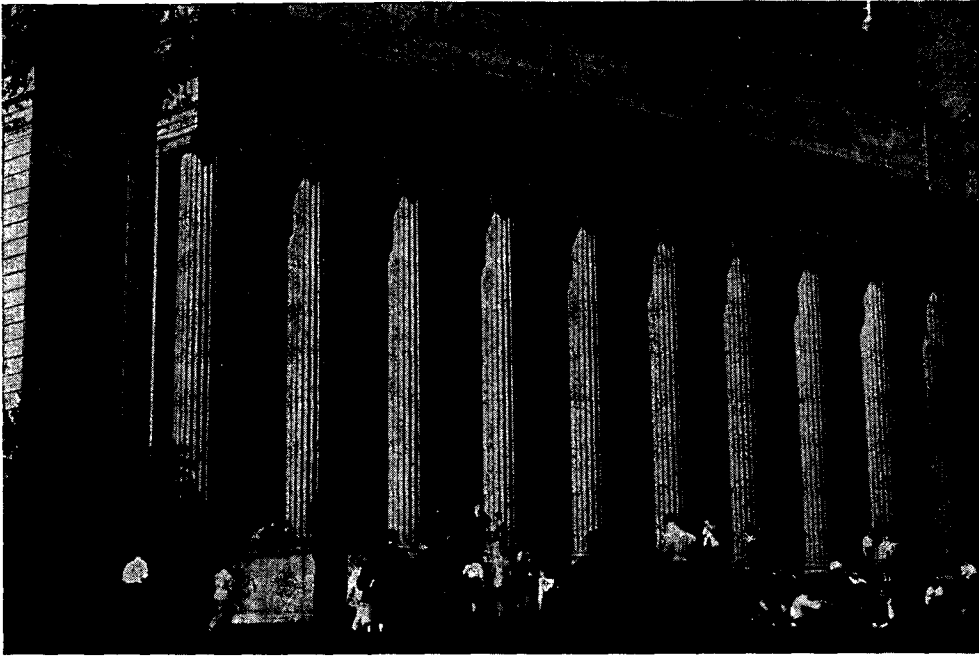


3/10/54

4/28/54

Bulletin of the
UNIVERSITY OF MINNESOTA



General Information 1954-1955

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Front cover—Cyrus Northrop Memorial Auditorium. Inscription on façade:
 FOUNDED IN THE FAITH THAT MEN ARE ENNOBLED BY UNDERSTANDING,
 DEDICATED TO THE ADVANCEMENT OF LEARNING AND THE SEARCH FOR
 TRUTH, DEVOTED TO THE INSTRUCTION OF YOUTH AND THE WELFARE OF
 THE STATE.

University of Minnesota

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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, and Home Economics and the School of Veterinary Medicine are on the St. Paul Campus. At Duluth is the Duluth Branch. Each campus has an Office of Admissions and Records.

Who May Enter the University

The colleges of the University invite applications for admission from: (1) Minnesota residents who have been graduated from accredited high schools, or those who have Equivalence Certificates; (2) students who have completed college work elsewhere; (3) nonresidents who present above-average high school or college records (page 10); (4) non-high school graduates who hope to qualify by examination (page 8); (5) mature men and women (usually 24 years or older) who want single courses or groups of courses to meet special personal needs and not for degree purposes.

The professional schools or colleges consider applications from students who have completed (depending on the individual college requirement) one to three years of preprofessional college level education.

The Graduate School considers applications from any student who has a Bachelor's degree from a recognized college or university (see page 10).

How and When to Apply for Admission

All applications for admission to undergraduate schools are received by the University's Offices of Admissions and Records on the Minneapolis, St. Paul, and Duluth Campuses. If you wish to apply for admission, you may secure application forms from any of these offices. Freshman application forms are also available at Minnesota high schools. All completed applications should reach the Office of Admissions and Records on the appropriate campus at least four weeks before the quarter in which you wish to be enrolled. An admission certificate and registration instructions are directed to successful applicants.

Admission from High School

If you have been graduated from an accredited high school, are a Minnesota resident, and meet the requirements of the college or division of the University you wish to enter, you may be admitted to the University without special examinations. (See page 38 for definition of "nonresident.")

Anyone who wishes to attend college but thinks he may not be admissible (because he did not graduate from high school or failed to take certain courses believed necessary for college entrance) and those in doubt about course offerings are invited to write to the Admissions Officer at the University of Minnesota. Almost every college of the University has made special arrangements to select worthy applicants regardless of their precollege training. See also Admission by Examination.

Requirements for the entrance of high school graduates to individual divisions of the University are described in the next sections of this bulletin. A high school unit, wherever used, stands for a year of work of approximately 180 class hours in a given subject.

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS. This College, the University's largest—usually called "the Arts College"—admits high school graduates who have college aptitude ratings of 40 or higher. They should have completed 12 units in the last three years of high school

including at least 9 units from the following: English, social studies and history, mathematics, natural science, and foreign languages. Three of these units should be in English, 2 or more in mathematics, and 2 or more in any one of the other areas specified. Algebra in grade 9 may count toward the mathematics requirement but not as one of the 12 units required from grades 10-12. A foreign language from grade 9 may count toward the language sequence, but not toward the 12 credits required from grades 10-12.

Students with good high school ranks and test scores may be 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 fully meeting the above requirements may be requested to submit additional information. Recommendations from high school principals or counselors are encouraged.

GENERAL COLLEGE. In order to allow students to try themselves out in college work and explore a variety of subject-matter fields, the General College does not have special restrictions on admission. The College is open to any resident of Minnesota who is a graduate of an accredited high school. It does not require a minimum high school rank, special standing on college aptitude tests, or a particular pattern of high school subjects.

INSTITUTE OF TECHNOLOGY. The Institute, in which education for engineering centers—students call the Institute “I-T”—admits any high school graduate who was in the top half of his class and who meets these requirements:

Twelve units completed in grades 10-12 including 3 units in English, 3 units in mathematics, 3 or more units from among the following: foreign languages, history, social science, and natural science.

One unit of algebra completed in grade 9 will count in the 3 units in mathematics. The 3 units in mathematics must include $1\frac{1}{2}$ units in algebra and $1\frac{1}{2}$ units in geometry. A full unit of general mathematics followed by a full unit of higher algebra may be substituted for the $1\frac{1}{2}$ -unit algebra requirement. It is desirable that the student complete as much mathematics as possible in high school, including higher algebra, solid geometry, and trigonometry if offered.

If a student lacks either higher algebra or solid geometry but not both, he can be admitted on the condition that he makes up the deficiency by the end of the first quarter. He may take the course in the summer preceding entrance, through the Correspondence Study Department, or during the first quarter—without Institute credit. It is strongly recommended that the deficiency be made up before entering the Institute.

Students not eligible for admission to the Institute of Technology directly may apply for transfer to the Institute of Technology after a year's satisfactory work in some other college, including the General College. Students who enter another college hoping to earn a later transfer to the Institute of Technology must consult with the counselors in that college at the very beginning of the school year in order to plan for this transfer and to receive help in planning their programs in relation to this goal.

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.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS. 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. However, the College prefers high school programs close to the divisional requirements described below.

High school graduates in the upper 75 per cent of their classes may enter if they have completed 12 units in grades 10-12. Nine of these should be in English, social studies and history, mathematics, natural science, and foreign languages. Distribution of these units with respect to the major areas included in the College program should be as follows:

Agriculture—3 units in English, 2 or more units in mathematics (or 1 unit in mathematics providing the student registers in technical agriculture, agricultural education, or agricultural business administration), and 1 or more units in natural science or agriculture.

Forestry—3 units in English, 2 units in mathematics, and 1 unit in natural science.

Home Economics—3 units in English. One unit in home economics may be included in the 9 basic units.

Pre-Veterinary Medicine—The requirements are the same as for Agriculture. Students wishing to prepare for the School of Veterinary Medicine should apply for admission to the College of Agriculture, Forestry, and Home Economics.

COLLEGE OF EDUCATION. Training for a number of teaching fields is open to high school graduates in the upper 60 per cent of their classes regardless of the high school courses they have completed. 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, and Home Economics. 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 admission to the winter and spring quarters. Such students must also take preadmission psychological tests offered in the quarter preceding transfer.

Whether a student is well fitted for teaching is a matter the College examines both at his first registration and later at 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.

COURSE FOR DENTAL HYGIENISTS. The requirements for admission to the Course for Dental Hygienists are similar to those for the Arts College (see page 5). Instead of mathematics, chemistry is required and high school typing is recommended. Applicants should be between 17 and 35 years of age. A one-year Course for Dental Assistants is now offered through the General College.

SCHOOL OF NURSING. Any high school graduate between 17 and 35 years old may enter the one-year Curriculum in Practical Nursing. Those older than 35 are given individual consideration. Students may enter this program only in the fall quarter. Other nursing curricula for which previous college work is required are described on page 16.

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. The completion of basic units in high school science is recommended. Consideration will also be given otherwise well qualified applicants who do not fully meet the stated admission requirements. Prospective applicants are urged to request individual counseling regarding opportunities in this field.

Admission by Examination

If you are a Minnesota high school graduate, or a non-high school graduate at least 19 years of age, 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 that measure aptitude for college work rather than specific knowledge or preparation.

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 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, you have to meet regular requirements for admission from high school. You must file official college transcripts to cover all the 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 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 non-collegiate institutions, independent study, travel, military experience, or in other ways. You should take the examinations for this kind of credit within the first six weeks of your first university enrollment 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, but subsequent admission to a degree program is possible on recommendation of the college. In such cases credit earned as an adult special will be applied when possible. 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 here may enter without filing credentials; but their admission to Summer Session gives them no claim to attendance in regular session. Students beginning their university attendance during the Summer Session who wish to continue in the regular academic year or who seek degrees here must apply for admission and submit credentials in the usual way.

Transfer from One College to Another

A student who wants to change at the University 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.

Admission to Professional Schools and Colleges

The professional schools or colleges of the University require from three 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 (minimal preparation) for specific colleges may be taken as follows:

Business Administration—Two years in the Arts College; or in Agriculture, Forestry, and Home Economics; 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 16 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.

Pharmacy—One year in the Arts College.

Veterinary Medicine—Two years in the College of Agriculture, Forestry, and Home Economics.

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.

At Your First Registration and Orientation

You must present your admission certificate when you appear for your first registration in the University. Most colleges of the University invite all new students to take part in a two-day period of orientation and registration well in advance of classes. For fall quarter this program is offered August 2 to 27 or September 7 to 17. It is most advantageous for you to participate fully in this two-day program. Also, you should be on campus September 19 to 25 for Welcome Week. During this week new students are guests at a series of meetings and campus inspection trips planned to introduce them to the University. For registration dates for other quarters see the University Calendar.



Procession to Northrop Auditorium on Cap and Gown Day

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 preprofessional 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 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, natural sciences, and the social sciences, in addition to concentrating in one of the thirty departmental or interdepartmental programs. 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.

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, oriental and slavic languages, philosophy, physics, physiology, political science, psychology, Romance languages, Scandinavian, presocial work, sociology, speech and theater arts, 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.

Preparation for entering the Graduate School in any of the above fields of study and also in social work and library training is also offered.

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 M.D. degrees.

Arts and Dentistry—A seven-year course leads to B.A. and D.D.S. degrees.

Arts and Law—A seven-year course leads to B.A. and LL.B. degrees.

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

Arts and Dental Hygiene—A course of approximately four years 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—one, two, or three years of Arts College work. Professional curricula requiring this kind of preparation are those in the Medical School, Law School, School of Dentistry, School of Business Administration, School of Nursing, College of Pharmacy, 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 require 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 the 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.

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 the 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 business, commercial art, dental assistant, general office work, practical nursing, recreation activity leadership, retailing and 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.

Institute of Technology

The Institute of Technology offers in its four colleges and schools five-year courses leading to the Bachelor's degree in the various engineering fields, in architecture, in chemistry and physics, and in geophysics. The colleges and schools and the five-year degree courses they offer are:

College of Engineering—Aeronautical, agricultural, civil, electrical, industrial, and mechanical engineering; applied mathematics.

School of Architecture—Architecture.

School of Chemistry—Chemical engineering, chemistry, physics.

School of Mines and Metallurgy—Geological engineering (mining or petroleum), geophysics, metallurgical engineering, mining engineering (mining or petroleum).

Cooperative Work-Study Curricula in industrial engineering and in mechanical engineering providing practical work experience in conjunction with regular class and laboratory work are available through cooperation with

nearby industrial concerns. Students in the work-study program are on a twelve-month basis and spend alternate quarters in industry, starting with the summer or fall quarter following the second year. While on the work assignments they are paid at regular rates by the companies. Application should be filed by February 1 of the second year at the Mechanical Engineering office. Selection will be based on scholastic ability, aptitude for industrial work, and financial need.

For students who attain the necessary standards of performance and who desire to proceed to graduate work, a bachelor of science degree may be obtained by petition at the end of four years in any of these courses except architecture.

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 School of Business Administration leads to a business administration degree.

Duluth Branch

At the Duluth Branch you can get a B.A., a B.S., or an associate in arts degree, or take preprofessional 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 course leading to the associate in arts degree is a general education program in which each student, consulting with an adviser, chooses courses to fit his individual need.

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

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

College of Agriculture, Forestry, and Home Economics

This College through its departments in agriculture and its Schools of Forestry and Home Economics—all on the St. Paul Campus of the University—offers Bachelor's degrees in a wide range of subject areas and, in some fields, advanced professional degrees. 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 business administration, agricultural journalism, dairy technology, food technology, fishery and wildlife management, science specialization.

Forestry—Forest management, forestry-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, tearoom, 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.

Students anticipating admission to professional study in the School of Veterinary Medicine may secure the two-year preprofessional curriculum requirements in this College.

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 of Technology 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, music, or teaching of handicapped children. 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 teachers of speech correction and for those interested in public health work, public health nursing, nursing education, and recreational leadership. A five-year program is offered for school librarians.

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.

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.

School of Nursing

Practical Nursing—A certificate in practical nursing is granted students who finish the four-quarter practical nursing program. This program prepares students for practical nursing service in general hospitals, public health

agencies, homes, and hospitals for the chronically ill and aged. Practical nursing students may earn the General College associate in arts degree by completing 45 credits in the General College either before or after the certificate program.

Practical Nursing and Home Management—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.

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 the College of Science, Literature, and the Arts or at any approved college offering the necessary biological science, social studies, and other general education courses. Ten quarters spent in the School of Nursing are devoted to the required professional major. Basic professional nursing is open to college graduates. To be eligible for this program leading to the B.S. degree in nursing, a college graduate should have had satisfactory work in social and biological sciences, preferably sociology, psychology, chemistry, and zoology.

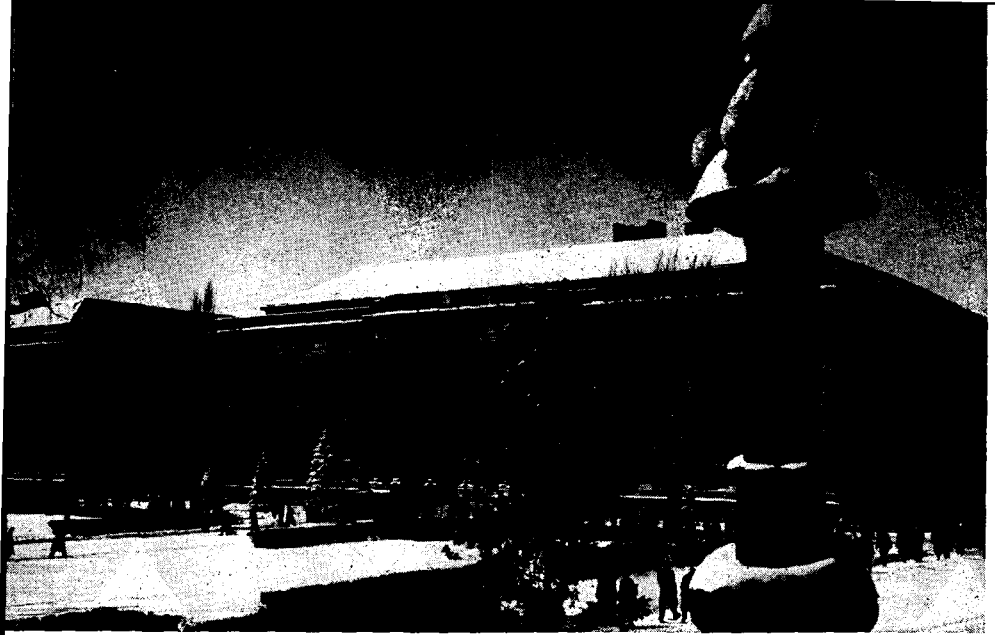
Curricula for Professional Nurses—The B.S. degree program with a major in nursing education is offered jointly by the School of Nursing and the College of Education (the student registers in Education). A minor may be taken in ward administration, science teaching, child development or a clinical field of nursing; medical, obstetric, operating room, pediatric, psychiatric, rural, surgical, or tuberculosis. Students in the advanced curricula who lack certain basic nursing content may arrange for it during 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. This program leads to a Master's degree in education (M.Ed.).

Master's Program in Nursing Administration—The program which leads to the master of nursing administration degree (M.N.A.) is designed to prepare professional nurses for positions in nursing administration such as those of directors, assistant directors, and supervisors. This program is open to qualified professional nurses who have completed an accredited program leading to a Bachelor's or a Master's degree. Persons who do not meet the usual requirements for admission to the program may, on special consideration, be admitted to selected course 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 six 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.



The Library

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 and four years in the Medical School.

Although three years of work in an “arts college” constitute 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 teaching 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,

Fall Quarter

1954

August 2-September 24

September 6 Monday
September 16 Thursday

September 17-25

September 24 Friday

September 27 Monday
September 30 Thursday
October 1 Friday

October 12 Tuesday
October 30 Saturday

November 6 Saturday
November 11 Thursday
November 18 Thursday
November 25 Thursday
November 26, 27 Friday,
Saturday

December 10, 11 and 13-16
December 16 Thursday
December 18 Saturday

Fall registration.¹ Orientation program for new students. Dates for the various colleges will be announced in mailed instructions. Students are urged to register early. It is expected that all students who can do so will register in August.

Labor Day; holiday

Fall quarter fees due for students registered through September 10

New Students' Camps, September 17-19; New Students' Parents Day, September 19; New Students' Week, September 19-25. Details announced in instructions issued at orientation

Last day for registration¹ and payment of fees for the undergraduate colleges

Fall quarter classes begin 8:30 a.m.²

Opening convocation, 11:30 a.m.; IV hour classes excused

Last day for registration and payment of fees for the Graduate School, and for teachers in service

Columbus Day; holiday

Homecoming Day

Dads Football Game

Armistice Day; holiday

Senate meeting, 3:30 p.m.

Thanksgiving Day; holiday

Classes excused (except Medical School)

Final examination period

Commencement, 8:00 p.m.

Fall quarter closes

Winter Quarter

December 23 Thursday

December 25 Saturday

December 29-30 Wednesday,
Thursday

1955

January 1 Saturday

January 3 Monday

January 4 Tuesday

January 7 Friday

February 12 Saturday

February 17 Thursday

February 21-27

February 22 Tuesday

February 24 Thursday

March 11, 12 and 14-17

March 17 Thursday

March 19 Saturday

Winter quarter fees due for students in residence fall quarter in undergraduate colleges

Christmas Day; holiday

Orientation and registration for new students in undergraduate colleges

New Year's Day; holiday

Registration resumes; winter classes begin 8:30 a.m.²

Last day for registration and payment of fees for new students in undergraduate colleges

Last day for registration and payment of fees for the Graduate School, and for teachers in service

Lincoln's Birthday; holiday

Senate meeting, 3:30 p.m.

University of Minnesota Week

Washington's Birthday; holiday

Charter Day convocation, 11:30 a.m.; IV hour classes excused

Final examination period

Spring quarter fees due for students in residence winter quarter in undergraduate colleges. Commencement, 8:00 p.m.

Winter quarter closes

Spring Quarter

March	24, 25	Thursday, Friday	Orientation program; registration ¹ and payment of fees for new students in all undergraduate colleges
March	28	Monday	Spring quarter classes begin 8:30 a.m. ²
April	1	Friday	Last day for registration and payment of fees for the Graduate School, and for teachers in service
April	8	Friday	Good Friday; holiday
May	12	Thursday	Cap and Gown Day Convocation, 11:30 a.m.; IV hour classes excused
May	19	Thursday	Senate meeting, 3:30 p.m.
May	30	Monday	Memorial Day; holiday
June 4 and 6-10			Final examination period
June	5	Sunday	Baccalaureate service, 3:00 p.m.
June	11	Saturday	Spring quarter closes. Commencement, 8:00 p.m.

First Term Summer Session

June	13	Monday	Orientation and registration for first term
June	14	Tuesday	First term classes begin 8:00 a.m. ² ; fees due for students in all colleges
July	4	Monday	Independence Day; holiday
July	14	Thursday	Commencement, 8:00 p.m.
July	16	Saturday	First term closes

Second Term Summer Session

July	18	Monday	Registration and payment of fees for second term
July	19	Tuesday	Second term classes begin 8:00 a.m. ²
August	18	Thursday	Commencement, 8:00 p.m.
August	20	Saturday	Second term closes

General Extension División

First Semester

1954			
September	13	Monday	Registration, first semester, ⁴ begins
September	25	Saturday	Last day for registration, first semester
September	27	Monday	First semester classes begin ³
November	25	Thursday	Thanksgiving Day; holiday
December	18	Saturday	Christmas recess begins

1955

January	3	Monday	Classes resume
January	24	Monday	Second semester registration begins
February	4	Friday	First semester classes close

Second Semester

February	5	Saturday	Second semester registration closes
February	7	Monday	Second semester classes begin ³
June	3	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, *General Information Bulletin* and *Summer Session Bulletin*.

² First hour classes on the St. Paul Campus begin at 8:00 a.m. fall, winter, and spring quarter and at 7:30 a.m. during the Summer Session.

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 beginning two weeks preceding the opening of classes.

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 Business Administration

Admission to the School is earned by satisfactory completion of the two-year prebusiness program. This includes certain specified courses and elective courses in certain specified fields of study. There is ample provision for general electives. The prebusiness work may be taken in liberal arts colleges or in certain technical schools. At the University of Minnesota, it can be taken in the College of Science, Literature, and the Arts, the Institute of Technology, or the Institute of Agriculture.

On this broad background you build two years of professional training leading to the B.B.A. (bachelor of business administration). You can take the general business program, or one of the following special fields: 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. Opportunities for internship experience are available in a few of these special areas.

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.

If you are seeking professional training in another field, in addition to business administration, certain combined programs are available. These combinations, taking additional time, lead to two degrees, and have been arranged with the Law School, the Institute of Technology, and the College of Pharmacy.

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.

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 examinations 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 by three and one-half years of law. The "two-

four plan," recommended by the Law School faculty, forms the core of the Law School program. 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 School dean.

Students with B.A. or equivalent degrees may earn the LL.B. by three and one-half 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.

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.

For combination courses leading to a law degree and a degree in another college, see *Law School Bulletin*.

College of Pharmacy

Upon the completion of the prepharmacy year, as outlined in the *Bulletin of the College of Pharmacy*, a student may apply for admission to the first year of the four-year professional curriculum.

The science and art of pharmacy deals with the preparation, compounding, and dispensing of medicinal agents and the study of their pharmacological actions, therapeutic uses, and toxic potentialities. Upon the satisfactory completion of the four years of professional 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 a degree in business administration. Evidence of above-average academic ability is required for admission to this course.

School of Veterinary Medicine

To qualify for the degree of doctor of veterinary medicine two years of preveterinary college work must be completed with a minimum grade average midway between B and C and satisfactory completion of the four-year professional curriculum.

A minimum of six months' farm experience is recommended before entering the professional curriculum.

The training in veterinary medicine prepares graduates for private practice, federal, state, and municipal animal disease control work and food sanitation, teaching and research, and for service as veterinary officers in the Armed Forces.

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.

Graduate School

All work toward advanced degrees, no matter in which of the University's subject fields, is administered by the Graduate 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.

Graduate programs leading to the master of arts degree with majors in education and in curriculum and instruction have been authorized at the Duluth Branch. All graduate students taking these programs are regularly enrolled in the Graduate School.

Inquiries about graduate work should go to the dean of the Graduate School, 316 Johnston Hall.

Other Study Opportunities in the University

The Summer Session

Two terms of regular university courses 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.

Courses are offered in Minneapolis, St. Paul, and Duluth and at the Biological Station in Itasca State Park.

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

The student can use either evening or correspondence courses to earn credits toward a degree, provided he has the necessary prerequisites and is qualified for admission to the University. Evening 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 an advanced 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.

The Division also provides other educational services. Headquarters 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 enrollment 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 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 medical care and health counseling for all students. No charge is made to students for medical examinations, for general care, or for consultations with a specialist on physical or mental health problems. Medical care is given to a hospitalized student without charge, except for surgery. Students also receive specialized services, such as allergy testing and treatment, eye examinations, and laboratory services. Physical therapy and x-ray therapy are provided up to a limit of \$30 per quarter. Charges are made on a cost basis or less for drugs, glasses, and dentistry.

Cost of Hospitalization for Students Without Hospital Insurance—Such students are entitled to four free days of hospitalization in the Health Service per quarter including all extras (except private duty nursing or surgery) and \$6 per day toward the hospital bill after the fourth day.

Cost of Hospitalization for Students With Hospital Insurance—

1. Students who feel they have adequate hospital insurance may choose to take a refund on the hospitalization portion of the incidental fee which is \$2 per quarter. Students accepting this refund may be hospitalized at the Health Service but will pay the full cost of hospitalization and themselves collect from their insurance company. To obtain the refund, students must present their fee statement and proof of insurance to the business manager of the Health Service, Room 205C, Health Service building, during the first ten days of each quarter.

2. Students with hospital insurance may wish to have additional coverage. They may do so by not taking the \$2 refund. Then if hospitalized, the Health Service will bill the insurance company and after receipt of this payment the Health Service will pay the remainder of the hospital bill for as many days as the two programs provide. If the insurance payment plus the Health Service allowance for hospitalization overpay the bill, a credit for the difference will be set up in the student's name. This credit may be used for any future charges of the Health Service except dentistry, glasses, or drugs. If not used, this credit will revert to the Health Service when the student leaves the University.

If additional information regarding the above plans is desired, call Ext 169 at the Health Service or make an appointment with the business manager.

Counseling 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, 115 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 authorizes 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. The Office of the Coordinator of Students' Religious Activities, 211 Eddy Hall, serves as a center where students may secure information concerning the 27 religious organizations

on the Minneapolis and St. Paul campuses. Liaison between the University and the diverse religious groups is also provided.

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 such as 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. 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 Advisory 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.

Scholastic Standing Committees—Each college has a faculty committee (some have student members too) charged with interpreting the regulations of the faculty, or making exceptions to them if warranted. A student should consult the committee if he is in doubt about a college rule or thinks the rule should not apply to him. Committee headquarters are usually in the college office.

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 nearly always presented in Northrop Memorial Auditorium, although infrequently in the Union Ballroom. Programs range from lectures on vital current topics to music and dance recitals and dramatic offerings. During the course of the year several "big name" features are offered for students, faculty, and staff only. These are presented at 11:30 and at 12:30, each half of the program being different. The purpose of the convocations, which are taped and rebroadcast 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—Major concerts and musical attractions are regularly brought to Northrop Auditorium by the Department of Concerts and Lectures. The University Artists Course presents a number of top flight recital artists, ballet, and world famous musical organizations on the campus each year. Season tickets for the Artists Course, at remarkably low prices, are sold at the office, 105 Northrop Auditorium.

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.

A spring season of the Metropolitan Opera is also brought to the campus under the combined sponsorship of the Department of Concerts and Lectures and the Minneapolis Orchestral Association. This season of opera usually comes the middle of May and presents four operas by the Metropolitan Opera Company.

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 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 offers a major season of 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 several times as many participants each year.

For women, instruction in a wide variety of seasonal sports, dance, body conditioning, as well as recreational activities, centers 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, tumbling, and golf; these activities are under joint faculty and student leadership and are open to all women in the University.

For men students a broad plan of organized intramural sports and other leisure time activities is supplemented by extensive facilities for recreation. 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 recreational activities. Outdoor playing fields and tennis courts, the indoor ice skating rink, and the two golf courses 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 ball-rooms, a card room, restaurant and soda fountain facilities, an artcraft workshop, billiard and pool tables, and a 16-lane bowling alley.

The Union on the St. Paul Campus has similar facilities for students on that campus. The 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, 201 Eddy Hall, may be able to help you. Loan funds have been set up to help any student who is making normal progress toward an educational objective. 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 \$200 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.

Other scholarships and merit awards are offered annually to students in many of the University's fields of study, usually as cash grants in recognition of outstanding achievement record. Information about these awards is available at the Bureau of Student Loans and Scholarships.

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 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 counselorships, in dormitories and fraternities, which provide room and board and require part of their holders' time. The Office of the Dean of Students 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—Application should be made to the Veterans Administration, Fort Snelling, St. Paul 11 (telephone DEsota 2411). Information and application forms can be obtained at the University Bureau of Veterans' Affairs, 115 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—If you need a job to help meet school expenses, the Student Employment Bureau, 153 TSF, will help you find part-time work either on or off campus. Apply in person at the Bureau after you have enrolled and know your class schedule. Your chances of being placed depend on the supply of jobs, your qualifications, your need, and the hours you have available. Very frequently a job will provide valuable vocational experience as well as financial assistance. Work in exchange for board and room is usually available for girls, and sometimes for men or married couples.

Housing Facilities

Most out-of-town students live either in university-maintained residence halls or in private rooming houses. All such students must live in university-approved residences, under substantially the same obligations. Information concerning residence halls may be obtained from the Director of Women's Residences at Comstock Hall, and from the Director of Centennial Hall (for men), or from the Student Housing Bureau, 209 Eddy Hall.

Information about private rooming houses may be obtained from the Student Housing Bureau.

Women's Residence Halls—Sanford Hall, Comstock Hall, and the Winchell Cottages provide room and board, counseling services, health supervision, and varied activity programs for women students.

Sanford Hall, for freshman, upperclass, 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 Cottages on University Avenue near Sanford Hall provide 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 a limited number of housing units 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 108A Westbrook Hall, Minneapolis Campus.

Vacancies in other housekeeping and sleeping rooms are reported to the Student Housing Bureau, where married students may 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. Single students, whether undergraduate or graduate, must have approval of the Student Housing Bureau to live in an apartment.

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.

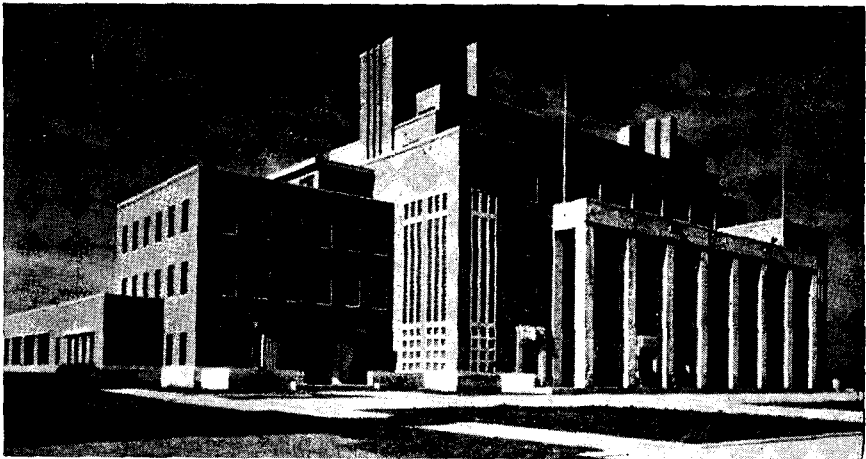
Moving to Fraternities and Sororities—Joining a fraternity or sorority does not excuse you from a rooming contract until it has ended. If you plan to move to a fraternity or sorority house, you should make the move at the beginning of a quarter if you have a room commitment. Information on rush week 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 student, faculty, and staff groups.

Shevlin Hall has a cafeteria and lunchroom for students.

Pioneer and Centennial Halls, for men, and Comstock and Sanford Halls and the Winchell Cottages, for women, have board for their residents. Most fraternities and sororities maintain regular dining rooms. There are also



Coffman Memorial Union

several cooperative dining clubs and privately operated restaurants, lunch counters, tearooms, 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 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 \$1200 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 35, 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 cost may be higher.

There is also variation in the costs of tuition and books and supplies. Tuition fees for Minnesota residents are less than those for students from outside the state. 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 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, except in the Graduate School, that a student taking only a few credits a quarter may pay tuition on a credit-hour basis. You pay your fees in advance—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, 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. Faculty members at the postdoctoral level may audit courses without registration or payment of fees. Should the need arise, an official class audit card may be obtained from the Graduate School office.

Estimated Average Expenses—Fall, Winter, and Spring Quarters, 1954-55

	Tuition Fee		Special Fees*	Laundry† Room Board	Books and Instruments	Total	
	Resident	Nonresident				Resident	Nonresident
Arts — General — Agriculture, Forestry, Home Economics — Public Health — Dental Hygiene — Duluth	\$123	\$330	\$47	\$790	\$ 60	\$1,020	\$1,227
Business Administration—Graduate School	138	330	47	790	60	1,035	1,227
Education	141	348	47	790	60	1,038	1,245
Institute of Technology	138	360	50	790	90	1,068	1,290
Law School	159	375	47	790	90	1,086	1,302
Medical Technology — Physical Therapy — Occupational Therapy — Advanced Clinical Nursing**	159	375	47	790	60	1,056	1,272
Dentistry, including graduate work	258	525	47	790	435§	1,530	1,797
Medicine, including clinical graduate work	264	555	47	790	425¶	1,526	1,817
Pharmacy, including graduate work	153	360	47	790	60	1,050	1,257
Mortuary Science	204	330	47	790	60	1,101	1,227
Nursing, Basic and Practical**	123	180	47	790	60	1,020	1,077
Veterinary Medicine	228	485	47	790	60	1,125	1,382

* Includes incidental fee and matriculation deposit.

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

§ Of this amount \$360 is for instruments.

¶ Of this amount \$300 is for microscope.

** Charges other than tuition vary. See Nursing bulletin.

TUITION

School or College	Quarter Fee		Credit Hour Fee	
	Resident	Non-resident	Resident	Non-resident
Agriculture, Forestry, Home Economics.....	\$41.00	\$110.00	\$3.50	\$9.25
Business Administration	46.00	110.00	4.00	9.25
Dental Hygiene	41.00	110.00	3.50	9.25
Dentistry and Graduate Work	86.00	175.00	7.25	14.75
Duluth Branch	41.00	110.00	3.50	9.25
Education	47.00	116.00	4.00	9.75
General College	41.00	110.00	3.50	9.25
Graduate School				
More than 6 credits	46.00	110.00	No credit hour fee provided	
Six credits or less, or thesis only	23.00	55.00		
Institute of Technology	46.00	120.00	4.00	10.00
Law School and Graduate Work	53.00	125.00	4.50	10.50
Library Instruction—Tuition of college in which work is taken.				
Medical School and Clinical Graduate Work	88.00	185.00	7.50	15.50
Medical Technology	53.00	125.00	4.50	10.50
Mortuary Science	68.00	110.00	5.75	9.25
Nursing, Basic and Practical	41.00	60.00	3.50	5.00
Nursing, Advanced Clinical	53.00	125.00	4.50	10.50
Pharmacy and Graduate Work	51.00	120.00	4.25	10.00
Physical and Occupational Therapy	53.00	125.00	4.50	10.50
Public Health	41.00	110.00	3.50	9.25
Science, Literature, and the Arts	41.00	110.00	3.50	9.25
University College—Tuition of college in which work is taken.				
Veterinary Medicine	76.00	165.00	6.50	13.75

Incidental Fee—If you are registered for 6 or more credits in a quarter you pay the \$14 fee which entitles you to the privilege of the Coffman Memorial Union and the Students' Health Service; it also brings you the *Minnesota Daily* and helps to support the All-University Student Congress. Students in the Institute of Technology pay 85 cents more a quarter and receive in addition the *Minnesota Technologist*.

The incidental fee is required of all students in the Graduate School, except teachers in service taking less than 6 credits, Ph.D. candidates during their final quarter of registration, and students doing research away from the campus.

Any student for whom the incidental fee is not required may obtain the privileges by paying the fee on an optional basis. For such students the incidental fee will be charged on request.

The incidental fee at the Duluth Branch is \$11.

Foreign Student Health Fee—Experience has shown that many foreign students have illnesses or accidents that require prolonged hospitalization, the costs of which far exceed the benefits of the incidental fee. Since non-citizens are not eligible for city, county, or state hospital care, great hardships

to some students have occurred. To avoid such hardships, foreign students are now required to carry additional health protection at a cost of \$8 per quarter. Foreign students having acceptable health insurance may be eligible for exemption from this fee. Any student who thinks he might qualify for this exemption should apply within 10 days of the opening of the quarter to the business manager of the Students' Health Service.

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 damages, 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 do not use it up by the time you graduate or leave the University, the unused remainder will be refunded to you by mail.

Special Fees

<i>Advanced Standing Examination Fee</i>	\$5.00	<i>Microscope Rental Fee</i>	
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.)		Partial use, one quarter	\$3.00
		Continuous use, one quarter	6.00
<i>Course Fees</i>		<i>Music Practice Fees</i>	
Civil Engineering Summer Camp, Modern Language Institute, Music Lessons, Physical Education, Public Health 169, 190. See Class Schedule issued at registration.		For rent of pianos, organs, and music practice rooms. Rates are given in the <i>Class Schedule</i> issued at registration.	
<i>Credentials Fee</i>		<i>Placement Service Fee</i> —required of degree candidates from:	
Required of nonresidents applying for admission to Law, Medicine, Dentistry, Education (Senior College), Business Administration, and Veterinary Medicine.		Institute of Technology	\$2.50
		College of Education (except Nursing Education majors)	5.50
<i>Dentistry Examination Fee</i>	\$26.00	<i>Privilege Fee</i> —for late registration or late payment of fees	
For examinations to determine advanced standing in Dentistry.		Through third day of classes	\$2.00
		Each additional day (to a \$5 maximum)	.50
<i>Deposits</i>		Late change of registration	2.00
Agricultural Biochemistry	\$10.00	<i>Record Service Fee</i>	\$0.50
Chemistry	10.00	This fee, deducted from students' matriculation deposits, provides three certified copies of student records. Each additional copy 50 cents.	
Pharmacy	5.00	<i>Special Examination Fee</i>	\$5.00
Physiological Chemistry	5.00	<i>Speech and Hearing Clinic Fees</i>	
To cover cost of materials and breakage. Unused portion is credited to students' matriculation deposit at end of course.		See <i>Class Schedule</i> issued at registration.	
<i>Duplicate Diploma Fee</i>		<i>Thesis Binding Fee</i>	
To replace large diploma	\$7.50	Master's thesis	\$2.50
To replace small diploma	5.00	<i>Thesis Examination Fee</i>	
<i>Graduation Fee</i> (including small diploma)		For professional engineer degree	\$15.00
Each degree	\$10.00	<i>Thesis Publication Fee</i>	
<i>Large Diploma Fee</i>	\$5.00	Ph.D. thesis	\$35.00
Any graduate may get a large diploma in place of a small one, by paying this fee in addition to the graduation fee.			

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 credit for such work toward a degree in a higher fee college, however, he must pay the tuition difference.

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

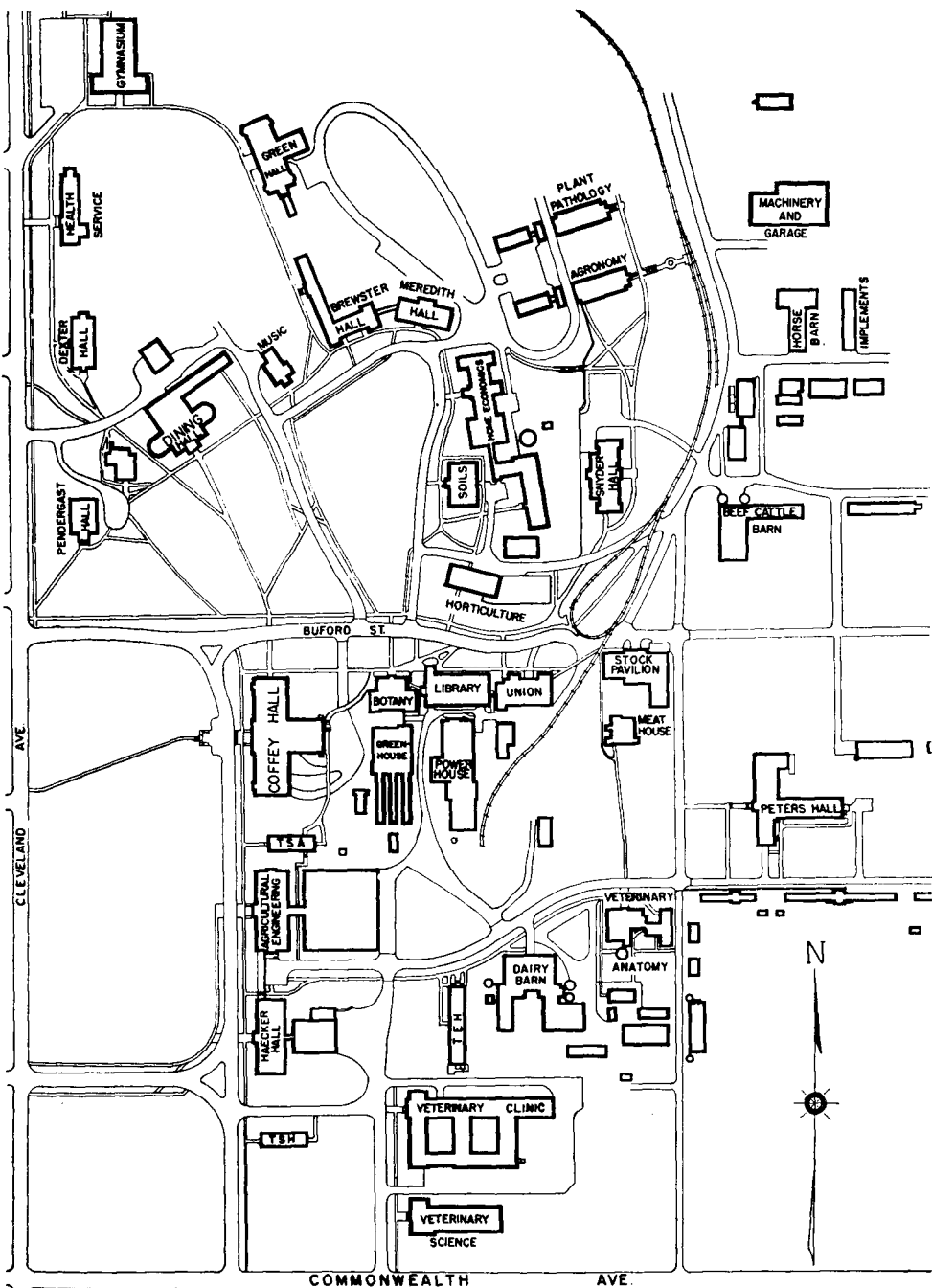
If you cancel your registration before six weeks of any quarter have passed, you are entitled to refund of tuition, incidental, and course fees on this basis: If you do not attend classes at all, you get full refund; if you cancel within the first week, you get 90 per cent; within the second, 80; third,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



ST. PAUL CAMPUS

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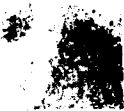
The Bulletin of the
UNIVERSITY of MINNESOTA

Class Schedule

Winter Quarter
1954

including

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



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.

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 LVI

Number 52

November 3, 1953

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

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

Registration dates for each college are listed on page 4.

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

Courses which are tallied in college offices are listed on page 74.

Step 3—(New Students) Go to the Students' Health Service and make an appointment for your physical examination.

Step 4—Turn in your Registration Permit, class reservation cards, physical examination appointment slip (for new students), and approved Registration Blank to your college window in the Office of Admissions and Records to get a fee statement.

Step 5—Pay your fees to the bursar.

Fees for students in residence fall quarter in undergraduate colleges are due December 28.

Fees for new students in undergraduate colleges are due January 5.

Fees for students in the Graduate School are due January 8.

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

Withdrawal from the University—Notify your college and the Office of Admissions and Records of your intention to withdraw from the University. P.L. 16 and 346 veterans must also notify the Bureau of Veterans Affairs.

