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THE UNIVERSITY AND THE POSTWAR WORLD

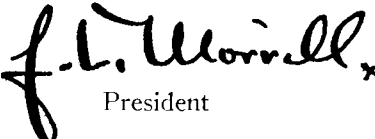
The University of Minnesota takes pride in the significant contributions it made during the war years to the gigantic task of converting our peace-loving nation into a great arsenal of democracy. It turns now to the tasks of peace.

Up to June, 1945, more than 17,000 soldiers and sailors had received specialized training at the University. Included in this number were engineers, language students, ROTC and NROTC men, preflight cadets, meteorologists, electricians and machinists mates, aviators, midshipmen, doctors, and dentists. Almost 2,000 nurses were enrolled at the University during the war. Almost 12,000 civilians, engaged in the production of war materiel, received training at the University in our Engineering, Science, Management, and War Training courses. The University made its scientists, educators, and professional men available to the nation. Our laboratories on the campus were used in the development of new instruments of warfare, including the atomic bomb. Our students, staff, and alumni served with distinction in the Army, the Navy, the Marine Corps, and the Coast Guard.

War is the necessary but unwise and inhumane business of destruction. Families, communities, and entire nations have been grievously hurt. Our heritage of moral and spiritual values has been warped by the stresses and strains of wartime distortion. The physical task of rebuilding is enormous. But even greater is the challenge to create, through international understanding and agreement, adequate machinery dedicated to the proposition that peoples and nations can live in peace.

Here in our country, millions of men and women from the armed services are welcomed home by a grateful nation. Our citizens who made ships, and tanks, and planes, and guns have put down their war tools and are seeking employment in the manufacture of peacetime goods. Wartime destruction and dislocation present to us the challenge of the postwar world: a world of new problems that demand new solutions, forged in the crucible of keen and honest thinking, infinite patience, intelligent understanding, moral courage, and decisive action.

As the University of Minnesota discharged its responsibilities during the war years, so the University will strive to meet its responsibilities in this postwar world. Our scientists, educators, and professional men and women at the University are assuming their traditional role in the great task of re-converting our wartime economy to peacetime ways of thinking and acting. When the turbulent postwar history of this nation is written, let it be said that the University of Minnesota met its responsibilities of training, of research, and of leadership promptly and well. The University dedicates itself to this high aim.


President

UNIVERSITY CALENDAR, 1946-47

1946		<i>Fall Quarter</i>	
September	16	Monday	Extension registration, first semester begins
September	19	Thursday	Fall quarter fees due for students in residence spring quarter in the Institute of Technology, Business Administration, Dentistry, Dental Hygiene, Law, Nursing, Pharmacy, and Agriculture, Forestry, and Home Economics
September	23	Monday	Entrance tests ¹
September	23-24		Registration for Freshman Week for new students entering the freshman class
September	23-27		Freshman Week; Registration, ² College of Science, Literature, and the Arts, and General College
September	25	Wednesday	Registration of Seniors in Home Economics, College of Agriculture, Forestry, and Home Economics, 1:00-4:30 p.m.
September	26-27		Registration, ² all colleges except Institute of Technology. Fall quarter fees due for all students in Science, Literature, and the Arts, General College, Education, Medical School, Medical Technology, Public Health, Physical Therapy, University College, and for new students in other undergraduate colleges
September	27	Friday	Registration, ² Institute of Technology
September	30	Monday	Fall quarter classes begin 8:30 a.m. ³ First semester extension classes begin ⁴
October	3	Thursday	Opening convocation, 11:30 a.m.
October	5	Saturday	Last day for extension registration
October	10	Thursday	Senate meeting, 3:30 p.m.
October	11	Friday	Last day for registration and payment of fees for the Graduate School, and for teachers in service
October	12	Saturday	Columbus Day; holiday (except extension)
November	9	Saturday	Homecoming Day
November	11	Monday	Armistice Day; holiday (except extension)
November	16	Saturday	Dads Day
November	28	Thursday	Thanksgiving Day; holiday
December	12	Thursday	Senate meeting, 3:30 p.m.
December	13-14 and 16-19		Final examination period
December	19	Thursday	Fall quarter ends 6:00 p.m. ⁵ ; Commencement, 8:00 p.m.
		<i>Winter Quarter</i>	
December	26	Thursday	Winter quarter fees due for students in residence fall quarter in undergraduate colleges
1947			
January	3	Friday	Entrance tests ¹ ; Registration ² for Institute of Technology
January	3-4		Registration ² for new students in all colleges except Institute of Technology. Registration and payment of fees for new students in all undergraduate colleges closes at noon, Saturday, January 4
January	6	Monday	Winter quarter classes begin 8:30 a.m. ³
January	18	Saturday	Last day for registration and payment of fees for the Graduate School, and for teachers in service

January	27	Monday	Extension registration, second semester begins
February	8	Saturday	First semester extension classes close
February	10	Monday	Second semester extension classes begin ⁴
February	12	Wednesday	Lincoln's Birthday; holiday (except extension)
February	13	Thursday	Senate meeting, 3:30 p.m.
February	15	Saturday	Last day for extension registration
February	20	Thursday	Charter Day Convocation, 11:30 a.m.
February	22	Saturday	Washington's Birthday; holiday (except extension)
March 14-15 and 17-20			Final examination period
March	20	Thursday	Spring quarter fees due for students in residence winter quarter in undergraduate colleges. Winter quarter ends 6:00 p.m.; Commencement, 8:00 p.m.

Spring Quarter

March	28	Friday	Entrance tests ¹ ; Registration ² for Institute of Technology
March	28-29		Registration ² for new students in all colleges except Institute of Technology. Registration and payment of fees for new students in all undergraduate colleges closes at noon, Saturday, March 29
March	31	Monday	Spring quarter classes begin 8:30 a.m. ³
April	4	Friday	Good Friday; holiday (except extension)
April	12	Saturday	Last day for registration and payment of fees for the Graduate School, and for teachers in service
May	8	Thursday	Senate meeting, 3:30 p.m.
May	10	Saturday	Mothers Day
May	15	Thursday	Cap and Gown Day Convocation
May	30	Friday	Memorial Day; holiday (except extension)
June	6	Friday	Second semester extension classes close
June 6-7 and 9-13			Final examination period
June	8	Sunday	Baccalaureate service
June	13	Friday	Spring quarter ends 6:00 p.m.; Seventy-fifth annual commencement, 8:00 p.m.

Summer Session

June	16-17		Registration, ² first term. First term fees due for students in all colleges
June	18	Wednesday	First term Summer Session classes begin 8:30 a.m. ³
July	4	Friday	Independence Day; holiday
July	24	Thursday	Commencement, 8:00 p.m.
July	25	Friday	First term closes
July	28	Monday	Registration, ² second term. Second term fees due for students in all colleges
July	29	Tuesday	Second term classes begin 8:30 a.m. ³
August	29	Friday	Second term closes

¹ Applicants are urged to take entrance tests a month in advance of the quarter for which admission is desired. Tests may be taken at the Student Counseling Bureau, 101 Eddy Hall.

² Registration subsequent to the date specified will necessitate the approval of the college concerned. See privilege fees for late registration or late payment of fees, page 31. No student may register in the undergraduate college after one week from the beginning of the quarter except in unusual cases wherein circumstances shall justify the appropriate committee of the college concerned permitting registration at a later date.

³ First hour classes begin at 8:15 a.m. at University Farm.

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

⁵ Extension classes continue through Friday, December 20 and will resume Monday, January 6, 1947.

INFORMATION FOR MEN AND WOMEN WITH MILITARY SERVICE RECORDS

CREDIT POLICIES

1. **Application for credit for educational achievement during military service**—Personnel *now on active duty* should submit the United States Armed Forces Institute Form No. 47 provided for this purpose. Form No. 47 may be obtained from your educational officer or from the United States Armed Forces Institute, Madison 3, Wisconsin.

Veterans of World War II *no longer on active duty* should submit a certified copy of W.D., A.G.O. Form 100, Separation Qualification Record, or Notice of Separation from the U. S. Naval Service, NavPers 553; or U.S.M.C. Report of Separation; or Notice of Separation from the U. S. Naval Service—Coast Guard, 553. In the case of Naval commissioned or warrant officers, the Officer's Qualification Record Jacket (NavPers 305), a certified copy thereof, or a statement from the Bureau of Naval Personnel covering the data desired should be submitted.

2. **Basic or boot training**—Upon receipt of certification, as provided in item 1, of completion of basic or boot training in the Armed Forces, credit will be allowed as follows providing such work does not duplicate courses already credited.

Basic Military or Naval Science	6 credits
Physical Education	2 credits

3. **Advanced military training**—Students who present evidence of having attained a commission of flight officer, second lieutenant or higher, in the Army or Army Air Forces, will be allowed up to 18 credits in Advanced Military Science providing such work does not duplicate courses already credited.

4. **Formal service courses and schools**—Upon receipt of certification, as provided in item 1, academic credit as recommended by the American Council on Education, Guide to the Evaluation of Educational Experience in the Armed Services, will be allowed for Armed Services Formal Service Courses and Schools for enlisted men, officers, and officer candidates.

5. **U.S.A.F.I. correspondence courses**—Upon receipt of official certification from the Armed Forces Institute, Madison 3, Wisconsin, credit as recommended by the American Council on Education, Guide to the Evaluation of Educational Experience in the Armed Services, will be allowed for Armed Forces Institute college level correspondence courses on the basis of end-of-course test and/or subject examination.

6. **College or university correspondence courses**—Upon receipt of official transcript of record from the institution from which the correspondence course was taken (the procedure by which civilian course credit is transferred) credit will be allowed for college level correspondence courses taken from colleges and universities in co-operation with the Armed Forces Institute.

7. **Credit for ASTP, V-12, and other programs conducted on college campuses**—Upon receipt of official transcript of record from the institution where course was taken (the procedure by which civilian course credit is transferred) credit will be allowed on the same basis as approved for similar courses offered at the University of Minnesota. Credit will be allowed to the extent that work completed is applicable to the curriculum to be followed providing such work does not duplicate courses already credited.

8. **Credit for other educational experiences**—On the basis of General Educational Development Tests or on the basis of advanced standing examinations that may be taken on the campus with approval of the Advanced Standing Committee of the college concerned, credit will be allowed for other educational experience such as independent or group study, or information acquired through travel to the extent that it is demonstrated that the equivalent of courses, not already credited, have been completed.

ADMISSION PROCEDURE FOR VETERANS

Application for admission may be made either in person or by mail. Application blanks are available at the office of admissions and records. **IMPORTANT: Application for admission, and high school, ASTP, V-12, Armed Forces Institute, and previous college records must be filed with the dean of admissions.**

Non-high school graduates—Veterans who left high school before graduating may be considered for admission by examination. Application for admission and test authorization may be obtained from the office of admissions and records. Results of General Educational Development examinations given by the Armed Forces Institute will be accepted in lieu of university examinations normally required. Admission status and classification will be based on test results, high school record, educational experience in the Armed Forces, and judgment of counselor, college dean, and dean of admissions after personal interview. Non-high school graduates who are accepted for admission may receive advanced standing to the extent that educational experience in the Armed Forces has been the equivalent of college courses. Non-high school graduates, because of tests and interviews required, must necessarily make application in person. Write to the dean of admissions for application for admission and test authorization.

High school graduates who meet requirements for admission by certificate will be allowed advanced standing to the extent that educational experience in the Armed Forces is applicable to the curriculum to be followed.

High school graduates who do not meet requirements for entrance by certificate may be considered for admission by examination. Students accepted by examination may receive advanced standing for educational experiences in the Armed Forces.

Students previously enrolled—Advanced standing for educational experience in the Armed Forces will be allowed to the extent that work completed is applicable to the curriculum followed providing such work does not duplicate courses already credited. Write to the dean of admissions for application for readmission.

Applicants from other colleges and universities—Veterans who have attended other colleges or universities, who desire to transfer to the University of Minnesota should file a transcript of record from the institution attended (if less than one year of college work was completed, high school record should also be submitted). Write to the dean of admissions for application for admission with advanced standing.

REGISTRATION PROCEDURE FOR VETERANS

Upon arriving at the University report to the Office of the University Bureau of Veterans Affairs, 203 Eddy Hall for general instruction and information. Bring your letter of eligibility for training obtained from the Veterans Administration. If enrolling in the College of Agriculture, Forestry, and Home Economics report to 207 Administration Building, University Farm.

Every quarter for the duration of your training authorization you should proceed as follows:

1. **Register** in the same manner as all other students in your college and obtain statement of fees.
2. **Present fee statement and Veterans Administration authorization for training to Trainee Account Clerk**, Window 18, Office of Admissions and Records, to have statement approved for collection from Veterans Administration. If you are enrolling in the College of Agriculture, Forestry, and Home Economics, present fee statement to Office of Admissions and Records, 203d Administration Building, University Farm.
3. **Obtain fee receipt from Bursar**. Turn in your approved fee statement to the bursar, who will give you a receipt showing that your fees are being paid by the

Veterans Administration. If you are enrolling in the College of Agriculture, Forestry, and Home Economics, turn in your approved fee statement to the cashier, 203d Administration Building, University Farm, who will give you a receipt showing your fees are being paid by the Veterans Administration.

4. **Present fee receipt and list of courses, signed by your adviser, to Bureau of Veterans Affairs, 203 Eddy Hall, to obtain purchase voucher on the basis of which books and supplies may be obtained from one of the University Bookstores. Veterans enrolled in the College of Agriculture, Forestry, and Home Economics should present fee receipt and signed list of courses, at 207 Administration Building, University Farm.** Required books and supplies, including Chemistry Deposit Cards and rental cards for lockers and microscopes are issued on the basis of these vouchers. Each department in the University prepares lists of requirements for each course, and approval is based on these lists.
5. **Cancellation of registration.** It is very important that veterans who discontinue attendance notify the Office of Admissions and Records, the University Bureau of Veterans Affairs, 203 Eddy Hall or 207 Administration Building, University Farm (Agriculture, Forestry, and Home Economics students), and Mr. J. G. Pease, Veterans Administration, Minneapolis 6, of this fact as soon as they terminate their attendance.

COUNSELING FACILITIES FOR VETERANS

The University, in recognition of the difficulty many veterans will have in becoming adjusted to student life, has established special facilities for the counseling of veterans. The University of Minnesota Bureau of Veterans Affairs, a department of the Office of the Dean of Students, will aid veterans in securing adequate advice and counseling. All the facilities for this are co-ordinated by the University's Committee on the Co-ordination of Advisory Services for Veterans.

Through the Bureau referral will be made to the various members of the committee, to various faculty members, and to such agencies as the Student Counseling Bureau (see university services to students, page 25), Speech Clinic, Student Health Service, Student Activities Bureau, Reading Clinic, Student Union, and others.

All veterans should make their initial contact with the University through the University Bureau of Veterans Affairs, Room 202 Eddy Hall.

NON-UNIVERSITY VETERANS' FACILITIES

Veterans Administration—The Veterans Administration has been designated by the government as the authorizing agency for training under the Servicemen's Readjustment Act of 1944 (G. I. Bill) and under the vocational rehabilitation act for veterans with service-connected disabilities. Veterans approved for training under either act will have tuition fees, books, supplies, and allowance for maintenance paid by the government. Application may be made to the Veterans Administration, 54th and 48th Avenue South, Minneapolis 6, Minnesota. (Telephone: Dupont 2381.)

Department of Veteran Affairs, 512 Ryan Building, Seventh and Robert Streets, St. Paul, is the official agency for administration of the State Rehabilitation Law. Veterans who are legal residents of Minnesota should investigate the provisions of this state law for emergency aid and educational rehabilitation.

Veterans Information and Referral Service, 414 South Eighth Street, Minneapolis (Telephone: Atlantic 4344), is a co-operative venture of several federal, state, and Minneapolis agencies. Counseling and information are provided by trained interviewers. Discharge papers are duplicated without charge, other important documents at a nominal fee. Veterans are given aid in filling out applications and other papers.

ADMISSION

I. Admission to Undergraduate Colleges

NONRESIDENTS

By action of the Board of Regents of the University of Minnesota taken because of the present veterans' educational emergency, our admissions requirements have been necessarily revised for nonresident undergraduates. Only if you are a veteran whose home is in the area which is economically and educationally related to Minnesota (adjacent states), and only if you rank in the upper 25 per cent of your high school class or have an average of "B" or better for transfer purposes, are we permitted to give preliminary consideration to your application. If you are a non-veteran from the same region, you must stand in the upper 10 per cent of your high school class or have an average of "B" or better for advanced standing to enable our consideration of your application. We regret, indeed, the emergency which imposes these conditions.

A. APPLICATION PROCEDURE

All inquiries, credentials, and applications for admission to the undergraduate colleges should be addressed to the Dean of Admissions, University of Minnesota, Minneapolis 14, Minnesota.

Application blanks may be obtained at any Minnesota high school or from the dean of admissions, University of Minnesota.

An admission certificate will be mailed to each student who has met the requirements. Students entering from other colleges or universities will also receive a statement of advanced standing. Instructions for registration will either be enclosed with the admission certificate or will be mailed later—about one month before the opening of the quarter. Students must present their admission certificates when they report for registration.

B. TIME OF ENTRANCE

The University year is divided into four quarters. The fall, winter, and spring quarters make up the college year from September to June. The fourth quarter includes two summer terms.

Following are the registration dates:

Summer quarter, 1946

Registration	June 17-18
Classes begin	June 19

Fall quarter, 1946

Registration	September 23-27
Classes begin	September 30

Winter quarter, 1947

Registration	January 3-4
Classes begin	January 6

Spring quarter, 1947

Registration	March 28-29
Classes begin	March 31

Admission to the following schools and colleges requires two or more years of pre-professional work as indicated, either at the University of Minnesota or at some other recognized college or university. The content of the preprofessional course is listed in the bulletin of the college offering the work. This bulletin should be obtained from the office of admissions and records. On entering the University, the applicant must meet the admission requirements of the college in which the preprofessional work is to be taken.

Professional School	Preprofessional Course
Law School	Two years in Science, Literature, and the Arts
Medical School	Three or more years in Science, Literature, and the Arts
School of Dentistry	Two years in Science, Literature, and the Arts
College of Education	Two years in Science, Literature, and the Arts; or in Agriculture, or in Home Economics; or in the General College; or five quarters in Science, Literature, and the Arts and ten quarters in the School of Nursing. Exceptions are the special four-year courses of study in Art Education, Industrial Education, Kindergarten and Primary Education, Music Education, and Physical Education to which students are accepted by the College of Education directly from high school.
School of Business Administration	Two years in Science, Literature, and the Arts; Agriculture, Forestry, and Home Economics; or the Institute of Technology

ALL FALL QUARTER FRESHMEN MUST REGISTER FOR FRESHMAN WEEK ON SEPTEMBER 23-24 MUST BE IN ATTENDANCE THROUGHOUT THE FRESHMAN WEEK PERIOD CLOSING ON SEPTEMBER 27.

The University recognizes the need of giving newcomers an introduction to the academic and social world which they are entering. The week before the opening of fall quarter classes is set aside as a general orientation week known as Freshman Week. Much of the program is concerned with the problems of those who are entering as freshmen altho newly entering advanced standing students will also find much of interest and are urged to attend the exercises of Freshman Week.

C. REQUIREMENTS FOR ADMISSION

1. ADMISSION BY EXAMINATION

a. High School Graduates

High school graduates, regardless of subject-matter pattern in high school, may be considered for admission by examination.

These tests are of the objective type, intended to measure aptitudes for college work rather than specific information in high school fields. No special preparation for the examinations is practicable

b. Non-High School Graduates

With the concurrence of the Minnesota Council of School Executives and the Minnesota High School Principals Association, provision has been made to consider for admission non-high school graduates, men or women, who show evidence of sufficient maturity to adjust to college life and achieve satisfactorily in college if it can be demonstrated that it would be to their best interest to enroll in the University before the normal time of admission.

Such students may be considered for admission by examination.

Decision will be based on the high school record, test results, and judgments, with respect to maturity and best interest, of the high school principal, the parents, and all-university counselor, the dean of the college, and the dean of admissions. All cases where differences of opinion arise will be reviewed by the Board of Admissions.

