr)
 Swimming, Bgn
 —1, II MWF, PoolCH, Boyce
 —2, VII MWF, PoolCH, Thorpe
 —3, III TThS, PoolCH, Boyce
- Bowling, Bgn**
 —4, II MWF, CMU, Young
 —5, II TThS, CMU, Young
- Handball**
 —6, VII MWF, CH
- Badminton, Bgn**
 —7, IV MWF, CH, Brain
- Golf Bgn**
 —8, III MWF, CH, Bolstad
 —9, IV MWF, CH, Bolstad
 —10, II TThS, CH, Bolstad
 —11, III TThS, CH, Bolstad
- Skating, Bgn**
 —12, II MWF, Williams Arena
 —13, III MWF, Williams Arena
- Adapted Activities**
 —14, III MWF, Stad S, Osell
 —15, IV MWF, Stad S, Osell
 —16, VIII MWF, Stad S, Osell
 —17, Freshman Sport, Ar (cons coach)

- 2B Sports Education (1 cr)**
Swim, Intermed
 -1, II TThS, PoolCH, Boyce
 -2, VI MWF, PoolCH, Thorpe
 -3, IV MWF, PoolCH, Boyce
Life Saving
 -4, III MWF, PoolCH, Boyce
Swimming, Adv
 -5, IV TThS, PoolCH, Boyce
Boxing, Intermed
 -6, VIII MWF, Stad N, Chisholm
Boxing, Adv
 -7, IX MWF, Stad N, Chisholm
Wrestling, Intermed
 -8, VIII MWF, Stad N, Bartelma
Wrestling, Adv
 -9, IX MWF, Stad N, Bartelma
Squash
 -10, VII MWF, Stad N
Gymnastics
 -11, VIII MWF, CH, Ostrander
Weight Lifting
 -12, VIII MWF, CH, Ostrander
Basketball
 -13, VII MWF, CH, Vancisin
Volleyball
 -14, III MWF, CH
Badminton, Adv
 -15, III T, III-IV Th, CH, Brain
Square, Folk Dancing
 -16, III MWF, NGW, Bell
Ballroom Dancing
 -17, III TTh, hr ar, NGW, Bell
Fencing
 -18, VIII MWF, CH, Uebel
Skating, Adv
 -19, IV MWF, Williams Arena
Body Building
 -20, VIII MWF, Stad S, Osell
Varsity Sport
 -21, Ar (cons coach)

PHYSICAL EDUCATION FOR WOMEN (PE W)

Nonprofessional

Aquatics

- Swimming, Bgn**
 III MWF, 51NGW (1½ cr)
Swimming, Adv Bgn
 -1, III TTh, 51NGW (1 cr)
 -2, VI TTh, 51NGW (1 cr)
Swimming, Intermed
 VII TTh, 58NGW (1 cr)
Swimming, Intermed Adv
 VIII MWF, 58NGW (1½ cr)

- Sr Life Saving**
 VI MWF, 58NGW (1½ cr)

Body Building

- Indiv Body Building**
 -1, II MWF, 153A, 201NGW (1½ cr)
 -2, IV MWF, 153A, 201NGW (1½ cr)
 -3, VI MWF, 153A, 201NGW (1½ cr)
 -4, II TTh, 153A, 201NGW (1 cr)
 -5, III TTh, 153A, 201NGW (1 cr)

Individual Sports

- Archery, Elem**
 V TTh, 60NGW (1 cr)
Badminton, Elem
 -1, II MWF, 60NGW (1½ cr)
 -2, III MWF, 60NGW (1½ cr)
 -3, V MWF, 153NGW (1½ cr)
Badminton, Intermed
 IV MWF, 60NGW (1½ cr)
Bowling, Elem
 -1, II MWF, Union, 201NGW (1½ cr)
 -2, III MWF, Union, 201NGW (1½ cr)
 -3, II TTh, Union, 201NGW (1 cr)
 -4, III TTh, Union, 201NGW (1 cr)
Fencing, Elem
 VI MWF, 60NGW (1½ cr)
 II TTh, 60NGW (1 cr)
Rifemanship
 -1, II TTh, Armory, 201NGW (1 cr)
 -2, V TTh, Armory, 201NGW (1 cr)
 -3, VI TTh, Armory, 201NGW (1 cr)
Skating, Elem
 -1, II MWF, Arena, 201NGW (1½ cr)
 -2, III MWF, Arena, 201NGW (1½ cr)
Skating, Elem
 VII, VIII T, 201, 153NGW (1 cr)
Tennis, Elem
 VIII TTh, 151NGW (1 cr)

Rhythms

- Ballroom Dance, Elem**
 -1, III TTh, 151NGW (1 cr)
 -2, VIII TTh, 153NGW (1 cr)
Folk, Square Dance
 III MWF, 151NGW (1½ cr)
Modern Dance, Elem
 -1, IV MWF, 151NGW (1½ cr)
 -2, VII MWF, 151NGW (1½ cr)
Modern Dance, Intermed Adv
 -1, VI MWF, 151NGW (1½ cr)
 -2, II TTh, 153NGW (1 cr)
Tap Dance, Elem
 VII TTh, 153NGW (1 cr)

Team Sports

- Basketball**
 -1, I MWF, 151NGW (1½ cr)
 -2, VI TTh, 151NGW (1 cr)
Volleyball
 III TTh, 153NGW (1 cr)

COURSE FEES

All fees are per quarter unless otherwise indicated.