VETERANS

P.L. 16 and 346 veterans—Have your fee statement approved at window 18 in the Office of Admissions and Records (room 220 Coffey Hall, St. Paul Campus), and then receipted by the bursar. Present the receipted statement and your course list to the Bureau of Veterans Affairs, Shevlin Hall, to obtain an order for books and supplies. Full load is 12 credits per quarter. (The \$5 matriculation fee for new students is not chargeable to the Veterans Administration.)

P.L. 550 veterans—You pay your own fees. After they are paid, and not before Monday, January 4, report to window 18 in the Office of Admissions and Records (room 220 Coffey Hall, St Paul Campus) to have an enrolment certificate (new students) submitted to the Veterans Administration. You must also report at the beginning of each calendar month and at the end of your attendance for the academic year to file monthly attendance reports. Full load is 14 credits per quarter.

All new veterans must present a "Letter of Eligibility."

DEGREE CANDIDATES

File an "Application for Degree" with your college clerk in the Office of Admissions and Records if you expect to graduate at any time during the academic year or Summer Session, preferably at the same time you turn in your registration blank. Graduation fees are due six weeks in advance of the respective commencement.

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 4 and 5.

Orientation and registration for new students will be December 29 and 30 with registration continuing on January 4 and 5.

Agriculture, Institute of

220 Coffey Hall
November 24, 25, November 30-
December 10, Agriculture, For-
estry, Home Economics
November 24, 25 and December
3-4, Veterinary Medicine

Business Administration

107 Vincent Hall
Issue of material, November 23,
Tally November 30-December 2

Dental Hygiene

106 Owre Hall
November 23-25

‡Dentistry

149 Owre Hall
January 4, 5

Education

204 Burton Hall
November 23-December 4

General College

106 Nicholson Hall
November 23-December 4

Graduate School

316 Johnston Hall
November 23-January 8

‡Law

204 Fraser Hall
January 4, 5

Medical Technology

W225 Hospitals
November 23-December 4

‡Medicine

136 Owre Hall
January 4, 5

Mortuary Science

156 Nicholson Hall
November 23, 24

Nursing

125 Owre Hall
November 23-December 4

Occupational Therapy

204 Temporary West of Hospitals
November 23-December 4

Pharmacy

101 Wulling Hall
November 23-December 4

Physical Therapy

209 Temporary West of Hospitals
November 23-December 4

Public Health

121 Millard Hall
November 23-December 10

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 23; Tally, November
25. Student should complete
registration by December 10 be-
cause advisers generally will
not be available after that date.

Technology, Institute of

133 Main Engineering bldg., Engi-
neering and Architecture
127 Chemistry bldg, Chemistry
103 Appleby Hall, Mines and Metal-
lurgy
November 23-25

University College

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

Teachers taking Saturday classes only

may also register on Saturday,
January 9, at 206 Burton Hall

‡ 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.

EXPLANATION

Arrangement—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 or 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 page 74 for a list of courses tallied in college offices.)

Prerequisites—Certain courses require for enrolment therein the completion of or concurrent registration in certain other courses, the consent of the instructor, or the possession of some definite qualifications or minimum standing. Courses are numbered as follows: 1-49 for freshmen and sophomores; 50-99 for juniors and seniors; 100-199 for juniors, seniors, and graduate students; 200 and over for graduate students only. The prerequisite will indicate when there is an exception to this.

Work substantially equivalent to courses listed as prerequisite is occasionally accepted in lieu of those prerequisites. 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.

Information not listed—Information which is missing for courses listed, or appears as "ar," should be obtained from the department offering the course.

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

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.

Building abbreviations—See page 69 for building abbreviations.

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.

INSTITUTE OF AGRICULTURE

AGRICULTURAL BIOCHEMISTRY (AGBI)

- 2 Quantitative Methods (5 cr; prereq soph, 8 cr inorg chem)
VI-IX MWF, 116SnH, Hill
- 3 Introduction (3 cr; prereq 1)
I TThS, 113SnH, Liener
- 10 Dairy Chemistry (5 cr; prereq 3)
Lect IV MWF, 113SnH, Jenness
Lab VI-VIII TTh, 102SnH
- 116 Adv Animal Nutrition (3 cr; prereq 6...120 rec)
III TThS, 113SnH, Schultze
- 118 Lab Probs in Biochemistry (3-5 cr; prereq cons instr)
- 120 Proteins (3 cr; prereq* 119)
III MWF, 113SnH, Briggs
- 121 Carbohydrates (3 cr; prereq* 119)
II MWF, 113SnH, Smith
- 130 Proteins Lab (2 cr; prereq 2, concur regis 120)
VI-VIII TTh, 202SnH, Jenness
- 131 Carbohydrates Lab (2 cr; prereq 2, concur regis 121)
VI-VIII MW, 202SnH, Smith
- 203 Research Probs (2-5 cr; prereq cons instr)
- 205 Topics: Biochemical Literature (1-3 cr; prereq cons instr)
- 208 Seminar: Cereal Chemistry (1 cr; prereq* 108)
Ar, Geddes, Cuendet
- 213 Seminar: Dairy Chemistry (1 cr; prereq 103, cons instr)
Ar, Jenness
- 216 Seminar: Nutrition, Enzymes (1 cr; prereq 116, 123, cons instr)
Ar, Schultze, Boyer
- 219 Seminar: Colloids (1 cr; prereq 119, cons instr)
Ar, Briggs
- 220 Seminar: Proteins (1 cr; prereq 120, cons instr)
Ar, Briggs, Jenness
- 221 Seminar: Carbohydrates (1 cr; prereq 121, cons instr)
Ar, Smith
- 222 Seminar: Lipides (1 cr; prereq 122, cons instr)
Ar, Lundberg
- 224 Gen Seminar (1 cr)
Ar, Geddes

AGRICULTURAL ECONOMICS (AGEC)

- 1 Principles I (3 cr, †1-2; prereq soph)
III MWF, 109HH, Lowe
- 2 Principles II (5 cr, †1-2; prereq 1)
I MTWThF, 109HH, Lowe

- 3 Principles for Home Economics Students (5 cr; prereq soph)
II MTWThF, 109HH, Lowe
- 25 Accounting (4 cr; prereq soph, regis IA)
Lect III MWF, 311HH, Dahl
Lab VIII-IX Th, 311HH, Dahl
- 102 Farm Organization (3 cr; prereq 2)
I MWF, 100HH, Pond
- 131 Market Prices (3 cr; prereq 30)
10:00-11:15 TTh, 311HH, Cochrane
- 141 Marketing Organization: Dairy, Poultry Products (3 cr; prereq 40)
II MWF, 210HH, Jenness
- 143 Marketing Organization: Livestock, Meats (3 cr; prereq 40)
IV MWF, 210HH, Raup
- 170 Land Economics (3 cr; prereq 110)
1:30-2:45 WF, 109HH, Raup
- 191 Adv Agricultural Statistics (3 cr; prereq 90 or 190)
IV MWF, 311HH, Cox
- 206 Seminar: Agricultural Policy (3 cr)
4:00-5:15 MW, 311HH, Jenness

AGRICULTURAL ENGINEERING (AGEN)

- 3 Mechanical Drawing (3 cr)
III-IV MWF, 303En, Christopherson
- 9 Laboratory: Materials (1 cr; prereq regis IT)
VIII-IX W, 101En
- 11 Applied Mathematics (5 cr; prereq plane geom)
IV MTWThF, 103En, Flikke
- 12 Machinery (3 cr; prereq 23)
Lect II TTh, 217En
Lab VI-VIII T, 217, 49En
- 13 Engines, Tractors (3 cr; prereq 23)
Lect III TTh, 216En, Keppel
Lab VI-VIII W, 216, 49En
- 18 Automotives (3 cr; prereq regis IT, ME 131)
Lect I TTh, 216En, Strait
Lab VIII-X F, 37En
- 23 Physics (5 cr; prereq 11)
Lect II MTWF, 101En, Hustrulid
—1, Lab I-II Th, 102En
—2, Lab IX-X F, 102En
- 25 Agricultural Physics II (4 cr; prereq 24)
Lect I TThS, 101En, Hustrulid
—1, Lab III-IV S, 102En
—2, Lab VI-VII M, 102E
—3, Lab VI-VII T, 102En
—4, Lab VI-VII F, 102En
—5, Lab IX-X T, 102En
- 31 Drainage (3 cr; prereq Soil 4)
II MWF, 305En, Larson
- 32 Supplemental Irrigation (2 cr; prereq Soil 4)
III TTh, 305En, Alfred

- 86 Rural Sanitation, Water Supply (3 cr; prereq regis IT, Hydr 102)
III MWF, 305En, Alired
- 41 Metal Work (3 cr)
I-II TThS, 106, 20En, Dent
- 51 Soil, Water Conservation (3 cr; prereq regis IT, 21, Soil 4, Hydr 102 or concur regis)
IV MWF, 305En, Manson
- 55 Electricity (2 cr; prereq 23)
IV TTh, 101En, Hustrulid
- 73 Steam Boilers, Heat Engines (3 cr; prereq regis IT, 18, ME 131)
Lect VII MF, 105En, Strait
Lab VII-X W, 37En
- 106 Hydrology (3 cr; prereq regis IT or Grad, 51 or concur regis)
VI MWF, 105En, Larson
- 112B Probs in Buildings (2-6 cr; prereq regis IT, cons instr)
- 112P Probs in Power, Machinery (2-6 cr; prereq regis IT, cons instr)
- 112E Probs in Rural Electrification (2-6 cr; prereq regis IT, cons instr)
- 112S Probs in Soil, Water (2-6 cr; prereq regis IT, cons instr)
- 126 Mgt of Machinery (3 cr; prereq regis IT Grad, 171, AgEc 102)
Ar, Schwantes
- 167 Adv Farm Structures (3 cr; prereq regis IT or Grad, 63)
Lect IV TTh, 303En, Otis
Lab VI-IX F
- 212 Adv Probs, Research (2-6 cr; prereq 111 or 112 or 113, cons instr)

**AGRICULTURAL JOURNALISM
(AGJO)**

- 53 Publicity (3 cr; prereq rhet comm require)
I TThS, 106AgrBot, 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
- 51 Genetics (4 cr; prereq soph, 6 cr bot or zool)
Lect I TThS, 202Ag, Lambert
—1, Lab VIII-IX M, 104-106Ag
—2, Lab II-III T, 104-106Ag
—3, Lab III-IV Th, 104-106Ag
- 77 Seminar: Agronomy (2 cr; prereq sr, 9 cr)
IX W, 408Ag
- 121 Grain Crops (4 cr, \$21; prereq 1)
Lect VI MWF, 202Ag, Dunham
Lab VII MWF, VIII W, 201Ag
- 181 Genetics (4 cr, \$31; prereq 6 cr bot or zool)
Lect I TThS, 202Ag, Lambert
Lab ar

- 132 Farm Crops Plant Breeding (4 cr; prereq 31 or 131)
VI-VIII TTh, 202Ag, Rinke
- 201 Research: Farm Crops (ar cr; prereq 121, 123)
Ar, Dunham, Schmid
- 202 Seminar: Farm Crops (1½ cr; prereq 9 cr farm crops)
IX W, 408Ag
- 203 Adv Studies (3 cr; prereq 21 or 121, 23 or 123)
Ar, Dunham, Schmid, Thomas
- 241 Research: Plant Genetics (ar cr)
Ar, Myers, Burnham, Rinke, Thomas, Lambert
- 246 Seminar: Genetics (2 cr)
- 247 Cytogenetics (3 cr; prereq Bot 119)
Ar, Burnham
- 248 Applied Statistics (3 cr; prereq 136 or PH 110)
Ar, Thomas
- 250 Cytogenetics: Specialized (2 cr; prereq 247)
Ar, Burnham

ANIMAL HUSBANDRY (ANHU)

- 1 Livestock Production (4 cr)
- II MTWThF, Center LsPav, West LsPav, Harvey, Wingert
- 8 Breeds of Livestock (4 cr; prereq soph, 1)
III-IV TThS, West LsPav, 3 LsPav, Harvey, Aunan
- 50 Meat Selection, Utilization (3 cr; prereq soph with cons instr)
III-IV TThS, MSh, Anderson
- 51 Meats, Meat Products (3 cr, \$50; prereq soph with cons instr, 1)
VI-VII MWF, MSh, Anderson
- 57 Livestock Feeding II (3 cr; prereq 56)
III MWF, 110PetH, Hanson
- 112 Animal Breeding (3 cr; prereq Agro 31)
IV MWF, 110PetH, Winters, Rempel
- 203 Adv Animal Breeding II (3 cr; prereq 116)
III MWF, 108PetH, Cummings
- 206 Adv Livestock Feeding I (3 cr; prereq 57, AgBi 6)
VI MWF, 108PetH, Hanson
- 209 Seminar (1 cr)
VIII F, 108PetH, Ferrin
- 213 Research (3-9 cr)

DAIRY HUSBANDRY (DYHU)

- 10 Dairy Products Judging (1 cr; prereq soph, 1)
IX-X Th, 9HH, Thomas, Morris
- 50 Dairy Bacteriology (3 cr without or 5 cr with lab; prereq soph, Bact 53, cons instr to take lect only)
Lect VI MWF, 210HH, Olson
Lab VII-VIII MWF, 212HH

- 103 Dairy Stock Feeding (3 cr; prereq sr, 101, AnHu 56)
II TThS, 9HH, Gullickson
- 106 Seminar II (1 cr; prereq 105)
III F, 210HH, Peterson
- 110 Ice Cream, Frozen Dairy Foods (3 cr; prereq 2, 50, AgBi 10)
Lect IV TS, 210HH, Combs
Lab VI-VIII T, 9HH, Thomas
- 114 Milk By-Products (3 cr; prereq sr, 2)
Lect I TTh, 210HH, Coulter
Lab VI-VIII Th, 9HH, Morris
- 150 Dairy Bacteriology (3 cr, §50; prereq grad, Bact 53)
Lect VI MWF, 210HH, Olson
Lab VII-VIII MWF, 212HH
- 203 Research: Dairy Production (ar cr)
- 206 Research: Dairy Manufacturing (ar cr)
- 213 Research: Dairy Bacteriology (ar cr)
Ar, 212HH, Olson, Jezeski

ENTOMOLOGY AND ECONOMIC ZOOLOGY (ENT)

- 52 Introductory Entomology (5 cr, §Zool 52; prereq Zool 15)
Lect VII MWF, 313Z, Mickel
Lab V-VI MWF, 402Z, Mickel
- 56 Forest Entomology (5 cr; prereq Zool 15)
Lect VI MWF, 307CofH, Hodson
Lab VII-VIII MWF, 307CofH, Hodson
- 63 Mammalogy (4 cr; prereq Zool 22)
Lect II MWF, 307CofH, Beer
—1, Lab I-II ThS, 100CofH, Beer
—2, Lab IV-V ThS, 100CofH, Beer
- 64 Fishery, Wildlife Mgt (5 cr; prereq Zool 3, Bot 50 or For 48)
III MTWThF, 307CofH, Marshall, Smith
- 118 Animal Ecology (3 cr, §Zool 118; prereq 15 cr ent or zool, cons instr)
Lect VI TTh, 307CofH, Hodson
Lab VII-VIII TTh, 15CofH
- 126 Adv Gen Entomology (3 cr, §Zool 126; prereq* 52)
Lect I TTh, 211Z, Mickel
Lab I-III S, 402Z
- 129 Insect Physiology (4 cr, §Zool 129; prereq 128)
Lect VI WF, 8CofH, Richards
Lab VII-IX WF, 8CofH
- 142 Insects in Relation to Plant Diseases (3 cr, §PIPA 142; prereq 8 cr ent or pl path)
I-II MWF, 302CofH, Christensen, Granovsky
- 145 Parasitic Protozoa (3 cr, §Zool 145; prereq 15 cr zool, cons instr)
Lect VI TTh, 208Z, Wallace
Lab VII-VIII TTh, 208Z
- 165 Wildlife Mgt (3 cr; prereq 164)
I MWF, 100CofH, Marshall
- 169 Fishery Biology, Mgt (5 cr; prereq 168)
Lect VI MWF, 100CofH, Smith
Lab VII-VIII MWF, 100CofH
- 197 Introd Research (ar cr; prereq cons dept)
- 200 Seminar (1 cr)

FOOD TECHNOLOGY (FOOD)

- 52 Food Analysis (2 cr; prereq* 51)
VI-VIII TTh, 102SnH, Boyer
- 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 Introduction (3 cr)
III MWF, 203GH, Kaufert
- 8 Forest Measurements (3 cr; prereq* 7)
Lect IV MW, 100GH, Brown
—1, Lab VI-VIII W, 206GH
—2, Lab II-IV S, 206GH
- 54 Wood Structure, Identification (3 cr; prereq* 53)
—1, Lab VI-VIII MW, 211GH, Rees
—2, Lab VI-VIII TTh, 211GH
- 55 Forest Protection (3 cr)
II MWF, 203GH, Schneider
- 57 Wood Utilization (3 cr; prereq 54)
I MWF, 211GH, Wallin
- 101 Adv Dendrology (3 cr; prereq 4)
Ar, Rees
- 104 Forest Influences (3 cr; prereq 126)
I TThS, 201GH, Duncan
- 112 Adv Forest Measurements (3 cr; prereq* 111)
Ar, 206GH, Brown
- 113 Wood Pulp, Paper (3 cr; prereq 54, org chem)
IX MWF, 203GH, Hossfeld
- 115 Mechanical Physical Properties of Wood (3 cr; prereq* 114)
I-II TThS, 3GH, Rees
- 124 Forest Mgt (3 cr; prereq 123)
I MWF, 203GH, Hall
- 127 Silviculture (3 cr; prereq 126)
Lect IV TTh, 201GH, Hansen
Lab I-II S
- 131 Forest Policy (3 cr; prereq sr)
I MWF, 202GH, Schneider
- 140 Forest Mgt (3 cr; prereq sr, 124)
III MWF, 201GH, Hall
- 141 Silvics (3 cr; prereq* sr, 127)
II TThS, 202GH, Hansen
- 143 Forest Recreation (3 cr; prereq sr)
IV MWF, 202GH, Duncan
- 147 Forest Inventory (3 cr; prereq* sr, 134)
Ar, Meyer
- 201 Research Probs: Silviculture (ar cr)
- 204 Research Probs: Forest Mgt (ar cr)
- 206 Research Probs: Forest Economics (ar cr)
- 208 Research Probs: Wood Technology (ar cr)
- 214 Research Probs: Forest Utilization (ar cr)
- 219 Research Probs: Forest Measurements, Photogrammetry (ar cr)
- 224 Seminar (1 cr)
VII-IX Th, 202GH, Schneider, others

HOME ECONOMICS (HE)

- 1 Choice, Care of Clothing (4 cr, §GC15, not open to HE sr or men)
III MTWF, 350HE, Wolf
- 3 Clothing Construction A (3 cr; prereq 3rd qtr fr, 1)
VI-VIII TTh, 327HE, Knight
- 4 Clothing Construction B (3 cr; prereq soph, 3)
—1, III-IV MWF, 327HE, Knight
—2, VI-VIII TTh, 328HE, Gorham
- 6 Institution Experience (3 cr; prereq instit mgt maj, cons instr)
Ar, Cafeteria, Scholl
- 17 Personal Family Living (3 cr, not open to HE sr)
—1, IV MWF, 227HE, Sherrill
—2, VII MWF, 227HE, Sherrill
- 20 Related Art (4 cr, §56, not open to HE sr)
II MTWF, 350HE, Myren
- 21 Color, Design I (3 cr; prereq 20)
—1, II-IV TTh, 359HE, Wilson
—2, VI-VIII TTh, 359HE, Wilson
- 22 Color, Design II (3 cr; prereq 1, 20)
—1, III-IV MWF, 342HE, Everson
—2, VI-VII MWF, 342HE, Everson
- 24 Probs in Home Planning, Furnishing (5 cr, §57 or 180 or FL 15 or GC 16, not open to TC in B, rel art, HE ed maj; prereq soph, 20...49 rec)
III-IV MWF, 359HE, III-IV T, 425HE, Franklin
- 27 Related Art Probs (3 cr; prereq soph, 21)
VI-VIII TTh, 360HE, Franklin
- 28 Construction, Refinishing of Home Furnishings (3 cr; prereq cons instr)
VI-VIII TTh, 433HE, Myren
- 31 Nutrition (3 cr, §30, not open to HE sr)
—1, II MWF, 201HE, Gormican
—2, 10:00-11:15 TTh, 201HE, Biester
- 35 Nutrition II (4 cr; prereq soph, 33)
Lect II MWF, 44HE, Pilcher
Lab VI-VIII T, 254HE, Pilcher
- 40 Food Preparation (5 cr; prereq 3rd qtr fr, 2 qtrs chem)
—1, Lect III TTh, 48HE, Andrews
Lab III-IV MWF, 157HE
—2, Lect VII TTh, 48HE, Benzie
Lab VI-VII MWF, 157HE
—3, Lect VII TTh, 44HE, Asp
Lab VI-VII MWF, 57HE
- 41 Food Mgt, Marketing (5 cr; prereq soph, 31, 40)
—1, III-IV TTh, III-V WF, 150, 152, 156HE, Trammell
—2, III-IV MW, III-V TTh, 150, 152, 156HE, Benzie
—3, VII-VIII MTh, VII-IX TW, 150, 152, 156HE, Andrews
- 46 Cafeteria Experience (3 cr; prereq soph, regis HE)
Lect IV W, Cafeteria, Ahrens
—1, Lab IV-VI MF, Cafeteria
—2, Lab IV-VI TTh, Cafeteria
- 49 Household Equipment (3 cr; prereq* soph, AgEn 35)
—1, VII-VIII MWF, 124, 128HE, Bonnell
—2, VI-VIII TTh, 124, 128HE, Bonnell
- 50 Textiles (3 cr; prereq 1)
—1, III-IV MWF, 303HE, Gorham
—2, VI-VII MWF, 303HE, Knight
- 53 Adv Clothing (3 cr; prereq 4, 50 or concur regis)
VI-VII MWF, 328HE, Gorham
- 56 Application of Color, Design I (3 cr, §20, not open to HE students)
II-III TTh, 342HE, Everson
- 63 Quantity Cookery (6 cr; prereq regis HE, 41)
Lect V TTh, 201HE, Claypoole
—1, Lab I-IV TThS, Cafeteria
—2, Lab I-IV MWF, Cafeteria
- 70 Adv Food Preparation (3 cr; prereq 40, AgBi 1)
VI TTh, 48HE, VII-VIII TTh, 56HE, Trammell
- 85 Home Mgt Prin (3 cr; prereq 40...41 rec)
VII MWF, 201HE, Jeary
- 86 Home Mgt Lab (4 cr; prereq 85 or concur regis, PH 52b...40, 41 rec)
—1, I MTWThFS, Home Mgt House, Jeary, Strattner
—2, I MTWThFS, Home Mgt House, Jeary, Strattner
- 89 Probs in Household Equipment (3 cr; prereq 49, cons instr)
Ar, Bonnell
- 98 Home Economics Extension (3 cr; prereq sr, HEED 91 or concur regis)
- 107 Textile Analysis (3 cr; prereq 50, AgBi 1, 2)
VI-VIII MWF, 304HE, Phelps
- 116 Family Clothing Probs (3 cr; prereq 3, 50)
Ar, Wolf
- 121 Textile Design (3 cr; prereq 23, 27, 50)
VI-VII MWF, 433HE, Wilson
- 170 Nutrition of the Family (3 cr; prereq 31, 40, AgBi 1, physiol or hum biol)
III MWF, 44HE, Biester
- 171 Child Nutrition (3 cr; prereq 170, HEED 90)
III MW, 48HE, III F, 203E, IV-V one day ar (Mpls), Leichsenring
- 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: Nutrition (2 cr; prereq 170)
V WF, 44HE, Pilcher
- 180 Home Planning, Furnishing (5 cr, §24 or 57 or FL 15 or GC 16; prereq 27, 49...120 rec)
III-IV MTWF, 360HE, Ludwig
- 185 Family Relationships (3 cr; prereq* 17, 86, HEED 90)
Ar, Sherrill
- 208 Microanalysis of Textile Fibers (ar cr; prereq bof, zool, adv textiles, cons instr)
Ar, Phelps

- 209 Seminar: Textiles, Clothing (1 cr; prereq cons instr)
Ar, Phelps
- 249 Seminar: Foods (1-2 cr; prereq cons instr)
Ar, Noble
- 279 Seminar: Nutrition (1 cr; prereq cons instr)
Ar, Biester
- 295 Problems (1-5 cr; prereq cons instr)
Ar, Noble
- 296 Problems (1-5 cr; prereq cons instr)
Ar, Noble

HORTICULTURE (HORT)

- 1 Gen Horticulture (3 cr)
III MWF, 100GH, Snyder
- 36 Plant Propagation (3 cr; prereq soph, 6 cr bot)
Lect III TTh, 8Hr, Widmer
Lab VI-VIII T
- 62 Probs in Landscape Design, Composition (2-4 cr; prereq sr, 6l)
Ar, Phillips
- 110 Crop Breeding (3 cr; prereq Agro 31 or 131)
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 Problems (2-4 cr; prereq cons instr)
- 194 Seminar (1 cr; prereq sr, 9 cr hort)
IX W, 301Hr
- 241 Organization of Research (2 cr)
Ar, Krantz
- 244 Adv Topics (3 cr)
Ar, Brierley, Krantz, Nylund
- 247 Report on Special Topics (1-9 cr)
- 249 Research: Crop Breeding (ar cr)
Ar, Currence, Hutchins, Krantz, Wilcox

ORIENTATION (ORIE)

- 1 College Orientation Lectures (1 cr)
—1, I T, 105En, McFarland
—2, I W, 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, 106AgrBot, Heggeness
Lab III-IV F, 106AgrBot

- 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 or 56)
VI-VIII TTh, 103, 105PP, Dosdall
- 111 Diseases of Field Crops (4 cr; prereq 1 or 10 or 120)
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, French
- 120 Adv Plant Pathology (3 cr, §1 or 10; prereq* 14 cr pl sci)
Lect VII MWF, 103PP, French
Lab VIII-IX MWF, 105PP
- 142 Insects in Relation to Plant Diseases (3 cr, §Ent 142; 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, J Christensen, others
- 208 Probs in Mycology (ar cr; prereq 105, 106, 107)
Ar, J Christensen, C Christensen, Dosdall
- 211 History of Plant Pathology (2 cr)
Ar, J Christensen
- 213 Seminar (1 cr)
IX-X T, 401PP, J Christensen, others
- 218 Principles (5 cr; prereq 1 or 10, Bact 53, 6 cr pl path)
III-IV MWF, 401PP, Elde
- 252 Seminar: Applied Plant Physiology (1 cr)
Ar, Landon
- 255 Research Probs: Applied Plant Physiology (ar cr)
Ar, Landon
- 261 Research Probs: Agricultural Botany (3 or 5 cr)
Ar, J Christensen, Larson

POULTRY HUSBANDRY (POHU)

- 1 Poultry Production (4 cr)
II MTWF, 110PetH, Canfield
- 55 Problems (1-3 cr; prereq 6 cr)
- 102 Poultry Breeding (4 cr; prereq 1, Agro 31)
I MWF, 200PetH, Shoffner
- 153 Poultry Nutrition, Feeding (3 cr; prereq 1, AgBi 1)
I MWF, 110PetH, Johnson
- 214 Research: Poultry Husbandry (ar cr; prereq cons instr)
- 215 Research: Poultry Nutrition (ar cr; prereq cons instr)
- 216 Research: Poultry Breeding (ar cr; prereq con instr)
Ar, Shoffner
- 217 Seminar (1 cr)
Ar, Shoffner
- 218 Research: Poultry Products (ar cr; prereq cons instr)
Ar, Swanson

RHETORIC (RHET)

- 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 the first week for diagnostic tests and sectioning. Students who have taken Rhetoric 1 or 2 meet in 107En the first period January 4.
- 22 Public Speaking (3 cr; prereq soph, rhet comm req)
 - 1, II MWF, 220TSA, Sandquist
 - 2, III MWF, 307En, Nichols
 - 3, IV MWF, 307En, Nichols
 - 4, VI MWF, 120TSA, Sandquist
 - 5, II TThS, 312En, Drake
- 26 Original Writing (3 cr; prereq soph, rhet comm req)
 - III MWF, 312En, Woods
- 28 Play Production (3 cr; prereq soph, rhet comm req)
 - Ar, 220TSA, Drake
- 31 Poetry, Drama (5 cr; prereq soph, rhet comm req)
 - III MTWThF, 308En, Thurston
- 32 Novel, Short Story (3 cr; prereq soph, rhet comm req)
 - V MWF, 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, 311En, Brown
 - 2, VI MWF, 185ForH, Wright
 - 3, VII 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, Drake
 - 2, II TThS, 120TSA, Sandquist
- 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

SOILS (SOIL)

- 4 Soils (3 cr, prereq soph, InCh 2 or 5)
 - II MWF, 204So, Caldwell
- 108 Physical Properties (3 cr; prereq 4)
 - Lect VI T, 204So, McMiller
 - 1, Lab VII-X T, 202So, Arneman
 - 2, Lab VI-IX Th, 202 So, Arneman
- 110 Chemistry of Soil (3 cr; prereq 4)
 - I TThS, 204So, MacGregor
- 202 Research Probs (2-5 cr)

- 203 Seminar (1 cr)
 - Ar, Rost
- 205 Soil Colloids (3 cr; prereq AgBi 119)
 - Ar, Caldwell
- 207 Adv Soils (3 cr; prereq 1 yr chem)
 - II MWF, 204So, Caldwell

VETERINARY MEDICINE (VET)

- 51 Anatomy, Physiology, Hygiene of Domestic Animals (3 cr; prereq* 50)
 - I TThS, 103VetA, Bergman
- 102 Gross Anatomy (4 cr; prereq* 101)
 - Lect VI WTh, 103VetA, Kitchell
 - Lab VII-VIII WTh or VI-VIII F, 102VetA
- 104 Studies in Anatomy (1-5 cr; prereq 111, cons instr)
 - Ar, Kitchell, Weber
- 105 Neuroanatomy (3 cr; prereq* 101, 111)
 - Lect I F, II Th, 103VetA, Kitchell
 - Lab III-IV Th, II-III F, 102VetA
- 106 Surgical Anatomy (1 cr; prereq 170)
 - VI-VII M, 103VetA, Kitchell
- 109 Anatomy, Physiology, Hygiene of Poultry (3 cr; prereq PoHu 1, Zool 15, Bact 53)
 - VII MWF, 207TEH, Pomeroy
- 112 Microscopic Anatomy, Embryology (5 cr; prereq* 111)
 - Lect I MW, IV F, 103VetA, Weber, Bell
 - Lab II-IV MW, 204VetA
- 119 Seminar: Anatomy (1 cr; prereq* 101)
 - Ar, Kitchell, Weber
- 123 Bacteriology (4 cr; prereq* 122)
 - Lect II MW, 229Vets, Pomeroy
 - Lab III-IV MW or II-III F, 325VetS
- 127 Public Health (2 cr; prereq 123, 179)
 - VI-VII T, 125VetC, Pomeroy
- 136 Animal Physiology (7 cr; prereq* 135)
 - Lect I MTWThF, 207TEH, Sellers, Good
 - Lab II-IV TTh, 103TEH
- 137 Probs in Animal Physiology (ar cr; prereq 136 or Phsl 107)
 - Ar, Sellers
- 143 Clinical Pharmacology (3 cr; prereq regis VMed or grad with cons instr, Phcl 105)
 - Lect VIII M, 207TEH, Stowe, Hammond
 - VII F, 103VetA
 - Lab VII-IX W, 103TEH
- 152 Pathology (5 cr; prereq* 151)
 - Lect VI MWF, 229Vets, Sautter, Hilton
 - Lab VII-IX WF, 225VetS
- 157 Post-mortem Pathology (1-3 cr; prereq 153, cons instr)
 - Ar, Sautter, Kernkamp
- 158 Surgical Pathology (1-3 cr; prereq 153, cons instr)
 - Ar, Sautter, Kernkamp
- 161 Parasitology (4 cr; prereq 103, 113, cons instr)
 - Lect VII M, IV F, 229Vets, Griffiths
 - Lab VI-VIII TTh, 225VetS
- 168 Diseases of Fur-Bearing Animals (2 cr; prereq 123, 186)
 - VII MTh, 125VetC, Fenstermacher

- 171b Clinical Conference (½ cr, †171a-171b-171c; prereq 171a)
VI F, 125VetC
- 171e Clinical Conference (½ cr, †171d-171e-171f; prereq 171d)
VI F, 125VetC
- 173 Special Surgery (5 cr; prereq 172)
Lect VI TTh, VIII F, 207TEH, Arnold, Clifford, Usenik
Lab VII-IX TTh
- 178 Large Animal Medicine (5 cr; prereq* 177)
IX WF, I TTh, 229VetS, VI W, 207TEH, Pritchard
- 180 Infectious Diseases of Domestic Animals (5 cr; prereq 179)
I MTWThF, 125VetC, Hoyt
- 189 Clinical, Lab Practice (5 cr; prereq* 188)
II-IV MTWThFS, 70VetC, Campbell, staff
- 192 Clinical, Lab Practice (5 cr; prereq* 191)
II-IV MTWThFS, 55VetC, Campbell, staff
- 195 Obstetrics, Probs of Animal Reproduction (5 cr; prereq* 194)
Lect VI MWTh, VII F, 125VetC, Campbell, Spurrell
—1, Lab VII-IX W, VIII-IX F, 70VetC
—2, Lab VIII-IX T, VII-IX Th, 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
- 209 Adv Clinical Technique (ar cr; prereq cons instr)
- 213 Obstetrics, Gynecology (ar cr; cons instr)
Ar, Campbell, Spurrell
- 217 Seminar (1 cr)
V Th, 125VetC, Kernkamp
- 230 Research (ar cr)
- 240 Adv Parasitology (ar cr; prereq 162)
Ar, Griffiths

SCHOOL OF BUSINESS ADMINISTRATION) 12 B

10P (BUSINESS ADMINISTRATION (BA)

- 51 Business Law: Contracts (3 cr, †51-52 or †51-53; prereq Econ 7)
8:30-10:00 TTh, 1VH, Wright
- 52 Business Law: Agency, Partnership, Corporations (3 cr, †51-52 or †51-53; prereq 51)
Lect III T, 150Ph, Wright, others
—1, I TTh, 2VH
—2, II TTh, 4VH
—3, IV TTh, 2VH
—4, IV TTh, 6VH
- 54 Elem Accounting: Combined Course (4 cr, §Econ 24-25)
II MWThF, 306VH, Nelson
- 55 Elem Accounting: Combined Course (4 cr, §Econ 26; prereq 54)
—1, I MWThF, 306VH, Meyers
—2, III MWThF, 306VH, Wheeler
- 58 Public Finance (3 cr, §Econ 189 or 191-192; prereq Econ 7)
—1, II MWF, 301VH, Borak
—2, IV MWF, 113VH, Heller
- 66 Managerial Costs (3 cr, †130 or 152; prereq Econ 26)
—1, 8:30-10:00 Th, 6VH, Wheeler
—2, 11:00-12:30 TTh, 207VH, Meyers
- 70 Statistics Survey (3 cr, §Econ 5 or Soc 45; prereq Econ 7)
VI MWF, 2VH, Allen
- 71 Transportation: Services, Charges I (3 cr, §Econ 172; prereq Econ 7)
—1, I MWF, 1VH, Nightingale
—2, VI MWF, 4VH, Muirhead
- 74 Business Statistics (3 cr, †112; prereq Econ 5)
—1, II MWF, 2VH, Gaumnitz, others
—2, III MWF, 2VH
- 77 Survey in Marketing (3 cr, †Econ 185; prereq Econ 7)
—1, II MWF, 4VH, Holloway
—2, IV MWF, 4VH, Lewis
- 86 Survey of Office Mgt (3 cr; prereq Econ 7)
VI MWF, 205VH, Donaldson
- 89 Production Mgt (3 cr, †187; prereq Econ 7)
—1, III MWF, 301VH, Filippetti
—2, VII 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
- 94 Cost Accounting Lab (1 cr; prereq concur regis 153)
—1, I-II Th, 307VH, Pettersen
—2, VI-VII T, 307VH
- 96 Business Equipment Lab (1 cr; prereq Econ 26, bus ed or office mgt maj)
VI TTh, 304VH, Peterson
- 98 Honors Course (ar cr; prereq cons dean)
- 111 Purchasing (3 cr; prereq 77)
9:00-10:30 TTh, 205VH, Holloway
- 112 Time Series Analysis, Quality Control (3 cr, †74; prereq cons instr or grad, Econ 5)
—1, II MWF, 2VH, Gaumnitz, others
—2, III MWF, 2VH
- 114 Retail Store Mgt (3 cr; prereq 77)
10:30-12:00 TTh, 205VH

- 116 **Fire, Marine Insurance** (3 cr; prereq Econ 50)
9:00-10:30 TTh, 113VH, Williams
- 130 **Managerial Cost Accounting** (3 cr, §66 or 152; prereq cons instr or grad, Econ 26)
—1, 8:30-10:00 TTh, 6VH, Wheeler
—2, 11:00-12:30 TTh, 207VH, Meyers
- 136 **Controllership Functions, Procedures** (3 cr; prereq 151)
11:00-12:30 TTh, 307VH, Reighard
- 141 **Real Estate** (3 cr; prereq Econ 7)
I MWF, 205VH, Sutton
- 146 **Investments** (3 cr; prereq Econ 75 or 155)
II MWF, 205VH, Stehman
- 150 **Interm Accounting I** (3 cr; prereq Econ 26, Math 20)
IV MWF, 2VH
- 151 **Interm Accounting II** (3 cr, §65 or 139; prereq 150)
—1, IV MWF, 306VH, Heilman
—2, VI MWF, 306VH, Nelson
- 152 **Cost Accounting** (3 cr, §66 or 130; prereq Econ 26)
II MWF, 113VH, Meyers
- 153 **Cost Accounting** (3 cr; prereq 152)
I MWF, 113VH, Wheeler
- 158 **Govt Accounting** (2 cr; prereq 151)
II TTh, 2VH, Heilman
- 159 **Adv Accounting** (3 cr; prereq 151)
2:00-3:30 TTh, 306VH, Nelson
- 167 **Industrial Relations** (3 cr; prereq Econ 73 or 161)
—1, III MWF, 207VH, Turnbull
—2, VII MWF, 207VH
- 170 **Methods Analysis, Work Measurement** (3 cr, §IE 156; prereq 89 or 187)
9:00-10:30 TTh, 301VH, Wickesberg
- 173 **Market Analysis, Research** (3 cr; prereq sr, 77, Econ 5)
VI MWF, 207VH, Holloway
- 174 **Transportation: Services, Charges II** (3 cr; prereq 71 or Econ 172)
II MWF, 6VH, Nightingale
- 180A **Senior Topics: Accounting** (3 cr; prereq sr, 12 cr sr col acctg)
III MWF, 210VH, Reighard
- 181B **Senior Topics: Business Finance** (3 cr; prereq sr)
2:00-3:30 TTh, 205VH, Stehman
- 181C **Senior Topics: Marketing** (3 cr; prereq sr, 77)
2:30-4:00 TTh, 207VH, Lewis
- 181D **Senior Topics: Industrial Relations** (3 cr; prereq sr, 167)
2:00-3:30 TTh, 6VH, Heneman
- 181E **Senior Topics: Office Mgt** (3 cr; prereq 180E)
IV MWF, 208VH, Donaldson
- 181F **Senior Topics: Statistics** (3 cr; prereq* sr, Econ 123)
2:00-3:30 TTh, 210VH, Allen
- 181G **Senior Topics: Production Mgt** (3 cr; prereq* sr, 89 or 187)
IV MWF, 301VH, Filipetti
- 181I **Senior Topics: Transportation** (3 cr; prereq* sr, 174)
IV MWF, 210VH, Nightingale
- 183J **Practice Course: Gen Business** (ar cr; prereq cons adv)
- 187 **Admin of Production** (3 cr, §89; prereq cons instr or grad, Econ 7)
—1, III MWF, 301VH, Filipetti
—2, VII MWF, 301VH
- 188 **Advertising** (3 cr, §87; prereq 77, Psy 156)
III MWF, 4VH, Lewis
- 193 **Internship: Public Accounting** (ar cr; prereq cons instr)
- 199 **Internship: Internal Accounting** (ar cr; prereq cons instr)
- 263 **Seminar: Accounting Theory—Valuation**, Prin (3 cr)
VIII-IX W, 210VH, Heilman

ECONOMICS (ECON)

- 2 **Business History** (5 cr; prereq 1)
Lect III TTh, 240ChE, Heaton, others
—1, I MWF, 308MurH
—2, III MWF, 85ForH
—3, VI MWF, 80ForH
- 5 **Statistics** (5 cr, §BA 70 or Soc 45; prereq soph)
—1, II MTWThF, 313Z
—2, VII MTWThF, 80ForH
- 6 **Principles** (5 cr, §8 or 62; prereq soph)
Lect VII TTh, 150Ph, McKenna, others
—1, I MWF, 80ForH
—2, II MWF, 420MurH
—3, III MWF, 211Z
—4, IV MWF, 15ForH
—5, V MWF, 6VH
—6, VII MWF, 20ForH
- 7 **Principles** (5 cr, §9 or 63; prereq 6...3 rec)
Lect I TTh, NHAud, Smith, others
—1, I MWF, 15ForH
—2, I MWF, 85ForH
—3, II MWF, 80ForH
—4, II MWF, 120ForH
—5, III MWF, 15ForH
—6, III MWF, 170Ph
—7, IV MWF, 85ForH
—8, V MWF, 2VH
—9, VI MWF, 15ForH
—10, VII MWF, 205VH
- 8 **Gen Economics** (3 cr, §6 or 62; prereq soph, regis IT or Pharm)
—1, II MWF, 85ForH, Filipetti, others
—2, V MWF, 113VH
- 9 **Gen Economics** (3 cr, §7 or 63; prereq 8)
—1, II MWF, 15ForH, Filipetti, others
—2, V MWF, 205VH
—3, VII MWF, 145Ph
- 24 **Accounting** (3 cr, §BA 54; prereq 3rd qtr fr)
—1, I MWF, 115C, Nelson, others
—2, II MWF, 115C
—3, IV MWF, 115C
—4, V MWF, 306VH
—5, VII MWF, 306VH