Students desiring to apply for admission to the University before graduation from high school should arrange to come to the campus for a period of two or three days for testing and counseling several weeks in advance of the quarter they desire to enter. At

that time application for admission, including high school credits and grades, and letters of recommendation from the principal and parents should be filed with the office of admissions and records.

2. ADMISSION BY CERTIFICATE FROM HIGH SCHOOL

Applicants must be graduates of an accredited high school and must satisfy the scholarship and subject-matter requirements of their college to be admitted.

The requirements for admission to the various colleges follow.

a. Definitions

In listing the requirements, reference is made to admissions groups, units, majors and minors.

1. Admissions groups referred to include:

Group A: English

Group B: Foreign Languages (major or minor must be in one language)

Group C: History and Social Sciences (major must include at least 2 units in History; a minor, at least 1 unit in History)

Group D: Mathematics

Group E: Natural Sciences (for major or minor in this group, not more than 2 half-unit courses may be included)

Group F: Vocational and Miscellaneous Subjects

2. A unit means a one-year high school subject taken in Grades X, XI, and XII (senior high school).

3. A major means at least 3 units in one admission group.

4. A minor means at least 2 units in one admission group.

5. From either Admission Group B (foreign languages) or Admission Group D (mathematics), *but not from both*, one unit completed in Grade IX may be used toward a major or a minor. If this is done, however, the unit completed in Grade IX may not be counted as part of the minimum of twelve units required from Grades X, XI, and XII nor as part of the units specified in Groups A through E.

b. Requirements

College of Science, Literature, and the Arts—

1. Applicants for admission to this college by certificate who are in the top 10 per cent of their high school class will be admitted regardless of the pattern of their high school subjects. Such students must meet the regular prerequisites for college subjects they may wish to take.

2. Other applicants for admission by certificate must have a college aptitude rating of at least 40 (the college aptitude rating is the average of the student's rank in his high school graduating class and his rank on the college aptitude test) and present the following pattern of subjects:

a. At least 12 units must have been completed in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E).

b. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major in Group A, English

A major or a minor in Group D, Mathematics

Institute of Technology—

1. Applicants must be in the upper 60 per cent of their high school graduating class. Others will be given individual consideration and may be permitted to take special tests to qualify for admission.

2. At least 12 units must have been completed in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E).

3. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major or a minor in Group A, English

A major in Group D, Mathematics, including Higher Algebra and Solid Geometry.

Students will be accepted without higher algebra or solid geometry or both. Such students must register for and complete these courses during their first quarter. No university credit is given for either of these courses.

College of Agriculture, Forestry, and Home Economics—

Agriculture—Applicants who are in the upper 25 per cent of their high school graduating class may be admitted regardless of subjects taken in high school. It is nevertheless recommended that such students select high school courses to conform as nearly as possible with requirements for other students listed below.

1. Applicants who are below the upper 25 per cent of their high school graduating class must have completed at least 12 units in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E). Eight units in standard subjects will be accepted provided one unit of senior high school agriculture is presented in Group F.

2. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major or a minor in Group A, English

A major or a minor in Group D, Mathematics, *or* one unit in Group D provided the student registers in one of the following curricula: Technical Agriculture, Agricultural Education, Agricultural Extension, and Agricultural Business Administration, and takes Higher Algebra in the freshman or sophomore year of college.

One unit in Group E *or* one unit in senior high school agriculture.

Forestry—Applicants who are in the upper 25 per cent of their high school graduating class may be admitted regardless of subjects taken in high school. It is nevertheless recommended that such students select high school courses to conform as nearly as possible with requirements for other students listed below:

1. Applicants who are below the upper 25 per cent of their high school graduating class must have completed at least 12 units in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E).

2. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major or a minor in Group A, English

A major or a minor in Group D, Mathematics

One unit in Group E

Home Economics—Applicants who are in the upper 25 per cent of their high school graduating class may be admitted regardless of subjects taken in high school. It is nevertheless recommended that such students select high school courses to conform as nearly as possible with requirements for other students listed below.

1. Applicants who are below the upper 25 per cent of their high school graduating class must have completed at least 12 units in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E). Eight units in standard subjects will be accepted providing one unit of senior high school home economics is presented in Group F.

2. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major or a minor in Group A, English

College of Education—Art Education, Elementary Education, Industrial Education, Kindergarten and Primary Education, Music Education, and Physical Education.

1. At least 12 units must have been completed in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E).

2. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major in Group A, English

3. Applicants for teacher training in other fields must meet requirements for admission to the College of Science, Literature, and the Arts where they will be registered during the first two years of the curriculum.

General College—There are no special requirements for admission to the General College. All graduates of accredited high schools who are residents of the state of Minnesota may be admitted without examination.

School of Nursing, three-year course—

1. Applicants must be not more than thirty-five years of age and must submit satisfactory evidence of physical and mental fitness and pass a satisfactory general medical examination by the University Health Service at time of registration.

2. Applicants who are in the upper third of their high school graduating class and who have satisfactory aptitude ratings may be admitted providing other requirements are met. Those in the middle third, while not usually advised to apply, may do so if they have satisfactory aptitude ratings and pass the necessary entrance tests.

3. At least 12 units must have been completed in Grades X, XI and XII (senior high school) including at least 9 units in standard subjects (Groups A through E).

4. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major in Group A, English

A major or a minor in Group D, Mathematics

5. Applicants for the five-year course must meet requirements for admission to the College of Science, Literature, and the Arts where they will be registered during the first five quarters of the curriculum.

College of Pharmacy—

1. Applicants for this college must have a college aptitude rating of 40 or better to be admitted unconditionally. Others will be given individual consideration and may be permitted to take special tests to qualify for admission. The college aptitude rating is the average of the student's rank in his high school graduating class and his rank on the college aptitude test. High school graduates in the upper 10 per cent of their class who have had 2 units of mathematics are admitted without examination.

2. At least 12 units must have been completed in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E).

3. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major in Group A, English

A major or a minor in Group D, Mathematics

Course for Dental Hygienists—

1. Applicants for this course must have a college aptitude rating of 40 or better to be admitted directly. The college aptitude rating is the average of the student's rank in his high school graduating class and his rank on the college aptitude test. Applicants are selected on the basis of scholarship, character, and general fitness. High school graduates in the upper 10 per cent of their class are admitted without examination.

2. At least 12 units must have been completed in Grades X, XI, and XII (senior high school) including at least 9 units in standard subjects (Groups A through E).

3. Either 1 major and 2 minors or preferably 2 majors and 1 minor must be presented including:

A major in Group A, English

3. ADMISSION WITH ADVANCED STANDING

Students who have completed one or more years of satisfactory work at another college or university of recognized standing may be admitted with advanced standing. Students who have completed less than one year of college work must meet the requirements for admission from high school and must submit high school credits in addition to their college transcript.

Applications for advanced standing should be made, if possible, at least two months before the quarter for which admission is desired. Application blanks may be obtained from the dean of admissions.

Advanced standing is allowed to the extent that courses completed are acceptable to the University of Minnesota. The certified record of courses taken in other institutions including ASTP, V-12, and other Armed Forces College Training Programs must be upon the official transcript blank of the institution concerned and should include or be accompanied by a statement of honorable dismissal. Students who have attended more than one institution must submit a transcript of record from each.

Each application for admission to a senior professional school or college from a non-resident of Minnesota should be accompanied by a \$5 credential examination fee. Senior professional schools are Medical School, School of Dentistry, Law School, College of Education, except courses admitting freshmen, and School of Business Administration. Remittance should be in the form of check, bank draft, or money order, payable to the University of Minnesota. Please do not send cash.

Candidates wishing to gain advanced standing by examination are allowed examinations without charge, provided they are taken within six weeks after admission.

4. ADMISSION AS AN ADULT SPECIAL STUDENT

Persons of mature age (twenty-four years or older) and experience and persons who have received a Bachelor's degree who desire a special and limited course of study may be admitted to any college of the University as an adult special student.

Veterans under 24 years of age may be accepted as adult special students providing it is demonstrated that they have sound vocational objectives and the requisite ability.

Such applicants must submit the information called for on the regular application blank, and must obtain the recommendation of the dean of the college concerned and the approval of the dean of admissions.

An adult special student may not be a candidate for a degree without meeting admission requirements. Adult special students may apply to the dean of admissions for regular classification after one full year of work (45 credits) has been completed with C average. No advanced standing will be allowed while a student is in the adult special classification.

II. Admission to the Graduate School

Any student with a Bachelor's degree or its equivalent from a recognized college or university may apply to the dean of the Graduate School for admission. An applicant of satisfactory scholastic record whose Bachelor's degree was granted by an institution on the list of colleges and universities approved by the Association of American Universities

will be admitted, with the approval of the major department concerned, for graduate work involving a major in that department.

An applicant whose scholastic record and qualifications are unsatisfactory will be refused admission to the Graduate School, but may be advised to register for a probationary period as an adult special student in the appropriate undergraduate college. Such an adult special student must complete successfully one quarter's work in courses acceptable for credit by the Graduate School before being permitted to transfer his registration to the Graduate School.

College graduates who simply desire to take additional work of undergraduate character without a view to ultimate preparation for an advanced degree should not apply for admission to the Graduate School but should register as special students in the college giving the work.

All inquiries concerning admission to the Graduate School should be addressed to the dean. Applications for admission must be accompanied by official transcripts in duplicate of undergraduate work and single official transcripts of any graduate work that may have been taken. Applications should be sent to the dean of the Graduate School at least two weeks before matriculation.

COURSES AND DEGREES

A full outline of each of these courses of study together with descriptions of the subject-matter courses which they include will be found in the announcement of the college or school in which the course of study is offered.

These announcements may be obtained by addressing the Dean of Admissions, University of Minnesota, Minneapolis 14, Minnesota.

Courses Open to Freshmen

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

1. **The four-year course leading to the degree of bachelor of arts or bachelor of science**—Fields of specialization include: Anthropology, Architecture, Astronomy, Bacteriology, Biostatistics, Botany, Chemistry, Classics, Economics, English, Fine Arts, Geography, Geology and Mineralogy, German, History, Journalism, Linguistics and Comparative Philology, Library Training, Mathematics, Music, Philosophy, Physics, Physiology, Political Science, Psychology, Romance Languages, Sociology and Social Work, Speech, Public Health, Theological Training (preparation for), Zoology.

2. **Specialized curricula of five or more years**—The following specialized curricula are offered in the College of Science, Literature, and the Arts:

Public Administration—A six-year course leading to the degree of bachelor of arts or bachelor of science and the degree of master of arts in public administration.

Diplomatic and Consular Service—A five-year course leading to the degree of bachelor of arts and the degree of master of arts.

Social Work—A six-year course leading to the degree of bachelor of arts, a special certificate, and the degree of master of arts.

3. **Combined arts and professional courses**—

Arts and Medicine—An eight-year course leading to the degrees of bachelor of arts and doctor of medicine.

Arts and Law—A seven-year course leading to the degrees of bachelor of arts and bachelor of laws.

Arts and Dentistry—A seven-year course leading to the degrees of bachelor of arts and doctor of dental surgery.

Arts and Dental Hygiene—A four-year course leading to the degrees of graduate dental hygienist and bachelor of arts.

Arts and Architecture—A six-year course in Arts and Architecture leading to the degrees of bachelor of arts and bachelor of architecture.

4. **Preprofessional training.**—In this college is given also the academic work required for admission to the Medical School, Law School, School of Dentistry, School of Business Administration, and College of Education; and also the courses preliminary to (1) nursing education and public health nursing in the College of Education and in the Medical School, and (2) training for medical technologists in the Medical School.

5. **A two-year course leading to the degree of associate in liberal arts**—This two-year course is (1) for those who know in advance that they will be in college for only two years; (2) for those who begin college as candidates for a degree in a four-year or longer course of study and find out later that they want formal recognition for the completion of a shorter course. The course of study is elective under certain broad limitations. With the aid and approval of their adviser, students may choose their courses from the many subjects of study offered by the college to freshmen and sophomores. The only specific requirements are these: (1) normally the work must be completed in six or seven quarters of residence; (2) the student must meet requirements in English and in at least two of these three groups of subjects: foreign languages, social sciences, and natural sciences.

6. **The college welcomes students who have definite intellectual interests but who do not expect to graduate or enter one of the professional schools.** Such students may continue in college as long as they maintain a satisfactory standing in the studies they elect.

INSTITUTE OF TECHNOLOGY

The Institute of Technology embraces the College of Engineering and Architecture, the School of Chemistry, and the School of Mines and Metallurgy.

The College of Engineering and Architecture offers professional courses of study in: Aeronautical, Civil, Electrical, and Mechanical Engineering; Engineering Prebusiness, Engineering and Business Administration (5 years), and Architecture. Agricultural Engineering is offered in co-operation with the College of Agriculture, Forestry, and Home Economics. The School of Chemistry offers professional courses of study in Chemistry, Chemical Engineering, and Physics; Chemistry or Chemical Engineering and Business Administration (5 years).

The School of Mines and Metallurgy offers professional four-year courses of study in Mining Engineering, Geological Engineering, Petroleum Engineering, and Metallurgical Engineering.

Technical Aide Curricula—Two-year course leading to Technical Aide certificate to prepare men for subprofessional positions in practical applied technical work in industry, in the contracting and construction field, public works, and in engineering offices. Courses are offered in the following fields: Draftsman, Maintenance and Operation, Production, General Construction, Chemical Analyst.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

The College of Agriculture, Forestry, and Home Economics offers (a) four-year courses in the fields of agriculture, forestry, and home economics, leading to the bachelor of science or equivalent degree, and (b) five-year curricula as follows:

Agriculture—Five-year curriculum (with College of Education) in Agricultural Education leading to the degree of master of education.

Five-year curriculum in Agricultural Technology leading to the degree of agricultural technologist.

Forestry—Five-year professional curricula in General Forestry, Range Management, and Game Management, leading to the degree of master of forestry.

Home Economics—Five-year curriculum (with College of Education) in Home Economics Education leading to the degree of master of education.

ALL-COLLEGE

Four-Year Curricula

Food Technology

Wildlife Management

Science Specialization

AGRICULTURE

Four-Year Curricula

Technical Agriculture

Agricultural Engineering

Pre-theological "major" in agriculture

Agricultural Business Administration

Agricultural Education

Agricultural Journalism

Agricultural Extension

Rural Education

Five-Year Curricula

Agricultural Education—leading to the degree of master of education

Agricultural Engineering Business Administration—leading to the degrees of bachelor of agricultural engineering and bachelor of business administration

Agricultural Technology—leading to the degree of agricultural technologist

One-Year Preprofessional Curriculum

Pre-veterinary Medicine

FORESTRY

Four-Year Technological Curricula

Lumber Merchandising and Construction

Wood Technology

Five-Year Curricula

General Forestry

Game Management

Range Management

HOME ECONOMICS

Four-Year Curricula

General Home Economics

Institution Management

Dietetics

Home Economics and Nursery School Education

Home Economics Education

Home Economics Extension

Home Economics in Business

Preparation for research in (a) Experimental Foods, (b) Nutrition, (c) Textiles and Clothing

Five-Year Curriculum

Home Economics Education—leading to the degree of master of education

COLLEGE OF EDUCATION

The satisfactory completion of a four-year course as outlined in the College of Education Bulletin leads to the bachelor of science degree and to a certificate for school work from the Minnesota State Department of Education.

Some of the courses of study prepare the student for high school teaching in an academic subject, such as English, Latin, French, German, history, mathematics, and

Spanish, or in one of the special subjects such as agriculture, art, business education, home economics, industrial arts, physical education, health subjects, or music. Some courses of study are outlined not for a one-subject major but for a broad field of specialization, such as natural science, or social studies including history. Other courses of study entitle the graduate to the kindergarten-primary certificate, or to the elementary school or junior high school certificate, with preparation for positions in nursery schools, kindergartens, elementary schools, and junior high schools. There are also four- or five-year courses of study for school librarians, for teachers of subnormal children, for teachers of speech correction, and for those interested in public school health work, public health nursing, nursing education, or recreational leadership.

There are, in addition, five-year courses of study offered by the College of Education leading to the master of education degree in physical education for men, in physical education for women, in art education, in music education, in industrial education, in home economics education, in agricultural education, and in rural education.

GENERAL COLLEGE

The General College is a new departure in education. Basically it provides a two-year curriculum of general education leading to the degree of associate in arts. A broad program of courses is available from which the individual student, under guidance, plans his own curriculum. General education aims essentially to produce well-rounded individuals who will be able to meet and understand the variety of common activities and problems encountered in the business of earning a living, as a member of a home and family group, as an individual consciously or unconsciously seeking numerous personal values, and as a citizen of a community, a state, a nation, and a world.

Although the primary purpose of courses in the General College is to provide a broad and basic general education, some of the courses, in combination with those selected from other departments, provide a good preparation for certain occupational areas which do not necessarily require professional training.

The two-year degree, associate in arts, is granted upon the passing of four comprehensive examinations and the earning of 90 academic credits. Eligibility for transfer to other colleges is determined by the scope and quality of work done in this college. The evaluation of credits accepted for transfer is in the hands of the college to which transfer is requested.

Provision is made for the counseling and guidance of individual students as this is needed in connection with personal, educational, or vocational problems. A carefully developed testing program aids in determining individual needs, interests, and abilities. The satisfaction of these, through a carefully planned program of courses and extracurricular activities, is worked out with college counselors and program advisers. The counselors and instructors of the General College are available at all times to help students with their many problems and questions, in order that their university study may be made interesting, valuable, and meaningful.

SCHOOL OF NURSING

Curricula offered by the School of Nursing include: (1) Four and one-half year course (18 quarters) leading to degrees of bachelor of science and graduate in nursing. The first five quarters in this course may be spent in any approved college or university where the required biological science, social science, and cultural courses fundamental to nursing are available. The next ten quarters are spent in the School of Nursing and the last three quarters in the School of Public Health or College of Education depending upon the student's objective.

(2) Two and one-half year course for college graduates leading to the degree of graduate in nursing.

(3) Three-year course for high school graduates leading to the degree of graduate in nursing.

(4) Short courses in various fields to meet the needs of returning veteran nurses.

(5) Curricula for graduate nurses. Most of these courses are nine months in length. Graduates of accredited schools of nursing with one year of successful experience who have had psychology and sociology or a year of college work with a "C" average are eligible.

COLLEGE OF PHARMACY

The College of Pharmacy offers one undergraduate course of four years' duration leading to the degree bachelor of science in pharmacy. This course includes one year of work in certain subjects in the College of Science, Literature, and the Arts, or other colleges of equal standing.

COURSE FOR DENTAL HYGIENISTS

The Course for Dental Hygienists is offered by the School of Dentistry. Admission is based upon the completion of a four-year high school course or its equivalent. It offers to young women a two-year university course leading to the degree of graduate dental hygienist.

CREATIVE ARTS

Courses in the practical arts—painting, drawing, sculpture, architecture, industrial and related arts—as well as their history and theory are given by several different colleges of the University. These may be taken for general educational purposes to broaden the student's background and experience in the cultural fields, as well as for direct vocational preparation in one or more of these arts.

The professional training of architects is provided by various curricula in the School of Architecture. Practical studio courses for the training of creative artists may be had in the departments of Art Education, Drawing and Descriptive Geometry, General College, and the School of Architecture. Curricula for the training of teachers of art, design, and the handicrafts are provided by the Department of Art Education. Practical and theoretical work in the arts of the home—home furnishing, clothing and textiles—is offered by the Department of Home Economics. Curricula for the training of art students in museum and library work are available through the Department of Fine Arts.

RADIO WORK

A student may undertake training for radio work at the University of Minnesota by any one of four main avenues (advisers in the several divisions offering radio courses will aid him in planning his program) :

1. By a major in the Department of Speech, College of Science, Literature, and the Arts, if he is interested principally in radio announcing, acting and production, radio speech, and the writing of dramatic scripts.
2. By a major in the School of Journalism, College of Science, Literature, and the Arts, if his interest is in the writing and presentation of radio news, radio advertising, radio script and continuity writing, or in radio salesmanship.
3. By a major in the College of Education if his interest is principally in the school use of radio.
4. By a major in the Institute of Technology if his interest is principally in radio engineering.