Aeronautical Engineering

\$3.00—lab fee for all soph, jr, sr students in aero engr
4.50 per solo hr—20 (pay at U Airport)
7.50 per dual hr—20 (pay at U Airport)
42.00—46 (no fee for aero engr)

Agricultural Education

\$1.50 per cr—82, 91, 199E

Agricultural Engineering

\$1.00—5, 7, 13, 14, 19, 20, 21, 23, 24, 25,
33, 35, 40, 72
3.00—42
6.00—41, 43

Agronomy

\$2.00—136

Architecture

\$3.00—AD I, AD II, AD III, 40
10.00—AD IV

Art

\$1.00—1, 2, 3, 4, 5, 11, 12
2.00—20, 20A, 21, 21A, 22A, 43, 44, 45,
87, 88, 89, 97, 98, 99, 103, 104, 105,
153, 154, 155, 193, 194, 195
3.00—23A, 24A, 25A, 30, 31, 50, 51, 52,
60, 60A, 61, 61A, 62, 62A, 70, 71, 72,
110, 111, 112, 150, 151, 152, 200, 201,
202
5.00—10, 23, 24, 25, 40, 41, 42, 53, 54,
55, 63, 64, 65, 73, 74, 75, 80, 81, 82, 90,
91, 92, 93, 94, 95, 101, 102, 180, 181,
182, 190, 191, 192
7.50—140, 141, 142, 143, 144, 145
10.00—83, 83A, 84, 84A, 85, 85A, 123,
124, 125
15.00—133, 134, 135

Art Education

\$1.50—17, 18, 19
2.00 per cr—84, 86, 86A, 87, 87A, 88,
88A, 185
2.00—81A, 81B
3.00—56, 57, 58

Astronomy

\$1.00—20

Bacteriology

\$3.00—53, 102, 103, 104, 112, 113, 114,
115, 116, 122, 124

Biological Station

\$5.00 per term—lab fee

Botany

\$1.50—1, 2, 3, 50, 51, 52, 53, 54, 112, 113,
114, 115, 118, 119, 121, 127, 130, 132,
134, 137, 165, 194, 195, 196, 197, 198,
199
2.25—4, 5
3.00—120, 123, 154, 173, 174, 175, 179,
180, 181

Business Administration

\$1.00—170, 171
2.00—65, 66, 74, 150, 152

Civil Engineering

\$2.00—51, 52, 53, 137, 146
35.00 per term—23 (summer camp)

Communication

\$1.00—1

Curriculum and Instruction

\$2.00 per cr—all courses

Economics

\$2.50 for one or more courses—32, 33,
34, 35, 37, 38, 39, 40, 41, 42, 43

Education

\$2.00 per cr—51A, 51B, 51C, 55A, 55B,
71A, 71B, 71C

Educational Psychology

\$1.00—217, 218
1.50 per cr—142, 143, 144, 150
1.50—216A, 217A, 218A

Electrical Engineering

\$1.00—12, 14, 112, 114, 116, 118, 120, 127,
128, 129
2.00—16, 122, 124, 126, 164, 165, 166

Engineering English

\$1.00—4

Entomology

\$1.50—5, 21, 51, 52, 56, 63, 64, 114, 117,
118, 119, 120, 121, 125, 126, 127, 141,
142, 144, 145, 146, 150, 164, 165, 166,
170, 175, 176, 179
5.00—55, 128, 129, 140, 168, 169, 177

Family Life

\$3.00—14

General College

\$1.00—10A

1.50—22A, 22B, 22C, 22X, 23AX, 23BX,
23CX, 23DX, 24A, 24B, 24C, 24AX,
24BX, 24CX, 25A, 25B, 25C, 25D,
25X, 28, 32A, 32B, 32C, 32D, 32AX,
32BX, 32CX, 33A, 33B, 33C, 33AX,
33BX, 33CX

2.00—23A, 23B, 23C, 23D

2.50—47A

5.00—26A, 26B

Geology

\$1.00—A, B, 23, 24

5.00—175

10.00—100, 115, 150

Home Economics

\$2.00—25 (bgn fall qtr '51)