CLASS SCHEDULE

- 25 Accounting (3 cr, \$BA 55; prereq 24)
 —1, I MWF, 311MurH, Nelson, others
 —2, I MWF, 111C
 —3, II MWF, 111C
 —4, III MWF, 307VH
 —5, IV MWF, 311MurH
 —6, V MWF, 207VH
 —7, VI MWF, 307VH
 —8, VII MWF, 307VH
- 26 Accounting (3 cr, \$BA 55; prereq 25)
 III MWF, 311MurH, Lund
- 28 Business Law (3 cr, \$BA 51; prereq soph, 6 cr econ; or sr)
 I MWF, 240ChE, Palmer
- 30 Retail Accounting (3 cr; prereq regis Pharm, 10)
 I MWF, 201WuH, Tuttle
- 32 Bgn Typewriting (1 cr)
 —1, I MTWThF, 209VH, Stanley
 —2, VI MTWThF, 211VH
- 33 Intern Typewriting (1 cr; prereq 30 words a min)
 IV MTWThF, 209VH, Stanley
- 38 Shorthand (3 cr, †37-38-39; prereq 37 or 1 yr HS shorthand)
 —1, II MTWThF, 209VH, Peterson
 —2, III MTWThF, 209VH, Donaldson
- 41 Adv Shorthand, Secretarial Procedure (3 cr, †40-41; prereq* 40)
 III MTWThF, 211VH, Peterson
- 50 Insurance (3 cr; prereq 7)
 —1, IV MWF, 1 VH, Williams
 —2, VII MWF, 1 VH
- 64 Economics of Money, Banking (3 cr, †142; prereq 3, 80)
 —1, I MWF, 301VH, Smith
 —2, VII MWF, 2VH, Gehrels
- 73 Manpower Economics, Labor Probs (3 cr, †161; prereq 7)
 Lect II TTh, 170Ph, Yoder, others
 —1, V T, 113VH
 —2, V Th, 113VH
 —3, VI T, 113VH
 —4, VII T, 113VH
 —5, VII Th, 113VH
- 75 Corporation Finance (3 cr, †155; prereq 3, 7)
 —1, 9:00-10:30 TTh, 207VH, Stehman
 —2, 2:00-3:30 TTh, 1 VH, Sutton
- 80 Intern Economic Analysis: Income, Employment (3 cr, †103-104 or 143; prereq 20 cr soc sci incl 7)
 —1, I MWF, 207VH, McKenna, others
 —2, III MWF, 1 VH
 —3, IV MWF, 6VH
 —4, VII MWF, 6VH
- 81 Intern Economic Analysis: Firms, Households (3 cr, †103-104; prereq 20 cr soc sci incl 7)
 —1, I MWF, 6VH
 —2, II MWF, 207VH
 —3, III MWF, 6VH
 —4, IV MWF, 207VH
 —5, VI MWF, 301VH
- 84 Comparative Economic Systems (3 cr; prereq 7)
 II MWF, 307VH, Papandreou
- 85 Govt Regulation of Business (3 cr, †175; prereq* maj 81; others law or pol sci)
 —1, II MWF, 1 VH, Buttrick
 —2, VI MWF, 6VH
- 98 Honors Course (ar cr; prereq cons maj adv)
- 101 Econometrics I (3 cr; prereq* 5, 100; Math 50-51 rec)
 VIII-IV MW, 307VH, Hurwicz
- 104 Adv Economic Theory (3 cr, †103-104, †80-81; prereq 103)
 VII MWF, 113VH, Boddy
- 106 Development of Economic Thought: Socialistic Critics, Neo-classical Theory (3 cr; prereq 81)
 IV MWF, 307VH, Buttrick
- 122 Theory of Statistics (3 cr, †121-122; prereq 121)
 I MWF, 307VH, Allen
- 142 Monetary, Banking Policy (3 cr, †64; prereq cons instr or grad, 3, 80)
 —1, I MWF, 301VH, Smith
 —2, VII MWF, 2VH, Gehrels
- 143 Economic Analysis: Income, Employment (3 cr, †80; prereq cons instr or grad, 7)
 —1, I MWF, 207VH, McKenna, others
 —2, III MWF, 1 VH
 —3, IV MWF, 6VH
 —4, VII MWF, 6VH
- 149 Business Cycles (3 cr; prereq* sr, 64 or 142)
 VI MWF, 1 VH, Smith
- 155 The Modern Corporation (3 cr, †75; prereq cons instr or grad, 3, 7)
 —1, 9:00-10:30 TTh, 207VH, Stehman
 —2, 2:00-3:30 TTh, 1 VH, Sutton
- 160 Readings (ar cr; prereq cons adv, instr)
- 161 Manpower Economics, Labor Probs (3 cr, †73; prereq cons instr or grad, 7)
 Lect II TTh, 170Ph, Yoder, others
 Rec VI Th, 113VH, Ulman
- 163 Union Organization, Admin (3 cr; prereq 73 or 161)
 I MWF, 2VH, Ulman
- 169 Labor Legislation: Economic Security (3 cr; prereq 73 or 161)
 IV MWF, 205VH, Turnbull
- 175 Govt Regulation of Market Behavior (3 cr, †85; prereq cons instr or grad, 104)
 VI MWF, 113VH, Boddy
- 176 Int'l Economics (3 cr; prereq 7)
 I MWF, 4VH, Gehrels
- 178 Consumption (3 cr; prereq 7)
 VIII MWF, 205VH, Valle
- 185 Marketing (3 cr, \$BA 77; prereq 7)
 III MWF, 205VH, Valle
- 190 Nat'l Income Analysis (3 cr; prereq 80)
 III MWF, 113VH, McKenna
- 192 Public Finance (3 cr, †191-192, †189 or BA 58; prereq 191)
 10:00-11:30 TTh, 6VH, Heller

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| <p>196 Adv Int'l Economics (3 cr; prereq 176)
2:00-3:30 TTh, 2VH, Coen</p> <p>200 Theory of Employment, Income (3 cr, †200-201)
VIII-IX T, 210VH, Brownlee</p> <p>202 Methodology (3 cr)
VIII-IX Th, 307VH, Papandreou</p> | <p>234 Seminar: Public Finance (3 cr, †233-234; prereq 233)
VIII-IX Th, 210VH, Heller</p> <p>244 Seminar: Money, Banking (3 cr, †243-244; prereq 243)
VIII-IX W, 306VH, Gehrels</p> <p>251 Seminar: Industrial Relations (3 cr)
VIII-IX M, 210VH, Yoder</p> <p>299 Research (ar cr)</p> |
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SCHOOL OF DENTISTRY

CROWN AND BRIDGE (CRBR)

- 61 Crown, Bridge (4 cr; prereq 60)
Lect I T, 12 Owre, Yock
Lab II-IV TW, VII-IX W, 1 Owre, Yock
- 81C Crown, Bridge Clinic (2 cr; prereq 80C)
Ar, Yock
- 91C Crown, Bridge Clinic (2 cr; prereq 90C)
Ar, Yock

DENTAL ANATOMY (ANAT)

- 51 Dental Anatomy (3 cr; prereq 50)
Lect VI M, 111 Owre, Hall
Lab VII-IX M, II-IV Th, 1 Owre, Hall

DENTISTRY (DENT)

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| <p>1 Dental X-ray (1 cr)
III M, 104 Owre, Cooper</p> <p>5 Dental Prosthetics (2 cr; prereq 4)
II-IV TW, 104 Owre, Cooper</p> <p>8 Dental Anatomy (2 cr; prereq 7)
Lect VI F, 104 Owre, Hall
Lab VII-IX F, 104 Owre, Bruning</p> <p>11 Clinical Dental Assisting (5 cr; prereq 10)
Ar, Cooper</p> <p>21 Dental Prophylaxis (2 cr)
Lect VI TTh, 104 Owre, Jackson
—1, Lab VII-VIII T, 104 Owre, Jackson
—2, Lab VII-VIII Th, 104 Owre, Jackson</p> <p>41 Dental Health Education (2 cr; prereq 40)
Ar, Bruning</p> <p>46 Dental Assisting (2 cr; prereq 45)
Ar, Bruning, others</p> <p>54 Dental Prophylaxis (2 cr; prereq 53)
Ar, Jackson, Bruning</p> <p>58 Prosthetic Dentistry, Dental Lab (2 cr; prereq 57)
Lect VI W, 104 Owre, Hall
Lab VII-IX W, 104 Owre, Hall</p> <p>60 Oral Histology, Pathology (2 cr; prereq 56)
Lect I TTh, 104 Owre, Mitchell
Lab VII-VIII M, 104 Owre, Mitchell</p> <p>131 Adv Dental Anatomy (ar cr; prereq 130)
Ar, Hall</p> | <p>132 Adv Dental Anatomy (ar cr; prereq 131)
Ar, Hall</p> <p>133 Adv Dental Anatomy (ar cr; prereq 132)
Ar, Hall</p> <p>134 Adv Technical Restorative Dentistry (ar cr; prereq grad)
Ar, Simon, Wittich, Yock, Listiak, others</p> <p>135 Adv Technical Restorative Dentistry (ar cr; prereq 134)
Ar, Simon, Wittich, Yock, Listiak, others</p> <p>136 Adv Technical Restorative Dentistry (ar cr; prereq 135)
Ar, Simon, Wittich, Yock, Listiak, others</p> <p>137 Adv Dental Radiographic Technique (ar cr; prereq grad)
Ar, Simon, others</p> <p>138 Adv Oral Diagnosis (ar cr; prereq grad)
Ar, Mitchell</p> <p>139 Adv Oral Physiology (ar cr; prereq grad)</p> <p>140 Preventive Dentistry (ar cr; prereq grad)</p> <p>141 Adv Oral Surgery (ar cr; prereq grad)
Ar, Clark, others</p> <p>142 Seminar: Oral Surgery (1 cr; prereq grad)
Ar, Clark</p> <p>143 Research: Oral Surgery (ar cr; prereq grad)
Ar, Clark, others</p> <p>144 Probs Oral Surgery (ar cr; prereq grad)
Ar, Clark, others</p> <p>150 Adv Orthodontic Techniques (ar cr; prereq grad)
Ar, Speidel, Steadman, McIver</p> <p>151 Treatment Procedures in Orthodontics (ar cr; prereq grad)
Ar, Speidel, Steadman, McIver</p> <p>152 Case Analysis (ar cr; prereq grad)
Ar, Speidel, Steadman, McIver</p> <p>153 Treatment Planning (ar cr; prereq grad)
Ar, Speidel, Steadman, McIver</p> <p>154 Adv Clinical Orthodontics (ar cr; prereq grad)
Ar, Speidel, Steadman, McIver</p> <p>155 Osteology, Myology of the Head (ar cr; prereq grad)
Ar, Steadman</p> <p>156 Growth of the Head (ar cr; prereq grad)
Ar, Speidel, Steadman, McIver</p> |
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- 157 Comparative Odontology (ar cr; prereq grad)
Ar, Steadman
- 158 Seminar: Orthodontics (ar cr; prereq grad)
Ar, Speidel, Steadman, McIver
- 230 Adv Clinical Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Yock, Listiak, others
- 231 Adv Clinical Restorative Dentistry (ar cr; prereq 230)
Ar, Simon, Wittich, Yock, Listiak, others
- 232 Adv Clinical Restorative Dentistry (ar cr; prereq 231)
Ar, Simon, Wittich, Yock, Listiak, others
- 233 Adv Clinical Restorative Dentistry (ar cr; prereq 232)
Ar, Simon, Wittich, Yock, Listiak, others
- 234 Research: Probs in Restorative Dentistry (ar cr)
Ar, Simon, Wittich, Listiak
- 235 Research: Probs in Restorative Dentistry (ar cr; prereq 234)
Ar, Simon, Wittich, Listiak
- 236 Research: Probs in Restorative Dentistry (ar cr; prereq 235)
- 237 Research: Probs in Restorative Dentistry (ar cr; prereq 236)
Ar, Simon, Wittich, Listiak
- 238 Adv Clinical Oral Diagnosis (ar cr)
Ar, Mitchell, others
- 239 Adv Clinical Oral Diagnosis (ar cr; prereq 238)
Ar, Mitchell, others
- 240 Adv Clinical Oral Diagnosis (ar cr; prereq 239)
Ar, Mitchell, others
- 241 Adv Clinical Oral Diagnosis (ar cr; prereq 240)
Ar, Mitchell, others
- 242 Research: Oral Pathology (ar cr)
Ar, Mitchell
- 243 Seminar: Dental Research (1 cr)
Ar, Mitchell
- 244 Clinical Oral Pathology Conference (1 cr)
Ar, Clark, Mitchell
- 245 Probs, Research: Orthodontics (ar cr)
Ar, Speidel, Steadman, McIver
- 246 Adv Periodontia (ar cr)
Ar, Zander, others
- 247 Research, Periodontia (ar cr)
Ar, Zander, others
- 248 Seminar: Periodontia (1 cr)
Ar, Zander, others

DENTURE PROSTHESIS (PROS)

- 51 Denture Prosthesis (4 cr; prereq 50)
Lect VI T, 111 Owre, Hall
Lab I-III F, VII-IX TTh, 1 Owre, Hall
- 81 Prosthesis (1 cr; prereq 80C)
1:00-2:00 F, 111 Owre, Listiak
- 81C Prosthesis Clinic (2 cr; prereq 80C)
Ar, Listiak
- 91C Prosthesis Clinic (2 cr; prereq 90C)
Ar, Listiak

OPERATIVE DENTISTRY (OPER)

- 61 Operative Dentistry (4 cr; prereq Anat 52)
Lect I M, 111 Owre, Pattridge
Lab II-IV M, VII-IX F, I-III S, 1 Owre, Pattridge
- 81C Operative Clinic (3 cr; prereq 80C)
Ar, Pattridge
- 91 Seminar: Restorative Dentistry (1 cr; prereq CrBr 90)
8:00-9:00 Th, 113 Owre, Pattridge
- 91C Operative Clinic (3 cr; prereq 90C)
Ar, Pattridge

ORAL DIAGNOSIS AND RADIOLOGY (DIAG)

- 94 Oral Medicine (1 cr; prereq regis Dent)
1:00-2:00 W, 111 Owre, Mitchell

ORAL SURGERY (OSUR)

- 91 Oral Surgery (2 cr; prereq 90)
8:00-9:00 TF, 113 Owre, Clark

ORTHODONTIA (ORTH)

- 51 Development of Occlusion (2 cr; prereq regis Dent)
I MW, 12 Owre, Speidel

PEDODONTICS (PEDS)

- 81 Pedodontics (1 cr; prereq 80)
1:00-2:00 Th, 111 Owre, Wittich
- 91C Pedodontics Clinic (3 cr; prereq 90C)
Ar, Wittich

PERIODONTIA (PERI)

- 81 Periodontia (2 cr; prereq regis Dent)
I TTh, 111 Owre, Zander
- 81C Periodontia Clinic (1 cr; prereq concur regis 81)
Ar, Zander
- 91C Periodontia Clinic (1 cr; prereq 90C)
Ar, Zander

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION (AGED)

- 54 Rural Education, Community Leadership (3 cr; prereq soph)
IV TTh, 1 hr ar, 301Hr, Swanson
- 81 Teaching in Secondary School (4 cr; prereq Ed 55B)
IV MWF, 301Hr, Kitts
- 91 Supervised Teaching Experience (6 cr; prereq sr, 82, C+ aver in maj)
Ar, Kitts
- 104 Planning Programs (2 cr; prereq* 3rd qtr sr)
Ar, Peterson
- 106 Young Farmer, Adult Education (4 cr; prereq 81)
II MWF, 301Hr, Kitts
- 154 Rural Education, Community Leadership (3 cr, §54; prereq grad)
IV TTh, 301Hr, Swanson
- 221 Field Probs (3 cr)
Ar, Peterson, Kitts
- 232 Research (ar cr; prereq 15 cr educ)
Ar, Peterson, Kitts
- 286 Current Issues (ar cr; prereq cons instr)
II-V S, 301Hr, Peterson

ART EDUCATION (ARED)

- 17 Pictorial Expression for Elem Education (3 cr)
VI-VII MWF, 218TNUH, Cherry
- 18 Design Activities for Elem Education (3 cr)
-1, I-II MWF, 213TNUH, Bratlee
-2, III-IV MWF, 213TNUH, Cherry
-3, VI-VII MWF, 213TNUH, Erickson
- 19 Functional Arts, Crafts for Elem Education (3 cr)
IV-V MWF, 218TNUH, Bratlee
- 57 Basic Prin, Experiences (5 cr; prereq concur regis Ed 55A or 55B)
III-IV MTWThF, 109J, Hastie, Gayne, Bratlee
- 84 Teaching Art in Elem School (3 cr; prereq* 17, 18)
VII-VIII TTh, 109J, Gayne
- 85 Art for Integration in Secondary Education (3 cr, §17-18-19, not open to art ed maj)
VI-VII TTh, 218TNUH, Bratlee
- 87 Student Teaching, Supervision of Art (2 cr, §86-87-88; prereq sr, 10 cr from 56-57-58, Ed 55B, cons dir student tchg, concur regis 87A)
Ar, Hastie
- 87A Teaching, Supervision of Art (2 cr, §86A-87A-88A; prereq concur regis 87)
IX-X T, 109J, Hastie
- 151 Curriculum Building (3 cr)
III-IV S, 213TNUH, Hastie

- 184 Adv Teaching, Supervision of Art in Elem School (3 cr)
III-IV S, 109J, Gayne
- 284 Research (2 cr)
IX-X T and ar, 213TNUH, Gayne
- 295 Problems (ar cr; prereq cons maj adv)
Ar, 106J, Gayne, Hastie
- 296 Seminar (no cr)
IX-X Th, 213TNUH, Gayne, others

CURRICULUM AND INSTRUCTION (EDCI)

- 58 Core Curriculum Foundations (1 cr; prereq cons instr)
VIII-IX T, 105JohH, Bossing
- 61 Teaching Social Studies in Elem School (3 cr; prereq Ed71C)
VIII MWF, 202Pt, Jarollmek
- 62B Teaching Arithmetic in Interm Grades (3 cr; prereq Ed 71B)
VII MWF, 210 OUHS, Brueckner
- 63 Children's Literature (2 cr)
-1, VI TTh, 210 OUHS, Chase
-2, VI TTh, 2P, D Smith
- 64 Teaching English in Elem School (3 cr; prereq Ed 71B)
VI MWF, 2P, D Smith
- 65 Teaching Science in Elem School (3 cr; prereq Ed 71B, 10 hrs nat sci)
VII-VIII T, VII Th, 103Bu, Boeck
- 66 Treatment of Learning Difficulties (3 cr; prereq concur regis student tchg)
IX-X W, 202Pt, Bond, Brueckner, Clymer, Reynolds
- 105 Audio-Visual Materials in Education (3 cr; prereq sr)
Lect I-II S, 206WeH, Pearson
Lab 1 hr ar
- 106 Coordinating Audio-Visual Education Program (3 cr; prereq* 105)
IX-X T, 206WeH, Pearson
- 108 Radio, Television in Education (2 cr; prereq 9 cr educ)
IX-X T, 302MurH, Tyler
- 109 Audio-Visual Materials, Equipment Lab (3 cr; prereq* 105 or concur regis)
Lect IX-X W, 206WeH, Pearson
Lab 2 hrs ar
- 117 Rural Education for Administrators, Teachers (3 cr; prereq cons instr)
III-IV S, 1 hr ar, 206 OUHS, Archer
- 125 Occupational Information Lab (3 cr; prereq cons instr)
III-IV S and ar, 111Bu, K Hoyt
- 137B Adv Materials, Methods in Cooperative Part-Time Classes (3 cr; prereq cons instr)
IX-X Th, 103Bu, Meyer

- 139 Coordination Techniques (3 cr)
IX-X W, 103Bu, Meyer
- 143 Teaching, Supervision of Reading in Elem School (3 cr; prereq 9 cr educ)
IX-X M and ar, 213NH, Bond
- 145 Reading Difficulties (3 cr; prereq rdg course or trng in counslg or sch psy work)
IX-X T and ar, 202Pt, Bond
- 151 Diagnosis, Treatment of Learning Difficulties (3 cr)
IX-X M, 112Bu, Brueckner
- 155 Materials Lab for Social Studies Teachers (3 cr; prereq cons instr)
IX-X M, 175PeikH, McCune, E West
- 169 Extracurricular Activities (4 cr; prereq Ed 55B)
III-IV TTh, 106JohH, Bossing
- 170B Curriculum, Course of Study Construction (3 cr; prereq 113 or 119, cons instr)
I-II S, 103Bu, Bossing
- 171 Curriculum Lab Practice (2 cr; prereq 170A or 170B, cons instr)
Ar, Archer, Bossing
- 173A Organizing Units of Instruction in Elementary School (3 cr; prereq 119 or thcg exper)
IX-X W, 112Bu, Goossen
- 174 Clinical Methods, Practice in Speech Pathology (3 cr; prereq Spch 163 or concur regis)
VII-VIII W, 409F, Bryngelson
- 175 Clinical Methods, Practice in Speech Pathology (3 cr; prereq Spch 163 or concur regis)
VII-VIII W, 409F, Bryngelson
- 176 Clinical Methods, Practice in Speech Pathology (3 cr; prereq Spch 163 or concur regis)
VII-VIII W, 409F, Bryngelson
- 181 Foundations of Elem School Methods (3 cr; prereq 9 cr educ)
III-IV S, 112Bu, Brueckner
- 199E Internship (ar cr)
Ar, Grim
- 201 Probs in Teaching Social Studies (3 cr; prereq* 168, 204)
Ar, McCune, Morse, E West
- 205 Probs in Audio-Visual Education (ar cr; prereq cons instr)
Ar, Pearson
- 207 Probs in Radio, Television 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 55B, sr methods)
IX-X W, 175PeikH, Boardman, Bossing, R Keller, D Smith
- 225 Probs in Supervision, Instruction in Secondary Schools (ar cr; prereq cons instr)
IX-X W, 175PeikH, Boardman, R Keller
- 226 Seminar: Elem School Probs (no cr)
IX-X Th, 175PeikH, Archer, Bond, Brueckner, Goossen
- 227 Probs in Rural Education (ar cr; prereq 117)
Ar, Archer
- 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, Meyer
- 239 Probs in Business Education (ar cr; prereq cons instr)
Ar, Price
- 250 Higher Education in United States (3 cr; prereq 18 cr educ or 1 yr grad study any field)
I-II S, 1 hr ar, 112Bu, Eckert
- 251 Curriculum Trends in American Colleges (3 cr; prereq 18 cr educ or 1 yr grad study any field)
I-II T, I Th, 206 OUHS, Eckert
- 253 Seminar: Improvement of College Instruction (0-3 cr; prereq cons instr)
VIII-IX W, 307JohH, Eckert, Wrenn
- 261 Special Probs: Improvement of Instruction (ar cr; prereq cons instr)
Ar, Brueckner, Goossen
- 271 Probs in Curriculum Construction (3 cr; prereq cons instr)
Ar, Archer, Birkmaier, Boeck, Bossing, 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
- 285 Professional Education of Teachers (3 cr; prereq* 15 cr educ incl 184, 250 or HED 182 or EPsy 250)
III-IV S, 103Bu, Grim
- 294 Adv Curriculum, Methods in Secondary School English (2 cr; prereq EdT 75C)
III-IV S, 307JohH, D Smith
- 296 Special Probs: Teaching English (ar cr)
Ar, D Smith

EDUCATION (ED)

- 55A Introd Secondary School Teaching (5 cr; prereq Psy 2)
Lect I TThS, BuAud, Mork
—1, II-III TTh, 103Bu, Anderson
—2, II-III TTh, 210 OUHS, Flanders
—3, VI-VII TTh, 111Bu, Anderson

55B Intro Secondary School Teaching (5 cr; prereq 55A)

- Lect I MWF, BuAud, Mork
 —1, II-III TTh, 112Bu, Peaslee
 —2, II-III MW, 112Bu, Dugan
 —3, II-III TTh, 175PeikH, Abel, Mitchell
 —4, VI-VII TTh, 2F, Bossing
 —5, VI-VII TTh, 112Bu, Jones
 —6, VI-VII MW, 103Bu, W West

71B Intro Elem School Teaching (5 cr; prereq 71A)

- Lect III MWF, 211NH, Clymer
 —1, I-II TTh, 111Bu, Clymer
 —2, II-III TTh, 212 OUHS, Goossen
 —3, III-IV TTh, 111Bu, Clymer
 —4, III-IV TTh, 202Pt, Archer
 —5, VI-VII TTh, 113JohH, Archer

81 Education for Public Health Nurses (3 cr; not open to educ degree cand)

- IV MWF, 111 Owre, Grout

EDUCATIONAL ADMINISTRATION (EDAD)**115 Organization of Elem School (3 cr; prereq 9 cr educ)**

- I-II S, 213NH, Goossen

218 Recent Literature in Secondary Education (ar cr)

- IX-X W, 175PeikH, Bossing

227 Teacher, Employee Admin (3 cr; prereq 225)

- IX-X W, 1 hr ar, 105JohH, Neale

228 Probs in Educational Admin (1-3 cr; prereq 225)

- Ar, Neale

230 Public Relations for Schools (3 cr; prereq 225)

- I-II S, 111Bu, Neale

235 Seminar (no cr)

- VIII-IX T, 106JohH, Neale

264 Admin of Instructional Activities in Secondary School (3 cr)

- II MWF, 103Bu, Boardman

270 Probs in Secondary Education (ar cr; prereq cons instr)

- Ar, Boardman, Bossing, R Keller

274 The Junior College (3 cr)

- III MWF, 103Bu, Boardman

EDUCATIONAL PSYCHOLOGY (EPSY)**120 Measurement (3 cr; prereq 60)**

- VII MWF, 112Bu, D Johnson

134 School Counseling Procedures (3 cr; prereq 120, 133, cons instr)

- IX-X M, 106JohH, Dugan

140 Instruments, Techniques of Measurements (3 cr; prereq sr, 120)

- VII-VIII TTh, 175PeikH, Edson

142 Individual Mental Testing (3 cr; prereq sr, 120)

- III-IV S, 1 hr ar, 202Pt, Reynolds

148 Clinical Diagnosis of Reading Difficulties (3 cr; prereq EdCI 145, 9 hr psy or educ psy)

- VI TTh, 1 hr ar, 202Pt, Reynolds

150 Clinical Practice in Remedial Teaching (3 cr; prereq EdCI 145 or 151, cons instr)

- II or III MTWThF, 108Pt, Bond, Clymer, Reynolds

151 Clinical Practice in Educational Diagnosis (2-6 cr; prereq 142 or EdCI 145, cons instr)

- VI-VIII MWF, 108Pt, Bond, Reynolds

159 Personality Development, Mental Hygiene (3 cr)

- I-II S, 1 hr ar, 114JohH, Wrenn

208 Methods in Educational Research (3 cr)

- VIII MWF, 111Bu, P Johnson

217 Statistical Methods in Education (3 cr)

- II MWF, 111Bu, P Johnson

217a Statistical Methods in Education Lab (2 cr)

- 1, II-III TTh, 221Bu, Moonan (for students taking entire sequence 216-217-218 concur)

- 2, VII-VIII TTh, 221Bu, Moonan (for students electing 1 or more qtrs)

225 Diagnosis as a Phase of Counseling (3 cr; prereq 140 or concur regs, 133 or 250 or Psy 130)

- IV MWF, 306JohH, Wrenn

233 Probs in Guidance, Personnel Work (1-9 cr)

- Ar, Dugan, Wrenn

240 Probs in Measurement (3 cr)

- Ar, P Johnson

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

- Ar, P Johnson

251 College Student Personnel Work (1-3 cr; prereq 250 or 1 course higher educ)

- VI-VII W, 306JohH, Wrenn

253 Research Probs (ar cr; prereq cons instr)**260 Seminar (no cr)**

- VIII-IX F, 103Bu

280 Practicum in Group Leadership (3 cr; prereq cons instr)

- VI-VII TTh, 1 hr ar, 130, 175 ForH, Flanders

281 Practice in Personnel Work (sec 1, 3 cr; sec 2, ar cr; prereq* 225, 226)

- 1, VI-VII Th and ar, 204EdH, Hagenah

- 2, Ar, Wrenn

293 Psychology of Learning (3 cr; prereq 12 cr psy, educ psy)

- III MWF, 175PeikH, Mork

HISTORY AND PHILOSOPHY OF EDUCATION (HED)**131 Comparative Education (3 cr)**

- IX-X Th, 314JohH, Beck

178 Education, Probs of American Democracy (3 cr)

- IX-X T, 111Bu, Ellis

- 180 **The School, Society** (3 cr; prereq sr, Ed 55B or 71C)
 —1, VII-VIII T, VII Th, 115JohH, Beck
 —2, VI-VII M, VI W, 111Bu, Ellis
 —3, IV MWF, 111Bu, Ellis
- 241 **Problems** (ar cr; prereq cons instr)
 Ar, Beck, Ellis

HOME ECONOMICS EDUCATION (HEED)

- 91 **Observation, Materials, Teaching** (5 cr; prereq HE 4, 21, 22, 41, Ed 55B, home exp, concur regis 93)
 VIII MWF, IX W, 1 hr ar, 103HE, Rose, Kafka
- 92 **Teaching Probs** (2 cr; prereq sr, 91, 93, concur regis 94, 192, 194A)
 Ar, Rose
- 93 **Supervised Teaching** (3 cr; prereq HE 4, 21, 22, 41, Ed 55B, home exp)
 Ar, Rose, Ford, Kafka, others
- 94 **Supervised Teaching** (6 cr; prereq 93)
 Ar, Rose, Kafka, Ford, others
- 95 **Field Experience for Home Agents** (6 cr; prereq 91, 93, cons dept head, dir agric ext)
 Ar, Rose, others
- 192 **Evaluation in Home Economics** (2-3 cr; prereq sr, 91, 93)
 Ar, Rose
- 193A **Home Economics Curriculum: Secondary Level** (3 cr; prereq* sr, 94)
 Ar, Rose
- 194A **Adult Education** (3 cr; prereq sr, 91, 93)
 Ar, Ford
- 197 **Organization, Methods for Related Art Teaching** (1-3 cr; prereq sr, 91, HE 180)
 Ar, Esteros
- 199E **Internship** (ar cr; prereq cons instr)
 Ar, Rose
- 243 **Trends in Home Economics** (3 cr; prereq cons instr)
 III-IV S, 103HE, Rose
- 293 **Problems** (1-9 cr; prereq cons instr...294 rec)
 Ar, Rose, Esteros, Ford
- 295 **Seminar** (1 cr)
 IX Th, 103HE, Rose

INDUSTRIAL EDUCATION (IND)

- 1 **Basic Woodwork** (3 cr)
 II-IV TTh, 1TNUH, Jackman (for OT students)
- 2 **Machine Woodwork** (3 cr; prereq 1)
 III-IV MWF, 1TNUH, Nelson
- 6 **Applied Drawing** (3 cr; prereq 5)
 VI-VIII TTh, 201TNUH, Worthington
- 10 **Basic Electricity** (3 cr)
 VI-VII MWF, 15TNUH, Kavanaugh
- 11 **Shopwork for Nonmajors** (3 cr)
 —1, VII-VIII MWF, 1 TNUH, Brown
 —2, VII-IX TTh, 1 TNUH, Kavanaugh
- 42 **Course Organization** (3 cr; prereq 40)
 IX-X W, 113TNUH, Nelson

- 50A **Student Teaching** (3 cr; prereq 70 or 100, 80, 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 **Practices in Vocational Education** (2 cr; prereq 60)
 IX-X M, 113TNUH, Widdowson
- 105 **Administration** (3 cr; prereq 61, 80, cons instr)
 II MWF, 113TNUH, Smith
- 109 **Conference Leading for Industry** (3 cr; prereq cons instr)
 VIII-X T, 116TNUH, Widdowson
- 200 **Research Probs** (3, 6 or 9 cr)
 III MWF, 101TNUH, 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 TTh and ar, 2309PoH, Boyle, Norris
- 51B **Teaching Nursing** (6 cr; prereq 51A)
 I MF, 3:00-5:00 Th, 2309PoH, Boyle, Norris
- 52 **Student Teaching** (ar cr)
 Ar, Grim
- 53A **Teaching Exceptional Children** (5 cr, †53A-53B; prereq cons instr)
 Ar, Reynolds
- 53B **Teaching Exceptional Children** (5 cr, †53A-53B; prereq 53A)
 Ar, Reynolds
- 54A **Student Teaching: Elem School** (5 cr, †54A-54B)
 Ar, Chase, Curtis, Strand, L Johnson
- 54B **Student Teaching: Elem School** (5 cr, †54A-54B; prereq 54A)
 Ar, Chase, Curtis, Strand, L Johnson
- 57 **Nursery School, Kindergarten Lab in Art, Literature, Social Studies** (5 cr; prereq 56)
 VIII MTWThF, 210 OUHS, Headley
- 59 **Methods, Observation in Nursery School** (3 cr; prereq 55 or concur regis)
 VII MWF, 212 OUHS, Helgerson
- 67 **Student Teaching: Mathematics** (2 cr; prereq sr, concur regis 67A-B-C)
 Ar, D Johnson
- 67B **Teaching Secondary School Mathematics** (1 cr, †67A-B-C; prereq 67A)
 VIII-IX T, 315PeikH, D Johnson (for maj only)
- 68 **Student Teaching: Natural Science** (2 cr; prereq sr, concur regis 68A-B-C)
 Ar, Boeck
- 68B **Teaching Secondary School Science** (1 cr, †68A-B-C; prereq 68A)
 VIII-IX M, 365PeikH, Boeck (for maj only)

- 69 Student Teaching: Social Studies (2 cr; pre-req sr, concur regis 69A-B-C)
Ar, E West, Bergstrom
- 69B Teaching Social Studies in Secondary School (1 cr, †69A-B-C; prereq 69A)
VIII MW, 165PeikH, E West (for maj only)
- 69M Teaching Social Studies in Secondary School (3 cr)
III MWF, 165PeikH, E West (for min only)
- 70 Student Teaching: Modern Languages (2 cr; prereq sr, concur regis 70A-B-C)
Ar, Birkmaier
- 70B Teaching Modern Languages (1 cr, †70A-B-C; prereq 70A)
IX-X W, 228PeikH, Birkmaier (for maj only)
- 71 Student Teaching: Latin (2 cr; prereq sr, concur regis 71A-B-C)
Ar, Birkmaier
- 71B Teaching Latin (1 cr, †71A-B-C; prereq 71A)
IX-X W, 228PeikH, Birkmaier (for maj 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* Ed 55B, Jour 41 or 51)
VII MWF, 308MurH, Kildow
- 75 Student Teaching: Language Arts (2 cr; prereq sr, concur regis 75A-B-C)
Ar, Alwin, Bergstrom
- 75B Teaching Language Arts in Secondary Schools (1 cr, †75A-B-C; prereq 75A)
VIII-IX TTh, 112Bu, D Smith (for maj only)
- 77 Student Teaching: Nursery School (5 cr; prereq cons maj adv, dir student tchg)
IX M and ar, 210 OUHS, Fuller
- 78 Student Teaching: Kindergarten (5 cr; pre-req cons major adv, dir student tchg)
IX M and ar, 210 OUHS, Fuller
- 79 Student Teaching: Primary Grades (5 cr; prereq cons maj adv, dir student tchg)
IX M and ar, 210 OUHS, Fuller
- 81 Teaching Shorthand (2 cr; prereq Ed 55B or concur regis)
IX-X M, 103Bu, Price
- 84A Practice, Field Work in Recreation Leadership (2 cr; prereq recr maj)
V W, 6 hrs ar, 215CH, Giles
- 84B Practice, Field Work in Recreation Leadership (2 cr; prereq 84A)
V W, 6 hrs ar, 215CH, Giles
- 84C Practice, Field Work in Recreation Leadership (2 cr; prereq 84B)
V W, 6 hrs ar, 215CH, Giles
- 85A Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq sr, recr maj, 84C; or recr min)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 85B Practice, Field Work in Recreation (1 cr, min, 2 cr maj; prereq 85A)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 85C Practice, Field Work in Recreation (1 cr min, 2 cr maj; prereq 85B)
V W, 3 hrs ar min, 6 hrs ar maj, 215CH, Giles
- 90B Teaching Distributive Education Subjects (2 cr, †90A-90B-90C; prereq cons instr)
IX-X T, 103Bu, Meyer
- 93 Student Teaching: Core Curriculum (2 cr; prereq Ed 55B)
Ar, Bergstrom *Mrs Ed*

MUSIC EDUCATION (MVED)

- 5 Applied Instrumental Technique (2 cr; pre-req mus ed maj)
VI MTWF, 4NMA, Prescott
- 50B Teaching in Interm Grades (2 cr; prereq 50A)
II TTh, 4Sch, Caswell
- 51 Teaching of Music (3 cr; prereq 1)
—1, IV MTWThF, 104Sch, Caswell
—2, IX MTWThF, 103Sch, Edes
- 52 Teaching of Music (3 cr; prereq 51)
—1, IV MTWThF, 4Sch, Edes
—2, VIII MTWThF, 103Sch
- 59 Choral Literature, Conducting (2 cr sr, 1 cr others)
V TTh, 4NMA, Caswell
- 60 Supervision, Teaching (3 cr, †60-61-62; pre-req sr, 53, cons instr)
IX-X W, 5 hrs ar, 4Sch, Ivory
- 61 Supervision, Teaching (3 cr, †60-61-62; pre-req sr, 53, cons instr)
IX-X W, 5 hrs ar, 4Sch, Ivory
- 62 Supervision, Teaching (3 cr, †60-61-62; pre-req sr, 53, cons instr)
IX-X W, 5 hrs ar, 4Sch, Ivory
- 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
- 105 Adv Topics: Instrumental Music Education (3 cr; prereq sr, cons instr)
IV MWF, 2Sch, Ivory
- 224 Research Probs (3 cr)
213Sch, Ivory, others
- 225E Adv Applied Music (2-4 cr)

NURSING EDUCATION (NUED)

- 74 Sciences in School of Nursing Curriculum (5 cr; prereq cons instr)
II-III TTh, Coe
- 162 Personnel Work in Nursing (3 cr)
II MWF, 111 Owre, R Johnson
- 171 Curriculum of School of Nursing (3 cr; prereq 69, EdT 51B or concur regis)
VII MWF, 175ForH, Harrington
- 175 Educational Admin (3 cr; prereq* sr)
IV MWF, 113 Owre, Densford
- 197E Adv Teaching (2 cr; prereq statistics, cons instr)
Ar, Harrington

PHYSICAL EDUCATION**Undergraduate Courses for Men (PEM)**

- 4A Football Fundamentals (1 cr)
VI-VII TTh, CH, Svendsen
- 5B Gymnastics (1 cr)
III-IV TTh, CH, Ostrander
- 6B Intramural Sports (1 cr)
IV-V TTh, CH
- 6C Aquatics (1 cr)
IV MWF, CHPool, Thorpe
- 7B Boxing, Wrestling (1 cr)
II-III TTh, CH, Johnson
- 9A Fundamental Rhythms (1 cr)
V-VI TTh, NGW, Piper
- 11B Survey of Recreation Activities (1 cr; prereq recr maj)
V M, CH, Starr
- 23B Recreation Leadership (1 cr; prereq 11A-B-C)
V M, CH, Starr
- 52 Leadership in Social Activities (3 cr)
VI-VII TTh, CH, Ostrander
- 55 Methods, Materials (4 cr; prereq 5A-B-C, 6A-B-C, 7A-B-C)
II MWF, CH, Kulbitski
- 57 Organization, Conduct of Recreation Centers (3 cr; prereq 23A-B-C)
VI MWF, CH, Giles
- 60B Athletic Training Lab (1 cr; prereq 60A)
30 hrs ar, CH, Stein
- 64A Leadership in Nature Recreation (2 cr; prereq 15 cr nat sci)
III-IV Th, CH, Chapman
- 65 Adapted Physical Education (3 cr; prereq 51, Anat 57)
II MWF, CH, Osell
- 72 Baseball Coaching (2 cr; prereq cons instr)
VI MWF, CH, Siebert
- 73 Directed Teaching (2 cr)
V M and ar, CH, Ostrander
- 74 Directed Teaching (2 cr)
V M and ar, CH, Ostrander
- 75 Directed Teaching (2 cr)
V M and ar, CH, Ostrander
- 78 Scout Leadership (2 cr)
VII MW, CH, Osell

Undergraduate Courses for Women (PEW)

- 21A Adv Basketball (½ cr)
VII MW, 153, 153aNGW, Hauptfuehrer
- 21B Rhythmic Fundamentals, Elem Folk Dance (1 cr)
V-VI TTh, 153, 153aNGW, Burgess
- 21D Stunts, Tumbling (1 cr)
II MWF, 153NGW, Larson
- 21E Winter Sports (½ cr)
III TTh, Arena, Reiter
- 26 ARC First Aid: Adv (1 cr)
I TTh, 201, 153NGW, Wilson
- 41A Adv Aquatics (1 cr)
VII MWF, 58NGW, Slaughter
- 41B Officiating Basketball (½ cr; prereq 21A)
III TTh, 153, 153aNGW, Hauptfuehrer
- 47 Teaching Dance, Rhythmic Activities (3 cr; prereq 21B, 22A, 40A)
II MTWThF, 151, 201NGW, Burgess
- 51 Mechanics of Movement (3 cr; prereq* Anat 57)
2:00-3:30 TTh, 3NGW, Wilson (for OT students only)
- 53 Role of Physical Educator in Recreation (3 cr)
II MWF, 201NGW, Tinker
- 70 Elem Program (3 cr; prereq elem ed maj)
VIII MWF, 201, 153-153aNGW, Lampe
- 77A Teaching Aquatics (1 cr; prereq 42A)
II TTh, 58, 201NGW, Slaughter
- 83 Methods, Materials of School Health Education (3 cr)
III MWF, 201NGW, Slocum
- 84 Physical Education Program in Elem, Secondary School (3 cr; prereq sr)
II MWF, 3NGW, Jaeger
- 90A Student Teaching (2 cr)
III TTh, 3NGW, Hauptfuehrer
- 90B Student Teaching (3 cr; prereq 90A)
I TTh, 3NGW, Jaeger
- 90C Student Teaching (3 cr; prereq 90B)
II TTh, 3NGW, Jaeger
- 94 Student Teaching in School Health Education (2 cr; prereq sr, 83)
III TTh, 202NGW, Slocum

Advanced Courses for Men and Women (PE)

- 101 Principles (3 cr; prereq 55)
I MWF, CH, Keller
- 107 Camp Admin (3 cr; prereq 46, cons instr)
IX-X W, CH, Osell, Ostrander, Thorpe
- 110 Recreation Surveys (2 cr; prereq 58)
VI MWF, CH, Fitzgerald
- 113 Physical Education in Elem School (3 cr; prereq cons instr)
3:30-5:00 TTh, 3NGW, Baker

- 118E Probs in Teacher Education in Health,
Physical Education, Recreation (ar cr;
prereq cons instr)
Ar, Baker, Wilson
- 135 Tests, Measurements in Physical Education
(3 cr; prereq sr, EPsy 60)
III MWF, Wilson
- 142 Leadership in Hospital Recreation (3 cr;
prereq 141)
III MWF, CH, Chapman
- 224 Research Probs: School Health Education,
Physical Education, Recreation (3 cr;
prereq cons instr)
Ar, Baker, Nordly, Wilson
- 241 Admin of Public Recreation (3 cr)
IV MWF, CH, Fitzgerald
- 244 Probs in Construction, Admin of Physical
Education Curriculum (6 cr)
4:00-5:30 MTWTh, CH, Nordly

GENERAL COLLEGE (GC)

- 1A Individual Orientation (4 cr)
—1, II-III TTh, 218P, Leino
—2, V-VI TTh, 218P, Leino
- 2 Vocational Orientation (5 cr; prereq cons
instr or couns)
IV MTWThF, 122NH, Borow
- 3 Home Life Orientation (5 cr)
—1, V MTWThF, 206WeH, Anderson
—2, VII MTWThF, 110P, Anderson
- 4 Probs of Contemporary Society (5 cr)
—1, V MTWThF, 202WuH, McCune
—2, VIII MTWThF, 9F, McCune
- 7A Physical Science: Physics (5 cr, §6A)
III MTWThF, 166Ph, J Harris
- 7C Physical Science: Chemistry (5 cr, §6E)
I MTWThF, 166Ph, Schwabacher
- 7D Physical Science: Geology (5 cr, §8C)
I MTWThF, 2P, J Harris
- 8A Applied Mathematics (5 cr)
—1, I MTWThF, 207NH, W Anderson
—2, III MTWThF, 207NH, Schwabacher
—3, VI MTWThF, 207NH, McCutcheon
- 8BX Applied Mathematics (5 cr; prereq 8A)
V MTWThF, 207NH, Rassweiler
- 10A Human Biology: Fundamental Similarities
in Living World (3 cr)
—1, II MWF, 211NH, dem lab ar T and/or
Th, Dearden
—2, IV MWF, 213NH, dem lab ar T and/or
Th, Dearden
- 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, 210 OUHS, Wilcox
- 14 Food Selection, Purchase (3 cr)
VII MWF, 202WeH, Gormican
- 19A Probs of Business Transactions (4 cr)
VII MTThF, 207NH, Rassweiler
- 19B Probs of Investment Transaction (4 cr;
prereq* 19A)
II MTThF, 207NH, McCutcheon
- 21 Gen Arts (3 cr)
II MWF, 206WeH, Hill
- 22B Art Today (3 cr)
IV MWF, 207NH, Safer
- 23A Art Lab (3 cr)
—1, I-II MW, 1 hr ar, 100NH, Hunter
—2, VI-VII MW, 1 hr ar, 100NH, Safer
—3, VI-VII TTh, 1 hr ar, 100NH, Roman
- 23C Commercial Art (3 cr)
II-III TTh, 100NH, Safer
- 24B Music Today: Opera (2 cr)
—1, III TTh, 111NH, Hill
—2, VI TTh, 111NH, Hill
- 25B Music Today (3 cr; prereq* 24A with grade
of 50 pr)
1:30-2:45 MW, 111NH, Hill
- 26A Photography (3 cr)
Lect V T, 308MurH, Liebling
—1, VI-IX T, 20MurH, Liebling
—2, VI-IX Th, 20MurH, Liebling
- 27 Leisure-Time Activities (3 cr)
III MWF, 215CH, Giles
- 30A Literature Today: Individual in Literature
(3 cr)
I MWF, 206WeH, Kivits
- 30B Literature Today: Critical Standards in
Reading (3 cr)
II MWF, 213NH, McCoy
- 30D Literature Today: American Ideals in
Literature (3 cr)
VI MWF, 206WeH, Sheldon
- 31A Writing Lab: Descriptive Writing (3 cr)
—1, I-II M, I WF, 216NH, Appel
—2, I-II TTh, 111NH, Nadon
—3, I-II TTh, 15ForH, Stockdale
—4, III-IV TTh, 85ForH, Hartley
—5, V-VI TTh, 216NH, Sheldon
—6, IV-V TTh, 111NH, Appel
—7, VII-VIII TTh, 216NH, Appel
- 31B Writing Lab: Organization in Writing (3
cr; prereq 31A)
—1, I-II TTh, 85ForH, Hartley
—2, I-II TTh, 216NH, Draxten
—3, II-III W, III M, II F, 216NH, Kivits
—4, III-IV TTh, 209NH, Stockdale
—5, III-IV F, IV MW, 209NH, McCoy
—6, III-IV F, IV MW, 216NH, Stockdale
—7, I-II M, I WF, 209NH, Reisman
—8, I-VII W, VI M, VII F, 216NH, Hartley