Courses Not Open to Freshmen

MEDICAL SCHOOL

The Medical School offers four principal courses; one for physicians, one for nurses, one for public health nurses, and one for medical technologists.

The Medical Course proper leads to the degree of doctor of medicine, and the usual career of graduates is the practice of medicine.

Altho three years of college work will constitute the minimum requirement for admission to the Medical School, a physician should have a thoro and broad education. Hence, students are advised to take four years of college work before beginning the medical course; and, other qualifications being approximately equal, the Admissions Committee will give preference to those applicants who have had the better educational background. (See Medical School Bulletin for details of entrance requirements and for suggestions for elective studies.) Four years in the Medical School and one year internship are required for the degree.

The School of Nursing—See page 18.

Public Health Nursing—Courses in public health nursing are conducted in the Medical School under the direction of the School of Public Health. Graduate nurses who are eligible and seniors in the five-year nursing course may secure the degree of bachelor of science with a major in public health nursing. Graduate courses in public health leading to a Master's degree are also available for qualified public health nurses. Students who are interested should ask the director of admissions and records for application blanks and should direct special inquiry to the Director, Public Health Nursing Course, 121 Millard Hall, University of Minnesota, Minneapolis 14, Minnesota.

The Course in Medical Technology is a four-year course and leads to the degree of bachelor of science. The first two years are spent in the College of Science, Literature, and the Arts. At the beginning of the third year the student enrolls for the course in the Medical School and completes all theoretical work. The entire fourth year is spent in a practical rotating laboratory service in the University of Minnesota Hospitals and affiliated laboratories. An additional six months for training in X-ray technique may be elected by the student.

The Course in Physical Therapy—See special bulletin of the Division of Physical Therapy for the course outline of the four-year program for physical therapists.

The Course in Applied Mortuary Science—See the Bulletin of the Course in Applied Mortuary Science. Much of this course is given in the Medical School under the administration of the General Extension Division.

Short courses for physicians are offered throughout the year by the medical faculty and other specialists under the administration of the General Extension Division and the Center for Continuation Study.

SCHOOL OF BUSINESS ADMINISTRATION

The School of Business Administration offers a two-year course leading to the degree of bachelor of business administration. This course requires as a prerequisite the completion of two years of work in the College of Science, Literature, and the Arts, the Institute of Technology, or the College of Agriculture, Forestry, and Home Economics in which certain prebusiness courses are prescribed.

For those whose time is more limited, a certificate in business administration is available after three years of work in a prescribed curriculum in pre-business and in the School of Business Administration.

In addition to the general courses in business, several specialized sequences are offered. Among them are courses in Accounting, Advertising, Agricultural Business, Depart-

ment Store Training, Finance, Foreign Trade, Industrial Administration, Industrial Management, Insurance, Merchandising, Office Management, Personnel Management, Secretarial Training, and Traffic and Transportation.

Two special sequences in the fields of economics and statistics leading to the degree bachelor of science in economics are offered in the School of Business Administration. These sequences aim to meet a demand for economic analysts and statisticians both in the government service and private industry.

Five-year combined courses in the Institute of Technology and the School of Business Administration are available for students preparing for administrative positions in industrial establishments that require technical training in both engineering and business. A student is enabled to obtain degrees in both engineering and business administration upon satisfactorily completing one of the five-year curricula as approved by the official advisers of the School of Business Administration and the Institute of Technology.

A five-year combined program in Pharmacy and Business Administration is available for students who are preparing for administrative positions in pharmaceutical or certain types of chemical plants. This course also affords training for those planning to enter a wholesale or retail pharmacy business.

A seven-year combined curriculum in Business Administration and Law offers training for several types of positions which require a knowledge in these two fields. These positions are found in certain types of law practice which involve appearance before governmental administrative boards and commissions and also in administrative positions in corporations which are subject to governmental regulation.

SCHOOL OF DENTISTRY

The School of Dentistry offers two principal courses—a four-year course for dentists and a two-year course for dental hygienists.

The course in dentistry leads to the degree of doctor of dental surgery and prepares graduates to engage in the practice of dentistry. The minimum requirement for admission to the Dental School is the successful completion of two full academic years of work in an accredited college of liberal arts and sciences. College courses must include at least one year's course in English, Biology, Physics and in Inorganic Chemistry and one and a half years' credit in Organic Chemistry. All courses in sciences must include both lecture and laboratory instruction.

After graduation a dentist secures a license to practice by passing the State Board Dental Examination required by the state in which he desires to locate.

LAW SCHOOL

The Law School offers courses leading to the degree of bachelor of science in law and the degree of bachelor of laws.

The course for the degree of bachelor of science in law is two years. To be admitted as a candidate for this degree a student must have completed two years (90 quarter, 60 semester credits) of college work, with the requisite honor points (see Admission). The college work is elective. No foreign language is required. The prebusiness course in this University will satisfy the college requirement. The law work may be either the regular first two years of the professional course, or selected law work for those who wish training only for business purposes. The degree of bachelor of science in law is conferred upon those candidates who maintain an average of at least 70 in the work of each of the two years in the Law School. This degree does not qualify for admission to the bar, but students who have completed this course may go on to the bachelor of laws degree upon the conditions stated below.

The course for the degree of bachelor of laws—the professional degree required for practice—requires two additional years of study in the Law School. To be admitted as a

candidate for this degree, a student must have completed the college work required for the degree of bachelor of science in law, *including*, except for students who have a college degree when they begin the study of law, *the subjects specified in the prelaw course* (see the Bulletin of the College of Science, Literature, and the Arts or the Bulletin of the Law School), or substitutes approved by the dean of the Law School, and must also have completed the two years of law work required for the degree of bachelor of science in law with an average of not less than 75 in one of these two years, or of not less than 73 for all the work of these two years combined. The additional two years of study are devoted to advanced courses in law, including practice, pleading, evidence, judicial administration, administrative law, jurisprudence, and legislation. About half of the work of these two years is prescribed; the remainder is elective. Students are permitted to take some work in other departments of the University. Advanced courses in political science and economics are especially recommended.

Students who have a bachelor of arts or equivalent degree when they enter the Law School may qualify for the bachelor of laws degree in three years.

DIVISION OF LIBRARY INSTRUCTION

The Division of Library Instruction offers a full year of professional education in librarianship for college graduates and properly qualified students of senior standing, leading to the degree of bachelor of science. Students electing work in the division are registered in the College of Science, Literature, and the Arts, the College of Education, or the University College, and certain courses are accepted for credit in the School of Business Administration and the College of Agriculture, Forestry, and Home Economics.

UNIVERSITY COLLEGE

Any undergraduate student who is unable to find in any of the curricula of the colleges a program of study suited to his special intellectual interests or professional aims may, with the advice and approval of the University College Committee, arrange a course of study best adapted to his needs. Any course offered in the University may be drawn upon in making up such a program. The satisfactory completion of an approved curriculum entitles the student to the degree of bachelor of arts or bachelor of science.

Students who believe their needs are best served by registration in the University College should apply at the University College office in the Physics Building.

GRADUATE SCHOOL

The Graduate School gathers into a single organization and unites for the purpose of administration all the activities of the University in all its schools and colleges in so far as they relate to advanced instruction offered for the second or higher degrees, namely, master of arts, master of science, master of business administration, electrical engineer, mechanical engineer, civil engineer, chemical engineer, and doctor of philosophy. The privileges of this school are in general open to all who have received Bachelor's degrees from accredited colleges and universities, based on courses substantially equivalent to those at this University.

Inquiries concerning graduate work should be addressed to the dean of the Graduate School, University of Minnesota, Minneapolis 14, Minnesota.

Other Study Opportunities of the University

UNIVERSITY SUMMER SESSION

The University Summer Session is organized for two terms, one of six weeks and one of five weeks, from June to September, as a regular part of the University. Courses in the Colleges of Science, Literature, and the Arts, Agriculture, Forestry, and Home

Economics, and Education, the Institute of Technology, the Schools of Medicine, Nursing, Dentistry, and Business Administration, the Institute of Child Welfare, the Division of Library Instruction, and the Departments of Physical Education are offered.

GENERAL EXTENSION DIVISION

The General Extension Division conducts late afternoon and evening extension classes in the Twin Cities, Duluth, and in some other communities for those who are employed during the usual working hours and are, therefore, not able to attend the regular day classes of the University. It also conducts correspondence study courses which are available to anyone no matter where he may live. These classes and correspondence study courses cover a wide range of subjects, representing the offerings of the various colleges, schools, and divisions of the University.

MILITARY SCIENCE AND TACTICS

Courses in Military Science and Tactics as given in the Reserve Officers' Training Corps are divided into two sections: the Basic Course of two years which is open as an elective subject to any physically qualified male student who is a United States citizen, and the Advanced Course of two years which is open to selected applicants who have completed the Basic Course, or who have completed over one year's active service in the Army, Navy, Marines, or Coast Guard. At the completion of the Advanced Course, the student, if recommended by the professor of military science and tactics and the president of the University, receives a commission in the Officers' Reserve Corps.

The Basic Course offers two years of general military training designed to give the student a background which will be of value to him in any branch of the service when inducted into the Army. The work not only will make the individual a more valuable soldier but will benefit him individually. The course consists of two hours of lecture or range work and one hour of drill per week, for which one credit per quarter is given. These credits may be counted toward any degree offered by the University. Students are loaned a complete uniform (including overcoat) without charge during their period of enrolment.

The Advanced Course offers two years of training leading to a commission in a branch of the Officers' Reserve Corps. The course consists of five hours' instruction per week covering, during the first year, subjects common to two or more arms of services of the Army and, during the second year, subjects peculiar to a particular arm or service. Three credits per quarter are given which may be counted toward any degree offered by the University. Certain other emoluments accrue to students pursuing the course, chief of which are the payment of commutation of subsistence and the furnishing of a complete officer-type uniform. All benefits received from the course by veterans are in addition to any being received under the G.I. Bill of Rights.

Further information on Military Science and Tactics Courses may be obtained from the Military Science office in the Armory.

NAVAL SCIENCE AND TACTICS

The Naval Reserve Officers' Training Corps program for peacetime had not been definitely decided upon at the time this bulletin went to press. Presently enrolled NROTC students will pursue to completion the curriculum as outlined by the Navy Department.

A student who completes the course satisfactorily is eligible for a commission as Ensign, United States Naval Reserve, provided he is recommended to the Bureau of Naval Personnel by the professor of Naval Science and Tactics and passes the prescribed physical examination.

Upon reporting for active duty as Ensign an NROTC graduate may make application for a regular commission, the same as held by graduates of the United States Naval Academy at Annapolis, Maryland. The attainment of this commission requires that the applicant complete twelve consecutive months of active duty, be able to serve 25 years in the Navy before the age of 64, and be recommended by his commanding officer.

Normally, cruises in naval vessels are held during the summer months of each year. As a prerequisite to a commission, a cruise is required of all students upon the completion of the third year of the course unless waived by the Bureau of Personnel.

All newly enrolled NROTC students will pursue curricula prescribed by the University for their respective degrees and in addition will be required to take the following courses under the Department of Naval Science and Tactics. Procedures for new enrollees in the program had not been decided upon when this bulletin went to press.

Curricula for new enrollees will be:

Year	Course	Subject	Hours
1	NS1(I, II, III)	Naval History, Seamanship and Damage Control	9
2	NS2(I, II, III)	Ordnance, Fire Control and Aviation	9
3	NS3(I, II, III)	Naval Engineering	9
3	NS4(I, II, III)	Navigation and Ship Control	9
4	NS5(I, II, III)	Communication and Tactics	9
4	NS6(I, II, III)	Naval Administration and Seminar	9

Further information as to enrolment in the NROTC program may be obtained by calling at the office of the Navy Training Unit located in the Armory or by letter addressed as follows: Professor of Naval Science and Tactics, University of Minnesota, Minneapolis 14, Minnesota.

Regulations Governing Granting of Degrees

The Board of Regents will confer the degree appropriate to the course pursued under the following conditions:

1. **Curriculum requirements**—Certification by the recorder of the completion of all requirements of the course of study as outlined in the college announcement, or its equivalent as determined by the faculty of the college offering the course.

2. **Recommendation of the faculty.**

3. **Residence requirement**—The student must earn at least one year's credit in residence in this University. If the term of residence is only one year, that year must be the senior year; and in any case he must spend two quarters of the senior year in residence. This last requirement may be waived under such rules as may be established by each college for such exemptions. In addition, special residence requirements must be met in several of the schools and colleges. Extension courses (not correspondence study courses) completed in Minneapolis, St. Paul, or Duluth may apply toward the residence requirement. Work done on the campus of the University of Minnesota in Armed Forces College Training Programs is considered residence credit.

4. **Payment or satisfactory arrangement of all financial obligations** due the University.

5. **Attendance at commencement**—A candidate for a degree is required to be present at the commencement exercises at which his degree is conferred provided the candidate's work is completed at the end of a quarter when such exercises are held.

A student who fails to attend shall not receive his diploma until the expiration of one year, unless in the meantime he attends commencement exercises or unless he is excused from such attendance by the dean of the college and the president of the University.

EXPENSES

Whether his expenses are met partly by his parents or on the basis of his own earnings, every student will want to know his probable expenses while attending the University. Expenses vary greatly, depending on the type of course taken and the needs and tastes of the students. The following information can be presented only in averages and generalities. In planning his budget, each student should adapt the following information to his own situation.

ESTIMATED AVERAGE EXPENSES FOR A YEAR AT THE UNIVERSITY OF MINNESOTA

	S., L., A., Education, Ag., F., & H.E., General, P.H.	Bus. Adm., I. of T., Grad.	Law, Med. T., Phys. Ther., Library, X-ray Tech.	Dent.	Dent. Hyg.	Med.	Phar- macy	Nurs- ing
¶ Tuition	\$ 75.00	\$ 96.00	\$126.00	\$ 195.00	\$ 81.00	\$ 231.00	\$111.00	\$ 90.00
Incidental fee	28.95	28.95††	28.95	28.95	28.95	28.95	28.95	9.65
Matriculation deposit..	10.00	10.00‡	10.00	10.00	10.00	10.00	10.00	10.00
Course fees	6.00	6.00	6.00	3.00	9.00	6.00	6.00	8.00†††
Laundry	60.00	60.00	60.00	60.00	60.00	60.00	60.00	20.00
Room rent	150.00	150.00	150.00	150.00	150.00	150.00	150.00	50.00
Board	360.00	360.00	360.00	360.00	360.00	360.00	360.00	120.00
Books and instruments	45.00	45.00††	45.00††	218.00*	50.00†	220.00‡	45.00	45.00
Total	\$734.95	\$755.95	\$785.95	\$1,024.95	\$748.95	\$1,065.95	\$770.95	\$352.65

* Of this amount \$170 is for instruments.

† Of this amount \$18 is for instruments.

‡ Of this amount \$175 is for a microscope.

†† Institute of Technology: incidental fee \$30.15, books \$60.

††† Books for Law School, \$45

†††† Transportation fee, \$8.

‡ Matriculation deposit for the Graduate School is \$3.

¶ This is the tuition charge for a resident of the state of Minnesota. For additional charges for nonresident tuition see nonresident fees, page 30.

All above expenses are comparatively fixed and unavoidable; the real difference in the costs of a year at the University are to be found in the amounts expended for living. Living expenses include maintenance, laundry, clothes, recreation, and other incidentals. Some of these are not included in the above table because they are determined entirely by the individual's tastes and interests and the amount of his resources.

For students who do not live at home or with relatives, the major expense while attending the University will be for room and board; and here there is considerable variation. Out-of-town students live in university dormitories, co-operative cottages, sorority or fraternity houses, a small number in apartments, and the majority in rooming houses near the campus. A few rent rooms with housekeeping privileges and prepare their own meals. At present, rooming house rentals for double rooms range from \$12.50 to \$20 per month for each student while single rooms, somewhat more expensive, are from \$15 to \$28 per month. Students should select and will benefit by selecting rooms that have been inspected and approved by the University. The director of student housing will assist any student in finding suitable quarters.

UNIVERSITY SERVICES TO STUDENTS

PERSONNEL AIDS

In making adjustments to college life many students desire or need assistance with regard to finances, study habits, choice of a vocation, selection of subjects, health and social adjustments. It is obvious that one person may have several of these kinds of problems at the same time and that one kind of problem such as health, may be the cause

of the others. Students who wish counsel on different personal problems or need direction to the proper service should go to the office of the dean of students, 213 Administration Building, or to the Student Counseling Bureau, 101 Eddy Hall.

SPEECH CLINIC

Students desiring help in the correction of speech deviations should register in the Speech Clinic, located in 411 Folwell Hall. Stuttering, sound substitutions, lisping, foreign accent, voice deviations, deafened speech, and oral inaccuracy are the various types of defects corrected by speech clinicians. Because speech defects are often a handicap to successful college life and also in some vocations, students are invited to seek clinical aid upon entrance to the University. A small fee is charged for these services. Left-handed students whose writing is awkward or lacking in correct slant may receive writing lessons in the clinic.

STUDENTS' HEALTH SERVICE

Through the Students' Health Service the University makes available to students medical care, medical examinations, and health consultations. General service is provided free of charge, but for services which are specialized and individual in character, such as dentistry, X ray, board and laundry in the student hospital, outpatient calls, minor surgery, etc., special fees are charged. No student, however, will be denied service because of inability to pay these fees. Major surgical operations or prolonged medical care ordinarily are secured through private physicians selected by the students or their families, but, if necessary, operations may be arranged through the Students' Health Service upon the established basis.

CULTURAL AND RECREATIONAL FACILITIES

University Library—The Library Building on the Mall of the Main campus houses a collection of well over a million volumes available for use. In addition there are more than 250,000 volumes in the Law Library, the Agricultural Library on the Agricultural campus, in the branch libraries of Chemistry, Engineering, Mines and Metallurgy, of the Institute of Technology, the Geology Library, the University High School, and the smaller work collections in many important departmental offices where texts specifically applying to their work have been placed for greater convenience.

Convocations—At eleven-thirty each Thursday morning, except for holidays and examination periods, an established authority on some subject of general interest is presented at Northrop Memorial Auditorium to students, staff, and faculty members of the University of Minnesota. Not only do they offer a liberal education in adventure, art, foreign news, music and dance, science, and world affairs, but they are at the same time highly entertaining. All classes are dismissed for convocation hour and the library is closed. It is intended that students, staff, and faculty attend these convocations. The general public is likewise invited. The convocations are always preceded by an organ recital. Both the organ recital and the convocation address are broadcast over KUOM.

University Gallery—The gallery is located on the third and fourth floors of Northrop Auditorium where new and varied exhibitions are presented for students as well as for the general public.

The University's permanent collection of art works is shown in classrooms, offices, and corridors on the campus.

In Room 308 current art magazines, books on various art subjects, and pictorial material are available to those who wish to use them there.

Music—The University is proud to be the home of the Minneapolis Symphony Orchestra of which Mr. Dimitri Mitropoulos is the conductor. Regular concerts are held throughout the college year. The office of the Symphony Orchestra is in Room 110 Northrop Memorial Auditorium.

The University regularly brings to the campus internationally known artists for independent concerts including a regular series, known as the University Artists Course. Season tickets may be purchased for this series of concerts at an exceptionally reasonable price. The office is located in Room 109 Northrop Memorial Auditorium.

The Department of Music maintains a large student band with both concert and marching divisions composed of students with either a professional or recreational interest in band membership. The University Band office is in Room 12 Northrop Memorial Auditorium.

The Department of Music has organized and directs a student symphony orchestra for those students interested in orchestral experience. The Student Symphony office is in Room 107 Music Building.

The Department of Music also maintains a large mixed chorus which gives public performances of chosen operettas each year. The more proficient sections of the chorus present additional short programs at frequent intervals. The office of the University Chorus is in Room 107 Music Building.

Theater—The University Theater is operated through the Department of Speech. Participation is open to all students interested in dramatics. Each school year a number of selected stage plays are presented. The University Theater office is in Room 210 Northrop Auditorium, the ticket office is in Room 110 Music Building.