Home Economics Education

\$2.00 per cr—91, 93, 94, 197, 199E

Humanities

\$1.00—1, 11, 21, 51, 61, 71

Industrial Education

\$1.50 per cr—1, 2, 3, 5, 6, 7, 10, 11, 12,
15, 16, 20, 21, 25, 26

2.00 per cr—50A, 50B, 50C, 70, 75

Journalism

\$1.00 general fee for one or more
courses, excluding Journ 5

2.00 plus general fee—51, 58, 59, 67, 68

3.00 plus general fee—41, 52, 55

5.00 plus general fee—10, 66

Library Science

\$3.75 per cr (max \$45.00)—for all
courses for resident students, ex-
cluding Lib 1

8.50 per cr (max \$100.00)—for all
courses for nonresident students, ex-
cluding Lib 1

Note: Students paying max fee may
take other courses with no college
tuition charge

Mathematics and Mechanics

\$1.00—87, 141, 143

Mechanical Engineering

\$2.00—1, 4, 5, 6, 7, 8, 12, 13, 14, 15, 16,
17, 18, 33, 34, 35, 61, 110, 111, 112,
113, 114, 118, 149, 159, 169, 189, 198

Methods and Student Teaching

\$2.00 per cr—all courses

Modern Language Institute (Summer Session)

\$20.00 per term—Russian (51, 52, 53)

40.00 per term—French (22, 58, 109);
or German (22, 66, 107); or Spanish
(22, 58, 109)

Mortuary Science

\$1.00—1, 2

1.50—4, 5, 6

3.00—7, 20, 21, 22

Music

\$1.50—10, 31, 32, 33, 34, 35, 36, 50, 51,
52, 53, 54, 55, 56, 57, 58

15.00—Class lessons in 11C, 12C

30.00 for one (no cr) individual lesson
per week—A, B, C, D, E, F

30.00 for one (2 cr), \$60.00 for two (4 cr)
individual lessons per week—11,
12, 13, 14, 15, 16, 17, 18, 19, 20, 21,
22, 23, 24, 25, 26, 27

60.00—204 (bgn fall qtr '51)

Music Education

\$1.50 per cr—4, 5, 6, 59, 63, 64, 65

2.00 per cr—50A, 50B, 53, 60, 61, 62

30.00 for one (2 cr), \$60.00 for two (4
cr) lessons per week—225E

Natural Science

\$1.00—1, 2, 3, 4, 5, 6

2.00 (bgn fall qtr '51)—7, 8, 9

Physical Education (men)

\$1.00 per cr—1A, 1B, 1C, 2A, 2B, 2C

1.50 per cr—4A, 4B, 4C, 5A, 5B, 5C,
6A, 6B, 6C, 7A, 7B, 7C, 8, 9A, 9B,
60B

2.00 per cr—55, 73, 74, 75

Note: Towel and locker fee for stu-
dents using PE facilities for activity,
\$2.50 per qtr payable at dept. Uni-
forms for class or recreational ac-
tivity, \$2.00 per qtr payable at dept.

Physical Education (women)

\$2.00 per cr—47, 48, 57A, 57B, 90A, 90B, 90C, 94

2.00—50, 51 (or both)

2.50 (max \$5.00 per qtr)—All nonprofessional, 20A, 20B, 20C, 21A, 21B, 21C, 21D, 21E, 22A, 22B, 22C, 40A, 40B, 40C, 41A, 41B, 42

Physical Medicine

\$3.00—75

Physics

\$2.00—1a, 2a, 3a, 4, 5, 6, 7, 8, 9, 50, 52, 110, 112, 120, 121, 122, 134, 136, 144, 145, 146, 148, 154

Psychology

\$1.00—4, 5, 135, 136, 137

2.00—130, 290, 291

Public Health

\$1.00 per cr—65, 66, 67, 119, 129, 138, 139, 173, 190

1.00—80, 140, 150

1.50—121, 131

2.00—111

3.00—143, 144, 184, 185, 186, 187, 188

100.00—169

Rhetoric

\$1.00—1, 12, 22, 28, 54, 59

Social Work

\$5.00—210, 211, 212, 215, 216, 217

Soils

\$2.00—108, 111

Speech

\$1.00—1, 2, 3, 5, 6, 51, 55, 56, 57, 61, 65, 67, 81, 82, 83, 141, 142

2.00—31, 32, 33, 34, 66, 71, 72, 73, 78, 79, 91, 92, 93, 111, 112, 113, 131, 132, 133, 143, 153

Technical Aid

\$2.00—80A, 80B, 81, 81A, 81B, 82A, 82B, 83A, 84, 84A, 85A

Zoology

\$1.50—21, 51, 52, 53, 55, 57, 58, 59, 75, 81, 100, 101, 102, 107, 108, 109, 110, 111, 115, 116, 117, 118, 119, 120, 121, 125, 126, 127, 132, 143, 144, 145, 146, 149, 150, 155, 156, 157, 160, 161, 162, 170, 180, 183, 184, 185

2.00—1, 2, 3, 14, 15

3.00—50, 112, 113

3.00 per term—1st term Summer Session; 2nd term Summer Session

5.00—128, 129, 140

8.00—182

10.00—22

FEEES FOR COURSES REQUIRING DEPOSIT CARDS

Deposit cards may be purchased from the bursar (or from the cashier, Coffey Hall, for Agricultural Biochemistry). Chemistry and biochemistry cards are \$10.00; all others are \$5.00.