- 31C **Writing Lab: Report Writing** (3 cr; pre-req 31B)
 -1, I-II TTh, 209NH, Reisman
 -2, V-VI TTh, 209NH, Draxten
- 31D **Writing Lab: Business Writing** (3 cr; pre-req 31A...31B rec)
 -1, II-III W, III M, II F, 209NH, Sheldon
 -2, III-IV TTh, 216NH, Cronin
 -3, VII-VIII TTh, 209NH, Cronin
- 32A **Oral Communication: Basic Prin** (3 cr)
 -1, I MWF, 107NH, Hansen
 -2, II MWF, 107NH, Olson
 -3, III MWF, 107NH, Olson
 -4, IV MWF, 107NH, Benson
 -5, V MWF, 107NH, Hansen
 -6, VI MWF, 107NH, Hansen
 -7, VII MWF, 107NH, Haugen
- 32B **Oral Communication: Applications of Speech** (3 cr; prereq 32A)
 -1, II MWF, 106JohH, Hansen
 -2, VI MWF, 307JohH, Haugen
- 32C **Oral Communication: Speech Organization** (3 cr; prereq 32A)
 -1, I MWF, 106JohH, Benson
 -2, III MWF, 106JohH, Benson
- 32D **Oral Communication: Group Discussion** (3 cr; prereq 32A)
 -1, I T, I-II Th, 107NH, Olson
 -2, IV-V T, IV Th, 107NH, Benson
- 33A **Oral Communication: Radio Today** (3 cr)
 II-III T, III Th, 107NH, Olson
- 37 **Social Trends, Probs** (5 cr)
 III MTWThF, 213NH, Bengtson
- 38 **Geography** (5 cr)
 I MTWThF, 213NH, Momsen
- 39 **Anthropology** (3 cr)
 VIII MWF, 207NH, Cronin
- 40B **Straight, Crooked Thinking** (3 cr)
 VI MWF, 113JohH, McCoy
- 41A **Psychology in Modern Society** (5 cr, §41)
 VIII MTWThF, 213NH, Dolphin
- 41BX **Fields of Applied Psychology** (5 cr...41 or 41A rec)
 II MTWThF, 2P, Borow
- 42A **Human Development** (3 cr)
 IV MWF, 2P, Templin
- 43A **Background of Modern World** (5 cr)
 V MTWThF, 101Frah, Bengtson
- 43B **Historical Biography** (3 cr)
 I MWF, 211NH, Moen
- 43C **The Far East** (5 cr)
 VI MTWThF, 213NH, Stout
- 44B **Current History** (2 cr)
 IV TTh, 211NH, F Harris
- 45A **Growth of American Democracy** (5 cr)
 V MTWThF, 213NH, F Harris
- 45B **American Economic, Social Development** (3 cr)
 IV MWF, 211NH, F Harris
- 45C **Minnesota, Upper Midwest** (5 cr)
 III MTWThF, 4ME, Stout
- 45D **Community Probs** (1-3 cr; prereq cons instr)
 Ar, McCune
- 46B **Functions, Probs of Govt** (3 cr)
 VII MWF, 213NH, Monat
- 47C **Bookkeeping, Accounting Lab** (3 cr; pre-req cons instr)
 -1, III-IV TTh, 115ForH, Ellis
 -2, VI-VII TTh, 115ForH, Ellis
- 48B **Probs of Production, Finance, Credit** (3 cr)
 VII MWF, 166Ph, Sutton
- 49B **Store Organization, Nonselling Activities** (5 cr; prereq cons instr)
 Lect II M, 122NH, Determan
 -1, II-III TTh, 122NH, Determan
 -2, 8:30-10:00 pm T, 122NH, Determan

COLLEGE OF MEDICAL SCIENCES

ANATOMY (ANAT)¹⁰

- 101 **Gross Human Anatomy** (8 cr; prereq 100)
 Lect VI MWThF, 102 IA, Boyden
 Lab VII-IX MWThF
- 107 **Human Embryology** (5 cr; prereq 100 or concur regis)
 Lect I TF, IV Th, 102 IA, Wells
 -1, Lab II-III T, I-II Th
 -2, Lab I-II M, II-III F
- 152 **Prosection** (ar cr; prereq 101, cons instr)
 Ar, Boyden
- 154 **Adv Anatomy** (ar cr; cons instr)
- 164 **Segmental, Topographic Anatomy of Lungs** (2 cr; prereq 101, cons instr)
 7:00-10:00 pm Th, Boyden
- 166 **Hematology** (4 cr; prereq 165)
 Lect VII TTh, 304 IA, Sundberg
 Lab VIII-IX TTh, 213 IA

- 202 **Research** (ar cr)
- 206 **Seminar: Anatomy** (1 cr)
 IV S, 226 IA

BACTERIOLOGY AND IMMUNOLOGY (BACT)

- 1 **Elem Bacteriology** (4 cr, offered by Ext Div, open to PT, dent hyg students without fee winter qtr, 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)
 Lect VII MWF, 214MH, Schmidt
 Lab VIII-IX MWF, 201MH

- 106 Infectious Disease (5 cr; prereq 105)
Lect I TTh, 15 Owre, Syverton
Lab II-IV TTh, 201MH
- 116 Immunology (3 cr; prereq 102 or 105)
Lect II MWF, 214MH, Watson
Lab III-IV MW, 201MH
- 122 Physiology of Bacteria Lab (3 cr; prereq 121)
Lect IX T, 214MH, Lichstein
Lab VI-VIII TTh, 201MH
- 201 Research (ar cr)
Ar, Watson
- 203 Seminar (1 cr)
V T, 214MH, Johansson
- 204 Adv Bacteriology (ar cr; prereq 122 or concurrent regis, cons instr)
Ar, Lichstein
- 205 Adv Bacteriology (ar cr; prereq 122 or concurrent regis, cons instr)
Ar, Lichstein

BIOPHYSICS (BPHY)

- 138 Seminar: Gen Physiology, Biophysics (ar cr)
VIII-IX T, 323Z
- 170 Problems (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

CANCER BIOLOGY (BIOL)

- 140 Seminar (1 cr)
4:30-6:00 pm M, 129MH, Bittner
- 141 Problems (ar cr)
Ar, Bittner
- 207 Research (ar cr)
Ar, Bittner

MEDICAL TECHNOLOGY (MEDT)

- 52 Introduction (3 cr; prereq 51)
VI WF, VII W, Eustis Amph, Evans
- 70 Lab Techniques in Chemistry (6 cr)
Ar, Rausch
- 71 Adv Techniques in Clinical Chemistry (5 cr)
Ar, Rausch
- 73 Electrocardiography (2 cr)
Ar, Jorgenson
- 74 Basal Metabolism (2 cr)
Ar, Fish
- 75 Hematology (6 cr)
Ar, Hulbert
- 76 Applied Hematologic Methods (2 cr)
Ar, Weisel

- 78 Urinalysis (3 cr)
Ar, Pierce
- 80 Medical Bacteriology (5 cr)
Ar, Ness
- 82 Blood Bank Techniques (3 cr)
Ar, Postier
- 83 Serology (1 cr)
Ar, Hansen
- 84 Parasitology (1 cr)
Ar, Hansen
- 85 Histologic Techniques (4 cr)
Ar, Duerr
- 90 Adv Lab Techniques (4 cr)
Ar, Ederer
- 95 Clinical Diagnosis by Lab Methods (1 cr)
I Th, 304 IA, Ederer

MEDICINE (MED)

- 101 Physical Diagnosis (3 cr; prereq regis Med, Anat 100, Phsl 106)
Lect VI TW, Todd Amph, Watson, others
—1, Lab III-IV MF
—2, Lab III-IV WS
- 104 Internal Medicine (2 cr; prereq 101, 102)
8:00-8:50 T, Watson, others
- 110 Clinic (no cr; prereq regis Med)
8:00-8:50 MTWThF, Eustis Amph, Watson, others
- 111 Clinical Clerkship (6 cr; prereq regis Med)
Ar, Watson, others
- 112 Senior Clerkship in Internal Medicine (6 cr; prereq regis Med)
Ar, Frick, others
- 123 Dermatology, Syphilology (1 cr; prereq 101, 102)
4:00-4:40 MTWThF, Eustis Amph, Michelson, others
- 124 Senior Clerkship in Dermatology (2 cr; prereq regis Med)
Ar, Michelson, others
- 201 Clinical Medicine (ar cr)
Ar, Watson, others
- 203 Research: Medicine (ar cr)
Ar, Watson, Spink, others
- 205 Tuberculosis (ar cr)
Ar, Myers
- 206 Clinical Conference (1 cr)
9:00-9:50 F, Watson, others
- 207 Clinical Pathological Conference (1 cr)
Ar, Dawson, McQuarrie, Rigler, Wangenstein, Watson, others
- 208 Clinical Radiological Conference (1 cr)
Ar, Rigler, Watson, others
- 210 Seminar: Infectious Disease (1 cr)
Ar, Spink
- 211 Electrocardiographic Conference (1 cr)
- 225 Clinical Dermatology, Syphilology (ar cr)
Ar, Michelson, others
- 226 Dermatology, Allergy (ar cr)
Ar, Laymon, others
- 227 Histopathology of Skin (ar cr)
Ar, Michelson, others
- 228 Research: Dermatology, Syphilology (ar cr)
Ar, Michelson, others

- 235 Adv Clinical Lab Medicine (ar cr; prereq Anat 166)
Ar, Evans, others
- 236 Research: Clinical or Clinical Lab Probs (ar cr)
Ar, Evans, others

NURSING

Nursing (NURS)

- 18 Clinical Nursing (4 cr; prereq 17)
Lect I T, VI MW, PoHAMph, Love
Lab ar
- 51 Medical, Surgical Nursing (12 cr; prereq 50)
IV MTWTh, 2309PoH, Brennan
VI-VII MTWTh, 2309PoH, Taufic
- 54 Pathology (2 cr)
III MW, PoHAMph, Coe
- 55 Communicable Disease (1 cr)
Ar, Love
- 56 The Operating Room (6 cr)
Ar, Williams
- 58 Orthopedic Nursing (2 cr)
Ar, Taufic
- 59 Gynecologic Nursing (4 cr)
Ar, Whitney
- 60 Maternal Nursing (12 cr)
Ar, Whitney
- 61 Child Nursing (12 cr)
Ar, Gautefeld
- 66 Neuropsychiatric Nursing (4 cr)
VI-VII TTh, 2317PoH, Lediger
- 67 Care of Neuropsychiatric Patients (8 cr)
Ar, Anderson
- 79 Tuberculosis Nursing (3 cr)
Ar, Einerson
- 87 Field Experience in Public Health Nursing (10 cr)
Ar, Griffin
- 88 Rural Nursing (5 cr)
Ar, Low
- 96 Out-patient Nursing (5 cr)
Ar, Schey
- 97 Medical, Surgical Nursing (7 cr)
Ar, Klock
- 145B Field Practice in Psychiatric Nursing (7 cr, †145B-145C; prereq 145A)
Ar, Linehan
- 151B Adv Medical Nursing (5 cr; prereq 151A)
II MWF, 207TSP, Coe
- 152B Adv Obstetric Nursing (5 cr; prereq 152A)
VI-VII TTh, 1 hr ar
- 153B Adv Operating Room Nursing (5 cr; prereq 153A)
II-III TTh, 1 hr ar, 207TSP, Williams
- 154B Adv Pediatric Nursing (5 cr; prereq 154A)
II-III WF, 1 hr ar, Schaaf
- 155B Adv Psychiatric Nursing (5 cr; prereq 155A)
III MF, I-II W, 1 hr ar, Bowditch
- 156B Adv Rural Nursing (9 cr; prereq 156A)
Ar, Low
- 157B Adv Surgical Nursing (5 cr; prereq 157A)
Lect V-VI T, 207TSP, Williams, II-III Th, 207TSP, Hanson
Lab ar
- 170 Psychiatric Nursing, the Community (4 cr)
Ar, Linehan
- 191 Field of Psychiatric Nursing (5 cr)
Ar, Lediger
- 193 Medical Nursing (3 cr)
Ar, Coe
- 194 Surgical Nursing (3 cr)
Ar, Hanson

Nursing Administration (NUAD)

- 50 Nursing Admin (1 cr; prereq sr)
Ar, Harris, Grainger
- 67 Field Practice in Ward Admin (6 cr; prereq 160, Nurs 165, cons instr)
III MF, 111 Owre, Grainger
- 160 Ward Admin (5 cr)
VI-VII MF, VI W, 113 Owre, Grainger
- 167 Studies, Experience in Ward Admin (8 cr)
III MF, 111 Owre, Grainger
- 170 Administrative Process in Nursing Admin (3 cr; prereq cons instr)
V MWF, 207TSP, Harris
- 192 Prin Admin Applied to Nursing - Service Admin (5 cr)
II-III TTh, Harris

OBSTETRICS AND GYNECOLOGY (OBST)

- 121 Obstetrics (1 cr; prereq 120)
8:00-8:50 T, Eustis Amph, Hosp, McKelvey, others
- 135 Clinical Clerkship (6 cr; prereq regis Med)
Ar, McKelvey, others
- 201 Adv Obstetrics, Gynecology I (ar cr)
Ar, McKelvey, others
- 202 Adv Obstetrics, Gynecology I (ar cr)
Ar, McKelvey, others
- 203 Adv Obstetrics, Gynecology I (ar cr)
Ar, McKelvey, others
- 204 Adv Obstetrics, Gynecology I (ar cr)
Ar, McKelvey, others
- 205 Adv Obstetrics, Gynecology II (ar cr)
Ar, McKelvey, others
- 206 Adv Obstetrics, Gynecology II (ar cr)
Ar, McKelvey, others
- 207 Adv Obstetrics, Gynecology II (ar cr)
Ar, McKelvey, others
- 208 Adv Obstetrics, Gynecology II (ar cr)
Ar, McKelvey, others
- 209 Adv Obstetrics, Gynecology III (ar cr)
Ar, McKelvey, others
- 210 Adv Obstetrics, Gynecology III (ar cr)
Ar, McKelvey, others
- 211 Adv Obstetrics, Gynecology III (ar cr)
Ar, McKelvey, others
- 212 Adv Obstetrics, Gynecology III (ar cr)
Ar, McKelvey, others

OPHTHALMOLOGY AND OTOLARYNGOLOGY (OO)

- 100 Ophthalmology (1 cr; prereq regis Med, or grad)
 102 Rhinology (1 cr; prereq regis Med, or grad)
 104 Clinic, Conferences in Diseases of Ear (2 cr)
 105 Clinic, Conferences in Diseases of Nose, Throat (2 cr)
 106 Clerkship in Diseases of Eye (2 cr)
 202 Clinical Ophthalmology (6 cr)
 9:00-12:00 MTWThF
 204 Ocular Muscles (2 cr)
 Ar, Horns, Kanter
 206 Surgery of the Eye (3 cr)
 214 Histology of the Eye (2 cr)
 220 Physiology of Vision, Biochemistry of the Eye (2 cr)
 Ar, Wendland
 230 Clinical Otology (3 cr)
 9:00-12:00 MWF, ENT Clinic
 231 Clinical Rhinology, Laryngology (3 cr)
 9:00-12:00 MWF, ENT Clinic
 232 Surgery of the Ear, Nose, Throat (3 cr)
 238 Pathology of the Ear, Nose, Throat (2 cr)
 Ar, Hilger
 241 Seminar: Otolaryngology (1 cr)

PATHOLOGY (PATH)

- 102 Special Pathology (8 cr; prereq 101)
 Lect VII MTWThF, 102 IA
 Dem I-III MWFS, 104 IA, McCartney
 Lab I-IV MWFS, 106, 107, 108 IA
 104 Autopsies (ar cr; prereq 102)
 105 Diseases of Kidney (3 cr; prereq 102)
 VII-VIII MW, 104 IA, Hebbel
 110 Seminar (1 cr; prereq 102)
 V M, 104 IA
 111 Conference on Autopsies (1 cr; prereq 102)
 V T, 104 IA, Dawson
 112 Diagnosis of Tumors (2-5 cr; prereq 102)
 VII-VIII TTh, 104 IA, Hebbel, McCartney
 113 Surgical Pathology (2-5 cr; prereq 102)
 Ar, Hebbel, McCartney
 201 Research (ar cr)

PEDIATRICS (PED)

- 121 Clinical Diagnosis in Infancy, Childhood (1 cr; prereq regis 120)
 8:00-8:50 W, Eustis Amph
 124 Junior Clinical Clerkship in Pediatrics (6 cr; prereq regis Med)
 135 Senior Clinical Clerkship in Pediatrics (3 cr; prereq regis Med)
 150 Physiology, Diseases of Newborn (1 cr)
 Ar, Raile
 152 Fundamental Prin Nutrition, Metabolism as Applied to Children (1 cr)
 Ar, McQuarrie, Raile, Ziegler
 154 Endocrinology as Applied to Pediatrics (1 cr)
 Ar, McQuarrie, Raile

- 156 Adv Study of Noncontagious Diseases (1 cr)
 Ar, McQuarrie, Thomas, Good, Huenekens
 158 Adv Study of Contagious Diseases (1 cr)
 Ar, Thomas, Platou, Good, Brown
 160 Allergic Disorders in Childhood (1 cr)
 1:30-3:00 W, Hosp OPD, Stoesser, L Nelson
 162 Common Behavior Disturbances in Childhood (1 cr)
 III-IV TF, Hosp OPD, Jensen, Quast, Wallinga
 163 Hematology of Infancy, Childhood (1 cr)
 IX T, Hosp wards, E Nelson, Good
 164 Rare, Unusual Diseases of Infancy, Childhood (1 cr)
 Ar, McQuarrie, Platou
 166 Seminar: Fundamental Subjects Related to Probs in Pediatrics (1 cr)
 VIII T, Hosp 6 fl, Ziegler
 167 Seminar: Review of Current Literature (1 cr)
 168 Speech Disturbances in Childhood (1 cr)
 Ar, Jensen, Brown, Quast, Stenswick
 170 Rheumatic Infection, Heart Diseases in Childhood (1 cr)
 Ar, Thomas, Adams, Anderson, Dwan, Good
 202 Pediatric Clinic (1-7 cr)
 Ar, McQuarrie, Adams, Jensen, Raile, Wannamaker, Brown
 204 Residency in Pediatrics at University Hospitals (1-7 cr)
 Ar, McQuarrie, Huenekens, Platou, Seham, Thomas, Jensen, Good, Richdorf, Raile
 208 Pediatric Research (3-7 cr)
 Ar, McQuarrie, Thomas, Jensen, Good, Ziegler, Staff

PHARMACOLOGY (PHCL)

- 9 Pharmacology for Nursing Students (2 cr, 9-10)
 VI TTh, 113 Owre, Cranston
 101 Introduction (2 cr; prereq PhsI 106-107)
 VII M, VI ThF, 15 Owre, Wright (for med students)
 105 Gen Experimental Pharmacology (6 cr; prereq 101)
 Lect I MWF, 1:00-2:00 T, 15 Owre, Wright
 —1, Lab II-IV MW, 101MH (for Dent students)
 —2, Lab VI-VIII MW, 101MH (for Pharm students)
 109 Problems (ar cr; prereq 102)
 112 Spectrochemical Toxicology (5 cr; prereq 110)
 Ar, Wright
 124 Special Systems (3 cr)
 203 Research (ar cr; prereq 102, cons instr)
 204 Adv Pharmacology (1 cr; prereq 102, cons instr)
 205 Gen Discussions (1 cr; prereq 102, cons instr)

PHYSICAL MEDICINE AND REHABILITATION (PMED)

- 1 Orientation to Occupational Therapy (1 cr; prereq PT maj)
Ar, Johnson, Lepley
- 2 Orientation to Physical Therapy (1 cr)
Ar, Rabideau
- 58 Asepsis, Bandaging, Contagious Technique (2 cr; prereq regis PT)
VI-VII Th, 150ChE, Rabideau
- 60B Theory, Technique of Thermo-, Photo-, Hydro-, Electrotherapy (2 cr, 160A-60B; prereq 60A)
Lect VI M, 132ChE, Rabideau
Lab VII-VIII M
- 64 Senior Clinic in Physical Medicine (1 cr; prereq regis PT)
III W, Eustis Amph Hosp, Gault
- 68 Applied Anatomy (3 cr; prereq regis PT)
II-III M, 1 hr ar, 154ChE, Stillwell
- 70 Theory, Technique of Massage (3 cr; prereq regis PT)
Lect I T
Lab VI-VII TTh, 132ChE, Rabideau
- 72 Theory of Occupational Therapy (3 cr; prereq regis OT)
II MWF, 175ForH, Hansen
- 74 Pediatric Occupational Therapy (2 cr; prereq regis OT)
VI MW, 170ForH, Hansen
- 80 Theory, Technique of Therapeutic Exercises (5 cr; prereq regis PT)
Lect I MF, 132ChE, Mundale
-1, Lab I-II W, 132ChE
-2, Lab II-III F, 132ChE
-3, Lab VIII-IX T, 132ChE
- 83 Theory, Techniques of Muscle Function, Measurements, Tests (5 cr; prereq regis med, PT, OT)
Lect II TTh, 132ChE, Mundale
-1, Lab II-III M, 132ChE (for PT students)
-2, Lab VI-VII WF, 132ChE (for PT students)
-3, Lab III-IV TThF, 132ChE (for OT students)
- 92 Preliminary Hospital Practice in Occupational Therapy (3 cr; prereq regis OT)
Ar, 206TWH, Johnson, Lepley
- 103 Physical Therapy Clinic (ar cr)
Ar, W107Hosp, Kottke
- 122 Physical Therapy (1 cr; prereq regis med)
I W, Todd Amph, Kottke
- 123 Clerkship (1 cr; prereq regis Med)
VI-VII MF, W107Hosp, Kottke
- 200 Physical Medicine Service (ar cr)
Ar, Kottke
- 203 Poliomyelitis Clinic (ar cr; prereq MD degree)
II-IV Th, W107Hosp, Kottke
- 204 Peripheral Vascular Disease Clinic (ar cr; prereq MD degree)
Ar, Kottke

- 210 Research (ar cr)
Ar, Kottke, Kubicek
- 220 Seminar (ar cr)
IV M, Heart Hosp Aud, Kottke

PHYSIOLOGICAL CHEMISTRY (PHCH)

- 101 Physiological Chemistry (6 cr, \$50; prereq 100)
Lect IV MTWF, 15 Owre, Glick, Cohen, Barnum, Carr
-1, Lab I-III MW, 310MH
-2, Lab I-III ThS, 310MH
- 102 Physiological Chemistry (6 cr, for vet med; prereq org chem)
Lect VI M, IV T, III-IV S, 214MH, Glick, Gutmann, Carr, Malmstrom
-1, Lab VII-IX M, I-III T, 310MH (for Vet Med students)
-2, Lab VI-VIII TTh, 310MH (for Med Tech students)
- 105 Physiological Chemistry (6 cr; prereq 104)
Lect III MT, IV WF, 12 Owre, Singer, Malmstrom
Lab VI-VIII WF, 310MH
- 153 Probs: Physiological Chemistry (ar cr; prereq 101)
- 200 Seminar: Physiological Chemistry (1 cr)
V Th, 214MH
- 205 Research: Physiological Chemistry (ar cr)
- 207 Radiotracers, Mineral Metabolism (3 cr; prereq 101)
IX MWF, 214MH, Armstrong
- 212 Histochemistry Lab (ar cr; prereq 101, cons instr)
Ar, Glick
- 236 Seminar: Radio Isotope (1 cr)
V W

PHYSIOLOGY (PHSL)

- 60 Human Physiology (6 cr, \$106-107; prereq physiol chem, human or mammalian anat)
Lect I MWThF, 214MH
Conf II F, 12 Owre
Lab II-IV W, 301MH
- 101 Human Physiology (10 cr, \$106-107; prereq physiol chem, human or mammalian anat)
Lect VI MTWThF, IV S, 129MH
Conf I F, 12 Owre
-1, Lab VII-IX MTh, 301MH
-2, Lab VII-IX T, II-IV F, 301MH
- 114 Seminar: Physiology (ar cr; prereq 106-107)
- 124 Seminar: Neurophysiology (ar cr; prereq 106-107 with grade B or spec exam)
- 201 Seminar: Physiology (ar cr)
V M, 214MH
- 202 Readings (1-3 cr)
- 203 Research: Physiology (ar cr)

PSYCHIATRY AND NEUROLOGY (NPSY)

- 101 Neurology (1 cr; prereq regis Med or grad clin psy)
8:00-8:50 S, Todd, Baker
- 103 Junior Clinical Clerkship (6 cr; prereq regis Med)
- 120 Psychosomatics (1 cr; prereq* regis Med)
VI T, 12 Owre, Aldrich, Hastings
- 121 Psychiatry in Practice of Medicine (1 cr; prereq regis Med or grad clin psy)
VI T, Todd, Schiele
- 145 Reading in Psychiatry (ar cr; prereq regis Med)
- 145x Reading in Neurology (ar cr; prereq regis Med)
- 151 Survey of Neuropathology (ar cr, §212 or Path 119; prereq regis Med)
Ar, Tichy
- 155 Therapeutics in Neurology (2 cr; prereq regis Med)
Ar, Baker
- 208 Clinical Neurology (ar cr)
Ar, Baker
- 208x Clinical Psychiatry (ar cr)
- 208y Clinical Child Psychiatry (ar cr)
Ar, Jensen
- 209 Research (ar cr)
Ar, Baker
- 211 Intracranial Neoplasms (2 cr, §Path 118)
Lect 2:00-3:00 Th, 111 Owre, Tichy
Lab 3:00-5:00 Th, Path Lab
- 212 Survey of Neuropathology (1 cr)
Ar, Tichy
- 215 Seminar: Diagnostic, Therapeutic Interviewing (1 cr)
Ar, Kiesler
- 219 Personality Structure: Normal, Abnormal (1 cr)
Ar, Hathaway
- 220 Adv Clinical Neurology (1 cr)
Ar, Baker
- 221 Psychometric Clerkship (2 cr)
Ar, Schofield
- 222 Interviewing Techniques in Psychiatry (1 cr)
Ar, Hastings
- 225 Neuro-ophthalmology (2 cr)
Ar, Baker
- 226 Neurological-Neurosurgical Conference (1 cr, §Rad 163 or Surg 318)
Ar, Baker
- 227 Clinical Seminar for Psychologists (1 cr; prereq cons instr)
- 228 Research: Neuropathology (ar cr)
Ar, Baker
- 231 Applied Electroencephalography, Myography (1 cr)
Ar, Baker
- 232 Applied Neuroentgenology (1 cr)
Ar, Baker
- 233 Applied Neuropathology (ar cr)
Ar, Tichy

- 236 Normal Personality Development, Psychopathology (1 cr)
Ar, Challman
- 240 Neuropathology Conference (1 cr)
Ar, Tichy
- 243 Prolonged Psychotherapy (1 cr)
- 245 Case Conference for Clinical Psychologists (ar cr)
Ar, Schuell
- 247 Neurological Speech Disorders (1 cr)
Ar, Schuell

PUBLIC HEALTH (PH)

- 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)
III MWF, 335EE, 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 concur regis 52a)
—1, VII-VIII T, 01MeH, Stack
—2, VII-VIII Th, 01MeH, Stack
- 55 Nursing, Social Probs in Venereal Disease Control (2 cr, for PH nurs, soc maj; prereq 100, 62 or Soc 50-51)
VI-VII Th, 12 Owre, Field
- 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, 150Ph, Thomson, Anderson
- 60 Tuberculosis, Its Control (2 cr; prereq* regis Nurs, 4 or 50 or 51 or 52 or 62, 100)
IV TTh, 129MH, Myers
- 62 Public Health Nursing I (5 cr, †62-63; prereq* regis PH nurs, 100 or concur regis)
VI-VII MW, VI F, 12 Owre, Sandve, Jensen
- 63 Public Health Nursing II (5 cr, †62-63; prereq* regis PH nurs, 62)
II-III MW, II F, 129MH, Field
- 65 Field Work: Public Health Nursing (15 cr; prereq 62, 100, C aver)
Ar, Field
- 70 Practice Teaching Home Nursing or Child Care (ar cr; prereq* 65, Ed 81)
Ar, Sandve
- 75 Environmental Sanitation (3 cr; prereq 3 cr)
II TThS, 214MH, Bond
- 92 Physiological Hygiene (4 cr, †91-92; prereq 91)
IV MWF, VII T, 50ForH, Brozek, Taylor
- 95 Human Nutrition (3 cr; prereq* chem, biol)
IV MWF, 170ForH, J T Anderson
- 101 Admin, Field Work (2 cr; prereq regis Med)
Ar, Thomson
- 103 Bacteriology (ar cr; prereq grad, Bact 102, 116, cons instr)
II-III MWF, SBH Lab, Bauer
- 104 Epidemiology (3 cr; prereq see PH bul)
I TThS, 129MH, Anderson

- 112a Public Health Engineering—Plan Examinations: Water Supplies (1 cr; prereq* 102, engr degree)
Ar, Bosch
- 113a Public Health Engineering—Field Investigations: Water Supplies (2 cr; prereq* 102, engr degree)
Ar, Bosch
- 115 Food Sanitation (3 cr; prereq 100, 102)
IV WF, VI-IX F, Olson
- 118a Sanitary Biology (3 cr; prereq cons instr)
VI-IX MW, Olson
- 119 Field Practice in Environmental Sanitation (ar cr; prereq cons instr)
Ar, Bosch
- 120 Adv Biostatistics I (3 cr; prereq 110, concur regis 121)
III MWF, 113 Owre, Elveback
- 121 Adv Biostatistics Lab I (2 cr; prereq concur regis 120)
—1, I-II MWF, 118MH
—2, I-II TThS, 118MH
—3, III-IV TThS, 118MH
—4, VI-VIII TTh, 118MH
- 122 Administration Probs (3 cr; prereq 106)
I MWF, 129MH, Anderson
- 123 Topics (ar cr; prereq cons instr)
- 129 Field Work: Industrial Nursing (ar cr; prereq 65)
- 133 Mental Hygiene (3 cr; prereq 62 or PH nurs exper)
I MWF, 160ForH, Cline
- 135 Conservation of Hearing (1 cr; prereq 53 or 100, 62 or concur regis)
I S, 214MH, 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, 214MH, Jordan
- 139 Field Work: Mental Hygiene (ar cr; prereq cons instr)
Ar, von Bergen
- 140 Vital Statistics I (3 cr)
—1, VI-VIII MF, 106 IA, Treloar
—2, VI-VIII TTh, 106 IA, Treloar
- 152 Industrial Hygiene Engineering (3 cr; prereq cons instr)
Ar, Michaelson
- 163 Organization, Mgt of Hospitals (6 cr; prereq 162)
I-II MWF, III-IV TThS, 105TSP, Stephan, Hamilton
- 165 Hospitals in Community Organization (1 cr)
VII-VIII T, 105TSP, Stephan
- 166 Hospital Clerkship (5 cr)
VI-VII W, VII-VIII Th, Stephan
- 169 Admin Residency (ar cr)
Ar, Stephan
- 170 Supervision in Public Health Nursing (3 cr; prereq* 53 or 100, 133, or PH nurs exper)
IV MWF, 129MH, Murphy
- 173 Field Work: Supervision in Public Health Nursing (ar cr, for PH nurs; prereq* 170)
Ar, Murphy
- 176 Case Work Applied to Public Health Nursing II (3 cr; MPH ment hyg stud or permis maj adv)
VI-VIII W, 105TSP, Cline
- 181 Prin, Methods in Community Health Education (ar cr; prereq cons instr)
Ar, Grout
- 190 Field Work in Community Health Education (ar cr; prereq 125, 181, 227)
Ar, Grout
- 191 Science of Human Nutrition (3 cr; prereq, cons instr)
Ar, J Anderson, Keys
- 192 Physiology of Exercise (4 cr; prereq 92 or Phsl 103, cons instr)
Ar, Taylor, Simonson
- 194 Human Factors in Industry (3 cr; prereq sr, cons instr)
Ar, Brozek
- 200 Research (ar cr)
- 201 Topics: Biometry (ar cr; prereq 120, 130, cons instr)
Ar, Treloar, others
- 202 Seminar: Physiological Hygiene (1 cr)
- 210 Seminar: Public Health (ar cr)
IX-X M, 15 Owre
- 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)
Ar, Boynton
- 220 Readings: 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
- 290 Research: Physiological Hygiene Related Areas (ar cr)

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
- 111 Medical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 M, Todd Amph, Hosp, Rigler
- 121 Roentgen Diagnosis, Radiation Therapy (2 cr; prereq regis Med)
8:00-8:50 MF, Todd Amph, Hosp, Rigler, Stenstrom
- 124 Pediatric-Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 T, Eustis Amph, Hosp, Rigler

- 126 Clinical Lectures in Roentgen Diagnosis, Therapy (1 cr; prereq regis Med, 121)
8:00-8:50 S, Eustis Amph, Hosp, Rigler
- 127 Fluoroscopy of Thorax (1 cr; prereq regis Med)
1:00-3:00 MF, VCHH X-ray, Rigler, others
- 135 Surgical Roentgenologic Conference for Graduate Students (1 cr)
9:00-10:00 S, Todd Amph, Hosp, Rigler, others
- 163 Neurosurgical - Roentgenologic Conference for Graduate Students (1 cr)
1:00-2:30 F, Todd Amph, Hosp, Peterson
- 185 Interpretation of Roentgenograms (1 cr; prereq regis Med, 121)
2:00-4:00 TTh, M532 Hosp, Rigler, Nice
- 186 Roentgen Technique (2 cr; prereq regis Med)
3:00-5:00 T, X-ray dept, Baggenstoss
- 200 Research: Roentgenology (ar cr)
Ar, Rigler
- 204 Tumor Clinic Conference (ar cr)
Ar, Stenstrom
- 205 Research Related to 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, Hosp, Rigler Stenstrom
- 209 Roentgen Diagnosis (ar cr)
Ar, Rigler
- 210 Roentgen Technique (ar cr)
Ar, Rigler
- 214 Roentgen Diagnosis of Diseases of Bones, Joints (1 cr)
5:00-6:00 W, Todd Amph, Hosp, Rigler, others
- 220 Urologic-Roentgenologic Conference (1 cr)
5:00-6:00 M, Eustis Amph, Hosp, Baggenstoss
- 236 Seminar: Radio-Isotope (1 cr)
12:00-1:20 W, 101TNHS, Marvin, others
- 237 Measurement of Ionizing Radiation (1 cr)
4:00-5:00 M, Cobalt R, Marvin
- 238 Roentgen-Surgical Pathology Conference (1 cr)
8:00-9:00 W, VCHH Aud, Hosp, Rigler, Nice
- 240 Radiation Therapy Conference (1 cr)
4:00-5:00 W, VCHH Aud, Stenstrom
- 139 Operative Surgery (ar cr)
Ar, Wangensteen, others
- 152 Probs in Clinical Investigations (ar cr)
Ar, Wangensteen, others
- 160 Clinic in Urology at Minneapolis General Hospital (prereq regis Med)
- 161 Clinic in Urology at Ancker Hospital (prereq regis Med)
Ar, Foley
- 165 Clinical Anesthesia
Ar, Knight
- 167 Probs in Experimental Surgery (ar cr)
Ar, Wangensteen, others
- 169 Diagnostic Bedside Surgical Clinic (ar cr)
Ar, Wangensteen, others
- 170 Surgical Specialties
Ar, Creevy
- 173 Clinic in Urology (2 cr; prereq regis Med)
I F, Creevy
- 200 Outpatient Clinic in Surgery (1 cr)
I-IV MTWThF, OP Clinic
- 202 Applied Surgical Anatomy on Cadaver (ar cr)
III W, 306 IA
- 203 Proctoscopy, Sigmoidoscopy (1 cr)
I-IV TF, OP Clinic
- 204 Tumor Clinic (1 cr)
I-IV MTh
- 205 Surgical Diagnosis (1 cr)
Ar, Wangensteen, others
- 208 Surgical Service (1 cr)
- 211 Operative Surgery (1 cr)
- 214 Surgical Ward Conference (1 cr)
7:00-9:00 WF, Wangensteen, others
- 215 Roentgenological-Surgical Conference (1 cr)
II-IV S, Todd Amph, Wangensteen, others
- 216 Surgical Research (1 cr)
Ar, Wangensteen, others
- 217 Surgical Seminar (1 cr)
Ar, Wangensteen, others
- 218 Medical-Surgical Pathological Conference (1 cr)
IV W, Todd Amph, Wangensteen, others
- 245 Surgical Literature Conference (1 cr)
I T, Small Dining Room Hosp, Wangensteen, others
- 250 Urological Surgery (4 cr)
Ar, Creevy, others
- 251 Cystoscopy, Urological Diagnosis (4 cr)
Ar, Creevy, others
- 252 Urological Conference (1 cr)
Ar, Creevy, others
- 253 Research: Urology (4 cr)
Ar, Creevy, others
- 254 Urological Seminar (1 cr)
Ar, Creevy, others
- 255 Urological Radiological Conference (1 cr)
Ar, Creevy, others
- 256 Urological Pathological Conference (1 cr)
Ar, Creevy, others
- 265 Gen Anesthesia (12 cr)
Ar, Knight, others
- 266 Regional Anesthesia (4 cr)
Ar, Knight, others

SURGERY (SURG)

- 104 Anesthesia (1 cr)
I-IV MTWThF
- 129 Surgical Clinics for Juniors (1 cr; prereq regis Med)
I Th, Todd Amph, Wangensteen
- 135 Clinical Clerkship (6 cr; prereq regis Med)
Ar, Wangensteen, others
- 136 Surgical Specialties (5 cr; prereq regis Med)

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| <p>267 Preoperative, Postoperative Evaluation (2 cr)
Ar, Knight, others</p> <p>268 Seminar: Anesthesia (2 cr)
Ar, Knight, others</p> <p>269 Research: Anesthesia (ar cr)
Ar, Knight, others</p> <p>305 Neurosurgical Diagnosis (ar cr)
Ar, Peyton, others</p> <p>308 Neurosurgical Service (ar cr)
Ar, Peyton, others</p> <p>311 Operative Neurosurgery (ar cr)
Ar, Peyton, others</p> | <p>316 Neurosurgical Research (ar cr)
Ar, Peyton, others</p> <p>318 Neurosurgical Conference (ar cr)
VI-VIII F, Todd Amph, Peyton, others</p> <p>405 Orthopedic Diagnosis (ar cr)
Ar, Cole, others</p> <p>408 Orthopedic Service (ar cr)
Ar, Cole, others</p> <p>411 Orthopedic Operative Surgery (ar cr)
Ar, Cole, others</p> <p>416 Orthopedic Research (ar cr)
Ar, Cole, others</p> |
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COLLEGE OF PHARMACY

PHARMACEUTICAL CHEMISTRY (PHMC)

- 2 Inorganic Pharmaceutical Products (4 cr; prereq 1)
Lect II WF, 201WuH, Soine
Lab I-III Th, VI-VIII F, 301WuH, Soine
- 55 Quantitative Pharmaceutical Chemistry (5 cr; prereq sr, 54)
Lect II-III M, IV Th, 202WuH, Di Gangi
-1, Lab 2:00-5:00 T, VI-VIII Th, 1 WuH, Di Gangi
-2, Lab II-IV W, VI-VIII F, 1 WuH, Di Gangi
- 162 Organic Pharmaceutical Products (4 cr; prereq 161)
III TTh, 201WuH, Givold
III WF, 202WuH
- 164 Special Analytical Methods (3 cr; prereq sr, 2, 54, OrCh 62)
Lect II Th, Di Gangi
Lab I-III T, II-IV F, 1 WuH, Di Gangi
- 201 Seminar (1 cr)
Ar, Givold
- 206 Chemistry of Medicinal Products (3-6 cr; prereq* 163, OrCh 2)
Ar, Soine

PHARMACOGNOSY (PHCG)

- 2 Vegetable Drug Histology (3 cr; prereq 1)
Lect IV MW, 201WuH, Fischer
Lab VI-VIII M, 104WuH
- 56 Identification, Medicinal Properties of Vegetable Drugs (3 cr; prereq 55)
III M, 201WuH, IV T, 202WuH, IV Th, 201WuH, White

- 60 Pharmacognosy, Pharmaco-Histology (3 cr; prereq sr, 54)
Lect II Th, Fischer
Lab I-III T, II-IV F, 104WuH
- 162 Biological Assay of Drugs (3 cr; prereq sr, 57, PhmC 55)
Lect II Th, 104WuH, White
Lab I-III T, II-IV F, 8 WuH
- 202 Adv Pharmacognosy (3-5 cr; prereq 56, 57)
Ar, Fischer
- 204 Research (ar cr)
Ar, Fischer

PHARMACY (PHCY)

- 55 Pharmaceutical Preparations (5 cr; prereq 54)
Lect II M, 201WuH, II WF, 202WuH, Hadley
-1, Lab VI-VIII MW, 302WuH, Hadley
-2, Lab VI-VIII TTh, 302WuH, Hadley
- 59 Prescription Compounding (4 cr; prereq 58)
Lect IV M, III Th, 202WuH, Netz
Rec 2:00-3:00 T, VI ThF, 201WuH, Netz
-1, Lab 2:00-5:00 T, VI-VIII Th, 205WuH, Netz, Miller
-2, Lab II-IV W, VI-VIII F, 205WuH, Netz, Miller
- 66 Pharmaceutical Manufacturing (3 cr; prereq sr, 56)
Lect II Th, 201WuH, Miller
Lab I-III T, II-IV F, 2aWuH, Miller
- 68 Hospital Pharmacy (3 cr; prereq sr, 58)
Lect II Th, N300 Hosp, Bruce
Lab I-III T, II-IV F, W113 Hosp, Bruce
- 72 Veterinary Products (3 cr; prereq sr, 58)
III T, II Th, IV F, 202WuH, Hadley
- 73 Special Probs (ar cr; prereq sr, 56, PhmC 163)
Ar, Hadley, Netz, Miller

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

AMERICAN STUDIES (AMST)

- 91 Proseminar (3 cr; prereq 90)
VII-VIII Th, 103F
- 201 Introd American Studies (3 cr; prereq Amer
St maj or min)
VII-IX T, 103F
- 211 Seminar (3 cr; prereq cons instr)
VIII-IX W, 103F
- 252 Readings: American Civilization (ar cr;
prereq cons prog chrm)

ANTHROPOLOGY (ANTH)

- 1 Introduction (5 cr)
VI MTWThF, 20ForH, Wallis
- 2 World Ethnology (5 cr)
VII MTWThF, 55ForH
- 80 The American Indian (3 cr)
IV MWF, 20ForH, Spencer
- 81 Archeology of North America (3 cr)
III MWF, 20ForH, Wilford
- 111 Adv Physical Anthropology (3 cr; prereq*
110 or Zool 22 or 175 or human anat)
I MWF, 140ForH, Wallis
- 125 Peoples of SE Asia, Indonesia (3 cr)
II MWF, 140ForH, Spencer
- 131 Islamic Culture Sphere (3 cr)
IV TThS, 140ForH, Spencer
- 205 Seminar: Anthropology (3 cr)
VIII-IX Th, 346ForH, Wallis, Wilford,
Spencer
- 252 Seminar: Culture, Personality (3 cr; prereq
MD degree)
VIII-IX M, 346ForH, Spencer