At weekly intervals throughout the college year the best visual information on current events is presented by the University Newsreel Theater in the Ballroom, Coffman Memorial Union.

Museums—One of the finest collections of animal and plant life of the Northwest is now offered to the public in the Minnesota Museum of Natural History located at the corner of 17th and University Avenues Southeast.

Under the direction of the respective departments numerous displays and collections are available for examination by both the public and students. These collections include rare books in the University Library, and displays of scientific and technical interest located in various departments.

Physical education, athletics, and sports—A wide program of sports, dance, aquatics, conditioning exercises, gymnastics, and recreational activities has its headquarters in the Norris Gymnasium for Women. The instruction program is based upon an activity guidance plan in which each woman student is helped to plan her own program in terms of her interests, needs, and health status. The Women's Athletic Association, which is open to all registered women students, is a student-run organization under the sponsorship of the Department of Physical Education for Women. The program offers a wide variety of recreational activities, individual and team sports, including an extensive intramural schedule, and an opportunity for club participation in such activities as aquatics, dancing, and riding where special skill is a basis for membership. Facilities and equipment are available for use every afternoon and certain evenings. Expert leadership is provided for this voluntary participation program.

An extensive plan of physical education and athletics is available for men students. In addition to the regular varsity sports scheduled each year, a broad program of intramural athletics is carried on. Cooke Hall, the Memorial Stadium, and the Field House are occupied by these activities. Besides the several gymnasiums there are two swimming pools, numerous handball and squash courts, as well as the large indoor playing space of the Field House. The outdoor playing fields, the 18-hole university golf course, and tennis courts are under the direction of this department.

General social program—The center of much of the student social program is in the Coffman Memorial Union where an active and varied social program under the direction of a full-time social consultant is always in progress. The Union building has numerous meeting rooms for student groups, general lounges, two ballrooms, billiard and

pool tables, as well as a 16-lane bowling alley. The Farm Union, located on the Agricultural campus, offers similar activities for students on that campus.

It has been the policy of the University to encourage the organization of student groups in all departments and colleges. At the present time over two hundred student organizations exist and carry on a professional or social program on the campus. All student groups are under the general supervision of the office of the dean of students both as to program and finance. In each instance some interested faculty member serves as an adviser to the group and its officers. Information regarding these student organizations may be secured from the Student Activities Bureau in the office of the dean of students, 213 Administration Building.

FINANCIAL AIDS

Student employment—Any student who wishes to earn money to help finance his educational program should report to Room 17 Administration Building, where the Employment Bureau maintains a file of available part-time and full-time jobs on the University campus and in the Twin Cities. All students must apply in person before being considered for any vacancy. Upon arrival at the University, the student should report to the Employment Bureau to file his application as to his need, work experience, preference in work, course of training selected, class schedule, and other related information. In order to remain active these applications must, at all times, be kept up to date with such necessary information as post-office box, local address, and class schedule.

Student loans—The University of Minnesota has numerous loan funds. They are restricted in their distribution to individuals meeting certain requirements. A loan usually cannot be obtained before two quarters of attendance at the University, during which time the student will have the opportunity to demonstrate his ability and integrity. The only security for the loans made to students is the character of the applicant and his ability to do college work. Application for loans may be made to the Bureau of Student Loans and Scholarships, 207 Eddy Hall, a department under the office of the dean of students.

Merit awards for students—Merit awards giving financial assistance for the undergraduate comprise scholarships and prizes which are usually cash awards allowed in recognition of outstanding scholastic achievement or ability. There are very few scholarships available to beginning freshmen in the University and the majority are restricted to students in the junior and senior years. In addition to cash prizes there are a number of trophies and medals awarded each year to the winners in competitions or in recognition of some unusual achievement. Application for merit awards may be made to the offices of the deans of the colleges and the Bureau of Student Loans and Scholarships.

Assistantships and fellowships—A number of assistantships and fellowships are provided for selected graduate students in the different departments. For information, inquiry may be made to the Bureau of Loans and Scholarships, to the Employment Bureau, or to the dean of the Graduate School or the dean of the college concerned.

Special financial aids—Under state law, "Any resident who has graduated from the School for the Blind upon compliance with all other requirements shall be entitled to pursue any course of study in the State University without expense for tuition." The Board of Regents of the University has in addition authorized the admission without tuition of blind students who are residents of the states of Minnesota and North Dakota for instruction in courses which they are qualified to receive. Such students, however, are required to pay incidental and special course fees in the same way as other students.

Certain funds are available for the rehabilitation of disabled persons through the State Department of Education, Division of Vocational Rehabilitation. Application for aid should be submitted to the Division of Vocational Rehabilitation, State Office Building, St. Paul 1, Minnesota.

HOUSING FACILITIES

A common problem to all students who leave home to attend college is that of living arrangements. The University of Minnesota has made the housing and feeding of out-of-town students one of its major concerns. It maintains dormitories and co-operative cottages, operates food services, and has a director of student housing who directs students to approved quarters.

Housing Regulations—

1. Students, whether graduates or undergraduates, while attending the University must have their places of residence approved by the director of the Student Housing Bureau in the office of the dean of students. This includes all apartments, private dwellings, and other residences.
2. A room is engaged for a complete quarter unless otherwise specifically arranged with the householder, payments to be made the first, fourth, and seventh weeks of the quarter. A copy of special arrangements should be filed with the director of the Student Housing Bureau.
3. To reserve a room, each student shall pay a deposit fee of ten dollars (\$10), to the householder. This payment should be acknowledged by a receipt.
4. Notice must be given at least ten days before the close of a quarter if a student wishes to move at the end of the quarter. However, if a student withdraws from the University for any reason, he may terminate the written or verbal contract by giving one week's notice *in writing*.
5. Each student may be required to furnish bed linen, towels, soap, and one blanket.
6. Men and women students may not room in the same house.
7. Disputes which cannot be satisfactorily settled by the student and householder should be referred to the director of the Student Housing Bureau.

Housing for women—In addition to the facilities maintained by the University, there are numerous private rooming houses and sorority houses for women students. All of these are inspected and must meet the standards of operation set by the University before residence in them is approved. For further information and a list of approved residences near the Main campus, write to the Director of Student Housing, Room 230, Northrop Auditorium, University of Minnesota, Minneapolis 14, Minnesota. Students desiring accommodations near the Agricultural campus should write to the Student Housing Bureau, Room 204, Administration Building, University Farm, St. Paul 8, Minnesota.

Housing for men—Approved private dwellings are available for men residents. These also must meet standards set by the University. For further information and a list of approved residences near the Main campus, write to the Director of Student Housing, Room 230, Northrop Auditorium, University of Minnesota, Minneapolis 14, Minnesota. Students desiring accommodations near the Agricultural campus should write to the Student Housing Bureau, Room 204, Administration Building, University Farm, St. Paul 8, Minnesota.

Food services for students—Most of the university dormitories operate dining rooms for their residents. In addition, there are four food services in the Coffman Memorial Union. A large cafeteria and grill are located on the basement level. In the west wing a soda fountain and luncheon grill are open at all hours of the day. For the benefit of those students living in the Twin Cities there is a "commuter" lunchroom in the Union to which they may bring their lunches and obtain a hot dish and beverages if they desire. On the Agricultural campus, there is a large cafeteria operated for the convenience of individuals on that campus. Light lunches and commuters' dining service are available at the Farm Union located in the Old Dairy Hall building.

UNIVERSITY FEES

The university year, extending from October to June is divided into three terms called quarters. On the specified dates (see Calendar, pp. 4-5) prior to the opening of each quarter, the following fees are due from each student: (a) tuition, (b) incidental, and (c) such special fees and deposits as may be required.

TUITION FEES

School or College†	Quarter Fee		Credit Hour Fee*	
	Resident	Nonresident	Resident	Nonresident
General College	\$25.00	\$56.00	\$2.25	\$4.75
Science, Literature, and the Arts	25.00	56.00	2.25	4.75
Agriculture, Forestry, and Home Economics	25.00	56.00	2.25	4.75
Public Health	25.00	56.00	2.25	4.75
Education	25.00	56.00	2.25	4.75
Graduate School‡‡	32.00	56.00	2.75	4.75
Institute of Technology	32.00	60.00	2.75	5.00
Law School	42.00	71.00	3.50	6.00
Medical School and Clinical Graduate Work	77.00	150.00	6.50	12.50
Medical Technology, X-ray Technology.....	42.00	64.00	3.50	5.50
Physical Therapy	42.00	64.00	3.50	5.50
Dentistry	65.00	108.00	5.50	9.00
Dental Hygiene	27.00	56.00	2.25	4.75
Pharmacy	37.00	60.00	3.25	5.00
Business Administration	32.00	56.00	2.75	4.75
Library Instruction	42.00	56.00	3.50	4.75
University College	Tuition of college in which work is taken			

Nursing—Tuition (1st quarter) \$50 for both residents and nonresidents; (2nd through 10th quarters) \$20 for both residents and nonresidents; (11th, 12th, and postgraduates) no fee. All students in the School of Nursing pay the full quarterly tuition rate. Students repeating courses of the 1st quarter will be considered as attending 2nd quarter for fee purposes.

Psychiatric Nursing—Tuition \$100 a quarter for both residents and nonresidents; \$9.65 incidental fee for 1st quarter only.

INCIDENTAL FEE

An incidental fee of \$9.65 a quarter is charged each student for the privileges of the Coffman Memorial Union, the Health Service, the Speech Clinic, the Student Counseling Bureau, the *Minnesota Daily*, including the Official Daily Bulletin, the university post-office service, and the *University Address Book*. Students in the Institute of Technology pay \$10.05 per quarter and receive the *Minnesota Technologist* in addition.

All students who are registered for five credits or more in any quarter are required to pay the incidental fee; while students who are registered for less than five credits in any quarter are not charged nor permitted to pay this fee.

* Students carrying less than the complete schedule of work may pay fees on a credit hour basis.

† All fellows, scholars, assistants, instructors, research associates, and members of the teaching staff and scientific bureaus and experiment stations giving 25 per cent or more of full-time service when regularly enrolled as students in the Graduate School or in the final year of the Master's degree (including agricultural technologist degree) curricula in undergraduate colleges are not required to pay tuition fees. This does not apply to commercial fellowships.

‡‡ Tuition of \$5 per quarter is charged graduate students who have completed all course work and who are registered for thesis work only.

MATRICULATION DEPOSIT

At the student's first registration at the University a matriculation deposit of ten dollars (\$10) is required to cover locker rental, locker key deposit, laboratory breakages, drawing board rental (Architecture), military equipment (men), library fines, or damage to university property.

The matriculation deposit required of students registered for less than five credits is five dollars (\$5), whereas the matriculation deposit of students registered in the Graduate School is three dollars (\$3).

The unused balance of the deposit fee will be returned by *mail* upon cancellation or automatically after the beginning of the first quarter the student fails to return. If, at any time, the charges against a student shall warrant a renewal of the deposit, an additional fee of five dollars (\$5) will be required.

SPECIAL FEES

Examination of credentials fee (nonresidents applying for admission to Law, Medicine, Dentistry, Education (Senior College), and Business Administration)..... \$5.00
Music fee (in addition to tuition for those electing music)

Lesson fees—

One individual lesson per week\$25.00 per quarter
Class lessons (two- or three-hour lesson) 15.00 per quarter

Practice fees..... 5.00 per quarter

Pianos and organs are available for practice purposes upon payment of practice fees charged by the Music Department.

Course fees—for individual courses. The amounts are specified in the course announcements in the college bulletins.

Laboratory deposit—A laboratory deposit of five dollars (\$5) is required of students registered for courses in chemistry to cover the cost of materials. The unused balance will be credited to the student's matriculation deposit at the end of the course.

Special examination \$5.00

Examination on subjects taken out of class* 5.00

(No fee for such examination on first entering the University, if taken within the first six weeks)

Large diploma fee: any graduate may receive the large diploma on payment of the special fee of 5.00

Duplicate diploma (if original has been lost or destroyed)

Large duplicate diploma 7.50

Small duplicate diploma 5.00

Record service fee—50 cents, deducted from each student's deposit account upon refund, for which record certification service is furnished including three copies of record. Additional copies of records 0.50

Graduation fee—Graduate School 10.00

Other schools and colleges 7.50

Privilege fees—The fee for the privilege of late registration, or late payment of fees is \$2 through the third day of classes, on the fourth day the fee is \$2.50 and then increases 50 cents per day to a maximum of \$5. The fee for late change of registration is \$2.

Students of one college taking work in another—Where a student of a given college or school elects courses in another, such courses being accepted by the college in which the student is registered as a part of its curriculum, the tuition shall be that of the college in which he is registered.‡

* Such an examination may be taken only upon approval of the appropriate committee.

‡ A student paying full fees in a given college, electing courses in a lower fee college, shall pay no additional fees for the work so elected, but if electing in a higher fee college, may have the option of paying the pro rata fees for both or the full-time fees of the first and pro rata fees of the second.

The Bulletin of the
UNIVERSITY of MINNESOTA

Combined Class Schedule for 1946-1947

Volume XLIX, Number 18

June 3, 1946

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UNIVERSITY CALENDAR, 1946-47

1946		<i>Fall Quarter</i>	
September	16	Monday	Extension registration, first semester begins
September	19	Thursday	Fall quarter fees due for students in residence spring quarter, in the Institute of Technology, Business Administration, Dentistry, Dental Hygiene, Law, Nursing, Pharmacy, and Agriculture, Forestry, and Home Economics
<i>Willis</i>			
September	23	Monday	Entrance tests ¹
September	23-24		Registration for Freshman Week for new students entering the freshman class
September	23-27		Freshman Week; Registration, ² College of Science, Literature, and the Arts, and General College
September	25	Wednesday	Registration of Seniors in Home Economics, College of Agriculture, Forestry, and Home Economics, 1:00-4:30 p.m.
September	26-27		Registration, ² all colleges except Institute of Technology. Fall quarter fees due for all students in Science, Literature, and the Arts, General College, Education, Medical School, Medical Technology, Public Health, Physical Therapy, University College, and for new students in other undergraduate colleges
September	27	Friday	Registration, ² Institute of Technology
September	30	Monday	Fall quarter classes begin 8:00 a.m. ³ First semester extension classes begin ⁴
October	3	Thursday	Opening convocation, 11:00 a.m.
October	5	Saturday	Last day for extension registration
October	10	Thursday	Senate meeting, 3:30 p.m.
October	11	Friday	Last day for registration and payment of fees for the Graduate School, and for teachers in service
October	12	Saturday	Columbus Day; holiday (except extension)
November	9	Saturday	Homecoming Day
November	11	Monday	Armistice Day; holiday (except extension)
November	16	Saturday	Dads Day
November	28	Thursday	Thanksgiving Day; holiday
December	12	Thursday	Senate meeting, 3:30 p.m.
December	13-14 and 16-19		Final examination period
December	19	Thursday	Fall quarter ends 6:00 p.m. ⁵ ; Commencement, 8:00 p.m.
<i>Winter Quarter</i>			
December	26	Thursday	Winter quarter fees due for students in residence fall quarter in undergraduate colleges
1947			
January	3	Friday	Entrance tests ¹ ; Registration ² for Institute of Technology
January	3-4		Registration ² for new students in all colleges except Institute of Technology. Registration and payment of fees for new students in all undergraduate colleges closes at noon, Saturday, January 4
January	6	Monday	Winter quarter classes begin 8:00 a.m. ³
January	18	Saturday	Last day for registration and payment of fees for the Graduate School, and for teachers in service

CALENDAR

January	27	Monday	Extension registration, second semester begins
February	8	Saturday	First semester extension classes close
February	10	Monday	Second semester extension classes begin ⁴
February	12	Wednesday	Lincoln's Birthday; holiday (except extension)
February	13	Thursday	Senate meeting, 3:30 p.m.
February	15	Saturday	Last day for extension registration
February	20	Thursday	Charter Day Convocation, 11:00 a.m.
February	22	Saturday	Washington's Birthday; holiday (except extension)
March 14-15 and 17-20			Final examination period
March	20	Thursday	Spring quarter fees due for students in residence winter quarter in undergraduate colleges. Winter quarter ends 6:00 p.m.; Commencement, 8:00 p.m.

Spring Quarter

March	28	Friday	Entrance tests ¹ ; Registration ² for Institute of Technology
March	28-29		Registration ² for new students in all colleges except Institute of Technology. Registration and payment of fees for new students in all undergraduate colleges closes at noon, Saturday, March 29
March	31	Monday	Spring quarter classes begin 8:00 a.m. ³
April	4	Friday	Good Friday; holiday (except extension)
April	12	Saturday	Last day for registration and payment of fees for the Graduate School, and for teachers in service
May	8	Thursday	Senate meeting, 3:30 p.m.
May	10	Saturday	Mothers Day
May	15	Thursday	Cap and Gown Day Convocation
May	30	Friday	Memorial Day; holiday (except extension)
June	6	Friday	Second semester extension classes close
June 6-7 and 9-13			Final examination period
June	8	Sunday	Baccalaureate service
June	13	Friday	Spring quarter ends 6:00 p.m.; Seventy-fifth annual commencement, 8:00 p.m.

Summer Session

June	16-17		Registration, ² first term. First term fees due for students in all colleges
June	18	Wednesday	First term Summer Session classes begin 8:00 a.m. ³
July	4	Friday	Independence Day; holiday
July	24	Thursday	Commencement, 8:00 p.m.
July	25	Friday	First term closes
July	28	Monday	Registration, ² second term. Second term fees due for students in all colleges
July	29	Tuesday	Second term classes begin 8:00 a.m. ³
August	29	Friday	Second term closes

¹ Applicants are urged to take entrance tests a month in advance of the quarter for which admission is desired. Tests may be taken at the Student Counseling Bureau, 103 Eddy Hall.

² 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. No student may register in the undergraduate colleges after one week from the beginning of the quarter except in unusual cases wherein circumstances shall justify the appropriate committee of the college concerned permitting registration at a later date.

³ First hour classes begin at 7:45 a.m. at University Farm.

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

⁵ Extension classes continue through Friday, December 20 and resume Monday, January 6, 1947.