The course fees listed below will be charged against your deposit card, together with laboratory, material and breakage, and the unused balance credited to your matriculation deposit at end of the course. You must present your deposit card to be assigned a lab desk. Veterans will receive information from their instructor concerning deposit cards and lab assignments.

Agricultural Biochemistry

\$2.00—2

5.00—103, 110, 117, 118, 129, 130, 131, 132, 133, 202, 203, 212

Analytical Chemistry

\$3.00—1, 2, 7, 9, 96, 97, 98, 101, 102, 103, 104, 105, 106, 107, 108, 109, 122, 123, 127, 131, 132, 134, 138, 140

Chemical Engineering

\$3.00—105, 106, 111, 112, 113, 151, 152, 153, 154, 155, 156, 160, 176, 177, 179

Food Technology

\$5.00—51, 52

Inorganic Chemistry

\$3.00—1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 96, 97, 98, 102, 109, 110

Organic Chemistry

\$3.00—61, 62, 64, 96, 97, 98, 102, 130
10.00—110, 139

Pharmacognosy

\$3.00—55, 56
5.00—162, 163

Pharmacy

\$5.00 deposit required of all soph, jr,
sr students in Pharmacy

Physical Chemistry

\$3.00—96, 97, 98, 104, 105, 106, 107, 108,
110, 111, 112, 113, 132, 133, 134, 211,
212, 213, 231

Physiological Chemistry

\$3.00—100, 101, 102, 103

SPECIAL FEES

Supplement to General Information Bulletin.

Music Practice

\$1.00 per qtr for one, \$2.00 for two, 50
cents for each addtl hr per week—
piano, practice room
.20 per hr—small organ, practice
room
.40 per hour—large organ, practice
room
2.00 per qtr for 10 hrs per week—
practice room for other instruments

Speech and Hearing Clinic—Students

\$5.00 per qtr—spec clinical treatment

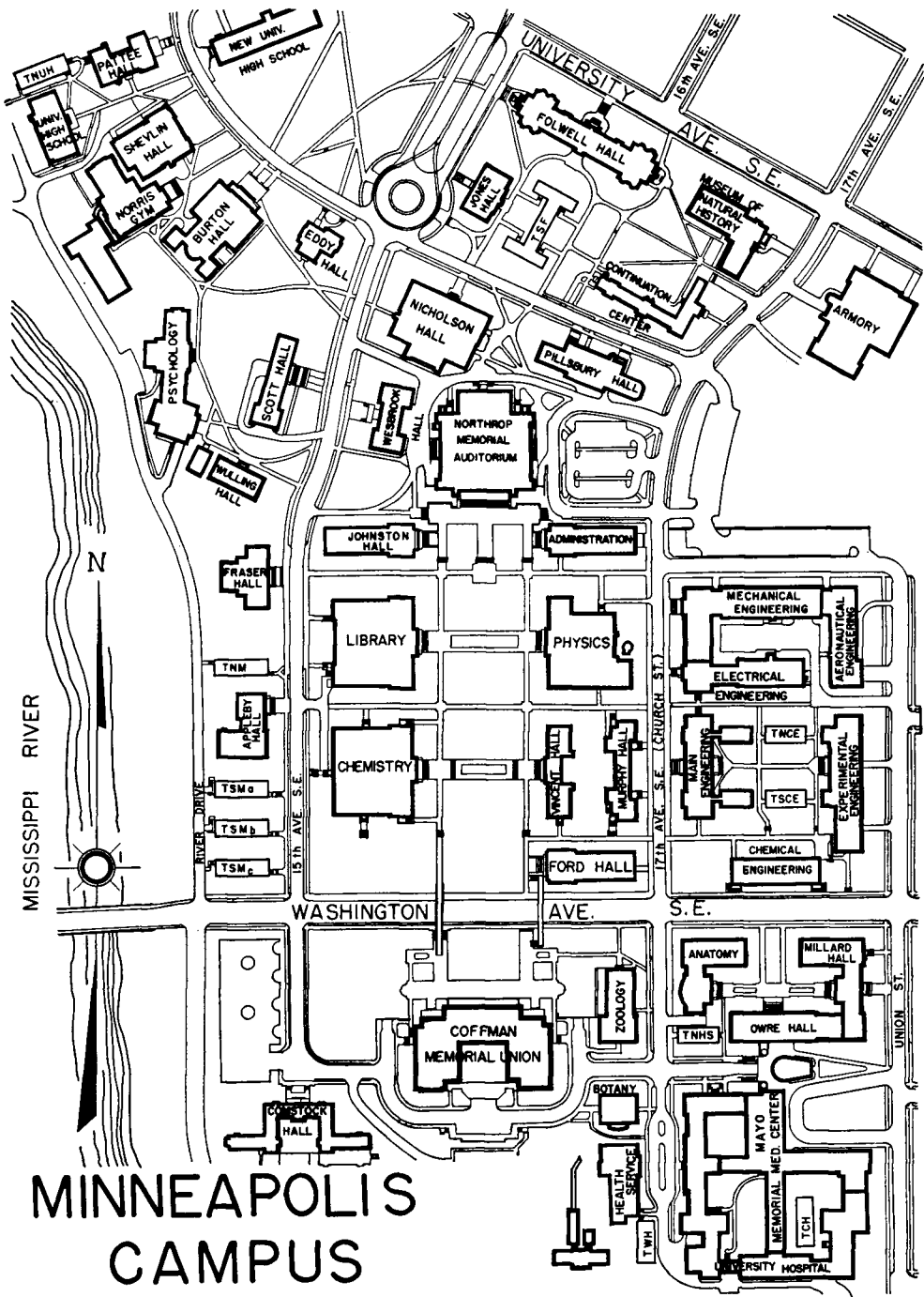
**Speech and Hearing Clinic—Nonstu-
dents**