ART (ART)

- 1 Principles (4)
Lect III MWF, NHAud, Torbert
-1, Lab I-II F, 203TSF
-2, Lab V-VI M, 203TSF
-3, Lab IV-V T, 203TSF
-4, Lab VI-VII T, 203TSF
- 2 Prin Ancient Art (3 cr; prereq 1)
VIII MWF, 207bJ, Thomas
- 10 Photography (3 cr, §Jour 10)
Lect V T, 308MurH, Downs
Lab II-III WF, 20MurH, Downs
- 23 Drawing, Design I (3 cr; prereq 1 or concur
regis)
-1, I-II MWF, 207aJ, Rollins
-2, III-IV MWF, 104J, Collins
-3, VII-VIII MWF, 267aJ, Young
- 24 Drawing, Design I (3 cr; prereq 23)
-1, VI-VIII TTh, 104J, Young
-2, V-VI MWF, 104J, Downs
-3, VII-VIII MWF, 104J, Arnest
- 24A Drawing, Painting for Architects I (2 cr;
prereq 23A)
II-IV TTh, 417E, Young

- 30 Drawing (2 cr)
III-IV MW, 200bJ, Rollins
- 31 Drawing (2 cr; prereq 30)
III-IV TTh, 207aJ, Quirt
- 32 Printmaking (3 cr)
III-V TTh, 203J, Demopoulos
- 33 Textile Design: Weaving (3 cr; prereq 24)
VI-VII MWF, 4J, Berglund
- 34 Textile Design: Weaving (3 cr; prereq 33)
VIII-IX MWF 4J, Berglund
- 41 Sculpture I (3 cr; prereq 40)
I-III TTh, 2J, Tovish
- 45 Ceramic Processes (3 cr)
VI-VIII TTh, 10J, MacKenzie
- 51 Pictorial Design (3 cr; prereq 50)
I-III TTh, 200bJ, Booth
- 54 Design Workshop (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* 24 or 31)
-1, I-II MWF, 200aJ, Arnest
-2, VI-VII MWF, 200aJ, Rollins
-3, VI-VIII TTh, 200aJ, Quirt
- 60A Drawing, Painting for Architects II (2 cr;
prereq 25A)
IV-V Th, II-IV S, 417E, Tovish
- 61 Drawing, Painting II (3 cr; prereq 60)
-1, I-II MWF, 200aJ, Arnest
-2, VI-VII MWF, 200aJ, Rollins
-3, VI-VIII TTh, 200aJ, Quirt
- 61A Drawing, Painting II for Architects (2 cr;
prereq 60A)
IV-V Th, II-IV S, 417E, Tovish
- 62 Drawing, Painting II (3 cr; prereq 61)
-1, I-II MWF, 200aJ, Arnest
-2, VI-VII MWF, 200aJ, Rollins
-3, VI-VIII TTh, 200aJ, Quirt
- 62A Drawing, Painting II for Architects (2 cr;
prereq 61A)
IV-V Th, II-IV S, 417E, Tovish
- 64 Sculpture, Three Dimensional Design (5 cr)
IV-VI MWF, 11J, Rood
- 67 Modern Art: Realism, Impressionism (3 cr;
prereq* 1)
VI MWF, NHAud, Eitner
- 70 Drawing, Painting III (3 cr; prereq 24 or 31)
-1, I-III TTh, 200aJ, Arnest
-2, VI-VIII TTh, 200bJ, Booth
-3, I-IV S and ar, 200aJ, Quirt
- 71 Drawing, Painting III (3 cr; prereq 70)
-1, I-III TTh, 200aJ, Arnest
-2, VI-VIII TTh, 200bJ, Booth
-3, I-IV S and ar, 200aJ, Quirt
- 72 Drawing, Painting III (3 cr; prereq 71)
-1, I-III TTh, 200aJ, Arnest
-2, VI-VIII TTh, 200bJ, Booth
-3, I-IV S, and ar, 200aJ, Quirt

- 74 **Presentation Techniques** (3 cr; prereq 25 or arch maj)
I-II MWF, 104J, Collins
- 81 **Sculpture II** (3 cr; prereq 80)
II-III MWF, 24F, Rood
- 84 **Design, Photography** (3 cr; prereq 83)
II-IV TTh, 104J, Liebling
- 87 **The Film** (3 cr; prereq 9 cr art or 6 cr lit or 6 cr Spch incl 31)
III-IV TTh, 207bJ, Amberg
- 89 **Textile Design: Weaving** (3 cr; prereq 34)
VIII-IX MWF, 4J, Berglund
- 90 **Printmaking** (3 cr; prereq* 62)
VI-VIII TTh, 203J, Anderson
- 91 **Printmaking** (3 cr; prereq 90)
VI-VIII TTh, 203J, Anderson
- 92 **Printmaking** (3 cr; prereq 91)
VI-VIII TTh, 203J, Anderson
- 94 **Ceramic Design** (3 cr; prereq* 32)
VI-VIII TTh, 10J, MacKenzie
- 104 **Design in Industry** (3 cr; prereq 103)
- 107 **Hellenistic Art to Christian Art** (3 cr; prereq 9 cr art hist; or 9 cr hist or lit, cons instr)
III MWF, 207bJ, Eitner
- 117 **Renaissance, Baroque Art in Italy: 1490-1625** (3 cr; prereq 9 cr art hist; or 9 cr hist or lit, cons instr)
IV MWF, 207bJ, Thomas
- 124 **Film Workshop** (3 cr; prereq 123)
VII-IX WF, 203TSF, Downs
- 137 **The United States** (3 cr; prereq 9 cr art hist; or 9 cr hist or lit, cons instr)
VI MWF, 207bJ, Torbert
- 141 **Metal Sculpture, Jewelry** (3 cr; prereq* 140)
III-IV MWF, 2J, Morton
- 147 **European, American Architecture: 1850-1900** (3 cr; prereq 146)
V MWF, 207bJ, Tselos
- 150 **Probs in Painting** (ar cr; prereq 72, cons instr)
-1, I-III TTh, 200aJ, Arnest
-2, VI-VIII TTh, 200bJ, Booth
-3, I-IV S and ar, 200aJ, Quirt
- 151 **Probs in Painting** (ar cr; prereq 150)
-1, I-III TTh, 200aJ, Arnest
-2, VI-VIII TTh, 200bJ, Booth
-3, I-IV S and ar, 200aJ, Quirt
- 152 **Probs in Painting** (ar cr; prereq 151)
-1, I-III TTh, 200aJ, Arnest
-2, VI-VIII TTh, 200bJ, Booth
-3, I-IV S and ar, 200aJ, Quirt
- 157A **20th Century European, American Painting** (3 cr, †156A-157A-158A; prereq 156A)
VII MWF, 207bJ, Tselos
- 181 **Probs in Sculpture** (ar cr; prereq 180)
II-III MWF, 24F, Rood
- 190 **Probs in Printmaking** (ar cr; prereq* 82)
VI-VIII TTh, 203J, Anderson
- 191 **Probs in Printmaking** (ar cr; prereq 190)
VI-VIII TTh, 203J, Anderson
- 192 **Probs in Printmaking** (ar cr; prereq 191)
VI-VIII TTh, 203J, Anderson
- 193 **Adv Probs in Design** (ar cr; prereq 9 sr col cr in design, cons maj adv)
- 194 **Adv Probs in Design** (3 cr; prereq 193)
- 195 **Adv Probs in Design** (3 cr; prereq 194)
- 196 **Readings: Art History, Criticism** (3 cr, †196-197-198; prereq sr, cons instr)
- 197 **Readings: Art History, Criticism** (3 cr, †196-197-198; prereq 196)
- 198 **Readings: Art History, Criticism** (3 cr, †196-197-198; prereq 197)
- 200 **Adv Probs in Studio Work** (ar cr; prereq cons instr)
- 201 **Adv Probs in Studio Work** (ar cr; prereq cons instr)
- 202 **Adv Probs in Studio Work** (ar cr; prereq cons instr)
- 206 **Seminar: European, American Architecture** (3 cr, †206-207-208; prereq cons instr)
Ar, Tselos
- 207 **Seminar: European, American Architecture** (3 cr, †206-207-208; prereq cons instr)
Ar, Tselos
- 208 **Seminar: European, American Architecture** (3 cr, †206-207-208; prereq cons instr)
Ar, Tselos
- 236 **Seminar: Probs in Art History, Criticism** (ar cr, †236-237-238; prereq cons instr)
Ar, Tselos, others
- 237 **Seminar: Probs in Art History, Criticism** (ar cr, †236-237-238; prereq cons instr)
Ar, Tselos, others
- 238 **Seminar: Probs in Art History, Criticism** (ar cr, †236-237-238; prereq cons instr)
Ar, Tselos, others
- 250 **Thesis Seminar** (ar cr, †250-251-252; prereq cons adv)
Ar, Booth
- 251 **Thesis Seminar** (ar cr, †250-251-252; prereq cons adv)
Ar, Booth
- 252 **Thesis Seminar** (ar cr, †250-251-252; prereq cons adv)
Ar, Booth

ASTRONOMY (AST)

- 20 **Astronomy for Celestial Navigation** (5 cr)
III MTWF, 358Ph, Luyten
- 51 **Gen Astronomy** (3 cr, †11; prereq Math 6)
I MWF, 145Ph, Albers
- 52 **Astrophysics** (4 cr; prereq 51; or Math 6)
II MTWF, 358Ph, Luyten

BOTANY (BOT)

- 2 **Gen Botany** (3 cr; †5 or NSci 9; prereq 1)
-1, Lect III TTh, B6Bo, Hall
-2, Lect VI TTh, B6Bo, 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, 214Bo, Lawrence

- 53 Introd Plant Anatomy (3 cr; prereq 3 or 5 or NSci 9)
II-IV TTh, 209Bo, Abbe
- 112 Aquatic Flowering Plants (3 cr; prereq* 10 cr biol or bot or zool)
Lect IV MW, 401Bo, Morley
Lab Ar, 401Bo
- 118 Extranuclear Cytology (3 cr; prereq* 10 cr biol or bot or zool)
VI-VII MWF, 202Bo, Dahl
- 127 Morphology of Vascular Plants (5 cr; prereq 10 cr biol or bot)
II-IV MWF, 209Bo, Abbe
- 177 Photosynthesis (3 cr; prereq* sr, 51 or 140, 20 cr chem or biochem, PCh 103 or 108)
8:30-9:45 TTh, 110Bo, Brown, Whittingham
- 180 Adv Physiology Lab (2 cr; prereq 177 or concur regis, 179)
-1, Lab VI-X T, 104Bo, Brown, Whittingham
-2, Lab VI-X Th, 104Bo, Brown, Whittingham
- 198 Problems (1-5 cr; prereq 20 cr nat sci, cons instr, 197)
- 202 Research Probs: Morphology of Vascular Plants (ar cr)
Ar, Abbe
- 206 Research Probs: Taxonomy, Floristic Plant Geography (ar cr)
Ar, Morley
- 210 Research Probs: Paleobotany (ar cr)
Ar, Hall
- 222 Research Probs: Ecology (ar cr)
Ar, Lawrence, Hulbert
- 226 Research Probs: Plant Physiology (ar cr)
Ar, Brown, Whittingham
- 230 Research Probs: Cytology (ar cr)
Ar, Dahl
- 241 Seminar: Morphology (1 cr)
Ar, Abbe
- 244 Seminar: Taxonomy (1 cr)
Ar, Morley
- 247 Seminar: Paleobotany (1 cr)
Ar, Hall
- 250 Seminar: Ecology (1 cr)
Ar, Lawrence, Hulbert
- 253 Seminar: Plant Physiology (1 cr)
Ar, Brown, Whittingham
- 256 Seminar: Cytology (1 cr)
Ar, Dahl

CLASSICS

Classics (CLAS)

- 43 Ancient Mythology in Relation to Literature, Art (2 cr; prereq soph)
I MW, 6F, Corrigan
- 82 Aristophanes, Roman Drama in Translation (3 cr; prereq 9 cr lit or cons dept)
VI MWF, 108F, Corrigan
- 107 Study of Language (3 cr; prereq 106)
VIII MWF, 302F, Magner

- 192 Classical Literary Traditions (3 cr; prereq 9 cr lit)
VI MWF, Studio 3 KUOM, DeWitt

Greek (GRK)

- 2 Bgn Greek (5 cr, t1-2; prereq 1)
II MTWThF, 103F, McDonald
- 52 Greek Drama (3 cr; prereq 3)
IV MWF, 103F, McDonald
- 172 Independent Reading (3 cr; prereq 53 or cons dept)
Ar, McDonald
- 222 Seminar: Thucydides (3 cr)
Ar, McDonald

Latin (LAT)

- 2 Bgn Latin (5 cr, t2b, t1-2; prereq 1)
II MTWThF, 205½F, Forbes
- 2b Roman Language, Culture (5 cr, t2, t1b-2b-3b; prereq 1b)
III MTWThF, 103F, DeWitt
- 82 Survey of Latin Literature (3 cr; prereq 3 or 3b or 21 or cons dept)
Ar, Corrigan
- 172 Independent Reading (3 cr; prereq 83 or cons dept)
Ar, Forbes

ENGLISH

Composition (COMP)

- 4 Freshman Composition (3 cr; §Comm 1 or Engl A; prereq assign to category 1 or 2 or 3)
-1, II MWF, 303F
-2, IV MWF, 6F
-3, V MWF, 201F
- 5 Freshman Composition (3 cr, §Comm 2 or Engl B; prereq 4)
-1, I MWF, 206F
-2, II MWF, 305F
-3, III MWF, 322F
-4, IV MWF, 3F
-5, V MWF, 306F
-6, VI MWF, 109TSF
-7, VII MWF, 304F
- 6 Freshman Composition (3 cr, §Comm 3 or Engl C; prereq 5)
I MWF, 213F
- 27 Adv Writing (3 cr; prereq 6 or Comm 3 or Engl C or exempt)
-1, II MWF, 204F, Christie
-2, III MWF, 2F, Christie
-3, IV MWF, 113F, del Plaine (for prelaw students)
-4, V MWF, 107F, Markels
-5, VI MWF, 205F, Lydenberg
- 28 Adv Writing (3 cr; prereq 6 or Comm 3 or Engl C or exempt...27 rec)
-1, I MWF, 204F, Hornberger
-2, III MWF, 101F, del Plaine
-3, IV MWF, 204F, Kraus
-4, VI MWF, 227F

- 58 **Business Reports, Letters** (3 cr; prereq* regis BA, 6 or Comm 3 or Engl C or exempt)
 —1, II MWF, 30ForH
 —2, IV MWF, 30ForH
- 65 **Writing of Research Papers, Articles** (3 cr; prereq 6 or Comm 3 or Engl C, 6 addtl cr comp or Engl; or 10 cr Engl 21-22-23, B aver in prereq courses)
 III T and ar, 108F, Steinmann
- 68 **Probs of Style** (3 cr; prereq 67)
 VI MWF, 2F, Atkins
- 102 **Writing of Fiction, Poetry** (3 cr; prereq 101)
 VIII-IX W, 304F, Kraus
- 201 **Seminar; Writing** (3 cr; prereq cons instr)
 IV-V M, 4F, Coxé

English (ENGL)

- A Freshman English** (5 cr, †Comp 4 or Comm 1; prereq assign to category 1 or 2)
 II MTWThF, 107F
- B Freshman English** (5 cr, §Comp 5 or Comm 2; prereq A)
 —1, I MTWThF, 305F
 —2, II MTWThF, 102F
 —3, III MTWThF, 213F
 —4, IV MTWThF, 305F
 —5, V MTWThF, 205F
 —6, VI MTWThF, 321F
- C Freshman English** (5 cr, §Comp 6 or Comm 3; prereq B)
 V MTWThF, 303F
- 20 **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
- 22 **Introd Literature** (5 cr, §19 or 20; prereq C or Comp 6 or Comm 3 or exempt)
 —1, III MTWThF, 305F, Moore
 —2, IV MTWThF, 308F, Montgomery
 —3, VI MTWThF, 301F, Buckley
- 38 **Modern Literature** (3 cr; prereq soph, C or Comp 6 or Comm 3 or exempt)
 VII MWF, 301F, Rathburn
- 53 **English Novel** (3 cr; prereq C; or Comp 6 or Comm 3, 6 addtl cr; or 10 cr in 21, 22, 23)
 VII MWF, 206F, Stange
- 55 **Shakespeare: Early Plays** (3 cr, §57; prereq C; or Comp 6 or Comm 3, 6 addtl cr; or 10 cr in 21-22-23)
 —1, III MWF, 303F, Turpie
 —2, VI MWF, 110F, del Plaine
- 56 **Shakespeare: Later Plays** (3 cr, §57; prereq* 55)
 —1, II MWF, 110F, Atkins
 —2, IV MWF, 207F, Stange
 —3, VI MWF, 303F, Reisman
- 67 **Literature of the Bible** (3 cr; prereq C; or Comp 6 or Comm 3, 6 addtl cr; or 10 cr in 21-22-23)
 VI MWF, 107F, Jackson

- 73 **American Literature** (3 cr; prereq C; or Comp 6 or Comm 3, 6 addtl cr; or 10 cr in 21-22-23)
 III MWF, 108F, McDowell
- 74 **American Literature** (3 cr; prereq C; or Comp 6 or Comm 3, 6 addtl cr; or 10 cr in 21-22-23)
 —1, II MWF, 308F, Hornberger
 —2, VII MWF, 101F, McDowell
- 75 **Chaucer** (4 cr; prereq C; or Comp 6 or Comm 3, 6 addtl cr; or 10 cr in 21-22-23)
 III MWThF, 107F, Atkins
- 98 **Adv Selected Survey for Seniors** (3 cr, †97-98-99; prereq 97)
 VIII-IX Th, 108F, Krieger
- 102 **Readings: Old English Prose, Verse** (3 cr; prereq 100)
 I MWF, 205F, Brown
- 105 **Hawthorne, Melville** (3 cr; prereq 6 cr above C)
 III MWF, 206F, Marx
- 110 **Romantic Poets of Early 19th Century** (3 cr; prereq 6 cr above C)
 VI TTh, VII T, 107F, Jackson
- 121 **Interpretation of Poetry** (3 cr, †120-121-122; prereq* 120)
 VII MWF, 207F, Blum
- 124 **Technique of the Novel** (3 cr; prereq sr, 6 cr above C, cons instr)
 VII-IX T, 207F, Gray
- 127 **Drama: 1660-1870** (3 cr; prereq 6 cr above C)
 IV MWF, 206F, Hillhouse
- 130 **English Poetry: 1832-1901** (3 cr; prereq 6 cr above C)
 III MWF, 205F, Montgomery
- 138 **19th Century English Literature** (3 cr; prereq 6 cr above C)
 II TThS, 206F, Stange
- 143 **20th Century Literature** (3 cr; prereq 6 cr above C)
 VI MWF, 213F, Coxé
- 148 **Literature of England: Middle Ages Exclusive of Chaucer** (3 cr; prereq 147)
 VII MWF, 205F, Clark
- 155 **American Novel** (3 cr; prereq 6 cr above C)
 II TThS, 205F, Bowron
- 162 **Milton** (3 cr; prereq 21, 22; or 56)
 IV MWF, 107F, Jackson
- 165 **Modern English** (3 cr; prereq 6 cr above C)
 VI MWF, 206F, Allen
- 182 **The Far West in Literature** (3 cr; prereq 6 cr above C)
 II MWF, 108F, Lydenberg
- 185 **Interpretation of Drama** (3 cr; prereq 184)
 VIII-IX W, 205F, Coxé
- 188 **18th Century Literature** (3 cr; prereq 6 cr above C)
 II MWF, 207F, Moore
- 195 **Elizabethan Literature: Prose, Poetry, Drama** (3 cr; prereq 6 cr above C)
 IV MWF, 205F, Brown

- 198 17th Century Literature (3 cr; prereq 6 cr above C)
III MWF, 204F, Monk
- 200 Adv Chaucer (3 cr; prereq 75 or 175)
VI MWF, 204F, Clark
- 205 Rise, Development of Standard English (3 cr; prereq* 204)
VII TTh, VIII T, 304F, Allen
- 241 The Canterbury Tales (3 cr; prereq 240)
4:00-6:00 Th, 312Lib, Clark
- 257 Spencer, Milton (3 cr; prereq 256)
VIII-IX T, 312Lib, Brown
- 260 19th Century Novel I (3 cr; prereq 259)
4:00-6:00 Th, 339Lib, Hillhouse
- 278 American Realism (3 cr; prereq 277)
VIII-IX F, 108F, Lydenberg
- 282 English Romantic Movement (3 cr; prereq 281)
VIII-IX M, 312F, Erdman
- 285 Dryden, His Age (3 cr; prereq 284)
VIII-IX W, 108F, Monk
- 298 Independent Reading (3 cr; prereq 297)

GENERAL STUDIES

Communication (COMM)

- 1 Communication (4 cr, §Comp 4 or Engl A; prereq assign to category 1 or 2 or 3)
-1, I MTWF, 115TNM
-2, V MTWF, 19TNM
-3, VI MTWF, 19TNM
- 2 Communication (4 cr, §Comp 5 or Engl B; prereq 1)
-1, Lect I T, 4ME
-2, Lect IV T, 4ME
-3, Lect VI T, 4ME
-1, Rec I MWF, 8TNM
-2, Rec II MWF, 8TNM
-3, Rec III MWF, 8TNM
-4, Rec IV MWF, 8TNM
-5, Rec V MWF, 8TNM
-6, Rec VI MWF, 8TNM
-7, Rec VII MWF, 8TNM
- 3 Communication (4 cr, §Comp 6 or Engl C; prereq 2)
V MTWF, 8TNM

Family Life (FL)

- 1 Preparation for Marriage (3 cr)
-1, II MWF, 107TNM
-2, IV MWF, 107TNM
-3, V MWF, 107TNM
-4, VII MWF, 107TNM
- 1A Preparation for Marriage (3 cr; prereq jr; or older students with cons instr)
IV MWF, 115TNM, Dyer
- 15 The Home, Its Furnishing (3 cr)
VII MWF, 206WeH, Ludwig
- 20 Consumer Education (3 cr)
II MWF, 202Pt, Price

- 25 Child Development, Adjustment (3 cr, §CW 40 or 80, not open to NKP or psy maj)
III MWF, 202Pt, Koppe

Humanities (HUM)

- 1 Modern World I (5 cr)
-1, I MTWThF, 111AH
-2, II MTWThF, 308MurH, Siegelman
-3, III MTWThF, 115JohH
-4, IV MTWThF, 115JohH
- 2 Modern World II (5 cr; prereq 1)
-1, I MTWThF, 308F, Erdman
-2, II MTWThF, 122JohH, Ramsland
-3, II MTWThF, 301F, Smith
-4, III MTWThF, 301F, Wood
-5, III MTWThF, 225C, Bryan
-6, IV MTWThF, 111AH, Gray
-7, V MTWThF, 122JohH, Blum
-8, VI MTWThF, 9F, Krieger
- 3 Modern World III (5 cr; prereq 2)
IV MTWThF, 310JohH, Ramsland
- 4 Modern World IV (5 cr; prereq 1 or 2 or 3)
I MTWThF, 114JohH, Bowditch
- 12 Roman, Medieval Heritage (5 cr)
III MTWThF, 310JohH, Ames
- 22 American Life II (3 cr)
-1, II MWF, 9F, Olson
-2, III MWF, 9F, Hansen
-3, IV MWF, 9F, Turpie
-4, VII MWF, 9F, Noble
- 52 Modern World (5 cr, §2)
-1, I MTWThF, 122JohH, Ames
-2, III MTWThF, 122JohH, Rosenfeld
-3, VI MTWThF, 122JohH, Amberg
- 54 Modern World (3 cr, §4)
IV MTWThF, 122JohH, Rosenfeld
- 62 European Heritage: Homer to Mollere (5 cr, §12)
-1, II MTWThF, 114JohH, Nelson
-2, III-IV TTh, 114JohH, Ross
- 72 Humanities in United States (3 cr, §22)
II MWF, 6F, Marx
- 132 Proseminar (3 cr; prereq 131)
VII-VIII T, 303JohH, Ross

Natural Science (NSCI)

- 2 Orientation in Natural Sciences (5 cr, §5 or 8, †1-2; prereq 1)
-1, II MTWThF, 166Ph, Graubard
-2, III MTWThF, 133Ph, Graubard
- 5 Physical World (3 cr, §2, †4-5; prereq 4)
IV MWF, 166Ph, Kruglak
Lab secs assigned during first day of class
- 8 Gen Biology (3 cr, §2, †7-8-9; prereq 7)
Lect V MW, B6Bo, Hall, Merrell
-1, Lab I-II WF
-2, Lab I-II TTh
-3, Lab VIII-IX MF
- 172 Development of Sciences (3 cr; prereq 171)
IV MWF, 241Ph, Graubard

Personal Orientation (PO)

- 1 **How to Study (2 cr)**
 —1, I MWF, 303JohH, Premack
 —2, II MWF, 303JohH, Premack
 —3, IV MWF, 303JohH, Premack
 —4, VI MWF, 303JohH, Farquhar
 —5, VII MWF, 303JohH, Farquhar
- 11 **Choosing a Vocation (2 cr)**
 II TTh, 107TNM, Hewer

Social Science (SSCI)

- 1 **Introduction (4 cr)**
 —1, II-III TTh, 302JohH, Page
 —2, I MTWF, 115JohH, Mouratides
 —3, II MTWF, 115JohH, Mouratides
 —4, III MTWF, 111AH, Potter
 —5, IV MTWF, 113JohH, Mouratides
- 2 **Introduction (4 cr; prereq 1)**
 —1, I MTWF, 310JohH, Jost
 —2, I MTWF, 113JohH, Potter
 —3, I MTWF, 314JohH, Donohue
 —4, II MTWF, 309JohH, Jost
 —5, II MTWF, 314JohH, Potter
 —6, II TWThF, 20ForH, Sibley
 —7, III MTWF, 314JohH, Olson
 —8, III MTWF, 120ForH, Rozentel
 —9, IV MTWF, 314JohH, Donohue
 —10, IV MTWF, 309JohH, Benewitz
 —11, V MTWF, 113JohH, Benewitz
 —12, VI MTWF, 115JohH, Donohue
- 3 **Introduction (4 cr; prereq 2)**
 —1, II MTWF, 113JohH, Miller
 —2, IV MTWF, 313JohH, Miller
- 12 **Int'l Relations (3 cr)**
 III MWF, 114JohH, Turner
- 52 **Introduction (4 cr, §2; prereq 51)**
 III MTWF, 113JohH, Nelson
- 52 **Public Affairs Forum (3 cr)**
 VI-VII TTh, 114JohH, Rogers

GEOGRAPHY (GEOG)

- 1 **Physical Resources (5 cr; fold 11)**
 Lect II MWF, 240ChE, Borchert
 —1, I MW, 261ForH
 —2, I TTh, 261ForH
 —3, III TTh, 261ForH
 —4, III WF, 261ForH
 —5, V MW, 261ForH
 —6, V TTh, 261ForH
- 4 **Human Geography (5 cr, fold 45)**
 Lect III MWF, 155ForH, Sopher
 —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, V F, 261ForH

- 4, VI F, 261ForH
 —5, VII M, 261ForH
 —6, VII F, 261ForH
- 90 **Readings (ar cr; prereq 12 cr, cons instr)**
- 113 **Eastern Anglo-America (3 cr, fold 71; prereq* 5 cr)**
 II MWF, 285 ForH, Weaver
- 121 **India, SE Asia (3 cr, fold 120; prereq* 5 cr)**
 III MWF, 285ForH, Broek
- 134 **Adv Climatology (3 cr; prereq* 133 or Aero 173)**
 IV MWF, 285ForH, Borchert
- 139 **Adv Cartography, Map Reading (3 cr; prereq 138)**
 V-VI TTh, 275ForH, Sopher
- 152 **Industrial Geography (3 cr; prereq* 5 cr)**
 VI MWF, 285ForH, Steigenga
- 165 **Source Materials for Geographic Research (3 cr; prereq sr, 15 cr)**
 VII W, VI-VII F, 285ForH, Weaver
- 251 **Seminar: Human Geography (ar cr)**
 VII-VIII T, 290CForH, Broek
- 253 **Seminar (ar cr)**
 VII-VIII Th, 290CForH, Steigenga
- 301 **Research Probs (ar cr)**

GEOLOGY AND MINERALOGY (GEO)

- A **Gen Geology Lab (2 cr; prereq 1 or concur regis)**
 —1, I-II MW, 22P
 —2, III-IV MW, 22P
- B **Gen Geology Lab (2 cr; prereq A, 2 or concur regis)**
 —1, I-II TTh, 20-22P
 —2, VI-VII MW, 20-22P
- 1 **Gen Geology (3 cr)**
 —1, IV MWF, 210P, Goldich
 —2, VII MWF, 210P, Henrickson
- 2 **Gen Geology (3 cr; prereq 1)**
 —1, II MWF, 110P, Swain
 —2, VI MWF, 110P, Sloan
- 6 **Engineering Geology (3 cr; prereq 5)**
 I MWF, 210P, Schwartz
- 8 **Earth Features, Their Meaning (5 cr, §1 or NSci 6)**
 III MTWThF, 110P, Thiel
- 24 **Mineralogy (4 cr; prereq 23)**
 Lect I MWF, 110P, Gruner
 —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, VI T, 101P, Swain
- 108 **Adv Invertebrate Paleontology (3 cr; prereq 107)**
 VIII-IX F, 105P, Sloan
- 110 **Economic Geology (3 cr; prereq 25)**
 III MWF, 210P, Schwartz

- 119a Geomorphology of Eastern United States (3 cr; prereq 118 or 125)
Lect II TTh, 220P, Wright
Lab Ar, 220P
- 131 Petrology (4 cr; prereq 106)
Lect II MW, 210P, Goldich
Rec II F, 210P
—1, Lab VI-VII WF, 200P
—2, Lab Ar, 200P
- 140 Applied Petrography (3 cr; prereq 131)
Lect Ar, 200P, Goldich
Lab VIII-IX MW, 200P
- 144 Geologic Maps (3 cr; prereq 125)
Lab VI-VIII MW, 220P, Wright
- 147 Soil Mineralogy (3 cr; prereq 146)
I MWF, 100P, Gruner
- 151 Stratigraphy (3 cr; prereq 107)
IV MWF, 110P, Swain
- 161 Adv Mineralogy (3 cr; prereq sr, 24)
Lect I TTh, 110P, Gruner
Lab VI-VIII F, 100P
- 166 Mineralography (3 cr; prereq sr, 111, 131)
VI-VII MWF, 207P, Schwartz
- 170 Geologic Probs (1-3 cr; prereq cons maj adv)
- 217 Research: Petroleum Geology (3 cr; prereq* 112, 153)
Ar, Swain
- 263 Research: Petrography (3 cr; prereq 132)
Ar, Goldich
- 60 Modern Writers (3 cr; prereq 4 or 4 yrs HS Ger)
II MWF, 208F, Menze
- 64 19th Century Drama (3 cr; prereq 3 cr above 59)
IV MWF, 208F, Ramras
- 71 Survey of Literature (3 cr; prereq 3 cr above 59)
III MWF, 208F, Pfeiffer
- 111 Middle High German (3 cr; prereq 70, 11 cr above 59)
VIII-IX W, 208F, Downs
- 144b Classical Period: Goethe (3 cr; prereq 70, 11 cr above 59)
VIII-IX Th, 208F, Ramras
- 167 History of Literature (1 cr; prereq 70, 11 cr above 59)
VII M, 208F, Pfeiffer
- 174a European Literary Relations: English-German (3 cr; prereq 70, 71, 72, 6 cr above 59)
VIII-IX T, 208F, Pfeiffer
- 181 Drama in Translation (3 cr; prereq sr, 9 cr theat arts or lit above 50)
VIII-IX M, 208F, Wood

HISTORY (HIST)

- 1 Civilization of the Modern World (3 cr)
Lect II MW, 4ME, Bowditch
—1, II Th, 60ForH
—2, IV Th, 50ForH
—3, VI Th, 140ForH
—4, I F, 70ForH
—5, II F, 238EE
—6, II F, 60ForH
- 2 Civilization of the Modern World (3 cr)
Lect II TTh, BuAud, Wolf
—1, I M, 60ForH
—2, I T, 60ForH
—3, I W, 70ForH
—4, I Th, 60ForH
—5, II M, 60ForH
—6, II W, 60ForH
—7, II F, 112Bu
—8, III T, 60ForH
—9, III W, 70ForH
—10, III Th, 60ForH
—11, III Th, 150ForH
—12, IV W, 60ForH
—13, IV Th, 60 ForH
—14, IV T, 60ForH
—15, VI W, 60ForH
—16, IV T, 50ForH
- 5 English History (3 cr)
Lect II TTh, 55ForH, Burt
—1, I T, 70ForH
—2, I Th, 70ForH
—3, III T, 70ForH
—4, III Th, 170ForH
- 12 Medieval, Renaissance History (3 cr; prereq* mus or art maj)
IV MWF, 115ForH, Thompson
- 15 Ancient Civilization (3 cr)
VII TWTh, 155ForH, Jones
- GERMAN (GER)**
- 1 Bgn German (5 cr, §1a or 1b)
—1, I MTWThF, 207F
—2, V MTWThF, 209½F
- 2 Bgn German (5 cr, §2a or 2b; prereq 1 or 1 yr HS Ger)
—1, I MTWThF, 209F
—2, II MTWThF, 209F
—3, V MTWThF, 209F
- 2a Bgn Conversational German (5 cr, §2 or 2b; prereq 1a)
Dem, III MTWThF, 209F, Menze
Lab, IV MTWThF, 209F
- 2b Language, Culture (5 cr, §2 or 2a; prereq 1b)
III MTWThF, 209½F, Ramras
- 3 Bgn German (5 cr, §3a or 3b; prereq 2 or 2 yrs HS Ger)
III MTWThF, 207F
- 4 Interm German (5 cr; prereq 3 or 3a or 3b or 3 yrs HS Ger)
—1, I MTWThF, 209½F
—2, VI MTWThF, 209F
- 25 Chemical German (3 cr; prereq 24)
II MWF, 209½F
- 42 Readings: German Chemical Periodicals (2 cr; prereq 41)
I TTh, 208F
- 51 Composition (2 cr; prereq 4)
VI MF, 209½F, Downs
- 54 Conversation (2 cr; prereq 4)
VI TTh, 209½F, Menze
- 57 Essay Writing (3 cr; prereq 56)
III TThS, 208F, Pfeiffer

CLASS SCHEDULE

- 15a Ancient Civilization with Readings (5 cr)
VII MTWThF, 155ForH, Jones
- 21 American History (3 cr; prereq soph)
-1, Lect II TTh, NHAud, Osgood, Chambers, Noble
-2, Lect VIII TTh, 155ForH, Osgood, Chambers, Noble
-1, II F, 142ChE
-2, IV T, 150ForH
-3, IV T, 170ForH
-4, IV F, 70ForH
-5, VI W, 70ForH
-6, VI F, 70ForH
-7, VII F, 60ForH
-8, VII M, 60ForH
- 50 Ancient Civilization (3 cr, §14)
VII TWTh, 155ForH, Jones
- 54 Civilization of the Modern World (3 cr, §2)
Lect II TTh, BuAud, Wolf
-1, II M, 70ForH
-2, III M, 70ForH
-3, II F, 70ForH
- 57 England (3 cr, §5)
Lect II TTh, 55ForH, Burt
Rec II F, 138EE
- 60 American History (3 cr, §21)
-1, Lect II TTh, NHAud, Osgood, Chambers, Noble
-2, Lect VIII TTh, 155ForH, Osgood, Chambers, Noble
-1, IV T, 70ForH
-2, III Th, 70ForH
-3, VII T, 70ForH
-4, VI W, 50ForH
- 63 Cultural History of China (3 cr)
VII MWF, 349ForH, Mather
- 66a Renaissance, Reformation (3 cr)
III MWF, 115ForH, Krey
- 71 English Constitutional History
(3 cr; prereq preleg soph, C aver; or jr)
I MWF, 115ForH, Thompson, Willson
- 77 Canadian History, Canadian-American Relations (3 cr)
III TThS, 150ForH, Burt
- 80 United States in 20th Century (3 cr)
VI MWF, 55ForH, Chambers
- 87 American Colonies (3 cr)
II MWF, 185ForH, Tyler
- 91 The American West (3 cr)
III TThS, 180ForH, Osgood
- 94 American Diplomatic History (3 cr)
IV MWF, 4ME, Beatty
- 98 Minnesota, the Northwest (3 cr)
III MWF, 180ForH, Jordan
- 98a The South (3 cr)
III TThS, 140ForH, Noble
- 101b Rome (3 cr)
I TThS, 160ForH, Jones
- 104a Renaissance, Reformation (3 cr)
III MWF, 115ForH, Krey
- 107 Continental Europe (3 cr)
VI MWF, 180ForH, Wolf
- 110 Europe in the 20th Century (3 cr)
I MWF, 155ForH, Deutsch
- 113 Economic History of Europe (3 cr)
II TThS, 170ForH, Heaton
- 116 European Overseas Expansion (3 cr)
II MWF, 170ForH, Willson
- 121 Modern France (3 cr; prereq 9 cr hist or 15 cr soc sci or Fren maj)
VI MWF, 175ForH, Bowditch
- 123 Scandinavian Countries (3 cr)
IV MWF, 244ForH, Steefel
- 126 Russia (3 cr)
IV MWF, 180ForH, Anderson
- 126a Eastern Europe, Middle East in 19th, 20th Centuries (3 cr; prereq 1-2-3)
III MWF, 160ForH, Anderson
- 135 World War II (3 cr)
II MWF, 155ForH, Deutsch
- 138a American History: 1850-1900 (3 cr)
III MWF, 130ForH, Loehr
- 141 Germany (3 cr; prereq* 1-2-3 or Ger maj)
VII MWF, 115ForH, Steefel
- 144 American Folklore (3 cr)
I MWF, 120ForH, Jordan
- 147 American Economic, Social History (3 cr)
II MWF, 130ForH, Loehr
- 150 Social, Intellectual History of the United States (3 cr)
III MWF, 185ForH, Tyler
- 155 Int'l Relations (3 cr)
III TThS, 150ForH, Burt
- 158 Latin-American History (3 cr)
III MWF, 170ForH, Beatty
- 174 Readings: Medieval, Renaissance History (3 cr, †173-174-175; prereq 173)
VIII-IX W, 244ForH, Krey
- 174a Readings: Medieval English History (3 cr, †173a-174a-175a; prereq 173a)
VI-VII Th, 312Lib, Thompson
- 177 Readings: 17th Century France (3 cr, †176-177-178; prereq 176)
VII-VIII W, 256ForH, Wolf
- 177a Readings: Russian History (3 cr, †176a-177a-178a; prereq 176a)
VII-VIII F, 160ForH, Anderson
- 177b Readings: Scandinavian History (3 cr, †176b-177b-178b; prereq 176b)
- 177c Readings: Recent European History (3 cr, †176c-177c-178c; prereq 176c)
VI-VII W, 244ForH, Deutsch
- 177d Readings: 19th Century European History (3 cr, †176d-177d-178d; prereq 176d)
VIII-IX T, 359ForH, Steefel
- 180 Readings: European Economic History since 1700 (3 cr, †179-180-181; prereq 179)
VI-VII T, 244ForH, Heaton
- 183 Readings: English History, Tudor, Stuart Periods (3 cr, †182-183-184; prereq 182)
VI-VII F, 140ForH, Willson
- 186a Readings: The West in American History (3 cr, †185a-186a-187a; prereq 185a)
VIII-IX W, 457ForH, Osgood
- 186b Readings: American Diplomatic History (3 cr, †185b-186b-187b; prereq 185b)
VI-VII T, 312Lib, Beatty

- 186c Readings: 20th Century American History (3 cr, †185c-186c-187c; prereq 185c)
VII-VIII F, 130ForH, Chambers
- 186d Readings: 19th Century American History (3 cr, †185d-186d-187d; prereq 185d)
VIII-IX W, 175ForH, Jordan
- 186e Readings: Probs of 18th Century American History (3 cr, †185e-186e-187e; prereq 185e)
VI-VII Th, 244ForH, Tyler
- 189 American Economic History (3 cr; prereq sr)
VI-VII W, 346ForH, Loehr
- 192 Readings: Relations of US, Gt Britain, Br N America (3 cr, †191-192-193; prereq 191)
VIII-IX T, Burt
- 209a Seminar: American History (3 cr, †208a-209a-210a)
VIII-IX F, Osgood
- 222 Seminar: Economic History (3 cr, †221-222-223)
VI-VII Th, 346ForH, Heaton

JOURNALISM (JOUR)

- 10 Photography (3 cr, †Art 10; prereq soph)
Lect V T, 308MurH, Liebling
Lab VI-IX M, 20MurH, Liebling
- 11 Reporting for Nonmajors (3 cr; prereq soph, C aver, Engl C or Comp 6 or Comm 3 or Rhet 3)
II TTh, 1 hr ar, 302MurH, Ford
- 13 Journalistic Writing for Majors (3 cr; prereq soph, C aver, Engl C or Comp 6 or Comm 3, typ 35 words/min or concur regis Econ 32 or 33)
—1, I-III TTh, 212MurH, Benson
—2, VI-VIII TTh, 210MurH, Emery
- 14 Newspaper Reporting for Majors (3 cr; prereq* 13 with grade C, Comp 28 or concur regis)
—1, I-III TTh, 210MurH, Nixon
—2, VI-VII MWF, 212MurH, Hage
—3, VI-VIII TTh, 212MurH, Charnley
- 18 Prin Advertising (3 cr; prereq 13, C aver, Comp 28 or concur regis)
—1, I TTh, 1 hr ar, 308MurH, Perry
—2, VI MWF, 308MurH, Perry
- 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 F, 206MurH, Pouncey
—2, Lab IV-V F, 206MurH, Park
—3, Lab IV-V F, 207MurH, Pouncey
—4, Lab VI-VII T, 206MurH, Pouncey
- 55 Advertising, Newspaper Typograpy (3 cr; prereq maj; or 11 or 13, 41)
Lect V M, 302MurH, Barnhart
—1, Lab VI-VII TTh, 315, 320MurH, Barnhart
Lect V M, 105MurH, Wilson
—2, Lab I-II TTh, 315, 320MurH, Wilson
—3, Lab III-IV MW, 315, 320MurH, Wilson
- 58 Newspaper, Periodical Design, Typograpy (3 cr; prereq 55, cons inst, 51 for adver seq or 52 for ed seq)
Lect II MW, 320MurH, Barnhart
Lab II-III F, 315MurH, Barnhart
- 66 Pictorial Journalism (3 cr; prereq* 10, 13)
Lect VIII M, 302MurH, Pouncey
Lab VIII-IX WF, 20MurH, Pouncey
- 67 Radio, Television News Writing (3 cr; prereq 15)
Lect VII WF, 302MurH, Charnley
Lab III-IV ar, 207MurH
- 74 Magazine Editing (3 cr; prereq 55, 73, cons instr)
VI MW, 1 hr ar, 302MurH, Charnley
- 86 Advertising Copy Writing (3 cr; prereq 41 or 51, 55, 65)
VI MW, VI-VII F, 311MurH, Wilson
- 87 Radio, Television Advertising (3 cr; prereq sr, 19, 120, cons instr; or sr, 69, BA 188, cons instr)
III MWF, 308MurH, Perry
- 101 Reporting Public Affairs (3 cr; prereq sr, 51)
I TTh, 1 hr ar, 302MurH, Hage
- 109 History of Journalism (3 cr)
—1, I MWF, 105MurH, Emery
—2, II MWF, 105MurH, Ford
- 112 Comparative Foreign Journalism (3 cr; prereq 15 cr soc sci)
II MWF, 311MurH, Park
- 115 Communication Media Analysis (3 cr; prereq 51, cons instr; or Econ 5 or Psy 70, cons instr)
III TTh, 1 hr ar, 311MurH, Jones
- 118C Topics: Readings in Journalism (3 cr; prereq sr, jour maj with B aver, cons instr)
- 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 T, VI Th, 105MurH
—1, VI-VII T, VI Th, 302 MurH, Nixon
—2, VI-VII T, VI Th, 308MurH, Park
—3, VI-VII T, VI Th, 311MurH, Benson
- 151 Newspaper Advertising (3 cr; prereq* 51, 55, 86 or 41, 55, cons instr)
9:30-11:00 TTh, 105MurH, Barnhart
- 230 Seminar: Public Opinion, Propaganda (3 cr; prereq 131, cons adv)
Ar, Casey, Nixon
- 277 Govt, Mass Communications (3 cr; prereq 12 cr incl 177, cons instr)
Ar, Benson