DIRECTORY OF ADMINISTRATIVE OFFICES

ADMINISTRATION

James L. Morrill, B.A., LL.D., President	Adm202
John M. Willey, Ph.D., L.H.D., Vice President, Academic Administration	Adm202
William T. Middlebrook, B.A., M.C.S., Vice President, Business Administration	Adm326
Anne Dudley Blitz, M.A., LL.D., Dean of Women	Adm120
Robert E. Summers, M.S., Dean of Admissions	Adm105
T. E. Pettengill, M.S., Recorder	Adm108
Edmund S. Williamson, Ph.D., Dean of Students	Adm213

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

T. Raymond McConnell, Ph.D., Dean	Adm219
J. William Buchta, Ph.D., Assistant Dean for the Senior College and Professor of Physics	Ph146
Russell M. Cooper, Ph.D., Assistant Dean for the Junior College and Chairman of General Studies	F106
Royal R. Shumway, B.A., Assistant Dean for Students' Work and Professor of Mathematics	Adm219
Roger B. Page, B.A., Administrative Assistant and Assistant Professor	F106

COLLEGE OF EDUCATION

Wesley E. Peik, Ph.D., Dean and Professor of Education	Bu204
Marcia Edwards, Ph.D., Assistant Dean and Associate Professor of Education	Bu202
G. Lester Anderson, Ph.D., Director of Training School and Associate Professor of Education	UHS105
Jan H. Alexander, M.A., Chairman of Students' Work Committee and Assistant Professor of Education	Bu206
Clifford P. Archer, Ph.D., Director of the Bureau of Recommendations and Associate Professor of Education	Bu208
Willis E. Dugan, Ph.D., Director of Student Personnel and Assistant Professor	Bu214

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

Clyde H. Bailey, Ph.D., Dean and Director, Department of Agriculture	Ad(UF)201
Henry Schmitz, Ph.D., Dean of the College of Agriculture, Forestry, and Home Economics	Ad(UF)202

SCHOOL OF BUSINESS ADMINISTRATION

Richard L. Kozelka, Ph.D., Dean of the School of Business Administration	VH127
John J. Reighard, M.A., C.P.A., Assistant Dean and Professor of Accounting	VH104
J. Warren Stehman, Ph.D., Chairman of the Curriculum Committee and Professor of Economics and Finance	VH204
Bruce D. Mudgett, Ph.D., Chairman of the Graduate Committee and Professor of Economics and Statistics	VH320
Harry J. Ostlund, B.A., Chairman of the Students' Work Committee and Associate Professor of Accounting	VH104

SCHOOL OF NURSING

Harold S. Diehl, M.A., M.D., D.Sc., Dean of the Medical Sciences	MeS127
Katharine J. Densford, R.N., M.A., D.Sc., Director of the School of Nursing	MeS125
Ruth B. Freeman, R.N., M.A., Director, Course in Public Health Nursing	MH121

DIRECTORY OF DEPARTMENTAL OFFICES

Administration (Educational) 202,224Bu	Journalism 111MurH
Admissions and Records, Office	Latin 118F
of; Main campus Adm105	Library Methods 118F
Admissions and Records, Office	Linguistics and Philology 118F
of; University Farm 203dAd(UF)	Mathematics 119F
Agricultural Biochemistry 214SnH(UF)	Methods and Directed Teach-
Agricultural Economics 303aHH(UF)	ing 105UHS,220,206Bu
Agricultural Education 205Hr(UF)	Military Science and Tactics 106A
Agricultural Engineering 201En(UF)	Music 107Mu
Agronomy and Plant Genetics 308Ag(UF)	Music Education 107Mu
Animal (Human) 201 IA	Natural Science (Education) 15UHS
Animal and Poultry Hus-	Natural Science (S., L., A.) 148Ph
bandry 8LsPav(UF)	Naval Science and Tactics 203A
Anthropology 106WeH	Nursery School and Kinder-
Architecture 315E	garten Education 100CWI
Art Education 201J	Nursing 125MeS
Astronomy 359Ph	Nursing Education 125MeS
Bacteriology 228MH	Philosophy 323F
Botany 209Bo	Physical Education for Men 208CH
Business Administration 127VH	Physical Education for Women 101NGW
Center for Continuation Study 136CCS	Physics 148Ph
Chemistry 127C	Physiology 318MH
Child Welfare 101bPt	Plant Pathology and Botany 304PP(UF)
Classics 118F	Political Science 203Bu
Clinical Psychology 112Psy	Professional Education of
Commercial Education 102UHS	Teachers 216,220Bu
Dairy Husbandry 207HH(UF)	Psychology 112Psy
Drawing and Descriptive Ge-	Public Health 121MH
ometry 208E	Public Health Nursing 121MH
Economics 127VH	Publications and Rural Jour-
Educational Administration 224Bu	nalism 115Ad(UF)
Educational Psychology 302Psy	Rhetoric 309En(UF)
Educational Sociology 222Bu	Romance Languages 200bF
Elementary Education 216,220Bu	Rural Sociology 202OD(UF)
English 219F	Russian 317F
Entomology and Economic Zo-	Scandinavian 13F
ology 300Ad(UF)	School Health Work HS
Fine Arts 101J	Secondary Education 218Bu
Forestry 110GH(UF)	Social Science (S., L., A.) 111J
Geography 101aBu	Social Studies (Education) 226Bu
Geology and Mineralogy 108P	Sociology and Social Work 108J
General Education 106F	Soils 100aSo(UF)
German 210F	Speech 309aF
Greek 118F	Student Counseling Bureau 101EdH
History 102Bu	Supervision (College of Edu-
History of Education 206,226Bu	cation) 218,220Bu,105UHS
Home Economics 215HE(UF)	Teachers of Subnormal Children 358Psy
Home Economics Education 215HE(UF)	Veterinary Medicine 119Ve(UF)
Horticulture 111Hr(UF)	Vocational Orientation 213Adm
How To Study 250Psy	Zoology 108Z
Humanities 323F	
Industrial Education 222Bu	

EXPLANATIONS

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

Examples:

1f-2w, a two-quarter course given in the fall and winter.

1w-2s, the same course given in the winter and spring.

3f,w,s, a one-quarter course given each quarter.

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

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

OTHER ABBREVIATIONS AND SYMBOLS

Class Hour Schedule

	Main Campus	University Farm
I Hour	8:00- 8:50	7:45- 8:35
II Hour	9:00- 9:50	8:45- 9:35
III Hour	10:00-10:50	9:45-10:35
IV Hour	11:00-11:50	10:45-11:35
V Hour	12:00-12:50	11:45-12:35
VI Hour	1:00- 1:50	12:45- 1:35
VII Hour	2:00- 2:50	1:45- 2:35
VIII Hour	3:00- 3:50	2:45- 3:35
IX Hour	4:00- 4:50	3:45- 4:35
X Hour	5:00- 5:50	4:45- 5:35

Convocation, IV hour, Thursday

(See Official Daily Bulletin for announcements)

Ar.	To be arranged or assigned.	MTWThFS	Monday, Tuesday, etc.
Aud.	Auditorium.	Prereq.	Prerequisite.
Cred.	Credits.	Rec.	Recitation.
Lab.	Laboratory.	Sec.	Section.
Lect.	Lecture.		

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

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

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

Buildings

A, Armory	AgrBot, Agricultural Botany, University Farm
Ad, Administration, University Farm	Farm
Adm, Administration	AH, Appleby Hall
Ag, Agronomy, University Farm	BB, Bull Barn, University Farm

EXPLANATIONS

BCB, Beef Cattle Barn, University Farm	HS, Health Service, University Farm
BeH, Berry House, University Farm	IA, Institute of Anatomy
BFH, Botany Field House, University Farm	J, Jones Hall
Bo, Botany	L, Law Building
BoG, Botany Greenhouse	Lib, Library Building
Bot, Botany, University Farm	LsPav, Livestock Pavilion, University Farm
BrH, Brewster Hall, University Farm	MB, Music Building, University Farm
Bu, Burton Hall	ME, Mechanical Engineering
C, Chemistry Building	MeH, Meredith Hall, University Farm
CCS, Center for Continuation Study	MeS, Medical Sciences
CH, Cooke Hall	MEx, Mines Experiment Station
CMU, Coffman Memorial Union	MH, Millard Hall
CoH, Ada Comstock Hall	MNH, Museum of Natural History
CS, Carpenter Shop, University Farm	MS, Machinery Shop, University Farm
CSP, Cold Storage Plant, University Farm	MSh, Meat Shop, University Farm
CWI, Child Welfare Institute	Mu, Music Building
DCB, Dairy Cattle Barn, University Farm	MurH, William J. Murphy Hall
DeH, Dexter Hall, University Farm	NGW, Norris Gymnasium for Women
DH, Dining Hall, University Farm	NH, Nicholson Hall
DHD, Dining Hall Dormitory, University Farm	NMA, Northrop Memorial Auditorium
E, Main Engineering	OD, Old Dairy, University Farm
EdH, Eddy Hall	OSL, Oak Street Laboratories
EE, Electrical Engineering	P, Pillsbury Hall
En, Engineering Bldg., University Farm	Pe, Pendergast Hall, University Farm
Ex, Experimental Engineering	PG, Poultry Group, University Farm
F, Folwell Hall	Ph, Physics
FCFH, Farm Crops Field House, University Farm	PH, Power House, University Farm
FdH, Field House	PiH, Pioneer Hall
G, Greenhouse (13th and University Ave. S.E.)	PoH, Louise M. Powell Hall
GH, Green Hall, University Farm	PP, Plant Pathology, University Farm
Gy, Gymnasium, University Farm	Psy, Psychology
HB, Horse Barn, University Farm	Pt, Pattee Hall
HE, Home Economics, University Farm	S, Stadium
HH, Haecker Hall, University Farm	SaH, Sanford Hall
HL, Hydraulics Laboratory, Hennepin Island	SB, Swine Barn, University Farm
HoB, Home Building, University Farm	SBH, State Board of Health
Hospitals	SH, Seed House, University Farm
CI, Cancer Institute	ShH, Shevlin Hall
EH, Eustis Hospital	SnH, Snyder Hall, University Farm
EMH, Elliot Memorial Hospital	So, Soils, University Farm
HS, Health Service	SS, Storehouse and Shops
PW, Psychiatric Ward	St, Stock Pavilion, University Farm
TM, Todd Memorial Hospital	TH, Thatcher Hall, University Farm
UD, University Dispensary	UHS, University High School
HP, Heating Plant	VB, Veterinary Barn, University Farm
Hr, Horticulture, University Farm	Ve, Veterinary, University Farm
	VH, Vincent Hall
	WeH, Westbrook Hall
	WeiH, Weigley House, University Farm
	WuH, Wulling Hall
	Z, Zoology Building

LIBRARY INSTRUCTION

Library Methods 1 is not a part of the professional curriculum of the Division of Library Instruction. Library Science 50 to 126 are professional courses open only to senior college students or graduates. Students seeking a major in Library Science (45 credits) may spread these courses over their last three years of college, or may take them all in one year. In the latter case four years of college preparation is recommended. The completion of a full year in Library Science is accepted for graduation in the College of Science, Literature, and the Arts, the College of Education, and the University College. Senior students from other colleges may be admitted on approval by the dean of the college concerned and the director of the Division of Library Instruction.

The fees for Library Science (50-126) are \$3.50 per credit hour or \$42 per quarter (\$4.75 per credit hour and \$56 per quarter for nonresidents). Students with programs in other colleges or divisions (except those registered in Library Methods 1), must pay the special fee for all library instruction courses taken.

A course for hospital library training is also given in the spring quarter. It includes 12 credit hours of class work, followed by six weeks of practice, or internship, in an approved hospital library. Candidates for admission to this special course should have completed satisfactorily (1) at least three years of approved college work and at least two quarters of work in an approved library school or an equivalent of approved experience in hospital library work, and (2) the following courses or their equivalents: Public Health 50, Public and Personal Health, (3 credits); Psychology 1-2, General, (6 credits); Psychology 144-145, Abnormal Psychology, (6 credits); Sociology 1, Introduction to Sociology, (5 credits); Sociology 49, Social Problems, (3 credits); Sociology 90, Survey of Social Work, (5 credits); Zoology 1-2-3, General Zoology, (10 credits). Students are advised to register only for the entire group of courses, and no candidates for a degree or special certificate will be excused from field observation and practice.

Some minor changes in the curriculum may be made necessary by present conditions. Candidates for admission to this course should apply for the special bulletin giving more detailed information regarding the course.

A student working for an education minor must have completed eighteen credits from the following: 53s, 60f, 62f, 70f, 71s, 72s, 73w, 82w.

For a library endorsement by the Minnesota State Department of Education a student must have completed nine credits from the list of those subjects required for a minor.

No.	Title	Hour	Day	Bldg.	Instructor
1f,w,s*	Use of Books and Libraries (2 cred.; fr., soph. only; no prereq.)				
	Sec. 1	II	MW	3Lib	Mr. Russell, Miss Moen
	2	IV	MW	3Lib	
	3	VI	MW	3Lib	
<i>Professional Courses</i>					
50f*	Libraries and Society (3 cred.; no prereq.)	IV	MWF	5Lib	Mr. Strout
51f	Origins of the Book (2 cred.; no prereq.)	Ar	Ar	5Lib	Mr. Strout
52w	History of Publishing (2 cred.; no prereq.)	Ar	Ar	5Lib	Mr. Strout
53s	School Library Administration (3 cred.; prereq. Ed. 51A-B-C, or Ed.Ad. 263, or Pol. Sci. 121w)	II	MWF	5Lib	Miss Hayner

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

LIBRARY INSTRUCTION

No.	Title	Hour	Day	Bldg.	Instructor
54s	Public Library Administration (3 cred.; prereq. Pol.Sci. 121w)	I	MWF	5Lib	
55s	College Library Administration (3 cred.; prereq. Pol.Sci. 121w or Ed.Ad. 253w)	II	MWF	Ar	Mr. Strout
56s*	Current Issues (1 cred.; required for degree in library science)	III	Th	5Lib	Mr. McDiarmid
60f*	Sources of Information about Library Materials (3 cred.; no prereq.)	III	MWF	5Lib	Miss Hayner
61f,*w,s	Library Practice (3 to 4½ cred.; prereq. 15 cred. in library science)	Ar	Ar	Ar	
62f*	Reference I (2 cred.; no prereq.)	III	TTh	5Lib	Mr. Strout
63w*	Reference II (3 cred.; prereq. 62)	IV	MWF	5Lib	Mr. Strout
64s	Reference III (2 cred.; prereq. 62, 63)	I	TTh	5Lib	Mr. Strout
65w	National and Regional Bibliography (2 cred.; no prereq.)	III	TTh	5Lib	Mr. Shove
70f*	Reading Guidance (3 cred.; no prereq.)	I	MWF	5Lib	Miss Hayner
71s	Reading Guidance for Children (3 cred.; prereq. 70)	IV	MWF	5Lib	Miss Hayner
72s	Reading Guidance for Adolescents (3 cred.; prereq. 70)	III	MWF	3Lib	Miss Hayner
73w	Reading Guidance for Adults (3 cred.; prereq. 70)	III	MWF	5Lib	Mr. Strout
76s	Library Service in Hospitals (3 cred.)	I	TThS	312Lib	Miss Jones and others
77s	Book Selection for Hospital Patients (3 cred.)	IV	MWF	312Lib	Miss Methven and others
78s	Reading and the Mental Patient (2 cred.)	III	TS	312Lib	Miss Jones and others
79s	Medical Reference Work (3 cred.)	II	MWF	312Lib	
80s§	Hospital Library Practice—A six-week internship in approved hospitals				(4 cred.) Miss Methven
81f*	Theory of Bibliography (2 cred.; no prereq.)	I	TTh	5Lib	
82w*	Cataloging and Classification (4 cred.; prereq. 81f)	VII	MWThF	5Lib	Miss Hayner
83s	Descriptive Cataloging (3 cred.; prereq. 82)	IV	MWF	Ar	
84s	Subject Cataloging and Classification (3 cred.; prereq. 82)	III	MWF	5Lib	
85f,w,s	Special Problems (1 to 3 cred.)	Ar	Ar	Ar	Mr. McDiarmid, Mr. Strout, Miss Hayner, and others
126s	Subject Bibliography (3 cred.)	II	TThS	5Lib	Mr. Russell

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

§ This practice will be a six-week internship in approved hospitals. The specific arrangements will be made by Miss Methven after the close of the class work early in June. This internship is required of all candidates for degrees or certificates.

MILITARY SCIENCE AND TACTICS

Basic Course

No.	Title	Hour	Day	Bldg.	Instructor
1f,2w,3s	First Year Basic Course (1 cred.; no prereq.)	I	MWF	A	Ar
		III	MWF	A	Ar
4f,5w,6s		Second Year Basic Course (1 cred.; prereq. 1, 2, 3, or equivalent in Junior ROTC or service in Armed Forces)			
		Ar	Ar	A	Ar

Advanced Course

151f,152w,153s	First Year Advanced Course (3 cred.; prereq. 4, 5, 6*)	Ar	Ar	A	Ar
154f,155w, 156s§	Second Year Advanced Course (3 cred.; prereq. 151, 152, 153)	Ar	Ar	A	Ar

NOTE—Enrolment in Advanced Course normally for the full two-year course; enrollees are entitled to certain financial benefits and upon successful completion are qualified for commission in Officers' Reserve Corps.

NAVAL SCIENCE AND TACTICS

Students enrolled in the Naval ROTC Unit should obtain a class schedule for the current term from the Naval ROTC office in the Armory.

PHYSICAL EDUCATION FOR MEN

Supervisor of Physical Education—Instructor Beise.

The courses in sports education were formerly offered for the purpose of providing instruction and practice in sports of a recreational nature in which men might participate during present and future years for more enjoyable living. The present emphasis is on the improvement of the physical fitness status of men students in order to make them better prepared for military, production, or home service. The status of these courses in the various colleges is:

1. **College of Education**—(All except majors and minors in physical education) Required with credit.
2. **General College**—Required with credit.
3. **Institute of Technology**—Elective with credit.
4. **College of Agriculture, Forestry, and Home Economics**—Elective with credit.
5. **University College**—Elective with credit.
6. **College of Pharmacy**—Required of students low on fitness tests. Credits as recommended by the dean.
7. **Science, Literature, and the Arts**—Elective with credit.
8. **School of Business Administration**—Elective with credit.
9. **All other colleges**—Elective without credit.

A towel and locker fee of \$1.25 per quarter is charged all students using physical education facilities for activity. Uniforms for class work or recreational activity are \$1 per quarter.

The facilities of the Department of Physical Education, including the golf course, tennis courts, gymnasium, swimming pools, and playing fields, are available for use by the

* Service in Armed Forces acceptable in lieu of all or part of Basic Course.

§ Not offered until fall quarter, 1947-48.

general student body. All men are invited to participate in some form of physical activity. For information regarding the intramural and intercollegiate athletic program see the handbook published by the Department of Physical Education for Men or inquire at Cooke Hall.

For specialized curriculum in Physical Education for Men, see College of Education Bulletin.

Note—For professional courses in major and minor curricula in Physical Education for Men, see College of Education section in this bulletin.

No.	Title	Hour	Day	Bldg.	Instructor
1Af-Bw-Cs	Sports Education (1 cred.* per qtr.; all; no prereq.) Sports Education 1ABC is an orientation course in a variety of recreational sports in which the student has had little or no experience. The objective is to provide instruction and competition in those sports in which men may participate now and in future years as a means of obtaining recreation, regular exercise, and social intercourse.				
1A†	Touchball, Volleyball, Boxing, Badminton				
	Sec. 1	II	MWF	215CH	Mr. Beise
	2	III	MWF	215CH	
	3	IV	MWF	215CH	
	4	VI	MWF	215CH	
	Beginning Swimming (for non-swimmers only)				
	5 Beginning Swimming	VI	MWF	215CH	Mr. Thorpe
	6 Beginning Swimming	VII	MWF	215CH	Mr. Thorpe
	Specialized Activities (by permission of instructor only)				
	7 Specialized Activities	III	MWF	S	Mr. Osell
	8 Specialized Activities	IV	MWF	S	Mr. Osell
	9 Specialized Activities	VIII	MWF	S	Mr. Osell
1Bw	Wrestling, Handball, Squash, Basketball				
	Sec. 1	II	MWF	215CH	Mr. Beise
	2	III	MWF	215CH	
	3	IV	MWF	215CH	
	4	VI	MWF	215CH	
	Beginning Swimming				
	5 Beginning Swimming	VII	MWF	215CH	Mr. Thorpe
	Specialized Activities (by permission of instructor only)				
	6 Specialized Activities	III	MWF	S	Mr. Osell
	7 Specialized Activities	IV	MWF	S	Mr. Osell
	8 Specialized Activities	VIII	MWF	S	Mr. Osell
1Cs	Swimming, Track, Softball, Tennis				
	Sec. 1	II	MWF	215CH	Mr. Beise
	2	III	MWF	215CH	
	3	IV	MWF	215CH	
	4	VI	MWF	215CH	
	Specialized Activities (by permission of instructor only)				
	5 Specialized Activities	III	MWF	S	Mr. Osell
	6 Specialized Activities	IV	MWF	S	Mr. Osell
	7 Specialized Activities	VIII	MWF	S	Mr. Osell
2Af-Bw-Cs	Sports Education (1 cred. per qtr.; all; prereq. 1ABC or permission of instructor) The program in Sports Education 2ABC offers an opportunity to develop proficiency in an elected recreational sport in which the student has had previous experience.				
2Af	Sec. 1 Bowling‡	I	TThS	Union Alleys	Ar
	2 Diving	II	MWF	CH	Mr. Boyce
	3 Advanced Swimming	III	MWF	CH	Mr. Boyce
	4 Badminton	IV	MWF	CH	Ar
	5 Wrestling	VI	MWF	CH	Mr. Bartelma
	6 Boxing	VII	MWF	CH	Ar
	7 Weight Lifting	VIII	MWF	CH	Ar

* For colleges offering credit, see list above.

‡ The bowling alleys will charge students the regular cost per game.