Articulatory cases, per 10 weeks—\$15.00
for 1, \$25.00 for 2, \$30.00 for 3, \$35.00
for 4, \$40.00 for 5 lessons per week

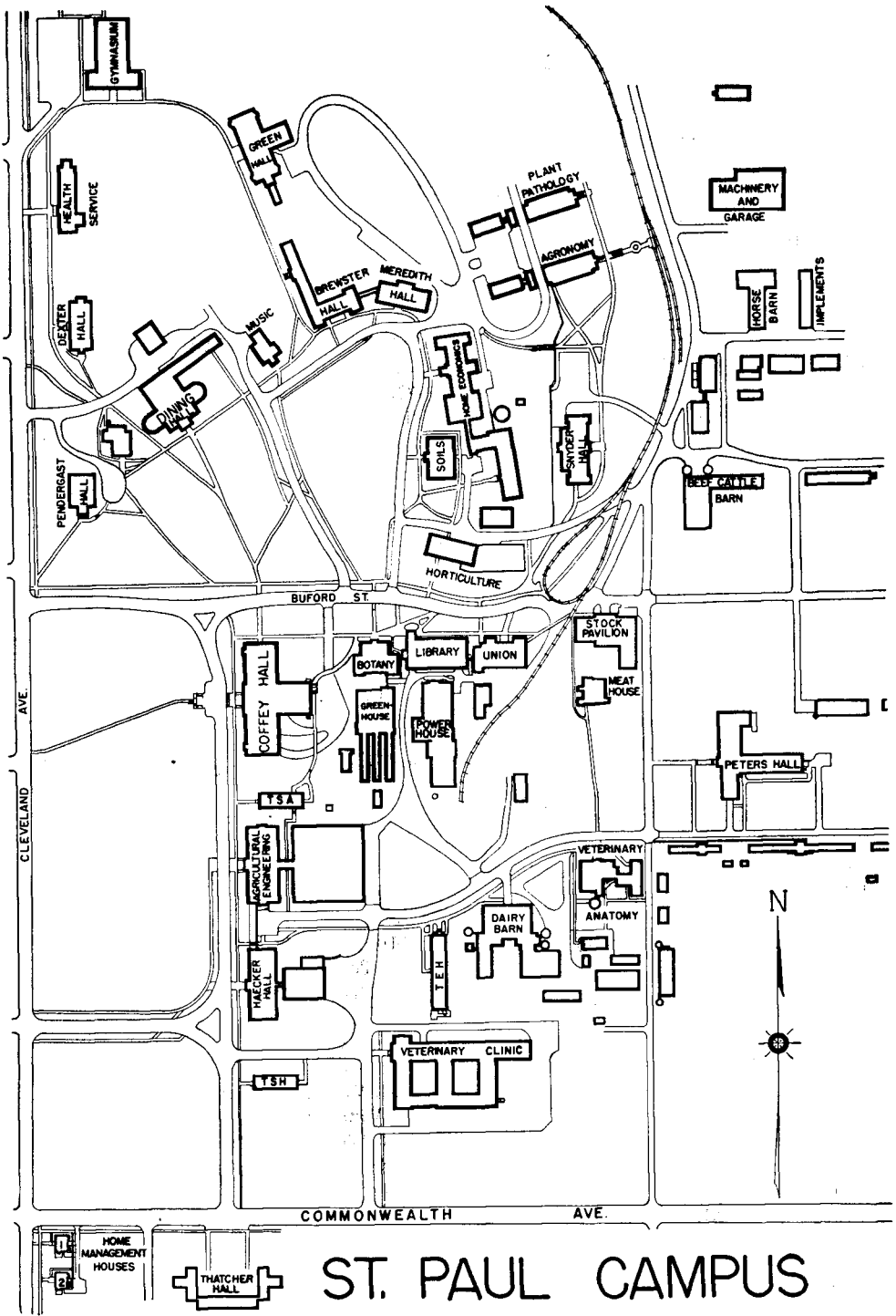
Stuttering, per 7 weeks—\$30.00 for one
qtr time, \$50.00 for half time, \$100.00
for full time remediation