LIBRARY (LIB)

- 1 Use of Books, Libraries (3 cr)
I MWF, 4aLib, Moen
- 53 School Library Mgt (3-4 cr)
VI MWF, 4aLib, Hayner

- 61 Library Practice (3 cr; prereq 18 cr or lib exper)
Ar, Sullivan
- 63 Reference II (3 cr; prereq 62)
IV MWF, 4aLib, Shove
- 82 Subject Organization of Library Materials (3 cr)
II MWF, 4aLib, Simonton
- 152 History of Printing to Modern Times (2 cr)
6:20-8:10 W, 4aLib, Shove
- 165 Adv Bibliography (2 cr)
III TTh, 4aLib, Shove
- 171 Prin. Probs in Reading Guidance for Children (3 cr; prereq 70)
III MWF, 4aLib, Hayner
- 185 Special Probs (1-3 cr; prereq cons adv)
Ar, Hayner, Shove, Fulmer
- 258 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 Reading Guidance (3 cr)
Ar, Fulmer

LINGUISTICS AND COMPARATIVE PHILOLOGY (LING)

- 152 Honors Course (1-3 cr; prereq sr, cons instr)

MATHEMATICS (MATH)

- 1 Higher Algebra (5 cr; prereq 1 yr HS alg)
—1, I MTWThF, 110F
—2, V MTWThF, 301F
—3, VI MTWThF, 109F
- 6 Trigonometry (5 cr; prereq plane geom and 1)
—1, III MTWThF, 110F
—2, VI MTWThF, 105F
- 7 College Algebra (5 cr, \$8 or 15; prereq 6 or HS trig with cons dept chrm after placement test)
—1, II MTWThF, 105F
—2, VII MTWThF, 105F
- 8 Commerce Algebra (5 cr, \$7 or 15; prereq 1)
I MTWThF, 301F
- 15 Mathematical Analysis (5 cr, \$7 or 8; prereq 1 or HS higher alg, plane geom)
—1, I MTWThF, 105F
—2, V MTWThF, 113F
- 16 Mathematical Analysis (5 cr; prereq 15)
—1, III MTWThF, 105F
—2, V MTWThF, 104F
- 20 Investment (5 cr; prereq 8, or 6, 7, or 15, 16)
IV MTWThF, 301F
- 30 Analytic Geometry (5 cr; prereq 6, 7 or 8, or 15, 16)
—1, II MTWThF, 104F
—2, VI MTWThF, 104F
- 50 Calculus I (5 cr; prereq 30)
—1, I MTWThF, 102F
—2, IV MTWThF, 109F

- 51 Calculus II (5 cr; prereq 50)
III MTWThF, 104F
- 52 Interim Calculus (5 cr; prereq 51)
I MTWThF, 104F
- 62 Theory of Equations (3 cr; prereq 50 or concur regis and cons instr)
VI MWF, 102F, Gibbens
- 107 Adv Calculus (3 cr; prereq 52)
V MWF, 105F, Carlson
- 122 Theory of Statistics (3 cr; prereq 121)
IV MWF, 105F, Gelbaum
- 128 Applied Mathematics for Social, Biological Sciences (3 cr; prereq 127)
V MWF, 102F, Donsker
- 145 Fourier Series, Orthogonal Functions (3 cr; prereq 144)
IV TThS, 104F, Hatfield
- 158 Methods of Applied Mathematics (3 cr; prereq 157)
II TThS, 101F, Loud
- 171 Modern Algebra (3 cr; prereq 170)
III TThS, 102F, Nering
- 199B Problem Course (3 cr; prereq 52, 9 addtl cr)
3:30-5:00 MF, 101F, Loud
- 204 Adv Topics: Mathematical Statistics (3 cr; prereq 203)
IV MWF, 104F, Hart
- 207 Theory of Functions (3 cr; prereq 206)
II MWF, 101F, Olmsted
- 214A Topological Algebra (3 cr; prereq 213, 120 or 170)
III MWF, 102F, Kalisch
- 285 Stochastic Processes (3 cr; prereq 284)
VII MWF, 102F, Donsker
- 292 Banach Spaces (3 cr; prereq 291)
VI MWF, 101F, Gelbaum

MUSIC (MUS)

- A Piano (no cr)
Ar
- D Voice (no cr)
Ar
- 1 Fundamentals (2 cr, for nonmusic maj)
—1, V MTWTh, 4Sch, Edes
—2, VII MTWTh, 4Sch, Caswell
- 1T Theory (3 cr)
I MTWThF, 3Sch, Goossen
- 2T Theory (3 cr; prereq 1T)
—1, II MTWThF, 103Sch, Goossen
—2, III MTWThF, 3Sch, Goossen
—3, VII MTWThF, 103Sch, Goossen
- 4T Theory (4 cr; prereq 3T)
V MTWThF, 103Sch, Malcolm
- 5T Theory (4 cr; prereq 4T)
—1, I MTWThF, 103Sch, Malcolm
—2, III MTWThF, 103Sch, Malcolm
—3, VI MTWThF, 103Sch, Malcolm
- 10 Introd Music (4 cr)
VI MTWThF, 4Sch, Riedel
- 11 Piano: Individual Lessons (2-4 cr; prereq entr exam)

- IV T, ScHAud, 1 hr ar, Kendall, Rymer, Weiser, Hunter, Lillestol
- 11C Piano: Class Lessons (2 cr; prereq MuEd students whose chief perfg med is not piano)
 -1, I MW, 21ScH, IV T, ScHAud, Lillestol
 -2, II TTh, 212ScH, IV T, ScHAud, Lillestol
 -3, III TTh, 212ScH, IV T, ScHAud, Lillestol
 -4, VI TTh, 208ScH, IV T, ScHAud, Kendall
 -5, VI TTh, 212ScH, IV T, ScHAud, Lillestol
- 12 Voice: Individual Lessons (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Hull, Norton, Stern
- 12C Voice: Class Lessons (2 cr)
 -1, III MW, 203ScH, IV T, ScHAud, Norton
 -2, IV MW, 203ScH, IV T, ScHAud, Norton
 -3, VI MW, 203ScH, IV T, ScHAud, Norton
 -4, VII MW, 203ScH, IV T, ScHAud, Norton
 -5, III TTh, 203ScH, IV T, ScHAud, Norton
 -6, II TTh, 203ScH, IV T, ScHAud, Norton
 -7, VI TTh, 203ScH, IV T, ScH, Norton
 -8, VII TTh, 203ScH, IV T, ScHAud, Norton
- 13 Violin (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Cullen, Druilan, Scheurer
- 14 Viola (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Barton
- 15 Cello (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Jamieson, Meltzer
- 16 Double Bass (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Fitch
- 17 Flute (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Opava
- 18 Oboe (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Angelucci
- 19 Clarinet or Saxophone (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Fitch, Handlon
- 20 Bassoon (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Santucci
- 21 Trumpet (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Adelstein, MacKay
- 22 French Horn (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Linder
- 23 Trombone (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, MacKay
- 24 Tuba (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, MacKay
- 25 Percussion (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Denecke
- 26 Harp (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Miller
- 27 Organ (2-4 cr; prereq entr exam)
 IV T, ScHAud, 1 hr ar, Berryman, Jennings
- 32 Literature (2 cr)
 II MWF, ScHAud, Ivory
- 35 History (2 cr; prereq 34)
 -1, II MWF, 4ScH
 -2, TTh, ScHAud, Downes
- 41 Orchestra (1 cr; prereq cons dir)
 VIII MTWThF, 4NMA, Oberg
- 44 University Chorus (1 cr, 143-44-45; prereq cons dir)
 -1, IV MWF, 4, 5NMA, 7:30 pm T, NHAud, Aliferis
 -2, VIII MWF, 5NMA, NHAud, 7:30 pm T, NHAud, Aliferis
- 44S St Paul Campus Chorus (1 cr; prereq cons dir)
 4:30-5:30 TTh, 102Hr, Rymer
- 47 Concert Band (1 cr; prereq cons dir)
 -1, IX MTTh, 4NMA, Prescott
 -2, IX WF, 4NMA, Sperry
- 54 Romantic Movement (2 cr; prereq 53)
 VII WF, 104ScH, Kendall
- 61 Instrumental Ensemble (2 cr)
 VI MWF, 104ScH, VI TTh, 2ScH, Oberg
- 67 The Chamber Singers (2 cr; prereq cons instr)
 VII MWF, 4, 5NMA, NHAud, Aliferis
- 71 Normal Piano (2 cr; prereq 70)
 I MWF, 104ScH, Kendall
- 78 Composition (2 cr; prereq 77)
 VI TTh, 3ScH, George
- 81 Adv Normal Piano (2 cr; prereq 80)
 VIII-IX M, VIII-IX W, 2, 3, 4ScH, Kendall
- 91 Adv Instrumental Ensemble (2 cr; prereq sr, 60, 61, 62)
 VI MWF, 104ScH, VI TTh, 2ScH, Oberg
- 94 Improvisation (1 cr; prereq 93)
 II TTh, 206ScH, Berryman
- 98 Counterpoint (2 cr; prereq 97)
 IV MWF, 103ScH, George
- 105 American Music (2 cr; prereq 104)
 III TTh, 104ScH, Riedel
- 122 Adv Harmony (2 cr; prereq 121)
 II TTh, 2ScH, George
- 125 History of Opera (3 cr; prereq 124)
 VI-VIII TTh, 104ScH, Downes
- 128 Composition (2 cr; prereq 127)
 Ar, George
- 135 History of Church Music (2 cr; prereq 134)
 VIII-IX T, 104ScH, Berryman
- 138 Keyboard Harmony (1 cr; prereq 137)
 IV MW, 3ScH, Jennings
- 142 Orchestration (2 cr; prereq 141)
 II MWF, 3ScH, Aliferis
- 145 Bach Through Beethoven (3 cr; prereq 144)
 III MWF, 104ScH, Downes
- 155 Middle Ages, Renaissance (2 cr; prereq 154)
 II MWF, 2ScH, Riedel
- 198 Adv Counterpoint (2 cr; prereq 197)
 VI MW, 2ScH, George
- 201 Basis of Musical Expression (3 cr; prereq 200)
 VI-VIII M, 3ScH, Oberg
- 204 Applied Music (3 cr; prereq placement test by dept)
- 212 Special Probs (3-9 cr; prereq 202 or 211)
 Ar, Riedel
- 228 Composition (3 cr)
 Ar, Aliferis

PHILOSOPHY (PHIL)

- 1 Probs of Philosophy (5 cr, §1A; prereq 3rd qtr fr)
 —1, Lect II MWF, 170Ph, Donagan
 Rec II TTh, 313JohH
 —2, Lect II MWF, 170Ph, Donagan
 Rec III TTh, 309JohH
 —3, Lect IV MTWThF, 202WeH, Raab
- 1A Probs of Philosophy (3 cr, §1; prereq* pre-legal 2A; others soph or cons adv)
 VI MWF, 202WeH, Terrell
- 2 Logic (5 cr, §2A)
 III MTWThF, 202 WeH, Shaw
- 3 Ethics (5 cr, §3A; prereq 3rd qtr fr)
 —1, I MTWThF, 202WeH, Castaneda
 —2, III MTWThF, 302WeH, Terrell
- 10 Science, Religion (2 cr; prereq soph)
 II TTh, 310JohH, Donagan
- 51 History of Philosophy (5 cr)
 II MTWThF, 202WeH, Shaw
- 82 Science, Civilization (3 cr; prereq* sr)
 II MWF, 105JohH, Scriven
- 106 American Philosophy from William James (3 cr; prereq* 105)
 IV MWF, 302JohH, Brodbeck
- 107 Philosophy in Modern Literature (3 cr)
 IV MWF, 302WeH, Terrell
- 108 Political, Social Ethics (3 cr; prereq* 50 or 51 or 52)
 III MWF, 309JohH, Hospers
- 113 Plato (3 cr; prereq 112)
 VII MWF, 114JohH, Sellars
- 122 Spinoza (2 cr; prereq* 121)
 IV TTh, 4aLib, Donagan
- 131 Hume (3 cr; prereq 130)
 VI MWF, 105JohH, Shaw
- 137 Kierkegaard, Scandinavian Philosophy (3 cr; prereq* 50 or 51 or 52)
 VI T, VI-VII Th, 202WeH, Hong
- 140 Contemporary Philosophy (3 cr; prereq* 53)
 VI MWF, 106JohH, Raab
- 152 Esthetics (3 cr; prereq 151)
 IV MWF, 114JohH, Hospers
- 158 Theory of Knowledge (4 cr; prereq* 2)
 III MTThF, 313JohH, Feigl
- 164 Logic of Social Sciences I (3 cr; prereq* 15 cr educ or hist or phil or psy or soc sci)
 II MWF, 310JohH, Brodbeck
- 181 Psychology of Religion (3 cr; prereq 6 cr)
 VII MWF, 113JohH, Donagan
- 191 Seminar: Philosophy (3 cr; prereq* sr, 9 cr)
- 211 Seminar: Moral Philosophy (3 cr; prereq 210)
 VIII-IX W, 104WeH, Sellars
- 221 Seminar: Philosophical Analysis (3 cr; prereq 220)
 VIII-IX T, 104WeH, Sellars
- 231 Adv History of Philosophy (3 cr)
 IV-V T, 105JohH, Hospers
- 244 Seminar: Philosophy of Psychology (3 cr; prereq cons instr)
 VIII-IX M, 104WeH, Feigl

- 247 Seminar: Logic of Exact Sciences (3 cr; prereq cons instr)
 Ar, Brodbeck

PHYSICS (PHYS)

- 2 Physical Science (3 cr; prereq 1)
 III MWF, 150Ph, Wall
- 2a Physical Science with Lab (4 cr; prereq 1a)
 III MWF, 150Ph, Wall
 Lab secs will be assigned during first 2 days of class
- 5 Gen Physics (5 cr; prereq 4)
 I MTWThF, 133Ph, Johnston
 Lab secs will be assigned during first 2 days of class
- 8 Gen Physics (5 cr; prereq 7, regis in diff calc)
 II MTWThF, 133Ph, Collins
 Lab secs will be assigned during first 2 days of class
- 9 Gen Physics (5 cr; prereq 8)
 IV MTWThF, 170Ph, Valasek
 Lab secs will be assigned during first 2 days of class
- 11 Gen Physics for Engineers (5 cr; prereq concur regis ITM 11)
 VIII MTWThF, 150Ph
 Lab secs will be assigned during first 2 days of class
- 12 Gen Physics for Engineers (5 cr; prereq 11, concur regis ITM 12)
 —1, I MTWThF, 150Ph, Cheston
 —2, VI MTWThF, 150Ph, Wall
 Lab secs will be assigned during first 2 days of class
- 14 Interm Gen Physics (4 cr; prereq 13, concur regis diff calc)
 VI MTWThF, 166Ph
- 14a Laboratory (1 cr; prereq concur regis 14)
- 50 Interm Gen Physics (4 cr; prereq 14, concur regis intg calc)
 —1, II MTWThF, 150Ph, Buchta
 —2, VI MTWThF, 133Ph, Freier
- 50a Laboratory (1 cr; prereq concur regis 50)
- 103 Theoretical Physics (5 cr; prereq 101)
 I MTWThF, 170Ph, Nier
- 109 Modern Physics (3 cr; prereq 107)
 VI MWF, 170Ph, Collins
- 121 Experimental Nuclear Physics I (3 cr; prereq 9, math 51)
 VI-IX MF, 250Ph, Blair
- 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, Valasek
- 136 Spectrum Analysis (3 cr; prereq 15 cr)
 VII-IX TTh, 348Ph, Valasek
- 146 Vacuum Tubes, Associated Circuits (3 cr; prereq* 144)
 III TThS, 170Ph

- 183 Atomistics, Elem Quantum Mechanics (3 cr; prereq 181)
IV MWF, 145Ph, Williams
- 192 Mathematical Physics (3 cr; prereq 191)
III MWF, 145Ph, Freier
- 211 Analytical Dynamics, Quantum Mechanics (3 cr; prereq* 210)
VI MWF, 145Ph, Hill
- 226 Adv Quantum Theory (3 cr; prereq* 225)
VII MWF, 143Ph, Critchfield
- 229 Nuclear Theory (3 cr; prereq* 228)
IV MWF, 143Ph, Cheston
- 250 Theory of Solid State of Matter (3 cr; prereq* 249)
VI TTh, VIII W, 143Ph, Hill
- 253 Seminar: Nuclear Physics (3 cr; prereq* 193, adv calc)
VIII-IX F, 143Ph, Williams
- 259 Seminar: Cosmic Rays (3 cr; prereq* 193, adv calc)
II WF, 163Ph, Ney, others

POLITICAL SCIENCE (POL)

- A State in the Modern World (3 cr, †A-B, §9-10, or 15)
II MWF, 55ForH, Turner
- B State in the Modern World (3 cr, †A-B, §15; prereq A)
III MWF, B6Bo, Lippincott
- 1 American Govt, Politics (3 cr, †1-2, §5)
II TThS, 180ForH, Naftalin
- 2 American Govt, Politics (3 cr, †1-2, §5; prereq 1)
IV MWF, NHAud, Christensen
- 5 American Govt, Politics (5 cr, §1-2)
VI MTWThF, 155ForH, Monat
- 52 Field Work in Govt, Politics (3 cr, †51-52; prereq 51)
III-IV T, 349ForH, Naftalin
- 85 Probs of World Politics (3 cr; prereq* 25 or Hist 1-2-3)
III MWF, 55ForH, Mills
- 92 Honors Work in Sel Fields (ar cr; prereq 18 cr, cons maj adv)
- 94 Term Paper (no cr; prereq pol sci maj)
- 102 Prin American Constitution II (3 cr; prereq 101)
III MWF, 175ForH, Anderson
- 108 Legislative Organization, Procedure (3 cr; prereq 6 cr)
IV MWF, 160ForH, Short
- 117 Local Govt (3 cr, †116-117; prereq* 116)
II TThS, 349ForH, Naftalin
- 121 Municipal Admin (3 cr; prereq* 120)
II TThS, 80ForH, Ludwig
- 126 Govt Economic Order (3 cr; prereq 2 or 5)
II TThS, 115ForH, Warp
- 129 Social Legislation, Institutions in Scand-
navian Countries (3 cr; prereq* Soc 1)
VI MWF, 12F, Lindvall
- 132 Public Admin: Personnel (3 cr; prereq* 131)
II MWF, 160ForH, 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, 180ForH, Christensen
- 161 Probs of Democracy (3 cr; prereq* 6 cr or 12 cr soc sci)
III TThS, 185ForH, Sibley
- 165 Political Thought: Middle Ages (3 cr; prereq* 6 cr pol or 12 cr soc sci)
IV TThS, 185ForH, Sibley
- 167-168 Political Behavior (4½ cr)
1:30-3:00 TTh, 359ForH, McClosky
- 176 Conduct of American Foreign Relations (3 cr; prereq 175)
III TThS, 40ForH, McLaughlin
- 181 Int'l Law (3 cr, †180-181; prereq* 180)
I TThS, 115ForH, McLaughlin
- 185 Int'l Organization II (3 cr; prereq* 6 cr)
I MWF, 185ForH, Levi
- 197 Mediterranean Area in World Affairs (3 cr; prereq 25 or Hist 125a-126a-127a)
IV MWF, 120ForH, Mills
- 204 Seminar: Public Law (3 cr, †204-205; prereq* 18 cr)
1:00-2:20 TTh, 349ForH, Warp
- 211 Seminar: Public Adm (3 cr, †210-211-212; prereq cons staff)
3:30-5:00 TTh, 13Lib, Warp, Ludwig, Short
- 217 Seminar: Comparative European Govt (3 cr; prereq* 12 cr)
IV-V M, 349ForH, Levi
- 226 Readings: Classics of Politics (3 cr; prereq* 12 cr incl 6 cr pol theory)
3:30-5:00 TTh, 349ForH, Lippincott
- 239 Int'l Law, Diplomacy II (3 cr; prereq* sr, 181, cons instr)
VIII-IX F, 359ForH, McLaughlin
- 243 Colonization, Imperialism (3 cr; prereq* 196)
4:00-6:00 W, 346ForH, Mills
- 246 Seminar: Far Eastern Govt, Politics (3 cr; prereq 153-154)
VII-VIII W, 359ForH, Quigley
- 248 Seminar: Int'l Organization (3 cr; prereq cons instr)
IV-V F, 349ForH, Levi

PSYCHOLOGY (PSY)

- 1 Gen Psychology (3 cr, †1-2, §A or GC 41; prereq soph)
—1, II MWF, BuAud, MacCorquodale
—2, VIII MWF, 2P, Heron
- 2 Gen Psychology (3 cr, †1-2, §A or GC 41; prereq 1)
—1, III MWF, BuAud, Bird
—2, V MWF, BuAud, MacCorquodale, Elliott
- 4 Lab Psychology (2 cr, †4-5; prereq 2 or concur regis)
—1, I-II MW, 211Psy, Tinker, others
—2, IX-X TTh, 211Psy
—3, IX-X MW, 211Psy

- 5 Lab Psychology (2 cr, †4-5; prereq 4)
 —1, I-II TTh, 211Psy, Tinker, others
 —2, III-IV MW, 211Psy
 —3, V-VI TTh, 211Psy
 —4, V-VI MW, 211Psy
 —5, VII-VIII TTh, 211Psy
 —6, VII-VIII MW, 211Psy
- 91 Readings (ar cr; prereq 2, 3 addtl cr, cons instr)
- 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 Individual Differences (3 cr; prereq 125)
 —1, II MWF, 115Psy, Paterson
 —2, II MWF, 175PeikH, Jenkins
- 127 Projects in Individual Differences (3 cr; prereq 126)
 Ar, Jenkins, Paterson, Longstaff
- 129 Learning (3 cr; prereq 128)
 IV MWF, 115Psy, Heron
- 130 Vocational, Occupational Psychology (3 cr; prereq 9 cr)
 Lect III TTh, 211Psy, Paterson
 —1, Lab V-VI F, 211Psy
 —2, Lab VII-VIII F, 211Psy
- 133 Motivation (3 cr, †132-133; prereq 132)
 VII MWF, 115JohH, 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)
 10:30-11:45 TTh, 115Psy, Bird
- 145 Abnormal Psychology (3 cr, †144-145; prereq 144)
 —1, VII MWF, 211NH, Bird
 —2, VI MWF, 202WuH, Rosen
- 148 Physiological Psychology (3 cr; prereq* 2, 5, or Zool 3)
 IV MWF, 104 IA, Hathaway
- 152 Individual Investigations in Animal Psychology (ar cr; prereq 151)
 Ar, Heron
- 156 Advertising (3 cr; prereq 2, Econ 7)
 VII MWF, 170Ph, Longstaff
- 160 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; or grad, course in stat)
 VII MWF, 115Psy, Clark
- 172 Clinical Psychology (3 cr, †171-172; prereq 171)
 VI MWF, 114JohH, Schofield
- 201 History of Psychology I: European (1 cr, †200-201-202; prereq cons instr)
 II T, 109Psy, Tinker
- 211 Research Probs (ar cr)
- 221 Personality, Its Structure, Dynamics (2 cr; †220-221-222; prereq 246, 219 or 286, 129 or 165, cons instr)
 VIII-IX M, Russell, Rosen
- 231 Field Work: Psychometrics, Applied Psychology (ar cr; prereq cons instr)
- 236 Clinical Practice in Student Counseling Bureau (ar cr; prereq cons instr)
 Ar, Berdle
- 241 Seminar: Student Personnel Work (1 cr; prereq cons instr)
 Ar, Williamson
- 251 Topics (ar cr)
- 258 Methods of Research in Group Behavior (3 cr, †257-258-259; prereq 257)
 Ar, Schachter
- 261 Seminar: Applications of Psychological Methods to Study of Psychiatry (1 cr; prereq cons instr)
 Ar, Hathaway
- 272 Seminar: Recent Literature (1 cr; prereq cons instr)
 Ar, Rosen
- 291 Practicum in Interpretation of Projective Techniques (3 cr; prereq 290, cons instr)
 VIII-IX T, Rosen
- 292 Theoretical Probs of Group Functioning (2 cr; prereq cons instr)
 Ar, Festinger
- 296 Seminar: Individual Differences, Applied Psychology (1 cr; prereq cons instr)
 Ar, Paterson
- 299 Tabulating Equipment Lab (1 cr; prereq PH 110, 111)
 Ar, Clark

ROMANCE LANGUAGES

French (FREN)

- 1 Bgn French (5 cr, †1a or 1b)
 —1, III MTWThF, 226F
 —2, VII MTWThF, 202F
- 2 Bgn French (5 cr, †2a or 2b; prereq 1 or 1 yr HS Fren)
 —1, I MTWThF, 202F
 —2, IV MTWThF, 226F
 —3, VI MTWThF, 201F
- 2a Bgn Conversational French (5 cr, †2 or 2b; prereq 1a)
 Dem III MTWThF, 227F, Bufler
 —1, Lab VI MTWThF, 302F
 —2, Lab VII MTWThF, 10F
- 2b Language, Culture (5 cr, †2 or 2a, †1b-2b-3b; prereq 1b)
 II MTWThF, 5F
- 3 Interm French (5 cr, †3a or 3b; prereq 2 or 2 yrs HS Fren)
 III MTWThF, 201F
- 4 Interm French (5 cr; prereq 3 or 3a or 3 yrs HS Fren)
 —1, III MTWThF, 202F
 —2, VII MTWThF, 109F

- 50 Pronunciation (3 cr; prereq 4)
Dem II TTh, 203F, Sullivan
Lab 1 hr ar
- 54 Conversation (3 cr; prereq 20 or 53)
VI MWF, 203F, Carduner
- 64 Adv Conversation (3 cr; prereq 63)
VII MWF, 103F, Blinoff
- 71 French Literature (3 cr, §73-74; prereq 70)
IV MWF, 201F, Clefthon
- 73 French Literature (5 cr, §70-71-72; prereq 4)
III MTWThF, 304F, Brackney
- 76 Civilization, Culture (3 cr; prereq 75)
III MWF, 6F, Blinoff
- 104 Syntax, Composition (1 cr; prereq 103)
I Th, 203F, Barton
- 116 17th Century French Literature (3 cr; pre-
req 115)
IV MWF, 304F, Falk
- 119 18th Century French Literature (3 cr; pre-
req 72 or 74, cons instr)
IV TTh, V Th, 201F, Clefthon
- 146 Contemporary French Dramatic Literature
(3 cr; prereq 72 or 74)
III MWF, 203F, Barton
- 172 History of French Language (1 cr, §171-172-
173; prereq 171)
VIII Th, 307F, Brackney
- 202 Old French Phonology, Morphology (2 cr)
IX-X Th, 307F, Brackney
- 205 Readings: Old French Literature (2 cr)
VIII-IX T, 307F, Brackney
- 225 Seminar: Contemporary Period (2 cr)

Italian (ITAL)

- 2 Bgn Italian (4 cr; prereq 1)
IV MTWF, 307F, Pacifici
- 71 Modern Poetry: Leopardi, Carducci (3 cr;
prereq 3; or 2, cons instr)
III TTh, IV Th, 307F, Pacifici
- 162 16th Century (3 cr; prereq 161)
III MWF, 307F, Pacifici

Spanish (SPAN)

- 1 Bgn Spanish (5 cr, §1a)
—1, III MTWThF, 115TNM
—2, VII MTWThF, 227F
- 2 Bgn Spanish (5 cr, §2a; prereq 1 or 1 yr
HS Span)
—1, I MTWThF, 226F
—2, IV MTWThF, 202F
—3, VI MTWThF, 226F
- 2a Bgn Conversational Spanish (5 cr, §2; pre-
req 1a)
Dem II MTWThF, 227F, Cuneo
Lab I MTWThF, 302F
- 3 Interm Spanish (5 cr, §3a; prereq 2 or 2
yrs HS Span)
III MTWThF, 11F
- 4 Interm Span (5 cr; prereq 3 or 3a or 3 yrs
HS Span)
III MTWThF, 109TSF
- 20 Oral, Written Spanish (5 cr; prereq* 4 or
4 yrs HS Span)
VII MTWThF, 114F

- 52 Pronunciation, Diction (1-2 cr; prereq* 4,
cand for Span play)
Ar, Cuneo
- 54 Conversation (3 cr; prereq 20 or 53)
III MWF, 4F
- 57 Commercial Spanish (5 cr; prereq 20 or 53)
VI MTWThF, 4F, Cuneo
- 61 Adv Conversation (3 cr; prereq 60)
II MWF, 203F, Floripe
- 66 Literature of Spain (3 cr; §68-69; prereq 65)
IV MWF, 108F, Floripe
- 68 Literature of Spain (5 cr, §65-66-67; prereq
4)
VI MTWThF, 202F, Pattison
- 71 Latin American Civilization, Culture (3 cr;
prereq* 70)
III TTh, 1 hr ar, 203F, Cuneo
- 75 Literature of Spanish America (3 cr; pre-
req 74)
II MWF, 302F, Irving
- 104 Syntax, Composition (1 cr; prereq 103)
IV T, 203F
- 116 17th Century Spanish Literature (3 cr; pre-
req 115)
VII MWF, 108F, Floripe
- 141 Contemporary Latin American Literature
(3 cr; prereq 140)
VIII MWF, 307F, Floripe
- 175 Contemporary Spanish Literature (3 cr; pre-
req 174)
IV MWF, 203F, Pattison
- 245 Readings: Old Spanish Literature (2 cr)
IX-X M, 203F, Irving
- 251 Spanish Seminar (2 cr)
IX-X W, 203F, Pattison

SCANDINAVIAN (SCAN)

- 2 Bgn Norwegian (5 cr; prereq 1)
VI MTWThF, 11F, Nelson
- 5 Adv Norwegian (3 cr; prereq 4)
VII MWF, 12F, Nelson
- 8 Bgn Swedish (5 cr; prereq 7)
II MTWThF, 12F, Lorenzen
- 11 Adv Swedish (3 cr; prereq 10)
I MWF, 12F, Lorenzen
- 161 Scandinavian Novel I (3 cr; prereq 6 or 12,
or 8 cr lit, no knowl Scan lang)
Ar, Gustafson
- 162 Scandinavian Novel II (3 cr; prereq 6 or
12, or 8 cr lit no knowl Scan lang)
Ar, 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
- 192 Readings: Scandinavian Literatures (3 cr;
prereq 191)
Ar, Gustafson
- 216 Studies in Scandinavian Romanticism (3 cr)
Ar, Gustafson
- 222 Dramatic Interpretative Probs in Strind-
berg (3 cr)
Ar, Gustafson

SLAVIC AND ORIENTAL LANGUAGES

Chinese (CHIN)

- 2 Bgn Chinese (5 cr; prereq 1)
V MTWThF, 108F, Mather
- 52 Interm Chinese (3 cr; prereq 51)
III MWF, 12F, Mather
- 57 Composition (2 cr; prereq 3)
III TTh, 205F, Mather
- 102 Adv Chinese (3 cr; prereq 101)
Ar, Mather

Japanese (JAP)

- 2 Bgn Japanese (5 cr; prereq 1)
V MTWThF, 307F, Brower
- 52 Interm Japanese (3 cr; prereq 51)
II MWF, 307F, Brower
- 57 Composition (2 cr; prereq 56)
II TTh, 307F, Brower
- 102 Adv Japanese (3 cr; prereq 101)
Ar, Brower
- 111 Japanese Literature in Translation (3 cr;
prereq 110)
I MWF, 307F, Brower

Russian (RUSS)

- 2 Bgn Russian (5 cr; prereq 1)
—1, III MTWThF, 302F, Magner
—2, VII MTWThF, 4F, Niemi
- 52 Interm Russian (3 cr; prereq 51)
IV MWF, 302F, Magner
- 57 Conversation (3 cr; prereq 56)
III-IV TTh, 10F, Blinoff
- 62 Composition (2 cr; prereq 61)
II MW, 4F, Blinoff
- 72 Rapid Reading of Russian Literature (3 cr;
prereq 71)
Ar, Niemi
- 75 Russian Civilization, Culture (3 cr; prereq
10 cr hist or lit)
V MWF, 6F, Blinoff
- 102 Russian Literature in Translation (3 cr; pre-
req 101)
V MWF, 302F, Niemi
- 132 19th Century Russian Poetry (3 cr; prereq
131)
Ar, Niemi

Semitic (SEM)

- 122 Arabic Grammar, Reading (3 cr; prereq 121)
V MWF, 208F, Irving

SOCIAL WORK (SW)

- 201 History, Theory (3 cr)
I Th, III-IV S, 467ForH, Scott
- 206 Special Topics (ar cr)
- 209 Seminar: Social Agencies, Institutions (ar
cr)
—1, VI-VII T, 467ForH, Boehm
—2, I-II T, 467ForH, Mueller
—3, VI-VII T, 457ForH, Connery
- 211 Initial Field Training (ar cr; prereq 220 or
282A. concur regis)

- 216 Adv Field Training (ar cr; prereq 221 or
282B)
- 219 Seminar for Field Training Supervisors (ar
cr; prereq supervision of students in
field work)
- 221 Case Work II (2 cr; prereq 220, 211, or con-
cur regis)
—1, III-IV T, 175ForH, Whitmore
—2, III-IV Th, 175ForH, Whitmore
- 222 Adv Case Work (2 cr; prereq 221)
—1, III-IV T, 467ForH, Boehm
—2, III-IV Th, 467ForH, Scott
- 249 Medical, Psychiatric Information for Social
Workers (3 cr; prereq 248)
VII T, VIII-IX Th, 180ForH, Mueller, Bush
- 268 Public Welfare II (2 cr; prereq 267)
I TTh, 185ForH, Gullford
- 269 Seminar: Public Welfare Admin (ar cr;
prereq 268)
VIII-IX Th, 457ForH, Stinson
- 282B Group Work II (2 cr; prereq 282A; 211,
249 or concur regis)
III-IV T, 457ForH, Saloshin
- 283 Use of Program in Groups I (2 cr; prereq
282A)
III-IV Th, 457ForH, Saloshin
- 286 Group Work IV (2 cr; prereq 285, cons
instr)
III-IV T, 447ForH, Konopka
- 288 Supervision, Admin in Group Work II (2
cr; prereq 287)
I-II T, 457ForH, Luck
- 293 Special Studies (ar cr)
- 299 Seminar: Recent Research (ar cr)
VI-VII Th, 467ForH, Scott
- 300 Gen Seminar (ar cr)
VIII-X W, 467ForH, Konopka

SOCIOLOGY (SOC)

- 1 Introduction (3 cr)
II MWF, B6BO, Sirjamaki
- 1A Sociology for Institute of Agriculture Stu-
dents (3 cr)
III TThS, 302Hr, Taves
- 2 Interm Sociology (3 cr; prereq 1 or 1A)
I MWF, 20ForH, Emerson
- 14 Rural Sociology (3 cr)
III MWF, 140ForH, Taves
- 14A Rural Sociology for Institute of Agricul-
ture Students (3 cr)
IV TThS, 102Hr, Taves
- 45 Social Statistics (5 cr, §Econ 5)
Lect III MWF, 150ForH, Haberman
—1, VI-VII MW, 85ForH, Haberman
—2, VI-VII TTh, 85ForH, Haberman
- 49 Social Probs (3 cr)
II MWF, NHAud, Johnson
- 50 Theory, Practice of Social Work (5 cr; pre-
req 49)
III MTWThF, 80ForH, Oren
- 53 Criminology (3 cr; prereq* 1 or 1A)
II MWF, 18ME, Vold
- 98 Tutorial, Honors Work (3 cr; prereq 97)

- 104 Police Probs, Practices in U S (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)
VI MWF, 115ForH, Francis
- 120 Social Psychology (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
VI-VIII T, VI Th, 120ForH Rose
- 122 Conflict (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV MWF, 185ForH, Vold
- 141 The Family (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
IV TThS, 120ForH, Johnson
- 144 Social Stratification (3 cr; prereq* 1, 15 cr soc sci, CW, educ, phil, or psy)
II MWF, 150ForH, Ramsey
- 145 Urban Sociology (3 cr, fold 7 or 118; prereq 1, 15 cr soc sci)
VI MWF, 150ForH, Sirjamaki
- 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
- 180 Methods of Social Research (3 cr; prereq 45)
II TThS, 120ForH, Monachesi (for Social Work students only)
- 185 Field Work, Lab Training in Social Research (2-3 cr; prereq 45 or 184)
Ar, Ramsey
- 200 Seminar: Research Probs in Criminology (ar cr)
VIII-IX W, 448ForH, Vold
- 201 Seminar: Research in Social Psychology (ar cr)
VIII-IX Th, 448ForH, Rose
- 202 Seminar: Research in Urban Sociology (ar cr)
VI-VII T, 447ForH, Caplow
- 204 Seminar: Research in Social Theory (ar cr)
VI-VII W, 448ForH, Martindale
- 207 Seminar: Statistical Theory in Relation to Social Theory, Practice (ar cr)
VIII-IX F, 448ForH, Ramsey
- 216 Research Seminar: Rural Community (ar cr)
VI-VII Th, 448ForH, Nelson
- 218 Seminar: Methodological Probs in Research (ar cr)
VIII-IX M, 448ForH, Francis
- 239 Principles (3 cr, t238-239; prereq 238)
VII-VIII T, 448ForH, Monachesi
- 240 Gen Seminar (ar cr)

- 3, III MWF, 307JohH, Gilkinson, D Smith, others
- 4, IV MWF, 8F, Gilkinson, D Smith, others
- 5, VI MWF, 3F, Gilkinson, D Smith, others
- 2 Fundamentals (3 cr, t1-2, \$5; prereq 1)
 - 1, I MWF, 311½F, Gilkinson, D Smith, others
 - 2, II MWF, 302WeH, Gilkinson, D Smith, others
 - 3, III MWF, 302JohH, Gilkinson, D Smith, others
 - 4, IV MWF, 311½F, Gilkinson, D Smith, others
 - 5, VI MWF, 311½F, Gilkinson, D Smith, others
 - 6, VII MWF, 311½F, Gilkinson, D Smith, others
- 3 Fundamentals (3 cr; prereq* soph, 2)
 - II MWF, 304F, Gilkinson, D Smith, others
- 5 Fundamentals (5 cr, \$1-2; prereq* soph)
 - 1, I MTWThF, 311F, Gilkinson, D Smith, others
 - 2, II MTWThF, 311½F, Gilkinson, D Smith, others
 - 3, III MTWThF, 307MNH, Gilkinson, D Smith, others
 - 4, IV MTWThF, 311F, Gilkinson, D Smith, others
- 6 Fundamentals (5 cr; prereq 5)
 - 1, III MTWThF, 311½F, Gilkinson, D Smith, others
 - 2, IV MTWThF, 306F, Gilkinson, D Smith, others
 - 3, VI MTWThF, 311F, Gilkinson, D Smith, others
- 9 Freshman Discussion, Debate (1 cr by pet; prereq fr with C aver)
Ar, Bystrom
- 31 Theater (3 cr)
 - II TThS, 19ScH, Ballet
- 32 Bgn Acting (3 cr; prereq soph, 2 or 5, 31)
 - 1, I MWF, 19ScH, Whiting
 - 2, II MWF, 19ScH, Moulton
- 33 Bgn Acting (3 cr; prereq 32)
 - I MWF, 302WeH, Moulton
- 56 Speech Writing, Platform Speaking (3 cr; prereq 2 or 5)
 - III MWF, 311F, 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 adv)
 - IV MWF, 302MurH, P Smith
- 67 Phonetics (3 cr; prereq 2 or 5)
 - II MWF, 306F, Fletcher
- 72 Play Production (3 cr; prereq 32)
 - VI MWF, 302NH, Josal
- 78 Adv Acting (3 cr; prereq 32)
 - III MWF, 302NH, Graham
- 79 Adv Acting (3 cr; prereq 78)
 - II MWF, 302NH, Graham
- 81 Interpretative Reading (3 cr; prereq 2 or 5)
 - VII MWF, 306WeH, Thompson

SPEECH AND THEATER ARTS (SPCH)

- 1 Fundamentals (3 cr, t1-2, \$5; prereq* soph)
 - 1, I MWF, 306F, Gilkinson, D Smith, others
 - 2, II MWF, 311F, Gilkinson, D Smith, others

ZOOLOGY (ZOO)

- 82 Interpretative Reading (3 cr; prereq 81)
—1, IV MWF, 306WeH, Thompson
—2, VI MWF, 306WeH, Thompson
- 91 Stage Design (3 cr; prereq 2 or 5, 31)
III TThS, IV TS, 302NH, Josal
- 97 Intercollegiate Oratory, Debate (1-3 cr by
pet; soph with C aver)
Ar, Howell
- 102 Argumentation, Persuasion (3 cr; prereq 2
or 5, Psy 2, 10 cr soc sci)
—1, III MWF, 306F, Howell
—2, VI MWF, 306F, D Smith
- 106 Discussion (3 cr; prereq 2 or 5)
VII MWF, 305F, Howell
- 112 Stage Direction (3 cr; prereq 111)
III MWF, 310WeH, Whiting
- 116 Playwriting, Production (3 cr; prereq 115)
II MWF, 306WeH, Thompson
- 124 Experiments in Gen Speech (3 cr; prereq
2 or 5, Psy 2)
II TThS, 311F, Gilkinson, Sikkink
- 142 Physical Bases of Speech (3 cr; prereq 67;
Psy 2, 5)
VII MWF, 306F, Fletcher
- 153 Audiometry, Hearing Aids (3 cr; prereq
152)
IV MWF, 5ShH, Lassman
- 162 Speech Pathology (3 cr; prereq 61, 67, 119)
VI-VII Th, VI T, 306F, Bryngelson
- 165 Clinical Methods, Practice in Speech Pa-
thology (3 cr, §Ed CI 175; prereq 163)
Ar, Bryngelson
- 172 History of Theater (3 cr; prereq 2 or 5, 31)
VI-VII Th, VII T, 302NH, Graham
- 182 Readings (1-3 cr; prereq 2 or 5, 6 addtl
cr, cons instr)
- 192 Adv Technical Probs (3 cr; prereq 191)
Ar, Josal
- 201 Gen Seminar (1 cr)
Ar, Gilkinson, D Smith
- 204 Debate Coaching (2 cr; prereq 101, 102, 103,
Psy 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
- 222 Seminar: Oral Interpretation of Literature
(3 cr; prereq 3 or 6, 105, 122, Psy 74)
Ar, Thompson
- 232 Seminar: Adv Speech Probs (2 cr; prereq
undergrad maj speech, cons instr)
Ar, Gilkinson
- 242 Seminar: Radio Research (2 cr; prereq cons
instr)
Ar, Ziebarth
- 262 Seminar: Speech Pathology (3 cr; prereq
122, 163, Psy 2)
Ar, Henrikson
- 276 Seminar: Rhetoric (3 cr; prereq* 2 or 5,
109)
Ar, D Smith
- 282 Seminar: Organic Disorders of Speech (2 cr)
Ar, Henrikson
- 292 Research: Special Probs (ar cr)
- 2 Gen Zoology (3 cr, ¶1-2-3; prereq 1)
—1, Lect II TTh, B6BO, Minnich
—2, Lect IV WF, B6BO, Stephens
—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, B6BO, Olson
—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, 3Z
—2, Lab III-IV MWF, 3Z
- 52 Entomology (5 cr, §Ent 52; prereq 3)
Lect VII MWF, 313Z, Mickel
Lab V-VI MWF, 402Z
- 57 Ornithology (3 cr, ¶57-58; prereq 3 or 15)
Lect VII TTh, 307MNH
Lab VIII-IX TTh, 307MNH
- 59 Gen, Comparative Embryology (5 cr, not
open to prenent or premed students;
prereq 3)
Lect I TTh, 313Z, Spratt
Lab VI-VIII TTh, 201Z
Conf II or III S, 211Z, or 323Z
- 101 Zoological Techniques (ar cr; prereq grad)
- 109 Sense Organs (3 cr; prereq 15 cr, cons instr)
IV MWF, 211Z, Minnich
- 118 Animal Ecology (3 cr, §Ent 118; prereq 15
cr zool or ent, cons instr)
Lect VI TTh, 307CofH, Hodson
Lab VII-VIII TTh, 307CofH
- 126 Adv Gen Entomology (3 cr, §Ent 126; pre-
req 125)
Lect I TTh, 211Z, Mickel
Lab I-III S, 402Z
- 129 Insect Physiology (4 cr, §Ent 129; prereq
128)
Lect VI WF, 307CofH, Richards
Lab VII-IX WF, 307CofH
- 145 Parasitic Protozoa (3 cr, §Ent 145; prereq
15 cr, cons instr)
Lect VI TTh, 211Z, Wallace
Lab VII-VIII TTh, 208Z
- 156 Biophysics (3 cr; prereq 28 cr between phys
and biol, cons instr)
Lect VI TTh, 49Ph, Schmitt
Lab VII-VIII Th
- 160 Cytology (3 cr; prereq 15 cr, cons instr)
Lect II MW, 211Z, Gall
Lab III-IV MW, 204Z
- 171 Genetics of Speciation (3 cr; prereq* 15 cr
incl 83)
Lect VI MWF, 323Z, Merrell
- 198 Problems (ar cr; prereq 197)
- 202 Research: Entomology (ar cr)
Ar, Mickel