No.	Title	Hour	Day	Bldg.	Instructor
2Bw	Sec. 1 Bowling†			Union Alleys	Ar
	2 Diving	I	TThS	CH	Mr. Boyce
	3 Advanced Swimming	II	MWF	CH	Mr. Boyce
	4 Handball	III	MWF	CH	Ar
	5 Badminton	IV	MWF	CH	Ar
	6 Squash	IV	MWF	CH	Ar
	7 Wrestling	VI	MWF	CH	Mr. Bartelma
	8 Boxing	VI	MWF	CH	Ar
	9 Weight Lifting	VII	MWF	CH	Ar
	10 Golf‡‡	VIII	MWF	CH	Mr. Smith
	11 Fencing	VIII	MWF	CH	Ar
2Cs	Sec. 1 Archery	II	MWF	CH	Mr. Osell
	2 Life Saving*	III	MWF	CH	Mr. Thorpe
	3 Track	VI	MWF	CH	Mr. Kelly
	4 Tennis	VII	MWF	CH	Mr. Brain
	5 Golf‡‡	VIII	MWF	CH	Mr. Smith
	6 Softball	VIII	MWF	CH	Ar

PHYSICAL EDUCATION FOR WOMEN

Major adviser—Professor Baker.

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

The credit allocation for courses meeting three times a week is one and a half; for those meeting twice a week, one credit is given.

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

1. **College of Education**—Requirement: 5 credits.
2. **General College**—Requirement: three quarters. Credits upon transferring to Education or Agriculture, Forestry, and Home Economics.
3. **College of Agriculture, Forestry, and Home Economics**—Requirement: 3 credits. Up to three additional credits may be applied to elective work in physical education.
4. **School of Dentistry, Dental Hygienists**—Requirement: three quarters. No credit.
5. **Institute of Technology**—Requirement: one quarter (spring). No credit.
6. **All other colleges**—Elective without credit.

Note—For professional courses in major and minor curricula in Physical Education for Women, see College of Education section in this bulletin.

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

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

* Student must be able to swim 440 yards.

† The bowling alleys will charge students the regular cost per game.

‡‡ Student must furnish his own equipment.

PHYSICAL EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
1f,2w,3s, 4f,5w,6s*†	College Program in Physical Education				

Aquatics

Canoeing (classes limited to 15)					
Sec. 1	(spring)	III	MWF	58NGW	Ar
2	(spring)	II	TTh	58NGW	Ar
Swimming, Beginning‡					
Sec. 1	(fall)	II	MWF	51NGW	Ar
2	(fall, winter, spring)	III	MWF	51NGW	Ar
3	(winter, spring)	IV	MWF	51NGW	Ar
4	(fall, spring)	III	TTh	51NGW	Ar
Swimming, Advanced Beginning¶					
Sec. 1	(fall)	IV	MWF	51NGW	Ar
2	(fall)	VI	MWF		
3	(winter)	VIII	MWF	51NGW	Ar
4	(winter)	III	TTh		
5	(spring)	VI	MWF		
6	(spring)	III	TTh	51NGW	Ar
Swimming, Intermediate					
Sec. 1	(fall, spring)	VIII	MWF	51NGW	Ar
2	(winter)	II	MWF	58NGW	Ar
3	(spring)	II	MWF	58NGW	Ar
Swimming, Intermediate and Advanced					
Sec. 1	(fall)	III	MWF	58NGW	Ar
2	(winter)	VIII	MWF	58NGW	Ar
Swimming, Advanced (fall)					
		VIII	MWF	58NGW	Ar
Swimming, Advanced and Diving (spring)					
		IV	MWF	58NGW	Ar
Swimming, Advanced and Synchronized (spring)					
		VIII	MWF	58NGW	Ar
Red Cross Life Saving					
Sec. 1	(fall)	IV	MWF	58NGW	Ar
2	(spring)	IX	MWF	58NGW	Ar
Preliminary Water Safety Instructors' Course (winter)**					
		VII	MWF	58NGW	Ar
Water Safety Instructors' Course (spring)					
		VI	MWF	58NGW	Ar

Body Building

Individual Body Building					
Sec. 1	(fall, winter, spring)	IV	MWF	153ANGW	Ar
2	(winter, spring)	III	TTh	153ANGW	Ar
3	(fall, winter)	VI	MWF	153ANGW	Ar
Posture and Conditioning Exercises					
Sec. 1	(fall)	I	MWF	153NGW	Ar
2	(fall)	III	MWF	153NGW	Ar
3	(winter)	VIII	MWF	153NGW	Ar
4	(spring)	I	MWF	153ANGW	Ar

* Students must report to the Norris Gymnasium for Women on either of the first two days of the quarter to be placed in the proper class section. This is in addition to the regular registration.

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

‡ For students with no experience in swimming.

¶ For students with some experience in swimming.

** This course covers the review required by the Red Cross for all candidates for the rank of Water Safety instructor.

Body Building—Continued

Individual Sports

No.	Title	Hour	Day	Bldg.	Instructor
1f,2w,3s, 4f,5w,6s**†	College Program in Physical Education—Continued				
	Archery, Elementary				
	Sec. 1 (fall)	III	MWF	60NGW	Ar
	2 (fall)	VI	MWF	60NGW	Ar
	3 (winter)	I	MWF	60NGW	Ar
	4 (winter, spring)	III	TThS	60NGW	Ar
	Archery, Intermediate (spring)				
		II	TTh	60NGW	Ar
	Badminton, Elementary				
	Sec. 1 (fall, winter)	II	MWF	60NGW	Ar
	2 (fall)	IV	MWF	60NGW	Ar
	3 (winter)	VI	MWF	60NGW	Ar
	4 (fall)	III	TTh	60NGW	Ar
	5 (winter)	III	MWF	60NGW	Ar
	6 (spring)	I	TTh	153NGW	Ar
	Badminton, Intermediate				
	Sec. 1 (fall)	I	MWF	60NGW	Ar
	2 (winter)	IV	MWF	60NGW	Ar
	Bowling				
	Sec. 1 (fall, winter, spring)	II	MWF	201NGW	Ar
	2 (fall, winter, spring)	III	MWF	201NGW	Ar
	3 (fall, winter, spring)	II	TTh	201NGW	Ar
	4 (fall, winter, spring)	II	TTh	201NGW	Ar
	Fencing				
	Sec. 1 (fall)	IV	MWF	153NGW	Ar
	2 (winter)	II	TTh	153NGW	Ar
	3 (spring)	VI	MWF	153NGW	Ar
	Golf, Elementary¶				
	Sec. 1 (fall)	VIII	MWF	60NGW	Ar
	2 (winter)	VIII	MWF	60NGW	Ar
	3 (spring)	IV	MWF	60NGW	Ar
	4 (spring)	I	MWF	60NGW	Ar
	Golf, Intermediate¶				
	Sec. 1 (spring)	VI	MWF	60NGW	Ar
	2 (spring)	VIII	MWF	60NGW	Ar
	Golf, Advanced (spring)§¶				
		Ar	Ar	Ar	Ar
	Skating, Plain and Figure (winter)**				
	Sec. 1	VI	Ar	151NGW	Ar
	2	VII	Ar	151NGW	Ar
	3	VIII	Ar	151NGW	Ar
	Social Games and Mixers				
	Sec. 1 (fall)	III	TTh		
	2 (spring)	VIII	MWF		
	Skiing (winter)				
		TTh	2-4 p.m.	151NGW	Ar

* Students must report to the Norris Gymnasium for Women on either of the first two days of the quarter to be placed in the proper class section. This is in addition to the regular registration.

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

¶ Students must supply their own equipment.

§ Intermediate and advanced classes are open only to students having had regular instruction or by permission of the instructor.

** Days for skating to be arranged last week of fall quarter.

PHYSICAL EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
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Individual Sports—Continued

1f,2w,3s,

4f,5w,6s*‡

College Program in Physical Education—Continued

Tennis, Elementary and Advanced Elementary

Sec. 1 (fall)	I	TTh	151NGW	Ar
2 (fall)	VIII	MWF	151NGW	Ar
3 (winter, spring)	IV	MWF	151NGW	Ar
4 (spring)	I	MWF	151NGW	Ar
5 (spring)	I	TTh	151NGW	Ar
6 (spring)	II	MWF	151NGW	Ar
7 (spring)	VI	MWF	151NGW	Ar
8 (spring)	III	TThS	151NGW	Ar

Tennis, Intermediate and Advanced

Sec. 1 (winter)	III	MWF	151NGW	Ar
2 (spring)	III	MWF	151NGW	Ar
3 (spring)	II	TTh	151NGW	Ar

8‡‡

Horseback Riding (fall, spring)

Sec. 1 (Elementary)	4:00	T	Ar	Ar
2 (Elementary)	4:00	Th	Ar	Ar
3 (Intermediate and Advanced)	3:00	T	Ar	Ar
4 (Intermediate and Advanced)	3:00	Th	Ar	Ar

Rhythms

Ballroom Dance, Elementary

Sec. 1 (fall)	III	TTh	151NGW	Ar
2 (winter)	III	TTh	151NGW	Ar

Country Dance

Sec. 1 (fall)	II	TTh	151NGW	Ar
2 (winter)	II	MWF	151NGW	Ar
3 (spring)	II	MWF	153NGW	Ar

National Dances

Sec. 1 (fall)	II	MWF	153NGW	Ar
2 (spring)	III	MWF	153NGW	Ar
3 (winter)	II	TTh		

Modern Dance, Elementary

Sec. 1 (fall, spring)	IV	MWF	153NGW	Ar
2 (fall, winter, spring)	VIII	MWF	153NGW	Ar

Modern Dance, Intermediate and Advanced

Sec. 1 (fall, winter)	VI	MWF	153NGW	Ar
2 (winter)	IV			
3 (spring)	VII	MWF		

Introduction to Rhythmic Activities (winter)

III	TTh	153NGW	Ar
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Team Sports

Basketball (winter)

Sec. 1	I	MWF	153NGW	Ar
2	VIII	MWF	153NGW	Ar

Softball (spring)

Sec. 1	III	MWF	60NGW	Ar
2	VI	MWF	151NGW	Ar

Volleyball

Sec. 1 (fall)	I	MWF	151NGW	Ar
2 (fall, winter)	VI	MWF	151NGW	Ar

Speedball (spring)

II	MWF	151NGW	Ar
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* Students must report to the Norris Gymnasium for Women on either of the first two days of the quarter to be placed in the proper class section. This is in addition to the regular registration.

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

‡‡ See instructor for special charge for this course. No course fee is charged.

Special Course for College of Education Students

No.	Title	Hour	Day	Bldg.	Instructor
1f,2w,3s, 4f,5w,6s*‡	College Program in Physical Education—Continued Activity Program for the Elementary School (fall)	VI	TTh	151NGW	Ar
	Activity Program for the Secondary School (winter)	II	TTh	151NGW	Ar

Elective Courses

54st	Camp Leadership (2 cred.; no prereq.)	IV and 1 hr. ar.	MW	201NGW	Ar
80s	Principles of Rhythm (2 cred.; prereq. some rhythm experience)	III	TTh	201NGW	Ar

Recreational Activities for Which No Registration Is Required

Archery	Fencing	Tennis
Badminton	Modern Dance	Volleyball
Basketball	Softball	
Exercises for Body Building	Swimming	

GENERAL EDUCATIONAL DEVELOPMENT TESTS

In recognition of the important educational values attained by many veterans while in service, several colleges of the University afford veterans the opportunity to secure academic credit by passing General Educational Development tests. These tests are administered by the Student Counseling Bureau and cover the following four fields: (1) Composition; (2) Social Science; (3) Natural Science; (4) Literature.

While a maximum of nine credits will be allowed for each G.E.D. test, this amount will be reduced by the number of college credits already earned in that general field. This regulation insures that credit will be allowed only once for the same learning. A student passing the G.E.D. tests will receive credit for **any course he later takes** except for the following which are designed to cover the same material: Test 1. Composition 4-5-6 and the composition part of English A-B-C (p. 47), or Communication 1-2-3 (p. 53); Test 2. Introduction to Social Science (p. 57); Test 3. Orientation in the Natural Sciences (p. 56); Test 4. Literature portion of English A-B-C (p. 47).

For further information about the applicability of these credits, consult the college concerned.

* Students must report to the Norris Gymnasium for Women on either of the first two days of the quarter to be placed in the proper class section. This is in addition to the regular registration.

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

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

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

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

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

AMERICAN STUDIES

Major advisers in the College of Science, Literature, and the Arts—Professors McDowell and Lowry Nelson; Associate Professors Christensen and Tyler.

A Major in American Studies is offered to students under the general provisions of the *Curriculum in Liberal Arts* which are stated in the Bulletin of the College of Science, Literature, and the Arts for 1946-47. The Senior College courses which constitute this major will include 45 credits in courses concerned with civilization in the United States, as follows:

- A. 42 credits in approved courses in the four fields named below, including at least 9 credits in each field: History; Literature; Fine Arts and Philosophy; Social Sciences. (For a list of approved courses consult the pamphlet entitled "A Program in American Studies" or one of the major advisers.)
- B. 3 credits in American Studies 90-91-92.

(Prerequisites: History 20-21-22, "American History," or Humanities 21-22-23, "Humanities in the United States." It is recommended that the student take both courses.)

Senior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
90f-91w-92s	Proseminar in American Studies—Conferences and readings designed to correlate the students' work in American civilization (6 cred.; sr.; prereq. consent of instructor)	Ar	Ar	Ar	Mr. McDowell and others

ANATOMY (HUMAN)

MEDICAL SCHOOL

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

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

No.	Title	Hour	Day	Bldg.	Instructor
3f,s	Elementary Anatomy (3 cred.; primarily for nurses; no prereq.)				
	<i>Schedule for 3f (Only Section E* is open to students not registered in the School of Nursing)</i>				
	Lect. and Quiz	A,B,C,E	I	TThS Ar	Ar
	Lab. and Rec. Sec. A		VIII, IX	Th Ar	Ar
		B	VIII, IX	T Ar	
		C	VI, VII	Th Ar	
		E	VI, VII	T Ar	
	<i>Schedule for 3s (Only Section E* is open to students not registered in the School of Nursing)</i>				
	Lect. and Quiz Sec. A,E		I	TThS Ar	Ar
	Lab. and Rec. Sec. A		VIII, IX	T Ar	Ar
		E	VIII, IX	Th Ar	

ANTHROPOLOGY

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

Major sequence in the College of Science, Literature, and the Arts—At least twenty-seven credits selected from the following: Anthropology courses numbered 80 or above, Zoology 83, 170-171.

(Prerequisites: Course 40, 41, or 42, with fifteen additional credits from either the social or biological sciences.)

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

Junior College Courses

40f	Introduction to Anthropology. Man's physical and cultural development; the nature and significance of race differences; ways of life in primitive society; applications of anthropology to modern life (5 cred.; no prereq.)	VI	MTWThF	166Ph	Ar
41w	Introduction to Anthropology. Culture areas and culture traits. (5 cred.; no prereq.)	VI	MTWThF	166Ph	Mr. Watson
42s	The Growth of Cultures. Man's first appearance in Old and New Worlds; earliest stages in the development of civilization; discovery and invention, the formation of cultural patterns, and the spread and adaptation of culture to various environments in Asia, Africa, the South Seas, and among the American Indians; changes in the arts, beliefs, and institutions of primitive communities as observed in recent times (5 cred.; no prereq.)	VI	MTWThF	166Ph	Mr. Cline

Senior College Courses

Courses 54, 56, 80, 81 are open to sophomores who have a grade of at least C in Courses 40, 41, or 42. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

54s	Social Organization. An analysis and survey of forms of social life. (3 cred.; jr., sr.; no prereq.)	I	MWF	6WeH	Mr. Watson
56f	Primitive Science. The beliefs and knowledge of primitive man (3 cred.; jr., sr.; no prereq.)	IX	MWF	6WeH	Mr. Watson

* Students who cannot take Section E may possibly get permission to enter one of the other sections. They should ask for written permission in the office of the School of Nursing, 125 Medical Sciences Building.

No.	Title	Hour	Day	Bldg.	Instructor
80s	The American Indian. A survey of native cultures of the New World. Physical and cultural characteristics (3 cred.; jr., sr.; no prereq.)	II	TThS	6WeH	Mr. Watson
81w	Archeology of North America. Prehistory of the region, with special attention to northern Mexico and the United States (3 cred.; jr., sr.; no prereq.)	III	MWF	4WeH	Mr. Wilford
105f	Elements of Language. A survey of speech sounds followed by practice in phonetic recording. Analysis of phonetic patterns in language. Practical work in dictation of Chipewewa, Dakota, Finnish, and other languages (3 cred.; jr., sr., grad.; no prereq.)	II	MWF	6WeH	Ar
106s	European Prehistory (3 cred.; jr., sr., grad.; no prereq.)	VIII	MWF	6WeH	Mr. Cline
110f	Physical Anthropology. Man's place in the animal kingdom. Comparison of man's structure with that of the anthropoid apes; types of prehistoric men; anthropometry (3 cred.; jr., sr., grad.; no prereq.)	III	MWF	6WeH	Mr. Wilford
116	<i>Indians of the Southwest.</i> The pueblo dwellers, Navaho, Apache, and other aborigines of New Mexico and Arizona. The ancient civilizations of the region. (3 cred.; jr., sr., grad.; no prereq.) (<i>Not offered</i>)				
117s	Anthropology and Contemporary Problems. Significance of the comparative study of human societies for understanding contemporary problems; among the subjects considered are education, minorities, crime, mental hygiene, race, and international organization (3 cred.; jr., sr., grad.; no prereq.)	VII	MWF	6WeH	Ar
118f	Indian Civilizations of Mexico and Peru (3 cred.; jr., sr., grad.; no prereq.)	VIII	MWF	6WeH	Mr. Cline
119s	The Contact of Cultures. An examination of the ways in which customs change, especially as exemplified by the impact of Western civilization on native societies (3 cred.; jr., sr., grad.; no prereq.)	II	MWF	6WeH	Ar
120	<i>Indians of the Plains.</i> The aboriginal inhabitants of the prairies and plains. The tribes which lived between the Upper Mississippi and the Rockies, from the forests of western Canada to Texas (3 cred.; jr., sr., grad.; no prereq.) (<i>Not offered</i>)				
122f-123w-124s	Problems in Anthropology (Cred. ar.; jr., sr., grad.; prereq. permission of instructor)	Ar	Ar	Ar	Mr. Watson, Mr. Cline, Mr. Wilford
129f	Primitive Economics—Varied systems of making a living in preliterate groups. Economy of hunting and fishing tribes, primitive agriculturalists, and simple herders. Relations between habitat, technology, social organization, and goals and attitudes as focussed in the area of economic life (3 cred.; jr., sr., grad.; no prereq.)	II	TThS	6WeH	Mr. Watson
130f-131w-132s*	Races and Cultures of Arabia, Egypt, and North Africa. Course 130: Pre-Muslim Culture. Courses 131, 132: Muslim Culture (9 cred.; jr., sr., grad.; no prereq.)	III	TThS	6WeH	Mr. Cline
133f-134w*	Races and Cultures of the Far East. This course will focus on the growth of native civilization in China and Japan. Attention will be given also to the cultures of Mongolia, Tibet, Korea, and southeastern Asia, especially in their relation to the Chinese (6 cred.; jr., sr., grad.; no prereq.)	VI	MWF	6WeH	Mr. Cline
135f-136w-137s	Cultural History of Egypt from the Earliest Times to the Sixteenth Century A.D. (The same as History 135-136-137) (9 cred.; jr., sr., grad.; prereq. permission of instructor and a B average in the student's major subject)	Ar	Ar	Ar	Mr. Cline, Mr. Jones

* Students may enter any quarter.