Miscellaneous

\$2.50—Placement service, required of
degree candidates in IT (bgn fall
qtr '51)
10.00—Graduation fee for Technical
Aid certificate
13.85—Duluth Branch incidental fee
(bgn fall qtr '51)
15.00—Professional engineering thesis
exam
26.00—Exam to determine adv standing
in Dentistry
35.00—PhD thesis publication



MINNEAPOLIS CAMPUS



ST. PAUL CAMPUS

BUILDING ABBREVIATIONS

A, Armory
Adm, Administration
AE, Aeronautical Engineering
Ag(StP), Agronomy
AgrBot(StP), Agricultural Botany
AH, Appleby Hall
Bo, Botany
Bu, Burton Hall
C, Chemistry
CH, Cooke Hall
ChE, Chemical Engineering
CofH(StP), Coffey Hall
DCB(StP), Dairy Cattle Barn
E, Main Engineering
EdH, Eddy Hall
EE, Electrical Engineering
En(StP), Agricultural Engineering
Ex, Experimental Engineering
F, Folwell Hall
ForH, Ford Hall
FraH, Fraser Hall
GH(StP), Green Hall
Gy(StP), Gymnasium
HE(StP), Home Economics
HoB(StP), Home Building
Hosp, University Hospitals
Hr(StP), Horticulture
IA, Institute of Anatomy
J, Jones Hall
JohH, Johnston Hall
Lib, Library
LsPav(StP), Livestock Pavilion
MB(StP), Music Building
ME, Mechanical Engineering
MeH(StP), Meredith Hall
MEx, Mines Experiment Station
MH, Millard Hall
MNH, Museum of Natural History
MSh(StP), Meat Shop
MurH, Murphy Hall
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
OSL, Oak Street Laboratories
Owre, Owre Hall (formerly Medical Sciences)

P, Pillsbury Hall
PetH(StP), Peters Hall
Ph, Physics
PoH, Louise M. Powell Hall for Nurses
PP(StP), Plant Pathology
Psy, Psychology
Pt, Pattee Hall
ScH, Scott Hall
ShH, Shevlin Hall
SnH(StP), Snyder Hall
So(StP), Soils
TCH, Temporary, Court of Hospitals
TEH(StP), Temporary, East of Haecker
TNCE, Temporary, North Court of Engineering
TNHS, Temporary, North of Health Service
TNM, Temporary, North of Mines (Appleby Hall)
TNUH, Temporary, North of University High School
TSA(StP), Temporary, South of Administration (Coffey Hall)
TSCE, Temporary, South Court of Engineering
TSF, Temporary, South of Folwell
TSH(StP), Temporary, South of Haecker Hall
TSMa, First Temporary, South of Mines (Appleby Hall)
TSMb, Second Temporary, South of Mines (Appleby Hall)
TSMc, Third Temporary, South of Mines (Appleby Hall)
TSP, Temporary, South of Powell Hall
TWH, Temporary, West of Hospitals
UHS, University High School
VCHH, Variety Club Heart Hospital
VetA, Veterinary Anatomy
VetC, Veterinary Clinic
VH, Vincent Hall
WeH, Wesbrook Hall
WuH, Wulling Hall
Z, Zoology

FINAL EXAMINATIONS

Final Examination Schedule—The time of examination is based on the hours and days the class is regularly scheduled during the quarter. For purposes of determining the proper examination time:

- Use the lecture hour rather than the laboratory or recitation periods.
- Use the MWF sequence if scheduled four or more days per week.
- Use the first class hour if scheduled two or more hours a day.

This schedule does not apply to courses offered primarily to students registered in Pharmacy, Law, Medicine, and Dentistry; to classes meeting after 6:00 o'clock p.m.; and to courses numbered 200 and over which have no regularly scheduled classroom.