- 212 Research: Ecology (ar cr)
Ar, Eddy
- 218 Research: Physiology (ar cr)
- 222 Research: Biophysics (ar cr)
Ar, Schmitt
- 230 Research: Histology (ar cr)
Ar, Olson
- 234 Research: Embryology (ar cr)
Ar, Spratt

- 238 Research: Cytology (ar cr)
Ar, Gall
- 252 Research: Genetics (ar cr)
Ar, Reed
- 262 Research: Parasitology (ar cr)
Ar, Wallace
- 292 Gen Seminar (no cr)
- 297 Seminar: Special Research Fields (ar cr)
Ar, Schmitt

INSTITUTE OF TECHNOLOGY

AERONAUTICAL ENGINEERING
(AERO)

- 5 Laboratory (1 cr):
—1, VIII M, 211AE
—2, VIII Th, 211AE
- 20 Flying: Theory, Practice (2 cr)
V-VI Th, 215AE
- 21 Flying: Theory, Practice (2 cr)
V-VI Th, 215AE
- 22 Flying: Theory, Practice (2 cr)
V-VI Th, 215AE
- 46 Orientation (2 cr; prereq 4th yr, aero engr
maj or cons dept)
- 101 Aerodynamics (3 cr; prereq 100)
III MWF, 227AE
- 104 Adv Aerodynamics (3 cr; prereq 102)
III MWF, 211AE
- 106 Adv Aerodynamics (3 cr; prereq 102)
II MWF, 211AE
- 115 Airplane Stresses (3 cr; prereq 83)
Lect III TTh, 211AE
Lab VII-VIII T, 215AE
- 117 Adv Airplane Stresses (3 cr; prereq 115)
IV MWF, 211AE
- 121 Airplane Design (2 cr; prereq 120)
IV TTh, 211AE
- 124 Adv Airplane Design (2-5 cr; prereq 123)
- 127 Adv Probs in Airscrew Design (2-5; prereq
126)
- 131 Airplane Design Lab (2 cr; prereq concur
regis 121)
VI-VIII MW, 317AE
- 142 Aircraft Installation I (2 cr; prereq 1)
Lect VI T, 211AE
—1, Lab VII-IX M, 209AE
—2, Lab VII-IX Th, 209AE
- 158 Physics of the Atmosphere (2 cr)
VI MWF, 211AE
- 174 Applied Meteorology (4 cr; prereq 173)
VI MWF, 227AE
- 180 Instrumentation, Techniques for Super-
sonic Flow (2 cr; prereq 106 or ME 134)
- 190 Seminar (1 cr; prereq* 101)
VI T, 215AE
- 192 Seminar (1 cr; prereq* 101)
- 193 Adv Problems (2-6 cr; prereq 5th yr, aero
enr maj)

- 194 Adv Problems (2-6 cr; prereq 193)
- 195 Adv Problems (2-6 cr; prereq 194)
- 202 Aerodynamics of Compressible Fluid (3 cr;
prereq 201)
I T, I-II Th, 211AE
- 220 High Speed Performance, Design (3 cr; pre-
req* 202)
- 231 Aerodynamics, Flight Performance of Super-
sonic Missiles (3 cr; prereq 230)
I T, I-II Th, 227AE
- 241 Dynamics of Aircraft Structures (3 cr;
prereq 240)
Lect III TTh, 227AE
Lab VII-IX M, 30AE
- 272 Research (3-6 cr; prereq cons instr)
- 273 Research (3-6 cr; prereq 272)
- 274 Research (3-6 cr; prereq 273)

ARCHITECTURE (ARCH)

- AD I Architectural Design: Grade I (6 cr; pre-
req 2nd yr for IT or jr for SLA students,
accept school)
VI-VII TTh, 305E, VI-VIII MWF, 400E
VII-VIII TTh, 3 hrs ar, Bliss, 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 (8 cr;
prereq AD II)
VI-VIII MTWThF, 9 hrs ar, 306E, 315E,
400E, McClure, others
- AD IV Architectural Design: Grade IV (9 cr;
prereq AD III)
VI-VIII MTWThF, 12 hrs ar, 306E, 315E,
400E, Cerny, others
- AD V Thesis (12 cr; prereq AD IV)
36 hrs ar, 306E, 315E, 400E
- 52 History of Architecture (4 cr; prereq 51)
IV MTWF, 305E, Koeper
- 58 Building Materials, Methods (4 cr; prereq
57)
II MTWF, 305E, Nagle
- 72 Building Equipment (3 cr; prereq 71)
III T, III-IV Th, 305E, Close

- 102 Tutorial Work in History of Architecture (2 cr; prereq 101)
Ar, Koepfer
- 105 Professional Relations (3 cr; prereq 4th yr)
III-IV MW, 302E, Cavin

CHEMICAL ENGINEERING (CHEN)

- 102 Unit Operations (5 cr; prereq 101)
Lect II TThS, 240ChE, Stoppel
—1, Rec I MWF, 154ChE, Earle
—2, Rec II MWF, 162ChE, Stoppel
- 112 Unit Operations Lab (2 cr; prereq 102)
—1, Lab VI-IX T, 3rd fl ChE, Preckshot
—2, Lab VI-IX W, 3rd fl ChE, Earle
—3, Lab VI-IX F, 3rd fl ChE, Ceaglske
- 117 Process, Plant Design (3 cr; prereq 103)
Lab VI-IX T, VIII-IX Th, 50ChE, Piret
- 120 Thermodynamics (3 cr; prereq 119)
Lect II MW, 142ChE, Isbin, Preckshot
—1, Rec II TTh, 154ChE, Isbin
—2, Rec IV TTh, 162ChE, Preckshot
- 132 Industrial Technology (3 cr; prereq 131)
I MWF, 142ChE, Madden
- 154 Special Probs (3 or more cr)
- 172 Process Control (3 cr; prereq 171)
Lect IV MWF, 150ChE, Ceaglske
Lab VI-IX W, 257ChE, Ceaglske
- 182 Senior Thesis (3 cr; prereq 5th yr, 1.5 + HPR)
- 187 Inspection Trip (2 cr; prereq 132)
V M, 240ChE
- 202 Seminar (1 cr)
VII M, 240ChE, Piret
- 209 Adv Unit Operations (3 cr; prereq 103, cons instr)
Ar, Madden
- 215 Adv Mathematics for Chemical Engineers, Chemists (3 cr; prereq 214)
III MWF, 158ChE, Amundson
- 220 Adv Thermodynamics (3 cr; prereq* 120)
Ar, Preckshot
- 222 Reaction Kinetics (3 cr; prereq cons instr)
Ar, Piret
- 232 Nuclear Reactor Design (3 cr; prereq 231)
4:30-6:00 TTh, 150ChE, Isbin
- 302 Research (ar cr)

CHEMISTRY

Analytical Chemistry (ANCH)

- 1 Quantitative Analysis (5 cr; prereq InCh 13 for chem, InCh 12 for chem engr students)
VI MWF, 225C, Meehan
—1, Lab VII-IX MWF, 310C
—2, Lab V-IX TTh, 310C
- 9 Quantitative Analysis (3 cr; prereq InCh 11 or 12)
VI TTh, 315C, Nightingale
Lab VII-IX TTh, 310C
- 97 Senior Thesis (5 cr; prereq 5th yr)
- 101 Quantitative Analysis (5 cr; prereq InCh 13)
VI-IX MWF, 310C, Meehan

- 105 Polarizing Microscope (3 cr; prereq PCh 101)
VI F, 315C, Sandell
Lab ar
- 107 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 (2 cr without or 3 cr with lab; prereq 1, 2, PCh 103)
VI MW, 111C, Kolthoff
Lab ar, 310C
- 134 Voltammetry, Amperometric Titrations (2 cr; prereq 133 or cons regis)
Lab ar, Kolthoff
- 136 Seminar: Modern Probs in Analytical Chemistry (1 cr; prereq 1, 2, PCh 103)
IV T, 315C
- 140 Water Analysis (2 cr; prereq 1, 2)
Ar, Sandell
- 202 Topics: Analytical Chemistry (3 cr; prereq 123)
Ar, Kolthoff
- 302 Research: Quantitative Analysis (ar cr)

Inorganic Chemistry (INCH)

- 1 Gen Inorganic Chemistry (4 cr, †1-2)
V MWThF, 410C, Pray
—1, Lab VI-IX T
—2, Lab VI-IX F
- 2 Gen Inorganic Chemistry (4 cr, †1-2; prereq 1)
—1, Lect VI MWThF, 100C, Pervier
Lab VI-IX T
—2, Lect VIII TWThF, 100C, Pray
Lab VI-IX M
- 5 Gen Inorganic Chemistry (4 cr, †4-5; prereq 4)
—1, Lect VII MTWF, 100C, Maynard
Lab VI-IX Th
—2, Lect VII MTWF, 325C, Brasted
Lab VI-IX Th
—3, Lect VII TWThF, 225C, Johnson
Lab VI-IX M
- 6 Gen Inorganic Chemistry (5 cr, †6-7)
Lect II MWF, 215C, Johnson
Lab VI-VIII MW
- 7 Gen Inorganic Chemistry (5 cr, †6-7; prereq 6)
Lect II MWF, 225C, O'Brien
Lab I-III TTh
- 10 Gen Inorganic Chemistry (5 cr, †9-10; prereq 9)
Lect II MWF, 100C, Sneed
Lab I-III TTh
- 15 Inorganic Chemistry (4 cr; prereq 14)
—1, Lect I MTWThF, 100C, Heisig
Lab VII-IX F
—2, Lect V MTWThF, 100C, Hugas
Lab VII-IX T (for combined BA-Engr students only)
—3, Lect V MTWThF, 100C, Hugas
Lab VII-IX W

- 53 Seminar: Modern Probs in Inorganic Chemistry (1 cr; prereq 5th yr)
VIII T, 215C
- 97 Senior Thesis (5 cr)
- 104 Adv Inorganic Chemistry (3 cr; grad 4 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: Modern Probs in Inorganic Chemistry (1 cr; prereq grad)
VIII T, 215C
- 231 Radioactivity Lab (1-2 cr; prereq 161 or concur regis)
Ar, O'Connor
- 262 Seminar: Radioactivity (3 cr)
Ar, O'Connor
- 302 Research: Inorganic Chemistry (ar cr)

Organic Chemistry (ORCH)

- 61 Elem Organic Chemistry (4 cr, †61-62; prereq 12 cr chem)
Lect IV MTWThF, 100C, Koelsch
—1, Lab VI-IX M, 390C
—2, Lab VI-IX T, 390C
—3, Lab VI-IX W, 390C
—4, Lab VI-IX Th, 390C
—5, Lab I-IV Th, 390C
—6, Lab VI-IX F, 390C
- 62 Elem Organic Chemistry (4 cr, †61-62; prereq 61)
Lect I MTWF, 410C, Fenton
Lab Conf II T, 410C
—1, Lab VI-IX T, 390C
—2, Lab VI-IX W, 390C
—3, Lab I-IV Th, 390C
Lect III MWThFS, 100C, Noland
—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 Senior Thesis (5 cr; prereq sr, 63, 64)
- 101 Interm Organic Chemistry (3 cr; prereq 14 cr)
III MWF, 325C, Lauer
- 106 Adv Organic Chemistry (3 cr; prereq 105)
II MWF, 325C, Smith
- 116 Heterocyclic Compounds (3 cr; prereq 63, 64)
III TThS, 315C, Parham
- 139 Adv Organic Chemistry Lab (2-5 cr; prereq 63, 64, rdg Ger)
Ar, Noland
- 152 Seminar: Organic Chemistry (1 cr; prereq sr only)
7:45-8:45 pm W, 325C
- 202 Seminar: Organic Chemistry (1 cr)
7:45-8:45 pm W, 325C
- 206 Theoretical Organic Chemistry (3 cr; prereq 147)
I MWF, 325C, Lauer
- 302 Research: Organic Chemistry (ar cr; prereq 102 or 110, cons div)

Physical Chemistry (PCH)

- 97 Senior Thesis (5 cr; prereq sr)
- 102 Physical Chemistry (3 cr; prereq 101)
IV MWFS, 325C, Prager
- 105 Physical Chemistry Lab (1-2 cr; prereq 102 or concur regis)
—1, Lab VI-VIII MW, 190C, Lumry
—2, Lab VI-VIII TTh, 190C
—3, Lab II-IV TTh, 190C
- 108 Physical Chemistry (3 cr; prereq 107)
IV MWF, 225C, Lipscomb
—1, Lab II-IV T, 190C
—2, Lab II-IV Th, 190C
- 111 Experimental Research Techniques II (2-3 cr; prereq 110)
Ar, Wertz
- 118 Adv Physical Chemistry (3 cr; prereq 103)
II TThS, 225C, Crawford
- 129 Adsorption, Catalysis (3 cr; prereq 128)
IV MWF, 111C, Reyerson
- 133 Colloid Chemistry Lab (1-2 cr; prereq 128)
Ar, Reyerson
- 151 Seminar: Physical Chemistry (1 cr; prereq sr only)
7:30 pm W, 225C, Prager
- 205 Atomistics (4 cr; prereq 204)
II MWF, 315C, Crawford
- 217 Thermodynamics, Chemistry (4 cr; prereq 116)
II TThS, 315C, Wertz
- 224 Crystal Analysis (3 cr; prereq 223)
Ar, Lipscomb
- 251 Seminar: Physical Chemistry (1 cr)
7:30 pm W, 225C, Prager
- 266 Seminar: Magnetochemistry (1 cr; prereq cons instr)
Ar, Wertz
- 302 Research: Physical Chemistry (ar cr)

CIVIL ENGINEERING (CE)

- 15 Surveying (2 cr; prereq 12)
—1, Lect II F, 102ME
—2, Lect VI F, 205E
—1, Lab VII-IX T, 225E
—2, Lab VII-IX W, 225E
—3, Lab VII-IX Th, 225E
- 21 Route Surveying (2 cr; prereq 13)
—1, Lect II M, 106ME
—2, Lect VI M, 305E
—1, Lab VI-IX T, 217E
—2, Lab VI-IX W, 217E
—3, Lab VI-IX Th, 120TSCE
- 32 Design in Steel (3 cr; prereq 31, MM 128)
—1, Lect II MWF, 227E
—2, Lect VI MWF, 227E
—1, Lab I-III T, 217E
—2, Lab VII-IX M, 217E
—3, Lab VII-IX F, 225E
- 39 Structural Design: Steel, Timber (3 cr; prereq 38)
III MWF, 19AE

- 52 **Highways, Pavements** (3 cr; prereq 51)
 -1, Lect IV MF, 114ME
 -2, Lect IV F, V M, 114ME
 -1, Lab I-IV T, 210Ex
 -2, Lab I-IV Th, 210Ex
 -3, Lab VI-IX M, 210Ex
 -4, Lab VI-IX F, 210Ex
- 110 **Adjustment of Surveys** (2 cr; prereq* 23)
- 112 **Aerial Surveying, Photogrammetry** (3 cr; prereq* 23)
- 131 **Structural Analysis** (2 cr; prereq 130)
 -1, Lect VI M, 205E
 -2, Lect VI W, 205E
 -1, Lab VII-IX M, 205E
 -2, Lab VII-IX W, 205E
- 136 **Adv Structural Analysis** (3 cr; prereq 132)
- 142 **Reinforced Concrete Design** (3 cr; prereq 130, 141)
 -1, Lect IV MW, 227E
 -2, Lect IV TTh, 205E
 -1, Lab VIII-IX T, 229E
 -2, Lab VIII-IX W, 120TSCE
 -3, Lab VIII-IX Th, 215AE
- 146 **Concrete, Concrete Materials** (3 cr; prereq MM 141)
 Lect V TTh, 227E
 Lab VI-IX T, 8Ex
- 147 **Foundations** (3 cr; prereq 32)
 -1, Lect I MWF, 205E
 -2, Lect II MWF, 205E
- 148 **Adv Concrete** (2 cr; prereq 146)
 II-III W, VI-IX Th, 8Ex
- 159 **Soil Mechanics** (3 cr; prereq 53)
 IV MWF, 205E
- 160 **Applied Hydraulics** (3 cr; prereq Hydr 102, 104)
 Lect III MW, 203E
 Lab I-IV Th, 229E
- 161 **Hydrology** (3 cr; prereq Hydr 101 or 102 or 103)
 Lect V MW, 227E
 Lab I-IV T, 229E
- 166 **Water Power** (3 cr; prereq 161)
- 170 **Water Supply** (3 cr; prereq 160)
 Lect II MW, 208ME
 -1, Lab VI-IX T, 120TSCE
 -2, Lab VI-IX T, 210TSCE
 Lect III MW, 227E
 -3, Lab VI-IX Th, 217E
 -4, Lab VI-IX Th, 229E
- 174 **Sanitary Engineering Probs: Sewage, Industrial Wastes** (3 cr; prereq 171)
- 177 **Seminar: Sanitary Engineering** (1 cr; prereq 5th yr)
- 235 **Adv Theory of Structures** (3-5 cr; prereq 132, 142)
- 244 **Dynamics of Structures Lab** (3 cr; prereq 243)
- 251 **Adv Soil Mechanics Lab** (3 cr; prereq 159 or concur regis)
- 261 **Water, Sewage Plant Design** (3-5 cr; prereq 173 or 174)
- 281 **Research** (3-5 cr; prereq 280)

DRAWING AND DESCRIPTIVE GEOMETRY (DRAW)

- 4 **Engineering Drawing** (3 cr)
 -1, III-IV TWThF, 220TSCE
 -2, III-IV TWThF, 101E
 -3, V-VI TWThF, 100TSCE
 -4, VII-VIII MWThF, 100TSCE
- 5 **Engineering Drawing** (3 cr; prereq 4)
 -1, I-II TWThF, 201E
 -2, I-II TWThF, 120TNCE
 -3, I-II TWThF, 210TNCE
 -4, I-II TWThF, 101E
 -5, III-IV MWThF, 201E
 -6, III-IV MWThF, 120TNCE
 -7, III-IV MWThF, 210TNCE
 -8, III-IV MWThF, 220TNCE
 -9, III-IV MWThF, 100TSCE
 -10, V-VI MWThF, 18E
 -11, V-VI MWThF, 101E
 -12, V-VI MWThF, 201E
 -13, V-VI MWThF, 120TNCE
 -14, V-VI MTWTh, 210TNCE
 -15, V-VI MTWTh, 220TNCE
 -16, VII-VIII MTWTh, 210TNCE
 -17, VII-VIII MTWTh, 220TNCE
 -18, VII-VIII MTThF, 201E
 -19, VII-VIII MTThF, 120TNCE
- 6 **Engineering Drawing** (3 cr; prereq 5)
 -1, III-IV MWThF, 210TSCE
 -2, VII-VIII MWThF, 220TSCE
- 8 **Engineering Drawing** (3 cr; prereq 7)
 -1, VII-VIII MWThF, 18E
 -2, VII-VIII MWThF, 101E
 -3, VII-VIII MWThF, 210TSCE
- 10 **Solid Geometry** (no cr; prereq plane geom)
 II MWF, 215AE
- 22 **Structural Detailing** (2 cr; prereq 21)
 I-II MWF, 100TSCE
- 28 **Drafting** (2 cr; prereq 6)
 I-II MWF, 210TSCE
- 34 **Lettering** (1 cr; prereq 4)
 VI Th, 210TSCE
- 44 **Lettering** (1 cr)
 IV T, 201E
- 45 **Alphabets** (2 cr; prereq 2nd yr, 44)
 III TTh, 120TSCE
- 50 **Diagrams, Charts** (2 cr; prereq 4)
 IV TTh, 120TSCE
- 52 **Alignment Charts** (3 cr; prereq 5, ITM 12)
 I TTh, 100TSCE
- 112 **Adv Descriptive Geometry** (3 cr; prereq 111)
- 116 **Curve Fitting** (3 cr; prereq 115)
- 118 **Short Course in Curve Fitting** (3 cr; prereq* 6, ITM 25)
- 153 **Nomography** (3 cr; prereq 152)
- 158 **Graphical Mathematics** (2 cr; prereq 157)
- ## ELECTRICAL ENGINEERING (EE)
- 12 **Laboratory** (1 cr; prereq ITM 13)
 -1, I-II M, 9EE
 -2, III-IV M, 9EE
 -3, III-IV F, 9EE

- 14 **Laboratory** (1 cr; prereq 12)
 -1, III-IV T, 9EE
 -2, III-IV W, 9EE
 -3, III-IV Th, 9EE
 -4, VII-VIII M, 9EE
 -5, VII-VIII T, 9EE
 -6, VII-VIII W, 9EE
 -7, VII-VIII Th, 9EE
 -8, VII-VIII F, 9EE
- 37 **Survey** (3 cr; prereq 36)
 -1, Lect I TTh, 138EE
 -2, Lect II WF, 106ME
 -3, Lect III TTh, 238EE
 -4, Lect V TTh, 138EE
 -1, Lab V-VI M, 207bEE
 -2, Lab V-VI W, 207bEE
 -3, Lab V-VI F, 207bEE
 -4, Lab VII-VIII M, 207bEE
 -5, Lab VII-VIII T, 207bEE
 -6, Lab VII-VIII W, 207bEE
 -7, Lab VII-VIII Th, 207bEE
- 38 **Survey** (3 cr; prereq 37)
 Lect I MW, 335EE
 -1, Lab V-VI T, 207aEE
 -2, Lab V-VI Th, 207aEE
- 41 **Survey** (1 cr; prereq concur regs 42)
 I-II Th, 207bEE
- 42 **Survey** (3 cr; prereq MM 26)
 V MWF, 335EE
- 47 **Survey, Aeronautical Radio** (3 cr; prereq 46)
 Lect IV TTh, 237EE
 -1, Lab VI-VII M, 207aEE
 -2, Lab VI-VII W, 207aEE
- 113 **Electrical Engineering** (3 cr; prereq 111, 112)
 -1, III MWF, 238EE
 -2, IV MWF, 238EE
 -3, VI MWF, 238EE
 -4, VIII MWF, 238EE
- 114 **Laboratory** (1 cr; prereq 112, concur regs 113)
 -1, I-II T, 107cEE
 -2, I-II Th, 107cEE
 -3, III-IV T, 107cEE
 -4, III-IV Th, 107cEE
 -5, VI-VII T, 107cEE
 -6, VI-VII Th, 107cEE
 -7, VIII-IX T, 107cEE
- 117 **Engineering Electronics** (3 cr; prereq 109, 111)
 -1, I MWF, 138EE
 -2, II MWF, 321ME
 -3, V MWF, 238EE
 -4, VII MWF, 238EE
- 118 **Engineering Electronics Lab** (1 cr; prereq concur regs 117)
 -1, I-II T, 227EE
 -2, I-II Th, 227EE
 -3, III-IV T, 227EE
 -4, VI-VII T, 227EE
 -5, VI-VII Th, 227EE
 -6, VIII-IX M, 227EE
 -7, VIII-IX W, 227EE
 -8, VIII-IX F, 227EE
- 123 **Electrical Engineering** (3 cr; prereq 121)
 -1, III MWF, 237EE
 -2, IV MWF, 237EE
 -3, VI MWF, 237EE
- 124 **Laboratory** (2 cr; prereq 122, concur regs 123)
 -1, II-IV T, 107aEE
 -2, II-IV Th, 107aEE
 -3, VII-IX M, 107aEE
 -4, VII-IX T, 107aEE
 -5, VII-IX W, 107aEE
 -6, VII-IX Th, 107aEE
- 128 **Transient Electrical Phenomena** (3 cr; prereq 127)
 -1, Lect I TTh, 237EE
 -2, Lect III TTh, 237EE
 -1, Lab I-II W, 129EE
 -2, Lab I-II F, 129EE
 -3, Lab VI-VII W, 129EE
 -4, Lab VI-VII Th, 129EE
 -5, Lab VIII-IX W, 129EE
- 133 **Electronic Circuit Design** (3 cr; prereq 131)
 -1, Lect I MW, 238EE
 -2, Lect II MW, 238EE
 -1, Lab III-IV W, 36EE
 -2, Lab VI-VII M, 36EE
 -3, Lab VI-VII W, 36EE
 -4, Lab VIII-IX Th, 36EE
- 134 **Type Study of Electric Machines** (3 cr; prereq 132)
 Lect III TTh, 138EE
 Lab II-III F, 107EE
- 139 **Power Systems** (3 cr; prereq 138)
 Lect III MW, 138EE
 Lab VII-VIII M, 107EE
- 144 **Electromechanical Vibrating Systems** (3 cr; prereq 143)
 VI MWF, 138EE
- 158 **Industrial Electronics** (3 cr; prereq 157)
 -1, Lect I TTh, 238EE
 -2, Lect II TTh, 238EE
 -1, Lab III-IV M, 35EE
 -2, Lab III-IV T, 35EE
 -3, Lab VI-VII Th, 35EE
 -4, Lab VI-VII F, 35EE
- 162 **Electric Communication** (4 cr; prereq 161)
 -1, Lect I MWF, 237EE
 -2, Lect II MWF, 237EE
 -3, Lect V MWF, 237EE
 -1, Lab II-III T, 307EE
 -2, Lab VI-VII W, 307EE
 -3, Lab VI-VII F, 307EE
 -4, Lab VIII-IX T, 307EE
- 165 **Communication Circuits** (3 cr; prereq 164)
 Lect II MW, 138EE
 Lab VII-VIII M, 307EE
- 168 **Radio Communication** (3 cr; prereq 167)
 Lect IV TTh, 138EE
 Lab III-IV W, 307EE
- 180 **Electrical Pulses, Transients** (3 cr; prereq 127, 163)
 V MWF, 138EE
- 184 **Special Electrical Lab** (1-3 cr; prereq 183)
- 195 **Servo-mechanisms** (3 cr; prereq 194)
 III MWF

- 198 Adv Electrical Design (3 cr; prereq 197)
 202 Adv Industrial Electronics (3 cr; prereq 201)
 205 Metadyne, Linear Dynamics (3 cr; prereq 204)
 I MWF
 212 Adv Network Analysis (3 cr; prereq 211)
 IV MWF, 138EE
 228 Stability of AC Power Systems (3 cr; prereq 227)
 VII MWF
 231 Introd Solid State Theory (3 cr; prereq 230)
 234 Fluctuation Phenomena (2 cr; prereq 233)
 237 Solid State Theory (3 cr; prereq 236)
 240 Solid State Devices (3 cr; prereq 239)
 273 Electromechanical Vibrating Systems, Engineering Acoustics (3 cr; prereq 272)
 IV MWF
 288 Adv Vacuum Tube Analysis (3 cr; prereq 287)
 292 Seminar: Electronics (1-3 cr; prereq 291)

ENGINEERING ENGLISH (ENGL)

- 4 Written, Spoken Communication (3 cr; prereq placement test)
 -1, II MWF, 115ForH
 -2, III MWF, 215C
 -3, IV MWF, 110ME
 5 Written, Spoken Communication (3 cr; prereq 4)
 -1, I MWF, 4E
 -2, I MWF, 215E
 -3, I MWF, 211AE
 -4, II MWF, 218P
 -5, II MWF, 158ChE
 -6, II MWF, 214ME
 -7, II MWF, 106TNN
 -8, III MWF, 60ForH
 -9, III MWF, 40ForH
 -10, III MWF, 30ForH
 -11, III MWF, 202AH
 -12, III MWF, 108AH
 -13, IV MWF, 215E
 -14, IV MWF, 4E
 -15, IV MWF, 140ForH
 -16, V MWF, 215AE
 -17, V MWF, 327AE
 -18, V MWF, 202ME
 -19, V MWF, 50ChE
 -20, VI MWF, 4E
 -21, VI MWF, 215E
 -22, VII MWF, 4E
 -23, VII MWF, 211AE
 -24, VII MWF, 227AE
 85 Adv Technical Communication (3 cr; prereq 6)
 -1, II MWF, 106E
 -2, V MWF, 206E
 -3, V MWF, 203E
 86 Adv Technical Communication (3 cr; prereq 85)
 -1, II MWF, 215E
 -2, II MWF, 4E

- 3, III MWF, 215E
 -4, III MWF, 4E
 -5, V MWF, 215E
 -6, V MWF, 4E
 -7, VII MWF, 215E

GENERAL ENGINEERING (GE)

- 70 Slide Rule (1 cr; prereq ITM 11 or concur regis)
 -1, VI T, 205E
 -2, VI Th, 205E
 101 Contracts, Specifications (3 cr; prereq 5th yr)
 -1, III MWF, 205E
 -2, IV MWF, 206E
 -3, VI MWF, 206E
 103 Professional Probs (1 cr; prereq 5th yr)
 VI Th, 335EE
 105 Library Techniques (1 cr)
 VII T, 206E, Sauter

GEOPHYSICS (GPHY)

- 90 Industrial Employment (2 cr; prereq cons instr)
 109 Seismology (3 cr; prereq Geol 125, Phys 9 or 14)
 III MWF, 109AH, Mooney
 126 Seismic Exploration (2 cr; prereq Geol 125, ITM 25, Phys 9 or 14)
 III TTh, 108AH, Mooney
 130 Problems (ar cr; prereq cons instr)
 Ar, Mooney

HYDROMECHANICS (HYDR)

- 101 Fluid Mechanics (3 cr; prereq MM 26 or 84)
 II MWF, 145Ph
 102 Fluid Mechanics (4 cr; prereq MM 26)
 -1, III MWThF, 110ME
 -2, V MTWTh, 110Ex
 103 Fluid Mechanics (5 cr; prereq MM 26 or 84)
 I MTWThF, 110Ex
 104 Hydraulics Lab (1 cr; prereq 101 or 102 or 103 or ChEn 101 or concur regis)
 -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
 190 Mechanics of Similitude, Dimensional Analysis (3 cr; prereq* 101 or 102 or 103, MM 127, 128)
 3:00-4:30 WF, HL
 191 Hydraulic Motors, Pumps (3 cr; prereq* 187)
 1:15-2:45 WF, HL
 294 Hydrodynamics (3 cr; prereq 293)
 8:30-10:00 TF, HL

INDUSTRIAL ENGINEERING (IE)

- 90 Industrial Assignment (3 cr, †90-91-92-93-94-95; prereq regis work-study program)
- 91 Industrial Assignment (3 cr, †90-91-92-93-94-95; prereq 90)
- 92 Industrial Assignment (3 cr, †90-91-92-93-94-95; prereq 91)
- 93 Industrial Assignment (3 cr, †90-91-92-93-94-95; prereq 92)
- 94 Industrial Assignment (3 cr, †90-91-92-93-94-95; prereq 93)
- 95 Industrial Assignment (3 cr, 90-91-92-93-94-95; prereq 94)
- 150 Industrial Engineering, Mgt (3 cr; prereq ME 14)
II MWF, 110ME
- 154 Adv Methods Engineering, Work Measurement (3 cr; prereq 153)
Lect III TTh, 114ME, Block
Lab VII-IX Th, 180ME
- 163 Process Planning, Development (3 cr; prereq 150)
VI MWF, 110ME, MacKenzie
- 170 Production Planning, Control (3 cr; prereq 153)
III MWF, 114ME, Block
- 171 Quality Control (3 cr; prereq* 150, ITM 90)
II MWF, 114ME, McElrath
- 191 Seminar (1 cr; prereq 5th yr)
I T, 180ME, McElrath
- 193 Inspection Trip (1 cr; prereq 5th yr)
- 252 Adv Industrial Engineering (3 cr; prereq cons instr)
- 262 Production Engineering Probs (3-5 cr; prereq cons instr)
Ar, MacKenzie
- 272 Research (3-5 cr; prereq cons instr)

MATHEMATICS (ITM)

- 11 College Algebra, Trigonometry I (5 cr; prereq 9)
-1, III MTWThF, 327AE
-2, III MTWThF, 50ChE
-3, III MTWThF, 142ChE
-4, III MTWThF, 50ForH
-5, VI MTWThF, 110Ex
-6, VI MTWThF, 142ChE
-7, VI MTWThF, 106E
- 12 College Algebra, Trigonometry II (5 cr; prereq 11)
-1, I MTWThF, 206E
-2, I MTWThF, 50ChE
-3, I MTWThF, 150ChE
-4, II MTWThF, 327AE
-5, II MTWThF, 40ForH
-6, II MTWThF, 50ForH
-7, II MTWThF, 19AE
-8, II MTWThF, 21AE
-9, II MTWThF, 15AE
-10, III MTWThF, 420MurH
-11, III MTWThF, 162ChE
-12, IV MTWThF, 142ChE
-13, IV MTWThF, 154ChE

- 14, IV MTWThF, 158ChE
- 15, V MTWThF, 211AE
- 16, V MTWThF, 106E
- 17, V MTWThF, 305E
- 18, VI MTWThF, 154ChE
- 19, VI MTWThF, 104E
- 13 Analytic Geometry (5 cr; prereq 12)
-1, V MTWThF, 158ChE
-2, V MTWThF, 142ChE
- 24 Calculus I: Differential (5 cr; prereq 13)
-1, I MTWThF, 158ChE
-2, I MTWThF, 162ChE
-3, III MTWThF, 150ChE
-4, III MTWThF, 21AE
-5, III MTWThF, 9AE
- 25 Calculus II: Integral (5 cr; prereq 24)
-1, I MTWThF, 104E
-2, I MTWThF, 203E
-3, I MTWThF, 106ME
-4, II MTWThF, 203E
-5, II MTWThF, 104E
-6, III MTWThF, 115C
-7, III MTWThF, 15AE
-8, III MTWThF, 111C
-9, IV MTWThF, 321ME
-10, IV MTWThF, 106E
-11, V MTWThF, 150ChE
-12, V MTWThF, 154ChE
- 80 Differential Equations (3 cr; prereq 25)
-1, III MWF, 104E
-2, III MWF, 106E
- 90 Engineering Statistics (3 cr; prereq 13)
III MWF, 102ME
- 133 Industrial Statistics (3 cr; prereq 132)
V MWF, 110ME
- 150 Calculus III: Interim (3 cr; prereq 25)
IV MWF, 162ChE
- 151 Ordinary Differential Equations (3 cr; prereq 80)
IV MWF, 104E
- 152 Calculus IV: Adv (3 cr; prereq 150)
-1, I MWF, 106E
-2, III MWF, 305E
-3, III MWF, 143Ph
- 154 Vector Analysis (3 cr; prereq 25)
V MWF, 162ChE
- 155 Vector Analysis, Dyadics with Applications (3 cr; prereq 154)
II MWF, 143Ph
- 162 Analytical Dynamics (3 cr; prereq 161)
IV MWF, 203E, Koehler
- 168 Theory of Complex Variables (3 cr; prereq 153)
III-IV TTh, 104E
- 174 Partial Differential Equations with Applications (3 cr; prereq 173)
II MWF, 206E, Koehler
- 182 Topics: Theory of Numbers (3 cr; prereq 181)
VII MWF, 206E, Popken
- 185 Adv Numerical Analysis in Engineering (3 cr; prereq 151, 153, 184)
III MWF, 206E, Munro

- 191 Adv Topics: Industrial Statistics (3 cr; prereq 190)
VI MWF, 321ME, McElrath
- 194 Absolute Differential Calculus (3 cr; prereq 193)
VI MWF, 203E, Milgram
- 199b Problem Course (3 cr; prereq cons instr)
VIII-IX MF, 102F, Block
- 228 Computers, Control Devices (3 cr; prereq 227)
V MWF, 205E, Munro
- 262 Functions of a Complex Variable (3 cr; prereq 261)
II-III TTh, 106E, Warschawski
- 275 Partial Differential, Integral Equations of Applied Mathematics (3 cr; prereq 274)
V MWF, 104E, Fulks

MECHANICAL ENGINEERING (ME)

- 12 Casting Processes (2 cr; prereq InCh 15, Draw 6; or prebus)
Lect II TTh, 102ME, Holtby
-1, Lab VII-IX M, 50ME
-2, Lab VII-IX W, 50ME
- 13 Metal Processing (2 cr; prereq InCh 15, Draw 6; or prebus)
Lect I MW, 18ME, Hughes
-1, Lab VII-IX M, 70ME
-2, Lab VII-IX T, 70ME
- 14 Metal Cutting (2 cr; prereq Draw 6)
Lect I MW, 102ME, Crowder
-1, Lab VII-IX T, 171ME
-2, Lab VII-IX W, 171ME
-3, Lab IV-VI M, 171ME
- 18 Materials, Processes (3 cr)
Lect II MW, 102ME
Lab I-III TTh, ME Shops
- 20 Machine Design (2 cr; prereq Draw 6)
Lect I F, 314ME, Palmer
-1, Lab VII-IX M, 314ME
-2, Lab VII-IX W, 314ME
- 21 Kinematics, Mechanisms (3 cr; prereq Draw 6)
Lect I TTh, 321ME, Larsen
-1, Lab VI-VII Th, 308ME
-2, Lab VII-VIII W, 308ME
- 22 Mechanisms of Automatic Machinery (3 cr; prereq 21)
Lect III TTh, 321ME, Larsen
-1, Lab VI-VIII M, 325ME
-2, Lab VI-VIII Th, 325ME
-3, Lab VII-IX T, 308ME
- 23 Dynamics of Machinery (3 cr; prereq 22, MM 127)
Lect V TTh, 302ME, Larsen
Lab VI-VIII Th, 314ME
- 24 Machine Design (3 cr; prereq MM 128)
Lect III MW, 321ME, Kemler
-1, Lab VI-VIII T, 214ME
-2, Lab VI-VIII W, 214ME
- 33 Laboratory I (2 cr; prereq concur regis 131)
Lect II T, 321ME, LaJoy
-1, Lab V-VI MW, 370ME
-2, Lab V-VI TTh, 370ME
-3, Lab VII-VIII MW, 370ME
-4, Lab VII-VIII TTh, 370ME
- 34 Laboratory II (2 cr; prereq 33)
Lect II Th, 321ME, LaJoy
-1, Lab III-IV MW, 370ME
-2, Lab III-IV TTh, 370ME
-3, Lab V-VI WF, 370ME
-4, Lab V-VI TTh, 370ME
-5, Lab VII-VIII WF, 370ME
-6, Lab VII-VIII TTh, 370ME
-7, Lab VII-VIII TTh, 370ME
-8, Lab VII-VIII WF, 370ME
- 35 Laboratory III (2 cr; prereq 34)
Lect III F, 321ME, LaJoy
-1, Lab I-III Th, 370ME
-2, Lab VI-VIII M, 370ME
- 40 Heat Engines (3 cr; prereq Phys 14)
Lect V TTh, 18ME, Lee, others
-1, Lab IV-VI F, 102ME
-2, Lab VII-IX T, 209AE
-3, Lab VII-IX W, 102ME
-4, Lab VII-IX F, 102ME
- 41 Heat Engines (3 cr; prereq 40)
Lect II TTh, 214ME, Lee, others
Lab VII-IX Th, 260ME
- 90 Industrial Assignment (3 cr, 190-91-92-93-94-95; prereq regis coop work-study program)
Ar, Algren
- 91 Industrial Assignment (3 cr, 190-91-92-93-94-95; prereq 90)
Ar, Algren
- 92 Industrial Assignment (3 cr, 190-91-92-93-94-95; prereq 91)
Ar, Algren
- 93 Industrial Assignment (3 cr, 190-91-92-93-94-95; prereq 92)
Ar, Algren
- 94 Industrial Assignment (3 cr, 190-91-92-93-94-95; prereq 93)
Ar, Algren
- 95 Industrial Assignment (3 cr, 190-91-92-93-94-95; prereq 94)
Ar, Algren
- 118 Adv Processing Technology (3 cr; prereq 12, 13, 14, MM 141)
Lect III MW, 18ME
-1, Lab III-V F, ME Shops
-2, Lab IV-VI T, ME Shops
-3, Lab IV-VI Th, ME Shops
- 119 Design for Casting, Forming, Welding (3 cr; prereq 118)
Lect III T, 102ME, Holtby, Hughes
Lab IV-VI MW, 102ME
- 120 Adv Engineering Design Drafting (2 cr; prereq 20, 24)
II-IV TTh, 314ME, Palmer
- 121 Machine Design (3 cr; prereq 24)
Lect I MW, 321ME, Ryan
Lab VI-VIII T, 325ME
- 123 Design II (3 cr; prereq 121)
Lect I F, 321ME, Ryan
Lab VI-VIII MF, 308ME

- 124 **Experimental Stress Analysis** (3 cr; prereq MM 128)
Lect I MW, 214ME, Ryan
Lab VI-VIII W, 351ME
- 131 **Thermodynamics** (3 cr; prereq ITM 25, Phys 14)
-1, Lect III MWF, 208ME, Hall, others
-2, Lect VI MWF, 202ME
-1, Lab VII-VIII M, 208ME
-2, Lab VII-VIII W, 208ME
-3, Lab VII-VIII F, 208ME
- 132 **Thermodynamics** (3 cr; prereq 131)
-1, Lect II MW, 335EE, Hall, others
-2, Lect IV MW, 335EE
-1, Lab V-VI M, rec II T, 208ME
-2, Lab V-VI W, rec II Th, 208ME
-3, Lab V-VI F, rec III Th, 208ME
-4, Lab VI-VII T, rec II F, 208ME
-5, Lab VI-VII Th, rec IV F, 208ME
- 134 **Thermodynamics of Fluid Flow** (3 cr; prereq 132)
III MWF, 202ME, Hall
- 138 **General Lab** (2 cr; prereq min or pet engr maj, Min 122)
VI-IX T, 260ME, Lee
- 141 **Heat Power Engineering** (3 cr; prereq 132)
-1, II MWF, 202ME, Lee, others
-2, IV MWF, 202ME
- 147 **Design of Steam Machinery** (3 cr; prereq 141)
Lect I F, 214ME, Lee
Lab VII-IX TTh, 102ME
- 149 **Adv Steam Lab** (2 cr; prereq 35, 141)
VI-IX M, 260ME, Lee, others
- 150 **Internal Combustion Engines** (4 cr; prereq 132)
-1, Lect III MWF, 214ME, Murphy, others
-2, Lect IV MWF, 214ME
-1, Lab VII-IX M, 480ME
-2, Lab VII-IX W, 480ME
-3, Lab VII-IX Th, 480ME
- 150A **Internal Combustion Engines** (4 cr; prereq 132)
-1, Lect I MTWF, 114ME, Murphy, others
-2, Lect III MTWF, 106ME
- 152 **Diesel Engines** (3 cr; prereq 150)
V MWF, 321ME, Murphy
- 154 **Design of Internal Combustion Engines** (3 cr; prereq 121, 150; or 150A, Aero 115)
Lect I F, 102ME, Murphy, others
Lab I-III TTh, 308ME
- 159 **Internal Combustion Engine Lab** (2 cr; prereq 150 or concur regis)
VI-IX T, 480ME, Murphy, others
- 160 **Heating, Ventilation, Air Conditioning** (3 cr; prereq 132)
-1, II MWF, 302ME, Turnacliff, Lund
-2, IV MWF, 302ME
- 161 **Heating, Ventilation, Air Conditioning Design** (3 cr; prereq 160)
Lect VI T, 302ME, Turnacliff
Lab VII-IX TTh, 302ME
- 169 **Heating, Ventilation Lab** (2 cr; prereq 35, 160 or concur regis)
VI-IX M, 358ME, Sutton