ARCHITECTURE

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No.	Title	Hour	Day	Bldg.	Instructor
140§	Field Trip in Archeology (1 to 8 cred.; jr., sr., grad.; no prereq.)	Ar	Ar	Ar	Mr. Wilford
150-151-152	<i>Selected Readings in Ancient History.</i> Early cultures of the Mediterranean Basin (The same as History 150-151-152) (9 cred.; sr., grad.; prereq. consent of instructor) (<i>Not offered</i>)				
161s	Primitive Religion. Beliefs and practices in primitive religion. The role of the sacred and the supernatural. Beliefs in the life after death (3 cred.; jr., sr., grad.; no prereq.)	IX	MWF	6WeH	Mr. Watson
162f	Peoples of Negro Africa. Physical types, social, political, and economic phases of the cultures of Negro Africa (3 cred.; jr., sr., grad.; no prereq.)	IV	MWF	6WeH	Mr. Watson
163w	Ethnology of India. A survey of the primitive tribes, Hindu caste society, and Moham- medan communities in India (3 cred.; jr., sr., grad.; no prereq.)	VII	MWF	6WeH	Ar
165w	Psychological Phases of Culture—The impact of cultural tradition on human experience. The significance of culture patterns in the structure and functioning of human ex- perience (3 cred.; jr., sr., grad.; no prereq.)	II	MWF	6WeH	Ar
166w	History of Anthropological Theory and Method. A review of the development of anthro- pology from early times to the present day. Schools of anthropological thought and various approaches to the data of anthropology (3 cred.; jr., sr., grad.; no prereq.)	IV	MWF	6WeH	Ar
167	<i>Primitive Mythology.</i> Plots and motives in folklore and mythology. Mythology as a re- flection of culture and interests. Explanatory tales (3 cred.; jr., sr., grad.; no prereq.) (<i>Not offered</i>)				
168w	Ethnology of Australia. Physical types and cultures (3 cred.; jr., sr., grad.; no prereq.)	IX	MWF	6WeH	Mr. Watson
169	<i>Peoples of the South Seas</i> —A survey of the native cultures of the Pacific Islands (3 cred.; jr., sr., grad.; no prereq.) (<i>Not offered</i>)				
170s	Primitive Art. The role of esthetics in primitive life, the spread of art styles, symbolism. The graphic and plastic arts and the place of the artist. Music, drama, the dance, in primitive societies (3 cred.; jr., sr., grad.; no prereq.)	IV	MWF	6WeH	Ar

For Graduate Students Only

204f-205w-206s Seminar in Anthropology (3 cred. per qtr.; grad.)

Ar	Ar	Ar	Mr. Watson, Mr. Cline, Mr. Wilford
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ARCHITECTURE

INSTITUTE OF TECHNOLOGY

Major adviser in the College of Science, Literature, and the Arts—Professor Rhodes Robertson.

Major sequence in the College of Science, Literature, and the Arts—Courses AD-I, AD-II, 51-52-53, 57.

(Prerequisites: High school or college equivalent of Math. 1, Higher Algebra, and Math. 14, Solid Geometry; Physics 1-2-3; and courses 40, DP-I, DP-II.¶)

This sequence is intended for:

1. Students who for cultural or vocational reasons may want a certain degree of specialization in architecture.
2. Students preparing for further training in such special fields as city planning, landscape architecture, and interior or industrial design.

§ This course may be taken for credit only once.

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

3. Students taking the six-year combined course in Arts and Architecture leading to both the liberal arts and professional architectural degrees. (See also General Information Bulletin.) Such students should include, in addition to the above courses, Math. 6-7-30, Math. and Mech. 91-92-93, C.E. 38-39-41, and Chem. 1-2 or 6-7 if they had no chemistry in high school.

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

Junior College Courses

Note—Consult the Bulletin of the School of Architecture, Institute of Technology for description of courses and for program of hours, days, buildings, and instructors.

- 1f-2w-3s Introduction to Architecture (3 cred.; open only to students intending to major in architecture; prereq. approval of major adviser)
 DP-1f,w,s†‡ Drawing and Painting, Grade I (6 cred., normally 2 cred. per qtr.; no prereq.)
 DP-11f,w,s†‡ Drawing and Painting, Grade II (6 cred., normally 2 cred. per qtr.; soph., jr., sr.; prereq. DP-I.)
 M-1f,w,s†‡ Modeling, Grade I (6 cred., normally 2 cred. per qtr.; no prereq.)
 40f,w,s Graphic Representation (5 cred.; 3rd qtr. soph.; prereq. solid geometry and approval of major adviser.)

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

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

- 51f-52w-53s† History of Architecture (The same as Fine Arts 51-52-53) (9 cred.; jr., sr.; no prereq.)
 57f Building Materials and Methods, Part I (4 cred.; jr., sr.; no prereq.)
 61f-62w-63s Tutorial Work in History of Architecture (The same as Fine Arts 61-62-63) (6 cred.; jr., sr.; prereq. 53)
 67-68-69 Theory of Design (6 cred.; jr., sr.; no prereq.) (*Not offered*)
 104f City Planning. General survey of the economic, governmental, social, and technical phases of city planning and group housing (The same as Economics 111, Political Science 123, and Sociology 104) (3 cred.; sr., grad.; no prereq.)
 110 Architectural Aconstics (2 cred.; sr.; no prereq.) (*Not offered*)
 DP-III f,w,s†‡ Drawing and Painting, Grade III (6 cred., normally 2 cred. per qtr.; jr., sr.; prereq. DP-II or equiv.)
 DP-IV f,w,s†‡ Drawing and Painting, Grade IV (6 cred., normally 2 cred. per qtr.; jr., sr.; prereq. DP-III or equiv.)
 IHP-1f†‡ Illustration (2 cred.; jr., sr.; prereq. DP-I or equiv.)
 IHP-II w,s‡ Hand Print Processes (4 cred., normally 2 cred. per qtr.; jr., sr.; prereq. DP-I or equiv.)
 M-11f,w,s†‡ Modeling, Grade II (6 cred., normally 2 cred. per qtr.; jr., sr.; prereq. M-I)
 SD-1f,w,s‡ Stage Design (4 cred., normally 2 cred. per qtr.; jr., sr.; no prereq.)
 AD-1f,w,s†‡‡ Architectural Design, Grade I (10 cred., normally 5 cred. per qtr.; jr., sr.; prereq. 40)
 AD-11f,w,s†‡‡ Architectural Design, Grade II (15 cred., normally 5 cred. per qtr.; jr., sr.; prereq. AD-I)

ART

Courses relating to art (drawing, painting, modeling, design and appreciation, criticism, and history of art) are to be found in this bulletin under these five headings: Architecture, Art Education, Drawing, Fine Arts, and Home Economics.

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

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

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

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

ART EDUCATION

See Education, page 41

ASTRONOMY

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

Major sequence in the College of Science, Literature, and the Arts—Courses 51-52-53, 101, and Mathematics 50, 51, 105.

(Prerequisites: Mathematics 6-7, or Mathematics 6 and at least five credits in chemistry, geology, or physics.)

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
11f*	Descriptive Astronomy. A brief survey of what is known about the sun, the moon, the planets and their motions, followed by a description of the constellations and a summary of our knowledge of the stellar universe to which the sun belongs. This course is completely non-mathematical. (5 cred.; no prereq.)	IV	MTWF	133Ph	Mr. Luyten
		and one evening a week with the telescope, weather permitting			
11s*	Descriptive Astronomy (See 11f)	IV	MTWF	133Ph	Mr. Luyten
		and one evening a week with the telescope, weather permitting			
20w‡	Astronomy for Celestial Navigation. Deals with the principles and the practice of navigation of planes and ships by using the stars in the sky. Some dead-reckoning navigation is included. (5 cred.; no prereq.)	III	MTWF	358Ph	Mr. Luyten
		and one 3-hour laboratory period to be arranged			

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

51w*	General Astronomy. An outline of our knowledge of the planetary system and its motions, including those of the earth and the moon. (3 cred.; jr., sr.; prereq. Math. 6)	IV§	MWF§	133Ph§	Mr. Luyten
52w		Astrophysics (4 cred.; prereq. 51 or 11 and Math. 6)			
53s	Stellar Astronomy (3 cred.; prereq. 51 or 11 and Math. 6)	II§	MTWF§	Ar§	Mr. Luyten
101f		Celestial Mechanics (3 cred.; jr., sr., grad.; prereq. Math. 51)			
140f	Least Squares (3 cred.; prereq. 51 or 11 and at least Math. 51)	II§	MWF§	Ar§	Mr. Luyten
		II§	MWF§	Ar§	Mr. Luyten

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

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

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

§ No student should register for this course without first consulting Professor Luyten.

BACTERIOLOGY

MEDICAL SCHOOL

Major adviser in the College of Science, Literature, and the Arts—Dr. Larson.

Major sequences in the College of Science, Literature, and the Arts—Sequence A. For work in medical or public health bacteriology, Courses 101-102, 104, 114, 116, 120, 124, and Zoology 51.

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

Sequence B. For work in industrial bacteriology, Courses 53, 103, 104, 114, 121-122, 123.

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

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

No.	Title	Hour	Day	Bldg.	Instructor
1f	Elements of Bacteriology (Exclusively for students in the three-year curriculum in Nursing) (4 cred.; no prereq.)				
	Lect.	I	MWF	MH	Ar
	Lab. Secs. A	III	MWF	MH	Ar
	B	IV	TThS	MH	Ar
	C	V	MWF	MH	Ar
1s	Elements of Bacteriology (Exclusively for students in the three-year curriculum in Nursing) (4 cred.; no prereq.)				
	Lab.	III	MWF	MH	Ar
	Lect.	IV	MWF	MH	Ar

Senior College Courses

Course 53 is open to Junior College students who have a grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

53f,w,s†‡	General Bacteriology (5 cred.; soph. with a C average in the prerequisite courses, jr., sr.; prereq. 10 cred. in chem. and 4 cred. in bot. or zool.)	VII, VIII, IX	MWF	MH	Ar
101†§¶	Medical Bacteriology (5 cred.; jr., sr., grad.; prereq. Zool. 1-2-3 and 10 cred. in chem.)				Dr. Evans
102†§	Medical Bacteriology (4 cred.; jr., sr., grad.; prereq. 101)				Dr. Larson, Dr. Green
103s†	Soil Microbiology (5 cred.; jr., sr., grad.; prereq. 53, and 15 cred. in chem.)	II, III, IV	TS	MH	Dr. Skinner
104w†	Sanitary Bacteriology (4 cred.; jr., sr., grad.; prereq. 53 and 15 cred. in chem.) (Class limited to 15 students)	II, III	Th		
114s	Molds, Yeasts, and Actinomycetes (4 cred.; jr., sr., grad.; prereq. 53 or 101)	VI, VII	MWF	MH	Dr. Skinner
		VII, VIII	TTh	MH	Dr. Skinner
		III, IV	S	MH	
116w	Immunity (3 cred.; jr., sr., grad.; prereq. 102)	VII, VIII, IX	TTh	MH	Dr. Larson

† Microscope required. Students may obtain use of microscope by purchasing \$3 microscope card from bursar.

‡ The schedule for this course is uncertain. Students wishing to take it should consult the department, 228 Millard Hall.

¶ No student may receive credit for both Course 53 and Course 101.

No.	Title	Hour	Day	Bldg.	Instructor
120s	Diseases of Animals Transmissible to Man (3 cred.; jr., sr., grad.; prereq. 102)	VI	MWF	MH	Dr. Green, Dr. Evans
121f-122w†	Physiology of Bacteria (6 cred.; jr., sr., grad.; prereq. Bact. 53 and 8 cred. in org. chem. or biochem.)	III	TThS	MH	Dr. Halvorson
123s	Applied Bacteriology (3 cred.; jr., sr., grad.; prereq. 121-122)	III	TThS	MH	Dr. Halvorson
124f	Filterable Viruses (4 cred.; jr., sr., grad.; prereq. 102)				
	Lect.	VI	TTh	MH	Dr. Green
	Lab.	VII, VIII	TTh	MH	Dr. Evans
214f	Medical and Industrial Yeasts and Yeast-like Fungi. Recent work on the perfect and imperfect yeasts, and on <i>Candida</i> , <i>Brettanomyces</i> , <i>Trichosporon</i> , <i>Blastomyces</i> , <i>Geotrichum</i> , etc.—Lectures, laboratory, and special library work. (4 cred.; prereq. 53 or 101, 114 or Pl.Path. 106, and reading knowledge of German or French; no auditors may register for this course)	Ar	Ar	Ar	Dr. C. E. Skinner

BIOSTATISTICS

See Public Health, page 112.

BOTANY

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

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

- A. In Botany, 27 credits in Senior College courses in botany, including Courses 50, 51, 52, 53, and 54.
- B. In special fields, such as morphology, taxonomy, physiology, or ecology, a major will consist of the respective courses with numbers over 100 and additional approved courses to make a total of 27 credits in Senior College courses.

(Prerequisites: *For sequences A and B*: Courses 1-2-3 or 4-5, a beginning course in general chemistry and either Principles of Genetics (Agron. and Plant Genetics 31) or Plant Pathology (Plant Path. and Agric. Bot. 1). At least one year of French or German is recommended as part of the Junior College work.)

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

Major adviser in the College of Education—Professor Cooper.

Requirements for a teacher's certificate—Major recommendation: Courses 1-2-3 or 4-5, 10, 12, 50, 51, 52, 53, 54.

Minor recommendation: Courses 1-2-3 or 4-5, 10, 12, and three additional credits.

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

For a course in General Biology, Natural Science 7f-8w-9s, see Department of General Studies, p. 56.

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1††-2w†-3s*†	General Botany. A survey lecture and laboratory course on plants and their human interest; characteristics of living matter; fundamental facts of growth, structure, and reproduction of plants; principles underlying inheritance, variation, organic evolution, and relations to environment. (10 cred.; no prereq.)				
	Lect. Sec. 1	III	TTh	BoAud	Ar
	2	VI	TTh	BoAud	Ar
	Lab. Sec. 1 (Limited to 125) (Intended primarily for students in the College of Agriculture, Forestry, and Home Economics)	IV, V	TTh	Ar	Ar
	2 (Limited to 125) (Intended primarily for students in the College of Agriculture, Forestry, and Home Economics)	VII, VIII	TTh	Ar	Ar
	3 (Limited to 125)	I, II	WF	Ar	Ar
	4 (Limited to 125)	VI, VII	WF	Ar	Ar
	5 (Limited to 125)	III, IV	WF	Ar	Ar
4††-5*††	<i>General Botany</i> (10 cred.; no prereq.) (<i>Not offered</i>)				
10s§	Minnesota Plant Life. A non-technical survey of all of the groups of plants native to Minnesota with special reference to identification and distribution. A course suitable for non-majors. (3 cred.; no prereq.)				
	Lect.	VI	W	BoAud	Ar
		VI, VII	F	BoAud	Ar
	Lab.	VI, VII	M	4,5Bo	
12f§	Plants Useful to Man. Survey of the world's useful plants and plant products, their sources, characteristics and uses. Demonstration of material. Plants and Man: the origin and history of cultivated plants. A course suitable for non-majors. (3 cred.; no prereq.)	VII	MWF	5Bo	Mr. Sharsmith

Senior College Courses

Courses 50, 51, 52, 53, 54, 56 are open to sophomores who have an average grade of at least C in Course 1-2-3 or 4-5. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50f†	General Plant Ecology (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5)				
	Lect.	VI	TTh	214Bo	Mr. Cooper
	Lab.	VII, VIII	TTh	214Bo	
51w†	General Plant Physiology (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5 and one quarter of general chemistry or consent of instructor)				
	Lect.	VI	TTh	214Bo	Mr. Lawrence
	Lab.	VII, VIII	TTh	104Bo	
52s†	Elementary Taxonomy (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5)				
	Lect.	VI	MW	209Bo	Ar
	Lab.	VII, VIII	MW	209Bo	
53f†	Morphology of Thallophytes and Bryophytes (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5)				
		I, II	MWF	209Bo	Mr. Abbe
54w†	Morphology of Pteridophytes and Spermatophytes (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5)				
		I, II	MWF	209Bo	Mr. Abbe
56f	Introduction to the Study of Fungi (3 cred.; jr., sr.; prereq. 9 cred. in botany or permission of instructor)				
	Lect.	II	MW	107PP	Mr. C. Christensen
	Lab.	II, III	F		

* Any student who has had Course 1 given in 1942-43 and earlier years should register for 2-3. If he has had additional courses he should consult the Department of Botany before registering for any other course. He may be permitted to take any one of Courses 50, 51, 52, 53, 54.

† A fee of \$1.50 is charged for this course.

†† A fee of \$2.25 is charged for this course.

§ This course does not satisfy any part of the laboratory science requirement of the College of Science, Literature, and the Arts.

No.	Title	Hour	Day	Bldg.	Instructor
108	<i>Pteridophytes</i> (5 cred.; sr., grad.; prereq. 54) (<i>Not offered</i>)				
110	<i>Gymnosperms</i> (5 cred.; sr., grad.; prereq. 54) (<i>Not offered</i>)				
113f‡	Flora of Minnesota (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5 or consent of instructor)	VI, VII, VIII	TTh	209Bo	Mr. Tryon
114w‡	Phyletic Taxonomy of Angiosperms (3 cred.; jr., sr., grad.; prereq. 52 or consent of instructor)	VI, VII, VIII	TTh	209Bo	Mr. Sharsmith
115‡	<i>Spring Flora of Minnesota</i> (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5 or consent of instructor) (<i>Not offered</i>)				
117s	Floristic Plant Geography (5 cred.; jr., sr., grad.; prereq. 52 or consent of instructor)	VI, VII, VIII,			
		IX	TTh	209Bo	Mr. Sharsmith
118w‡	Extranuclear Cytology (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5)	VI-VII	MWF	202Bo	Mr. Dahl
119f‡	Nuclear Cytology (3 cred.; jr., sr., grad.; prereq. 1-2-3, or 4-5 and an elem. course in genetics)	III-IV	MWF	202Bo	Mr. Dahl
120s‡‡	Research Methods in Cytology (3 to 5 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5 and consent of instructor)	III	MWF	202Bo	Mr. Dahl
	Lect.	Ar	Ar	202Bo	Miss Hansen
121‡	<i>Morphogenesis</i> (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5 and consent of instructor) (<i>Not offered</i>)				
123w‡‡	Research Methods in Histology (3 to 5 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5 and consent of instructor)	III	MWF	209Bo	Mr. Abbe
	Lect.	Ar	Ar	209Bo	Miss Hansen
127f‡	Anatomy of Vascular Plants (5 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5)	I	TTh	209Bo	Mr. Abbe
	Lect.	II, III, IV	TTh		
131f	Field Ecology (5 cred.; jr., sr., grad.; prereq. 50 or For. 2, 3, 4)	VI, VII, VIII	MWF	214Bo	Mr. Cooper
132w‡	Morphological Ecology (5 cred.; jr., sr., grad.; prereq. 50 or For. 2, 3, 4)	VI, VII, VIII	MWF	215Bo	Mr. Cooper
133s	Ecological Plant Geography (5 cred.; jr., sr., grad.; prereq. 50 or For. 2, 3, 4)	VI, VII, VIII	MWF	215Bo	Mr. Cooper
134f‡	Research Methods in Ecology (5 cred.; jr., sr., grad.; prereq. 18 cred. in pl. sci. incl. 50)	Ar	Ar	214Bo	Mr. Lawrence
137s‡	Experimental Ecology (5 cred.; jr., sr., grad.; prereq. 18 cred. in pl. sci. incl. 50, 51)	Ar	Ar	214Bo	Mr. Lawrence
140	<i>Advanced Survey of Plant Physiology</i> (3 cred.; jr., sr., grad.; prereq. 51 or equiv. and elementary inorganic chemistry) (<i>Not offered</i>)				
141f	Physicochemical Principles and Measurements in Plant Physiology (3 cred.; jr., sr., grad.; prereq. 20 cred. in chem. or biochem. or consent of instructor)	9:30-10:45	TTh	110Bo	Mr. French
	Lect.				
	For laboratory see 146.				
142w	Photosynthesis and Other Effects of Radiation (3 cred.; jr., sr., grad.; prereq. same as for 141)	9:30-10:45	TTh	110Bo	Mr. French
	Lect.				
	For laboratory see 147.				
143s	Plant Metabolism (3 cred.; jr., sr., grad.; prereq. same as for 141)	9:30-10:45	TTh	110Bo	Mr. French
	Lect.				
	For laboratory see 148.				