I	MWF	8:00-10:00	T	Mar 18	VII	MWF	1:30-3:30	Th	Mar 20
I	TThS	10:30-12:30	T	Mar 18	VII	TTh	4:00-6:00	Th	Mar 20
II	MWF	8:00-10:00	W	Mar 19	VIII	MWF	1:30-3:30	S	Mar 15
II	TThS	10:30-12:30	W	Mar 19	VIII	TTh	4:00-6:00	S	Mar 15
III	MWF	8:00-10:00	Th	Mar 20	IX	MWF	1:30-3:30	F	Mar 14
III	TThS	10:30-12:30	Th	Mar 20	IX	TTh	4:00-6:00	F	Mar 14
IV	MWF	8:00-10:00	S	Mar 15	X	MWF	1:30-3:30	M	Mar 17
IV	TThS	10:30-12:30	S	Mar 15	X	TTh	4:00-6:00	M	Mar 17
V	MWF	1:30- 3:30	T	Mar 18	Classes meeting on Saturdays only:				
V	TTh	4:00- 6:00	T	Mar 18	I, II	S	10:30-12:30	S	Mar 15
VI	MWF	1:30- 3:30	W	Mar 19	III, IV	S	1:30- 3:30	S	Mar 15
VI	TTh	4:00- 6:00	W	Mar 19					

Common Examinations—For courses having common examinations, all sections are examined together at one time irrespective of the regularly scheduled hours and days. A list of courses for which common examinations are given will be published in the Official Daily Bulletin.

Length of Examinations—Examinations for classes scheduled four or more days a week may continue into the examination period established for TThS classes provided the instructor notifies the Room Scheduling Office of his intention to do this.

Conflicts—Students shall consult their college office regarding procedure to follow in case of examination conflicts.

Rooms—Examinations are given in the regularly scheduled classroom unless the instructor arranges for and announces a different examination room.

STUDENT'S COPY OF WINTER QUARTER CLASSES

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
I						
II						
III						
IV						
V						

CALENDAR

December

- 25 Holiday (Christmas)
- 27 Winter quarter fees due for students in residence fall quarter in undergraduate colleges

January

- 1 Holiday (New Year's Day)
- 3-4 Orientation program; registration and payment of fees for new students in all undergraduate colleges
- 7 Winter quarter classes begin
- 11 Last day for registration and payment of fees for the Graduate School and for teachers in service

February

- 12 Holiday (Lincoln's Birthday)
- 21 Senate meeting, 3:00 p.m.
- 22 Holiday (Washington's Birthday)
- 24- University of Minnesota Week
- 28 Charter day convocation at 11:30 a.m.; IV hour classes excused

March

- 14-20 Final examination period
- 20 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
- Commencement, 8:00 p.m.
- 22 Winter quarter closes

STUDENT'S COPY OF WINTER QUARTER CLASSES

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
VI						HAVE YOU CHECKED ALL SECTION NUMBERS
VII						
VIII						
IX						Course—Section Room—Building
X						

DECEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JANUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

MARCH

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

REGISTRATION TALLY PROCEDURE

AGRICULTURE, FORESTRY, HOME ECONOMICS, AND VETERINARY MEDICINE

Tally at 203dCofH for all courses except the following (courses numbered 200 and over are not tallied).

AgEn 18, 36, 51, 61, 73, 106, 112, 126, 167 tallied at 136E

HE 1, 20, 31, 40, 70, 85, 120 tallied at 210JohH for SLA and 203dCofH for all other students
HE 56 tallied at 210JohH

BUSINESS ADMINISTRATION

Tally at 107VH for all courses except the following:

BA 183, 198, 199, 263 not tallied

Econ 33, 34, 35, 38, 41, 201, 214, 234, 251 not tallied

Econ 2, 5, 6, 7 tallied at 107VH for BA, and 210JohH for all other students

Econ 8, 9, 28 tallied at 136E

Econ 30 tallied at 101WuH

Other Econ courses tallied at 210JohH for all students except those registered in the School of Business Administration

EDUCATION

Tally at 204Bu for courses listed below unless otherwise indicated. Other courses are not tallied.

AgEd 54, 81, 91, 101, 102, 104, 154 tallied at 203dCofH

ArEd 17, 18, 57, 84

Ed 55A, 55B, 71B

EdCI 63, 109, 125

EdPsy 125, 134, 217a

HEd 180

HEEd 91, 92, 93, 94, 95, 192, 193B, 194A, 197, 199E tallied at 203dCofH

Ind 2, 6, 12, 15

MuEd 5, 50A, 50B, 59, 60, 61, 62, 63, 65, 105E, 224E

PE (women) 25, 58

GENERAL COLLEGE

Tally at 106NH for all courses

INSTITUTE OF TECHNOLOGY

Tally at 136E for all courses except the following (courses numbered 200 and over are not tallied).

Draw 44, 45 tallied at 210JohH

InCh 1, 5 tallied at 203dCofH for Agric, 136E for IT, and 210JohH for all other students

InCh 4 tallied at 210JohH

InCh 6, 7 tallied at 101WuH for Pharm, 136E for IT, and 210JohH for all other students

InCh 10, 11 tallied at 136E for IT, and 210JohH for all other students

OrCh 61 tallied at 210JohH

OrCh 62 tallied at 101WuH for Pharm, and 136E for all other students

PhCh 108 tallied at 210JohH

MEDICAL SCIENCES

The courses listed below are tallied as indicated. Other courses are not tallied.