- 170 **Tool Design** (3 cr; prereq 118)
Lect V M, 106ME, Crowder
Lab VII-IX MF, 180ME
- 180 **Refrigeration** (3 cr; prereq 132)
III MWF, 302ME Threlkeld
- 189 **Refrigeration Lab** (2 cr; prereq 180 or concur regis)
VI-IX W, 362ME, Threlkeld
- 190 **Seminar** (1 cr; prereq 5th yr)
-1, I Th, 114ME
-2, V W, 106ME
- 194 **Adv Engineering Probs** (2-4 cr; prereq 5th yr, mech engr maj, 1.5 HPR, cons div chief)
- 195 **Inspection Trip** (1 cr; prereq 5th yr)
- 198 **Industrial Instrumentation, Automatic Control** (3 cr; prereq 5th yr)
Lect V TTh, 321ME, LaJoy
-1, Lab VI-VIII M, 359ME
-2, Lab VI-VIII W, 359ME
- 199 **Servomechanisms** (3 cr; prereq ITM 80, EE 37)
Lect II TTh, 302ME, LaJoy
Lab VI-VIII F, 331ME
- 225 **Adv Applied Dynamics** (3 cr; prereq 224)
Ar, Kemler
- 229 **Adv Vibration Engineering** (3 cr; prereq 129)
Ar, Kemler
- 232 **Adv Fluid Thermodynamics** (3 cr; prereq* 134, 231)
I MWF, 110ME, Hall
- 234 **Convection** (3 cr; prereq 233)
V MWF, 214ME, Eckert
- 253 **Adv Gas Turbines** (3 cr; prereq 157)
Lect VI WF, 302ME, Murphy
Lab VII-IX F, 302ME
- 256 **Engine Testing, Research** (ar cr; prereq 158 or 159)
Ar, Murphy
- 266 **Adv Ventilation, Air Distribution** (3 cr; prereq* 265)
IV MWF, 106ME, Algren
- 281 **Applied Refrigeration** (3 cr; prereq 180)
VI MWF, 106ME, Jordan
- 290 **Research** (ar cr; prereq cons div chief)
- 291 **Research** (ar cr; prereq 290)
- 292 **Research** (ar cr; prereq 291)
- 293 **Seminar** (no cr)

MECHANICS AND MATERIALS (MM)

- 26 **Engineering Statics** (5 cr; prereq ITM 25)
-1, IV MTWThF, 327AE
-2, IV MTWThF, 215AE
- 85 **Mechanics of Materials** (3 cr; prereq 26 or 84)
III MWF, 215AE
- 87 **Materials Testing Lab** (1 cr; prereq concur regis 85)
VII-VIII T, 130Ex
- 92 **Mechanics for Architects** (4 cr; prereq ITM 91)
-1, I MTWF, 227E
-2, I MTWF, 305E

- 127 **Engineering Dynamics** (5 cr; prereq 26)
 —1, II MTWThF, 9AE
 —2, II MTWThF, 50ChE
 —3, III MTWThF, 110Ex
 —4, IV MTWThF, 50ChE
- 128 **Mechanics of Materials** (5 cr; prereq 26)
 —1, II MTWThF, 110Ex
 —2, II MTWThF, 150ChE
 —3, IV MTWThF, 110Ex
- 141 **Materials Testing Lab** (1 cr; prereq concur regis 128)
 —1, VIII-IX M, 130Ex
 —2, V-VI T, 130Ex
 —3, VII-VIII W, 130Ex
 —4, VII-VIII Th, 130Ex
 —5, VII-VIII F, 130Ex
- 165 **Problems** (3 cr; prereq cons instr)
- 182 **Applied Elasticity** (3 cr, †181-182-183; prereq 181)
 II MWF, 227AE
- 295 **Theory of Elasticity** (3 cr, †294-295-296; prereq 294)
 VIII MWF, 206E

MINES AND METALLURGY

Metallography (MET)

- 154 **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; prereq 4th yr)
 Lect III MF, 315AH, Mackay
 —1, VI-VII T
 —2, VIII-IX T
 —3, VI-VII W
- 159 **Dental Metallography** (2 cr)
 I TTh, 108AH, Jerabek, Mackay
- 160 **Metallography** (3 cr; prereq AnCh 1, 2)
 Lect VIII MF, 315AH, Jerabek
 —1, VI-VII T
 —2, VIII-IX T
 —3, VI-VII W
- 161 **Adv Metallography** (2 cr without or 3 cr with lab; prereq 152 or 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 **Laboratory** (1-3 cr; prereq 154)
 Ar, Dowdell, Jerabek
- 171 **Probs in Metallography** (1-3 cr; prereq 5th yr, met engr maj)
 Ar, Dowdell, Jerabek
- 205 **Seminar: Metallography** (ar cr)
 V Th, 109AH, Jerabek

Metallurgy (MET)

- 90 **Industrial Employment** (2 cr; prereq cons instr)
- 107 **Nonferrous Metallurgy** (3 cr; prereq 106)
 II MWF, 108AH, Bitsianes

- 111 **Mineral Dressing** (4 cr; prereq 110)
 Lect III TTh, IV Th, 202AH, Cooke
 —1, Rec VII T, 202AH, Cooke
 —2, Rec VII F, 202AH, Cooke
 —1, Lab VI, VIII T, Cooke
 —2, Lab VI, VIII F, Cooke
- 122 **Adv Mineral Dressing** (3 cr; prereq 112)
 Lect VI M, II T, 109AH, Cooke
 Rec VII M, 109AH, Cooke
- 124 **Probs in Mineral Dressing** (ar cr; prereq 112)
 Ar, Cooke
- 125 **Probs in Mineral Dressing** (ar cr; prereq 112)
 Ar, Cooke
- 126 **Probs in Mineral Dressing** (ar cr; prereq 112)
 Ar, Cooke
- 133 **Electrometallurgy** (3 cr; prereq 12)
 II TTh, 1 hr ar, 108AH, Martin
- 135 **Adv Metallurgy of Pig Iron** (3 cr; prereq 11)
 Lect II MWF, 109AH, Joseph
 Lab VI-IX T, Martin
- 142 **Special Probs** (3 cr; prereq 5th yr, met engr maj)
 Ar, Joseph, Martin, Bitsianes
- 217 **Seminar: Process Metallurgy** (1 cr)
 Ar, Joseph, Martin, Bitsianes
- 220 **Probs in Adv Metallurgy** (ar cr)

Mining Engineering (MIN)

- 12 **Surveying** (3 cr; prereq 11)
 II MTThF, 111AH, Heilig
- 90 **Industrial Employment** (2 cr; prereq cons instr)
- 106 **Mine Mapping** (2 cr; prereq 15)
 VI-IX TTh, 303AH, Heilig
- 112 **Elements of Mining** (3 cr; prereq 111)
 I MTWF, 202AH, Yardley
- 121 **Mine Plant Design** (2 cr; prereq ME 131, MM 84)
 VI-VIII MW, 206AH, Hartman
- 127 **Engineering Construction** (3 cr; prereq 126)
 I-III TTh, VI-VIII F, 205AH, Hartman
- 142 **Surface Mining** (3 cr; prereq 112)
 II MWF, IV T, 202AH, Pfeider
- 144 **Adv Mining** (2 cr; prereq 141)
 VI-VIII MW, 205AH, Pfeider
- 145 **Adv Mining** (4 cr; prereq 144)
 VI-VIII MW, VI-IX F, 205AH, Pfeider
- 152 **Probs in Mining** (ar cr; prereq 113)
- 160 **Industrial Minerals, Rocks** (2 cr; prereq* 112)
 Ar, Heilig
- 202 **Probs in Mining** (ar cr)
 Ar, Pfeider

Petroleum Engineering (PETE)

- 90 **Industrial Employment** (2 cr; prereq cons instr)
- 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)
VI-VIII MW, 205AH, Pfeider
- 145 Adv Petroleum Engineering (4 cr; prereq
144)
VI-VIII MW, VI-IX F, 205AH, Pfeider
- 153 Petroleum Production Technology (3 cr;
prereq 152)
Lect III Th, 109AH, Lacabanne
-1, Lab VII-IX Th, VI-VIII F, 112AH,
Yardley
-2, Lab ar

TECHNICAL AID (TA)

- 17 Slide Rule (1 cr)
VII T, 215E
- 25 Applied Mathematics (6 cr; prereq 24)
-1, IV MTWThF, VI TTh, 227AE
-2, V MTWThF, 227AE; VI TTh, 203E
- 41 Engineering Drafting: Architectural Draw-
ing (5 cr; prereq 14)
I-III MTWThF, 18E
- 42 Engineering Materials (2 cr)
VII MF, 203E
- 83 Forging, Welding, Heat Treating (2 cr; pre-
req 82)
Lect VI MF, 18ME
-1, Lab VII-IX W, 70ME
-2, Lab VII-IX Th, 70ME

UNATTACHED UNIVERSITY DEPARTMENTS

AIR SCIENCE AND TACTICS (AIR)

- 32 Air Science I (1 cr; prereq 31)
-1, II MWF, 309AE, Eisman
-2, III MWF, 309AE, Eisman
-3, IV MWF, 309AE, Eisman
-4, V MWF, 309AE, Jurgensen
-5, VI MWF, 309AE, Jurgensen
-6, VII MWF, 309AE, Jurgensen
- 35 Air Science II (1 cr; prereq 34)
-1, I MWF, 305AE, Brown
-2, II MWF, 305AE, Brown
-3, III MWF, 305AE, Young
-4, IV MWF, 305AE, Young
-5, V MWF, 305AE, Brown
-6, VI MWF, 305AE, Young
- 132 Air Science III (3 cr; prereq 131)
-1, I MTWThF, 12A, Widen
-2, III MTWThF, 12A, Widen
-3, IV MTWThF, 12A, Schnase
-4, VI MTWThF, 12A, Schnase
- 135 Air Science IV (3 cr; prereq 134)
-1, I MTWThF, 14A, 14aA, Covell, Mulflur
-2, II MTWThF, 14A, Aasheim
-3, III MTWThF, 14A, Covell
-4, IV MTWThF, 14A, Mulflur
-5, VI MTWThF, 14A, 14aA, Covell, Mulflur

CHILD WELFARE (CW)

- 40 Child Training (3 cr; prereq Psy 2)
-1, V MW, 212 OUHS, Helgerson
-2, VI TTh, 212 OUHS, Fuller
- 80 Child Psychology (3 cr; prereq Psy 2)
IV MWF, 210 OUHS, Harris
- 131 Personality, Emotional, Social Development
(3 cr; prereq sr, 12 cr psy)
II MWF, 212 OUHS, Anderson, others

- 140 Behavior Probs in Younger Children (2 cr;
prereq sr, 12 cr educ psy or psy or soc)
VIII-IX Th, 212 OUHS, Blodgett
- 141 Behavior Probs in Older Children, Adoles-
cents (2 cr; prereq sr, 12 cr educ psy or
psy or soc)
VIII-IX T, 212 OUHS, Blodgett
- 151 Childhood Education (2 cr; prereq sr, 12 cr
psy)
VIII-IX T, 113TNUH, Fuller
- 160 Physical Growth, Development (3 cr; prereq
sr, 12 cr psy)
IV MWF, 206 OUHS, Roff
- 170 Parent Education (3 cr; prereq sr, 15 cr CW
or educ or HE or PH or psy or soc)
V MWF, 210 OUHS, Cummings
- 200 Observation, Study of Children (1 cr; pre-
req 12 cr psy, 3 cr stat)
Ar, Harris
- 221 Seminar: Current Research (1 cr)
VIII-IX W (Alternates with CW 231) 206
OUHS, Roff
- 224 Seminar: Developmental Theory (1 cr; pre-
req cons instr)
Ar, Anderson
- 231 Seminar: Recent Literature (1 cr)
VIII-IX W (Alternates with CW 221) 206
OUHS, Anderson
- 233 Research Methods (2 cr; prereq 12 cr educ
psy or psy incl stat)
VII-VIII TTh, 206 OUHS, Roff
- 241 Practicum in Behavior Probs (ar cr; prereq
140, 141, cons instr)
Ar, Blodgett
- 250 Internship in Professional Work with Chil-
dren (ar cr; prereq cons dept)
Ar, Anderson
- 261 Seminar: Developmental Research, Practice
(1 cr; prereq* 1 yr grad work or PhD
cand)

- 271 Readings, Research: Child Development (ar cr)
 274 Technique, Field Work in Parent Education (ar cr; prereq 170, cons instr)
 Ar, Cummings
 290 Mental Examination of Preschool Children (4 cr; prereq 12 cr mental meas, cons instr)
 Ar, Blodgett

MILITARY SCIENCE AND TACTICS (MIL)

- 2 First Year Basic Course (1 cr; prereq 1)
 -1, I MWF, 257TSF, 116A, Jensen
 -2, II MWF, 257TSF, 116A, Jensen
 -3, III MWF, 257TSF, 116A, Jensen
 -4, IV MWF, 257TSF, 116A, Jensen
 -5, V MWF, 257TSF, 116A, Jensen
 -6, VI MWF, 257TSF, 116A, Jensen
 -7, VII MWF, 257TSF, 116A, Jensen
 2J Basic Pharmaceutical Course (1 cr; prereq 1J)
 IV T, 201WuH, Luehrs
 5A Antiaircraft Artillery (1 cr)
 -1, III MWF, 201A, Flanagan
 -2, VI MWF, 201A, Flanagan
 -3, VII MWF, 201A, Flanagan
 5B Engineers (1 cr)
 -1, III MWF, 116A, Smith
 -2, VI MWF, 116A, Smith
 5C Ordnance (1 cr)
 -1, III MWF, 105A, Gaddie
 -2, VI MWF, 105A, Gaddie
 5D Quartermaster (1 cr)
 -1, III MWF, 259TSF, Leahy
 -2, VI MWF, 259TSF, Leahy
 -3, VII MWF, 259TSF, Leahy
 5E Signal Corps (1 cr)
 -1, III MWF, 206A, Goldey
 -2, VI MWF, 206A, Goldey
 5F Transportation (1 cr)
 -1, III MWF, 103A, Hostetler
 -2, VI MWF, 103A, Hostetler
 -3, VII MWF, 103A, Hostetler
 5J Pharmaceutical Corps (1 cr; prereq 4J)
 IV F, 201WuH, Luehrs
 152A Antiaircraft Artillery (3 cr)
 -1, I MTWThF, 201A, Flanagan
 -2, IV MTWThF, 201A, Flanagan
 152B Engineers (3 cr)
 -1, I MTWThF, 116A, Smith
 -2, IV MTWThF, 116A, Smith
 152C Ordnance (3 cr)
 -1, I MTWThF, 105A, Gaddie
 -2, IV MTWThF, 105A, Gaddie
 152D Quartermaster (3 cr)
 -1, I MTWThF, 259TSF, Leahy
 -2, IV MTWThF, 259TSF, Leahy
 152E Signal Corps (3 cr)
 -1, I MTWThF, 206A, Goldey
 -2, IV MTWThF, 206A, Goldey
 152F Transportation (3 cr)
 -1, I MTWThF, 103A, Hostetler

- 2, IV MTWThF, 103A, Hostetler
 -3, VII MTWThF, 105A, Hostetler
 152J Pharmaceutical Corps (3 cr)
 V F, 201WuH, Luehrs
 155A Antiaircraft Artillery (3 cr)
 -1, II MTWThF, 201A, Flanagan
 -2, V MTWThF, 201A, Flanagan
 155B Engineers (3 cr)
 -1, II MTWThF, 116A, Smith
 -2, VIII MTWThF, 116A, Smith
 155C Ordnance (3 cr)
 -1, II MTWThF, 105A, Gaddie
 -2, VIII MTWThF, 105A, Gaddie
 155D Quartermaster (3 cr)
 -1, II MTWThF, 259TSF, Leahy
 -2, VIII MTWThF, 259TSF, Leahy
 155E Signal Corps (3 cr)
 -1, II MTWThF, 206A, Goldey
 -2, VIII MTWThF, 206A, Goldey
 155F Transportation (3 cr)
 -1, II MTWThF, 103A, Hostetler
 -2, V MTWThF, 103A, Hostetler
 -3, VIII MTWThF, 103A, Hostetler
 155J Pharmaceutical Corps (3 cr)
 I Th, 201WuH, Luehrs

MORTUARY SCIENCE (MORT)

- 1 Anatomy for Embalmers (3 cr; prereq soph, Zool 3)
 Lect V TTh, 304 IA
 Lab VI-VII TTh, 301-302-303 IA
 3 Business Methods (2 cr; prereq soph, Econ 24)
 IV TTh, 113VH, Lund
 5 Restorative Art (1 cr; prereq 4)
 -1, VIII-IX T, 100NH, Roman
 -2, VIII-IX Th, 100NH, Roman
 9 Orientation in Funeral Service (no cr; prereq 8)
 IX M, 209NH, Slater
 11 Chemistry for Embalmers (3 cr; prereq soph, InCh 2)
 Lect VIII MW, 225C, Pervier
 Lab VII-IX F
 14 Funeral Law (3 cr; prereq 13)
 V W, VI MW, 420MurH, Carney
 16 Funeral Mgt (2 cr; prereq 15)
 IV MW, 218P, Slater
 19 Pathology for Embalmers (2 cr; prereq 18)
 III MWF, 304 IA, Brunson
 21 Embalming Theory, Practice (3 cr; prereq 20)
 II MWF, 3F, Slater
 24 Public Health, Minnesota Laws, Regulations (3 cr; prereq soph)
 I MWF, 304 IA, Brower

NAVAL SCIENCE (NAV)

- 12 Naval Orientation (3 cr; prereq 11)
 -1, Lect IV MWF, 205A, James
 -2, Lect V MWF, 205A, James
 Lab II T or IV Th, 205A, James
 Drill IV T

- 22 Prin Fire Control (3 cr; prereq 21)**
 —1, Lect II MWF, 202A, Hannah
 —2, Lect III MWF, 202A, Hannah
 —3, Lect IV MWF, 202A, Hannah
 Lab II T or III T or IV Th, 202A, Hannah
 Drill IV T
- 52 Navigation (3 cr)**
 —1, Lect I-II TTh, 12aA, Bertsch
 —2, Lect VII-VIII TTh, 12aA, Bertsch
 Drill IV T
- 55 History of the Art of War (3 cr)**
 Lect III MWF, 205A, Worden
 Lab III T, 205A, Worden
 Drill IV T
- 58 Supply Afloat (3 cr; prereq 57)**
 Lect V MWF, 202A, London
 Lab IV F, 12aA, London
 Drill IV T
- 62 Diesel Engines, Ship Stability (3 cr)**
 —1, Lect III MWF, 12aA, Borgert
 —2, Lect V MWF, 12aA, Borgert
 Lab III T or V T, 12aA, Borgert
- 65 Amphibious Warfare (3 cr)**
 Lect II MWF, 12aA, Worden
 Lab II Th, 205A, Worden
 Drill IV T
- 68 Clothing, Small Stores, Commissary (3 cr; prereq 67)**
 Lect V-VI TTh, 202A, London
 Drill IV T

PHYSICAL EDUCATION FOR MEN (PE M)

Nonprofessional

- 1B Sports Education (1 cr)**
 Swimming, Bgn
 —1, II MWF, CHPool, Boyce
 —2, VII MWF, CHPool, Thorpe
 —3, III TThS, CHPool, Boyce
 Bowling, Bgn
 —4, III MWF, CMU
 —5, IV MWF, CMU
 Handball
 —6, VII MWF, StadN, Nash
 Badminton, Bgn
 —7, IV MWF, CHGym, Brain
 Golf, Bgn
 —8, III MWF, StadS, Bolstad
 —9, IV MWF, StadS, Bolstad
 —10, II TThS, StadS, Bolstad
 —11, III TThS, StadS, Bolstad
 Skating, Bgn
 —12, VI MWF, Arena
 Adapted Activities
 —13, III MWF, StadS, Osell
 —14, IV MWF, StadS, Osell
 —15, VIII MWF, StadS, Osell
 Freshman Sport
 —16, Ar, Cons coach
 Boxing, Bgn
 —17, VIII MWF, StadN

- 2B Sports Education (1 cr)**
 Swimming, Interm
 —1, II TThS, CHPool, Boyce
 —2, VI MWF, CHPool, Thorpe
 —3, IV MWF, CHPool, Boyce
 Life Saving
 —4, III MWF, CHPool, Boyce
 Swimming, Adv
 —5, IV TThS, CHPool, Boyce
 Wrestling, Interm
 —6, VIII MWF, StadN, Johnson
 Wrestling, Adv
 —7, IX MWF, StadN, Johnson
 Squash
 —8, VII MWF, StadN, Brain
 Gymnastics
 —9, VIII MWF, CHGym, Ostrander
 Weight Lifting
 —10, VIII MWF, CHGym, Ostrander
 Basketball
 —11, VII MWF, CHGym, Vancisin
 Volleyball
 —12, III MWF, CHGym
 Badminton, Adv
 —13, III T, III-IV Th, CHGym, Brain
 Square, Folk Dancing
 —14, III MWF, NGW
 Ballroom Dancing
 —15, IV TTh, NGW
 Fencing
 —16, VIII MWF, CHGym
 Skating, Adv
 —17, IV MWF, Arena
 Body Building
 —18, VIII MWF, StadS, Osell
 Ballroom Dancing
 —19, VII TTh, NGW
 Varsity Sports
 Ar, Cons coach

PHYSICAL EDUCATION FOR WOMEN (PE W)

Nonprofessional

- Aquatics**
 Swimming, Bgn
 VI MWF, 51NGW
 Swimming, Adv Bgn
 —1, III TTh, 51NGW
 —2, VII TTh, 51NGW
 Swimming, Interm Adv
 VIII MWF, 58NGW
 ARC Sr Life Saving
 VI MWF, 58, 201NGW
- Body Building**
 Posture, Individual Exercise
 —1, II MWF, 153aNGW
 —2, IV MWF, 153aNGW
 —3, VI MWF, 153aNGW
 —4, I TTh, 153aNGW
 —5, II TTh, 153aNGW

CLASS SCHEDULE

Individual Sports

Archery, Elem

—1, III TTh, 60, 201NGW

—2, V TTh, 60, 201NGW

Badminton, Elem

—1, III MWF, 153NGW

—2, IV MWF, 60NGW

—3, V MWF, 153NGW

—4, IV TTh, 153NGW

Bowling, Elem

—1, V MWF, 201NGW, CMU

—2, VI MWF, 201NGW, CMU

—3, V TTh, 201NGW, CMU

—4, VI TTh, 201NGW, CMU

Riflemarksmanship

—1, II TTh, 201NGW, Armory

—2, III TTh, 201NGW, Armory

Skating, Elem

II TTh, 201NGW, Arena

Social Games and Mixers

VII TTh, 153, 201NGW

Tennis, Elem

V TTh, 151NGW

Rhythms

Ballroom Dance, Elem

—1, IV TTh, 151, 201NGW

—2, VII TTh, 151, 201NGW

Folk and Square Dance

III MWF, 151NGW

Modern Dance, Elem

—1, IV MWF, 151NGW

—2, VII MWF, 151, 201NGW

Modern Dance, Inter Adv

VI MWF, 151NGW

Team Sports

Basketball

—1, I MWF, 151NGW

—2, VI TTh, 151, 201NGW

Volleyball

—1, III TTh, 151NGW

—2, VIII TTh, 151, 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, AD IV
10.00—AD V

Art

\$1.00—1, 2, 3, 4, 5, 11, 12
2.00—20, 20A, 21, 21A, 22A, 33, 34, 43,
44, 89, 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, 32, 40, 41, 42, 44, 45,
53, 54, 55, 63, 64, 65, 73, 74, 75, 80, 81,
82, 90, 91, 92, 94, 95, 101, 102, 180, 181
182, 186, 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,
55N, 71A, 71B, 71C

Educational Psychology

\$1.00—217, 218
1.50 per cr—142, 143, 144, 150
1.50—216A, 217A, 218A, 219A

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, 22D, 24A, 24B,
24C, 25A, 25B, 25C, 25D, 28, 32A,
32B, 32C, 32D, 32E, 33A, 33B

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, 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

Mechanical Engineering

\$2.00—1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16,
17, 18, 33, 34, 35, 61, 110, 111, 112, 113,
114, 118, 149, 159, 169, 189, 198

Mechanics and Materials

\$1.00—87, 141

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 students using PE facilities for activity, \$2.50 per qtr payable at dept. Uniforms (optional) for class or recreational activity, \$2.00 per qtr payable at dept.

Physical Education (women)\$2.00 per cr—47, 48, 49, 62, 77A, 77B,
83, 90A, 90B, 90C, 943.25 (max \$6.50 per qtr)—All nonpro-
fessional, 20A, 20B, 20C, 21A, 21B,
21D, 21E, 22A, 22B, 22C, 40A, 40B,
40C, 40D, 41A, 41B, 42A, 54, 70, 76,
87, 88**Physical Medicine**

\$3.00—75, 93

Physics\$2.00—1a, 2a, 3a, 4, 5, 6, 7, 8, 9, 12, 13,
14A, 50A, 51A, 110, 112, 120, 121, 122,
134, 136, 144, 146, 148**Psychology**

\$1.00—135, 136, 137

2.00—4, 5, 130, 290, 291

Public Health\$1.00 per cr—65, 66, 67, 119, 125, 129,
138, 139, 173

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, 1422.00—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

5.00 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—10, 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; Mort. Sci. 11, 12

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 Room

\$1.00 per qtr for one, \$2.00 for two, 50 cents for each addtl hr per week—
all instruments except organ
.20 per hr—small organ
.40 per hr—large organ

Speech and Hearing Clinic—Students

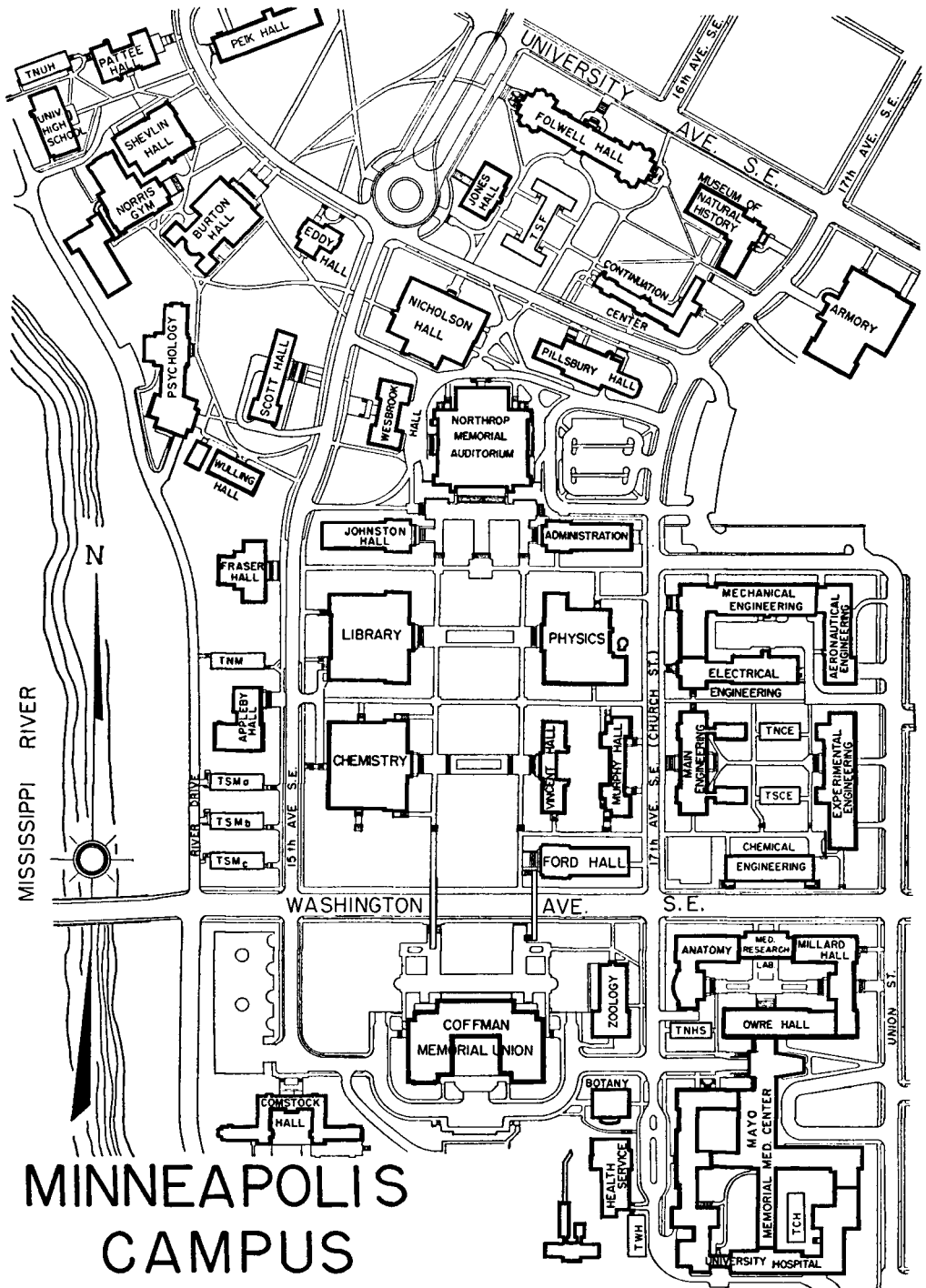
\$5.00 per qtr—spec clinical treatment

Speech and Hearing Clinic—Nonstudents

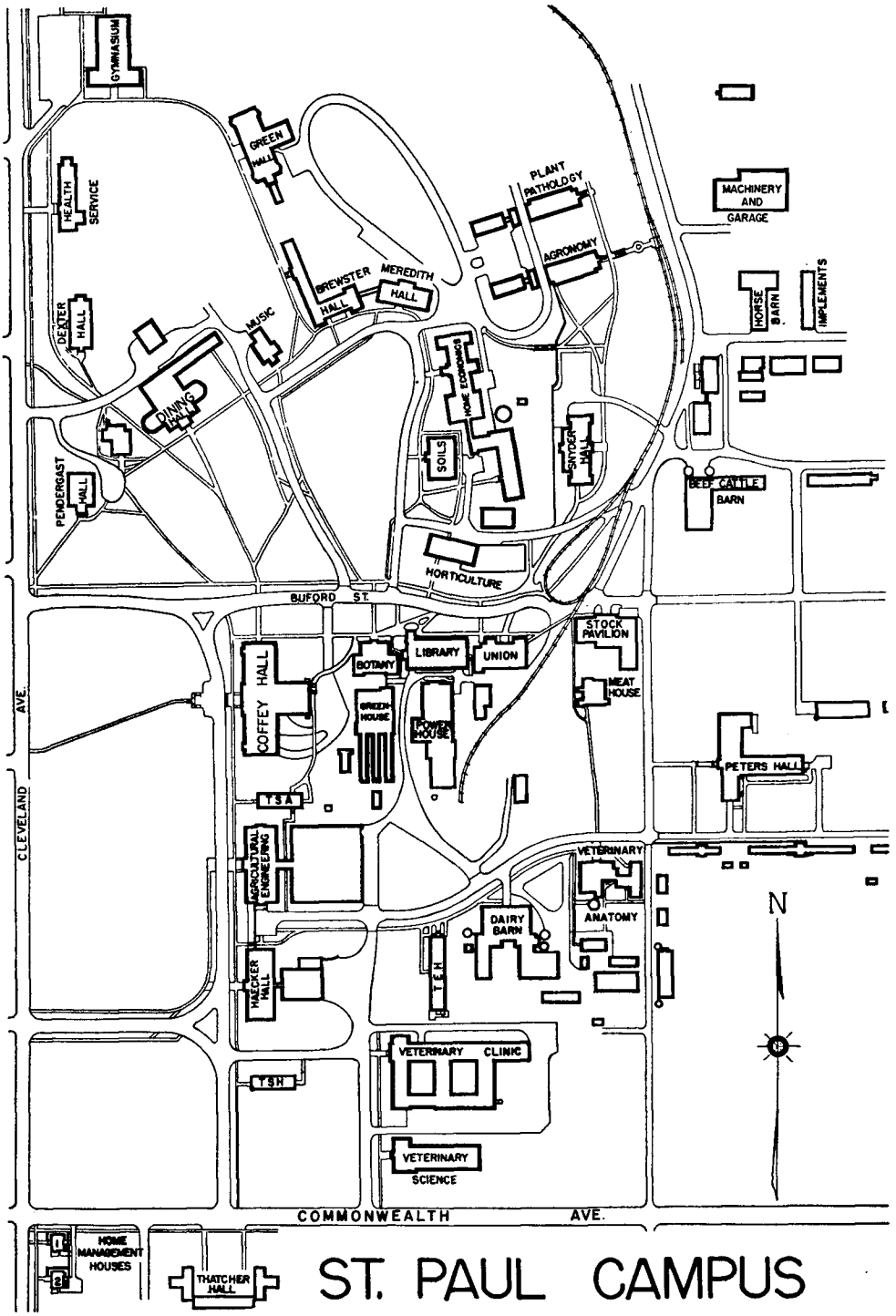
Articulatory cases, per 10 weeks—\$15.00
for 1, \$25.00 for 2, \$30.00 for 3, \$35.00
for 4, \$40.00 for 5 lessons per week
Stuttering, per session—\$100.00 for full
time remediation

BUILDING ABBREVIATIONS

A, Armory	PeikH, Peik Hall
AE, Aeronautical Engineering	PeikG, Peik Hall Gymnasium
Ag(StP), Agronomy	PetH(StP), Peters Hall
AgLib(StP), Agricultural Library	Ph, Physics
AgrBot(StP), Agricultural Botany	PoH, Powell Hall
AH, Appleby Hall	PP(StP), Plant Pathology
Bo, Botany	Psy, Psychology
Bu, Burton Hall	Pt, Pattee Hall
C, Chemistry	SBH, State Board of Health
CH, Cooke Hall	ScH, Scott Hall
ChE, Chemical Engineering	ShH, Shevlin Hall
CofH(StP), Coffey Hall	SnH(StP), Snyder Hall
DCB(StP), Dairy Cattle Barn	So(StP), Soils
E, Main Engineering	TCH, Temporary, Court of Hospitals
EdH, Eddy Hall	TEH(StP), Temporary, East of Haecker Hall
EE, Electrical Engineering	TNCE, Temporary, North Court of Engineering
En(StP), Agricultural Engineering	TNHS, Temporary, North of Health Service
Ex, Experimental Engineering	TNM, Temporary, North of Mines (Appleby Hall)
F, Folwell Hall	TNUH, Temporary, North of Old University High School
ForH, Ford Hall	TSA(StP), Temporary, South of Administration (Coffey Hall)
FraH, Fraser Hall	TSCE, Temporary, South Court of Engineering
GH(StP), Green Hall	TSE, Temporary, South of Folwell
Gy(StP), Gymnasium	TSH(StP), Temporary, South of Haecker Hall
HE(StP), Home Economics	TSMa, First Temporary, South of Mines (Appleby Hall)
HH(StP), Haecker Hall	TSMb, Second Temporary, South of Mines (Appleby Hall)
Hosp, University Hospitals	TSMc, Third Temporary, South of Mines (Appleby Hall)
Hr(StP), Horticulture	TSP, Temporary, South of Powell Hall
IA, Institute of Anatomy	TWH, Temporary, West of Hospitals
J, Jones Hall	VCHH, Variety Club Heart Hospital
JohH, Johnston Hall	VetA(StP), Veterinary Anatomy
Lib, Library	VetC(StP), Veterinary Clinic
LsPav(StP), Livestock Pavilion	VetS(StP), Veterinary Science
LyonL, Lyon Laboratories	VH, Vincent Hall
ME, Mechanical Engineering	WeH, Wesbrook Hall
MeH(StP), Meredith Hall	WuH, Wulling Hall
MEx, Mines Experiment Station	Z, Zoology
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	
OUHS, Old University High School	
Owre, Owre Hall	
P, Pillsbury Hall	



MINNEAPOLIS CAMPUS



ST. PAUL CAMPUS

CALENDAR

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		

- 25 Holiday (Christmas)
- 28 Winter quarter fees due for students in residence fall quarter in undergraduate colleges
- 29-30 Orientation and registration for new students in all undergraduate colleges

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						

- 1 Holiday (New Year's Day)
- 4 Registration resumes; winter classes begin
- 5 Last day for registration and payment of fees for new students in all undergraduate colleges
- 8 Last day for registration and payment of fees for the Graduate School, and for teachers in service

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						

- 12 Holiday (Lincoln's Birthday)
- 18 Senate meeting, 3:30 p.m.
- 21-27 University of Minnesota Week
- 22 Holiday (Washington's Birthday)
- 25 Charter day convocation at 11:30 a.m.; IV hour classes excused

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			

- 12-18 Final examination period
- 18 Spring quarter fees due for students in residence winter quarter in undergraduate colleges
Commencement, 8:00 p.m.
- 20 Winter quarter closes

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	S	Mar 13	VII	MWF	1:30- 3:30	F	Mar 12
I	TThS	4:00- 6:00	S	Mar 13	VII	TTh	4:00- 6:00	F	Mar 12
II	MWF	1:30- 3:30	M	Mar 15	VIII	MWF	8:00-10:00	F	Mar 12
II	TThS	4:00- 6:00	M	Mar 15	VIII	TTh	10:30-12:30	F	Mar 12
III	MWF	1:30- 3:30	T	Mar 16	IX	MWF	Arranged		
III	TThS	4:00- 6:00	T	Mar 16	IX	TTh	Arranged		
IV	MWF	1:30- 3:30	W	Mar 17	X	MWF	Arranged		
IV	TThS	4:00- 6:00	W	Mar 17	X	TTh	Arranged		
V	MWF	8:00-10:00	S	Mar 13					
V	TTh	10:30-12:30	S	Mar 13					Classes meeting on Saturdays only
VI	MWF	1:30- 3:30	Th	Mar 18	I,II	S	10:30-12:30	S	Mar 13
VI	TTh	4:00- 6:00	Th	Mar 18	III,IV	S	1:30- 3:30	S	Mar 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.

COURSES TALLIED IN COLLEGE OFFICES

Aeronautical Engineering

All courses under 200—136E

Agricultural Biochemistry

All courses under 200—220CofH

Agricultural Economics

All courses under 200—220CofH

Agricultural Engineering

18, 36, 51, 73, 106, 112B, 112P, 112R,
112S, 126, 167—136E

All other courses under 200—220CofH

Agricultural Journalism

53—220CofH

Agronomy and Plant Genetics

All courses under 200—220CofH

Air Science and Tactics

All courses—1A

Analytical Chemistry

All courses under 200—136E

Animal Husbandry

All courses under 200—220CofH

Architecture

All courses—136E

Art

24A, 60A, 61A, 62A—136E

All other courses under 193, **except**
32, 67, 89, 104—210JohH

Art Education

17, 18, 19, 84—206Bu

Bacteriology and Immunology

53—220CofH for IA, 125 Owre for
Nurs, 121MH for PH nurs, W225
Hosp for Med Tech, 209TWH for
PT, and 210JohH for SLA students
116—JohH

Botany

2 (lect and lab—220CofH for IA,
101WuH for Pharm, and 210JohH
for other students

118—210JohH

Business Administration

All courses under 200, **except** 98, 183J,
198, 199—107VH

Chemical Engineering

All courses under 200—136E

Child Welfare

40—210JohH

Civil Engineering

All courses under 200 (lect and lab
for 15, 21, 32, 52, 131, 142)—136E

Communication

All courses—210JohH

Composition

5—106 Owre for DHyg, 156NH for
Mort, 101WuH for Pharm, and
210JohH for other students

4, 6, 27, 28, 102—210JohH

58—107VH

Curriculum and Instruction

63, 66, 109, 125, 145—206Bu

Dairy Husbandry

All courses under 200—220CofH

Drawing and Descriptive Geometry

44, 45—210JohH

All other courses—136E

Economics

2, 5, 6, 7, 24, 25, 26—210JohH

8, 9, 28—136E

30—101WuH

All other courses under 200, **except**
32, 33, 38, 41, 98, 160—107VH for
BA, and 210JohH for other students

Education

55A, 55B, 71B—206Bu

Educational Psychology

142, 217a, 281—206Bu

Electrical Engineering

All courses under 200 (lect and lab
for 37, 128, 133, 158, 162)—136E

English (IT)

All courses—136E

English (SLA)

A, B, C, 22, 55, 56, 98—210JohH

Entomology and Economic Zoology

All courses under 200—220CofH

Family Life

All courses—210JohH

Food Technology

All courses—220CofH

Forestry

All courses under 200—220CofH

French

1, 2, 2a, 2b, 3, 4, 50, 54—210JohH

General College

7A, 7C, 10A, 10B, 26A—220CofH for
IA, and 106NH for other students
All other courses—106NH

General Engineering

All courses—136E

Geography

1, 4, 41—210JohH

Geology and Mineralogy

A, B, 1, 2, 102—210JohH
6—136E

Geophysics

All courses—136E

German

1, 2, 2a, 2b, 3, 4—210JohH
25, 42—136E

History

1, 2, 5, 21, 54, 60, 135—210JohH

History and Philosophy of Education

180—206Bu

Home Economics

1, 20, 31, 40, 70, 85—220CofH for IA,
and 210JohH for other students
56—210JohH
All other courses under 200—220CofH

Home Economics Education

All courses under 200—220CofH

Horticulture

All courses under 200—220CofH

Humanities

All courses, **except** 132—210JohH

Hydromechanics

All courses under 200—136E

Industrial Education

1, 2, 6, 10, 11—206Bu

Industrial Engineering

All courses under 200—136E

Inorganic Chemistry

1, 2, 5—220CofH for IA, 136E for IT,
and 210JohH for other students
6, 7—136E for IT, 101WuH for Pharm,
and 210JohH for other students
10—136E for IT, and 210JohH for
other students
All other courses under 200—136E

Journalism

10, 11, 13, 14, 18, 41, 55, 58, 66, 67, 74,
86, 87, 101, 109, 141—210JohH

Mathematics (IT)

All courses under 200—136E

Mathematics (SLA)

1, 6, 7—220CofH for IA, and 210JohH
for other students
All other courses under 200—210JohH

Mechanical Engineering

All courses under 200 (lect and lab
for 131, 132, 150)—136E

Mechanics and Materials

All courses under 200—136E

Metallography

All courses under 200—136E

Metallurgy

All courses under 200—136E

Military Science and Tactics

2J, 5J, 152J, 155J—101WuH
All other courses—106A

Mining Engineering

All courses under 200—136E

Mortuary Science

All courses—156NH

Music

1, 1T, 2T, 4T, 5T, 10, 11C, 12C, 35, 44,
47—210JohH
44S—220CofH

Music Education

50B, 51, 52, 59, 63, 105, 224—206Bu

Natural Science

2, 5, 8—210JohH

Naval Science

All courses—203A

Organic Chemistry

61—210JohH

62—101WuH for Pharm, and 136E for other students

All other courses under 200—136E

Orientation

1—220CofH

Personal Orientation

All courses—210JohH

Petroleum Engineering

All courses—136E

Philosophy

1, 3—136E for IT, and 210JohH for other students

51—210JohH

Physical Chemistry

108—210JohH

All other courses under 200—136E

Physical Education for Men

1B (sec 4, 5, 7, 8, 9, 10, 11, 12)—210JohH

2B (sec 13, 15, 16, 17, 19)—210JohH

52—206Bu

Physical Education for Women

26, 70—206Bu

Physics

11, 12, 14, 14A, 50, 50A—136E

Plant Pathology and Agricultural Botany

All courses under 200—220CofH

Poultry Husbandry

All courses under 200—220CofH

Psychology

2—220CofH for IA, 136E for IT, and 210JohH for other students

1, 4, 5, 126, 130, 145, 221—210JohH

Public Health

52b—220CofH

121—210JohH

Rhetoric

47—220CofH for IA, and 210JohH for other students

All other courses—220CofH

Russian

2—210JohH

Social Science

All courses—210JohH

Social Work

209, 221, 222—210JohH

Sociology

1A, 14A—220CofH

1, 45, 53—210JohH

Soils

All courses under 200—220CofH

Spanish

1, 2, 2a, 3, 4, 20, 54, 61—210JohH

Speech and Theater Arts

1, 2, 3, 5, 6, 31, 32, 33, 56, 65, 66, 67, 78, 79, 81, 82, 91, 102, 106, 116—210JohH

Technical Aid

All courses—136E

Veterinary Medicine

All courses under 200—220CofH

Zoology

2 (lect and lab)—106 Owre for DHyg, and 210JohH for other students

15—220CofH for IA, 156NH for Mort, 125 Owre for Nurs, 101WuH for Pharm, and 210JohH for other students

22, 52, 57, 59, 118, 126, 129, 145, 160, 171—210JohH

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