Bact 53 tallied at 203dCofH for Agric, 125 Owre for Nurs, 121MH for PH nurs, 605WHosp for Med Tech, 209TWH for PT, and 210JohH for SLA students

PH 52b tallied at 203dCofH

PH 111, 131 tallied at 210JohH

SCIENCE, LITERATURE, AND THE ARTS

Courses listed below are tallied at 210JohH unless otherwise indicated. Other courses are not tallied.

Art 1, 2, 10, 23, 24, 25, 30, 31, 34, 41, 42, 47, 57, 60, 61, 62, 70, 71, 72, 83, 89, 90, 91, 92, 97, 103, 104, 105, 110, 111, 112, 117, 123, 127, 137, 140, 141, 142, 147, 150, 151, 152, 157A, 177, 180, 181, 182, 190, 191, 192, 193, 194, 195, 196, 197, 198

Art 23A, 24A, 60A, 61A, 62A tallied at 136E

Bot 2 tallied at 101WuH for Pharm, 203dCofH for Agric, and 210JohH for all other students

Bot 53, 118, 127

Comm 1, 2, 3

Comp 5 tallied at 106 Owre for Dent Hyg, 155NH for Mort Sci, 101WuH for Pharm, and 210JohH for all other students

Comp 4, 6, 27, 28, 102

Comp 58 tallied at 107VH

Engl A, B, C, 22, 55, 56, 74, 98, 226, 241, 247, 254, 263, 278, 285, 288

FL 1, 15, 20, 25

Fren 1, 2, 2A, 3, 4, 50

Geog 1, 4, 138

Geog 41 tallied at 107VH for BA, and 210JohH for all other students

Geol A, B, 1, 2, 102, 166

Geol 6 tallied at 136E

Geol 24 tallied at 136E for IT, and 210JohH for all other students

Germ 1, 2, 3, 4

Germ 25, 28, 42 tallied at 136E

Hist 1, 2, 21 tallied at 136E for IT, and 210JohH for all other students

Hist 5, 53, 54, 60, 71

Hum 1, 2, 3, 4, 12, 52 tallied at 136E for IT, and 210JohH for all other students

Hum 22, 62, 72
 Journ 10 tallied at 203dCofH for Agric, and 107TSF for all other students
 Journ 11, 13, 14, 41, 51, 55, 58, 66, 67, 74, 86, 87, 101, 109, 118A, 118B, 118C, 141
 Math 1, 6, 7 tallied at 203dCofH for Agric, and 210JohH for all other students
 Math 8, 20 tallied at 107VH for BA, and 210JohH for all other students
 Math 15, 16, 20, 30, 50, 51, 52, 62, 106, 107, 119, 122, 145, 158
 Mus 1, 1T, 2T, 4T, 5T, 11C, 12C, 35, 44, 47
 Mus 44 StP tallied at 203dCofH
 NSci 2, 5, 8
 Phil 1, 2
 Phys 8, 9 tallied at 136E
 PO 1, 11
 Pol 2
 Psy 1, 2 tallied at 125 Owre for Nurs, 203dCofH for Agric, 136E for IT, and 210JohH for all other students
 Psy 4, 5, 102, 114, 126, 130, 145, 221
 Russ 2
 Soc 1A, 14A tallied at 203dCofH
 Soc 45
 Span 1, 2, 2A, 3, 4, 20, 54, 71
 Spch 2 tallied at 106 Owre for Dent Hyg, and 210JohH for all other students
 Spch 1, 3, 5, 6, 32, 33, 65, 66, 67, 72, 78, 82, 91, 102, 106

SSci 1, 2, 3, 12, 82 tallied at 136E for IT, and 210JohH for all other students
 SW 221, 222
 Zool 2 tallied at 106 Owre for Dent Hyg, 155NH for Mort Sci, and 210JohH for all other students
 Zool 15 tallied at 101WuH for Pharm, 125 Owre for Nurs, 203dCofH for Agric, and 210JohH for all other students
 Zool 22, 52, 57, 59, 82, 109, 113, 118, 126, 145, 171
 Zool 129 tallied at 203dCofH for Agric, and 210JohH for all other students

UNATTACHED UNIVERSITY DEPARTMENTS

Air 32, 35, 132A, 132B, 132C, 132D, 135A, 135B tallied at 1A
 CW 40 tallied at 210JohH
 Lib 1 tallied at 210JohH
 Mil 2 tallied at 203dCofH for Agric, and Armory drill floor for all other students
 Mil 5A, 5B, 5C, 5D, 5E, 5F, 152A, 152B, 152C, 152D, 152E, 152F, 155A, 155B, 155C, 155D, 155E, 155F tallied at Armory drill floor
 Mort 2, 5, 9, 12, 14, 16, 19, 21, 24, 30 tallied at 155NH
 Nav 12, 22 tallied at 203A
 PE (men) 1B (secs 4, 5, 7, 8, 9, 10, 11, 12, 13), 2B (secs 15, 17, 18, 19) tallied at 210JohH

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