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

‡‡ A fee of \$3 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
146f††, 147w††, 148s††	Advanced Physiology Laboratory (2 cred. per qtr.; jr., sr., grad.; to be taken with or after 141, 142, 143 respectively)	VI, VII, VIII, IX, X or VI, VII, VIII, IX, X	T	110Bo	Mr. French
154f††	Spectroscopy and Photochemistry Applied to Biology (3 to 5 cred.; jr, sr., grad.; prereq. 20 cred. in chem. or biochem. or consent of instructor)	VI VII, VIII, IX	MW	110Bo	Mr. French
165s†	Introduction to Pollen Analysis (3 cred.; jr., sr., grad.; prereq. consent of instructor)	VI, VII	MWF	202Bo	Mr. Dahl
197f†-198w†- 199s†	Problems (1 to 5 cred. per qtr.; jr., sr., grad.; prereq. 20 cred. in pl. sci. and permission of instructor)	Ar	Ar	Ar	Ar

For Graduate Students Only

201f-202w-203s	Research Problems in the Morphology of Vascular Plants				Mr. Abbe
205f-206w-207s	Research Problems in Taxonomy and Floristic Plant Geography				Mr. Sharsmith, Mr. Tryon
221f-222w-223s	Research Problems in Ecology				Mr. Cooper, Mr. Lawrence
225f-226w-227s	Research Problems in Plant Physiology				Mr. French
229f-230w-231s	Research Problems in Cytology				Mr. Dahl
233f-234w-235s	Seminar (Students may register for one-hour seminar credit per quarter in any of the research subjects)				

PLANT PATHOLOGY AND AGRICULTURAL BOTANY AND
AGRONOMY AND PLANT GENETICS

The following courses in the College of Agriculture, Forestry, and Home Economics regularly carry credit in the College of Science, Literature, and the Arts without petition:

Agronomy and Plant Genetics 31, Principles of Genetics.
Plant Pathology and Agricultural Botany 1, Plant Pathology.

Students in this college may elect other courses in "Plant Pathology and Agricultural Botany" and "Agronomy and Plant Genetics" by arrangement with the departments concerned. See the program of the College of Agriculture, Forestry, and Home Economics in this bulletin.

CHEMISTRY

INSTITUTE OF TECHNOLOGY

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

Major sequence in the College of Science, Literature, and the Arts—Analytical Chemistry 1-2; Organic Chemistry 54-55-156, 57-58-159; Physical Chemistry 101-102-103.

† A fee of \$1.50 is charged for this course.
†† A fee of \$3 is charged for this course.

(Prerequisites: Inorganic Chemistry 13 with its prerequisites; a year of college physics; mathematics through differential and integral calculus which need not be completed until the end of the student's junior year.)

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

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

Requirements for a teacher's certificate—Major recommendation: Inorganic Chemistry 6-7 or 9-10, 12; Analytical Chemistry 7; Organic Chemistry 54-55, 57-58 and 10 additional credits in chemistry.

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

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

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

INORGANIC CHEMISTRY

No.	Title	Hour	Day	Bldg.	Instructor
1f††-2w†††	General Inorganic Chemistry (4 cred. per qtr.; no prereq.; for architecture, pre dental, premedical, medical technology, nursing education, public health nursing, physical education for women, agriculture, forestry, and home economics students)				
1f-2w	(For architecture, agriculture, forestry, home economics, nursing education and public health nursing students)				
	Lect.	VI	MWF	100C	Mr. Barber
	Quiz	VII	WF	Ar	
	Lab.	VII, VIII, IX	M	ArC	
1f-2w	(For pre dental, premedical, medical technology, and physical education for women students)				
	Lect.	VI	MWF	225C	Mr. Pervier
	Quiz	VI	TTh	225C	
	Lab.	VII, VIII, IX	T	ArC	
1f-2w	(For all as indicated in general title 1f-2w)				
	Lect.	VIII	MWF	225C	Ar
	Quiz	VII	TTh	225C	
	Lab.	VIII, IX, X	Th	ArC	
4f††-5w†††	General Inorganic Chemistry (8 cred.; for premedical, medical technology, pre dental, nursing education, public health nursing, agriculture, forestry, and home economics students; prereq. entrance cred. in chem.)				
4f-5w	(For premedical and medical technology students)				
	Lect.	VII	MWF	100C	Mr. Maynard
	Quiz	VII	T	100C	
	Lab.	VII, VIII, IX	Th	ArC	
4f-5w	(For pre dental, nursing education and public health nursing students)				
	Lect.	VII	MWF	325C	Mr. Reyerson
	Quiz	VII	Th	100C	
	Lab.	VII, VIII, IX	T	ArC	
4f-5w	(For all as indicated in general title 4f-5w)				
	Lect.	I	MWF	225C	Ar
	Quiz	IV	S	100C	
	Lab.	I, II, III	S	ArC	
4f-5w	(For agriculture, forestry, and home economics students)				
	Lect.	VII	MWF	225C	Mr. O'Brien
	Quiz	VIII	F	ArC	
	Lab.	VIII, IX, X	M	ArC	

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

†† A fee of \$2 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2 course fee, laboratory material, and breakage will be charged against the deposit.

No.	Title	Hour	Day	Bldg.	Instructor
6f†-7w††	General Inorganic Chemistry (10 cred.; no prereq. A continuation of this course is 12s)				
	Lect.	II	MWF	225C	Ar
	Quiz	I	Th	225C, 100C	
	Lab.	I, II, III II, III	T Th	ArC ArC	
6w†-7s††	General Inorganic Chemistry (See 6f-7w)				
	Lect.	VIII	MWF	325C	Ar
	Quiz	V	W	325C	
	Lab.	V, VI, VII VI, VII	M W	ArC ArC	
7f††	General Inorganic Chemistry (2nd qtr. of 6-7. See 6f-7w)				
	Lect.	III	MWF	325C	Ar
	Quiz	Ar	Ar	ArC	
9f†-10w††	General Inorganic Chemistry (10 cred.; prereq. entrance cred. in chem.)				
	Lect. Sec. 1	II	MWF	100C	Mr. Sneed
	Quiz	I	Th	100C	
	Lab.	I, II, III II, III	T Th	ArC ArC	
9w†-10s††	General Inorganic Chemistry (10 cred.; prereq.** entrance cred. in chem.)				
	Lect. Sec. 1	III	MWF	410C	Ar
	Quiz	Ar	Ar	Ar	
	Lab.	VI, VII, VIII	TTh	ArC	
10f†	General Inorganic Chemistry (2nd qtr. of 9-10. See 9f-10w)				
	Lect.	II	MWF	325C	Mr. Maynard
	Lab.	I, II, III	TTh	ArC	
	Lect. Sec. 2	VIII	MWF	410C	Ar
11f††	Semimicro Qualitative Analysis (4 cred.; primarily for premedical and preidental students; prereq. Course 2 or 5)				
	Lect. Sec. 1	IV	MWF	325C	Ar
	Lab.	VI, VII, VIII, IX	F	210C	
	Lect. Sec. 2	VIII	MWF	325C	
11s††	Semimicro Qualitative Analysis (4 cred.; for premedical, preidental, and medical technology students; prereq. 2)				
	Lect.	VII	MWF	100C	Mr. Maynard
	Lab.	VII, VIII, IX, X	Th	ArC	
	Lect.	VI	MWF	225C	Mr. Pervier
11s††	Semimicro Qualitative Analysis (4 cred.; for premedical, preidental, and medical technology students; prereq. 5)				
	Lab.	VI, VII, VIII, IX	T	ArC	

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

† A fee of \$2 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2 course fee, laboratory material, and breakage will be charged against the deposit.

†† A fee of \$2.40 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar, in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2.40 course fee, laboratory material, and breakage will be charged against the deposit.

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

** Students who have not had high school chemistry may take this course, but they will be required to attend one extra lecture each week.

No.	Title	Hour	Day	Bldg.	Instructor
11s††	Semimicro Qualitative Analysis (4 cred.; for agriculture, forestry, and home economics students; prereq. 2 or 5)				
	Lect.	VII	MWF	225C	Mr. O'Brien
	Lab.	VIII, IX	MW	ArC	
12w††	Semimicro Qualitative Analysis (5 cred.; prereq. 7 or 10)				
	Lect. (For those who have completed Course 10)	II	MWF	111C	Mr. Maynard
	Lab.	I, II, III	ThS	ArC	
12s††	Semimicro Qualitative Analysis (5 cred.; prereq. 7)				
	Lect.	II	MWF	225C	Ar
	Lab.	I, II, III	TTh	210C	
12s††	Semimicro Qualitative Analysis (5 cred.; prereq. 10)				
	Lect.	II	MWF	100C	Mr. Sneed
	Lab.	I, II, III	ThS	290C	
13f††	Semimicro Qualitative Analysis (5 cred.; prereq. 12)				
	Lect.	VI	MWF	325C	Mr. Heisig
	Lab.	VII, VIII, IX	WF	290C	
		VII, VIII	M		
13s††	Semimicro Qualitative Analysis (See 13f)				
	Lect.	VI	MW	325C	Mr. Heisig
	Quiz	VI	F	325C	
	Lab.	VII, VIII, IX	WF	290C	
		VII, VIII	M	290C	
102s††	Semimicro Qualitative Analysis (3 cred.; jr. sr., grad.; prereq. Anal. Chem. 1-2)				
	Ar	Ar	Ar	290C	Mr. Barber
103f	Advanced Inorganic Chemistry (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)				
	II	TThS	115C		Mr. O'Brien
104w	Atomic Structure and the Chemical Bond (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2, Org. Chem. 55)				
	II	TThS	115C		Mr. Reyerson
105s	Co-ordination Compounds (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2, Org. Chem. 55)				
	II	TThS	115C		Mr. Maynard
109w†-110s†	Synthetic Inorganic Chemistry (3 to 5 cred. per qtr.; jr., sr., grad.; prereq. Org. Chem. 54)				
	Ar	Ar	Ar	Ar	Mr. Heisig

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

ANALYTICAL CHEMISTRY

1w†-2s††	Quantitative Analysis (10 cred.; soph., jr., sr.; prereq. Inorg. Chem. 13)				
	Lect.	VI	M	410C	Ar
	Quiz	VI	F	410C	
	Rec.	VI or VII	W	115C	
	Lab. Sec. 1 Any 9 hrs. selected from	VI-IX	MWF	310C	
	2 (winter)	I-IV	T	310C	
		I-III	Th	310C	
		I-IV	S	310C	
	2 (spring)	I-IV	T	310C	
		VII-IX	T	310C	
		I-IV	S	310C	

† A fee of \$2 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2 course fee, laboratory material, and breakage will be charged against the deposit.

†† A fee of \$2.40 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar, in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2.40 course fee, laboratory material, and breakage will be charged against the deposit.

‡ Course 2s may precede 1w, if desired.

No.	Title	Hour	Day	Bldg.	Instructor
7f†	Quantitative Analysis (4 cred.; primarily for premedical students; prereq. any course in qualitative chemistry)				
	Sec. 1 and 2				
	Lect.	VI	F	410C	Ar
	Rec. (Limit 35 in each sec.)	VI or VII	W	115C	
	Quiz	VI	M	410C	
	Lab. Any other 8 hrs. selected from	VI-IX	MWF	310C	
	Sec. 3				
	Lect.	VI	T	325C	Ar
	Rec.	VI	Th	325C	
	Lab.	VII, VIII, IX	TTh	310C	
		I, II, III	S	310C	
		or			
		II, III, IV	S	310C	
7s‡	Quantitative Analysis (4 cred.; primarily for premedical students; prereq. any course in qualitative chemistry)				
	Lect.	VI	T	325C	Ar
	Rec.	VI	Th	325C	
	Lab.	VII, VIII, IX	TTh	310C	
		I, II, III	S	310C	
		or			
		II, III, IV	S	310C	
9w‡	Quantitative Analysis. Short introductory course covering general principles of quantitative analysis, both gravimetric and volumetric. Typical problems are assigned and attention given to proper laboratory practice (3 cred.; prereq. Inorg. Chem. 11, 12, or 16; for dentists, engineers, and miners)				
	Lect.	VI	Th	325C	Ar
	Rec.	VI	T	325C	
	Lab.	VII, VIII, IX	TTh	310C	
96f†-97w†-98s‡	Senior Topics (5 cred. per qtr.; sr.)	Ar	Ar	Ar	Mr. Kolthoff, Mr. Sandell, Mr. Meehan
101w†-102s‡	Quantitative Analysis. General principles, methods, and procedure of quantitative analysis, both gravimetric and volumetric. Typical problems assigned and attention given to proper laboratory practice (5 cred. per qtr.; jr., sr., grad.; prereq. Inorg. Chem. 13)				
		VI, VII, VIII, IX	MWF	310C	Ar
103s‡	Quantitative Inorganic Microanalysis. Representative methods of micro- and semi-microgravimetric, volumetric, and colorimetric analysis (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)	Ar	Ar	Ar	Mr. Sandell
104f‡	Qualitative Inorganic Microanalysis. Use of microscope. Technique of handling small amounts of materials, inorganic qualitative analysis by means of crystal reactions and modern spot reactions (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)	Ar	Ar	Ar	Mr. Sandell
105w‡	Polarizing Microscope. Its use and application to chemistry. Identification of substances (3 cred.; jr., sr., grad.; prereq. Phys. Chem. 101)	VI	F	215C	Mr. Sandell
106f†-107w†-108s‡	General Technical Analysis. Analysis of commercially important materials such as steel, non-ferrous alloys, and ores (2 or 3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1, 2)	Ar	Ar	Ar	Mr. Sandell

† A fee of \$2 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2 course fee, laboratory material, and breakage will be charged against the deposit.

No.	Title	Hour	Day	Bldg.	Instructor
109f,w,s††	Rock Analysis. Laboratory course covering the technique of rock analysis (3 cred.; jr., sr., grad.; prereq. 1-2)	Ar	Ar	214P	Ar
	Advanced Analytical Chemistry. A condensed review of modern fundamentals of gravimetric and volumetric analysis (1 to 2 cred.; jr., sr., grad.; prereq. quantitative chemistry; 1 lecture, 1 recitation, and 3 to 6 laboratory hours to be arranged)	Ar	Ar	Ar	Ar
	Advanced Analytical Chemistry. Analysis of complex materials by modern methods (3 cred.; jr., sr., grad.; prereq. 1-2 or permission of instructor; 1 lect. and 6 lab. hrs. to be arranged)	Ar	Ar	Ar	Mr. Meehan
	Methods in Analytical Chemistry (2 to 3 cred.; prereq. Phys. Chem. 103; 2 lab. hrs. ar.)	Ar	Ar	Ar	Mr. Meehan
	Application of Indicators in Neutralization Reactions and pH Determinations. (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2 and Phys. Chem. 103)	VI	MW	315C	Mr. Kolthoff
	Measurements Titrations. Application of potentiometric and conductometric analytical work (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2 and Phys. Chem. 103)	VI	MW	315C	Mr. Kolthoff
	and Amperometric Titrations. A discussion of the use of the dropping mercury electrode (polarograph) and the platinum microelectrode in pure and applied chemistry (2 to 4 cred.; jr., sr., grad.; prereq. Phys. Chem. 103; 2 lect. and lab. hrs. ar.)	Ar	Ar	Ar	Mr. Kolthoff
134f-135w-136s	Seminar: Modern Problems in Analytical Chemistry (1 cred. per qtr.; jr., sr., grad.; prereq. 1, 2, and Phys. Chem.)	III	T	315C	Mr. Kolthoff
140w†	Water Analysis (2 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2)	Ar	Ar	Ar	Mr. Sandell

ORGANIC CHEMISTRY

1f†-2w††	Elementary Organic Chemistry. Discussion of important classes of organic compounds, both aliphatic and aromatic. Laboratory work includes the preparation of typical substances (8 cred.; for premedical, preidental and pharmacy students; prereq. Inorg. Chem. 11 or equiv.)	I	MWF	100C	Mr. Arnold
	Lect.	II	T	325C	Mr. Arnold
	Lab. conference	I	T	100C	Ar
	Quiz	VI-IX	T	390C	
	Lab. Sec. 1	VI-IX	W	390C	
	2	I-IV	S	390C	
	3				
1w, lab. 4	Elementary Organic Chemistry (See 1f-2w)	IV	MWF	100C	Mr. Koelsch
	Lect.	V	T	100C	Mr. Koelsch
	Lab. conference	IV	T	410C	Ar
	Lect.	VI-IX	W	390C	
	Lab. Electrometric Methods and Phys. Chem.	VI-IX	Th	390C	
	Lect.	I-IV	S	390C	

For any part of this course a student must complete the parts preceding the

...er quarter is charged for this course. The student should purchase a \$5 chemistry bursar in the Administration Building. No student will be assigned a desk in the lab unless he presents this card. The \$2 course fee, laboratory material, and breakage will be deposited.

...tion limited. Permission of instructor must be obtained.

No.	Title	Hour	Day	Bldg.	Instructor
54f-55w†-156s*	Elementary Organic Chemistry, Lecture Course. Discussion of important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds (3 cred. per qtr.; open to all except premedical, predentistry, and pharmacy students; prereq. 15 cred. in college chemistry. Course 156 is prerequisite to all other advanced courses in organic chemistry)	Lect. III	MWF	100C	
	Quiz	III	Th	410C	
57f†-58w††-159s†*	Elementary Organic Chemistry, Laboratory Course. Preparation of some original work. (2 cred. per qtr.; must be accompanied by responding quarter of 54-55-156. Course 159 is prerequisite to all other advanced courses in organic chemistry)	Lab. conference III	S	410C	
	Lab. Sec. 1	II, III, IV	T	390C	
		VI, VII, VIII	T	390C	
	2	VI, VII, VIII	TTh		
96f†-97w†-98s†	Senior Thesis. This course may be taken with any member of the Division staff (5 cred. per qtr.; sr.)	Ar			
105f-106w-107s	Advanced Organic Chemistry. Advanced descriptive organic chemistry, together with an introduction to organic chemistry. Lectures and outside reading. Ability to read German required. (5 cred. per qtr.; jr., sr., grad.; prereq. 156 and 159 or equiv.)	II	MWF	315C	
110f††	Organic Qualitative Analysis. Reactions of typical functional groups, identification of pure organic compounds, separation and identification of constituents of mixtures (5 cred.; prereq. 156 and 159 or equiv.)	Lect. 2 hrs. ar	Ar	315C	Mr. Arnold
	Lab.	9 hrs. ar	Ar	Ar	
130s†	Organic Quantitative Analysis. Methods of proximate and ultimate analysis of organic compounds, with special attention to semimicro methods (2 or 3 cred.; prereq. 156 and 159 and Anal. Chem. 1 and 2)	Lect. 1 hr. ar	Ar	Ar	Mr. Lauer
	Lab.	3 or 6 hrs. ar	Ar	Ar	
139f,w,s†	Advanced Organic Chemistry Laboratory Work. Selected laboratory problems of an advanced nature, including some original work (2 to 5 cred.); prereq. 156 and 159. Ability to read German is assumed. Students are advised to take this course during the winter quarter. Permission of instructor is required to take it at any other time)	Ar	Ar	Ar	Mr. Arnold
140	<i>Aromatic Compounds.</i> Discussion of the chemistry of typical aromatic compounds including derivatives of benzene, naphthalene, anthracene, phenanthrene, and other polynuclear hydrocarbons, together with a consideration of certain heterocyclic compounds which show aromatic character. The properties of these compounds will be illustrated by examples chosen from the sterols and the alkaloids (3 cred.; prereq. 156 and 159) (<i>Not offered—offered in alternate years</i>)				
141f	Reagents in Organic Chemistry. Discussion of typical reagents used in organic reactions; their limits of applicability, methods of use, and types of substances with which they react (3 cred.; prereq. 156 and 159)	IV	MWF	315C	Mr. Koelsch
142-143	<i>The Chemistry of Natural Products.</i> Discussion of the organic chemistry of important classes of natural products (3 cred. per qtr.; prereq. 156 and 159) (<i>Not offered—offered in alternate years</i>)				

* Courses 54-57, 55-58, and 156-159 take the place of the Course 51-52-153 which was offered in previous years.

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

‡ A fee of \$2 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2 course fee, laboratory material, and breakage will be charged against the deposit.

†† A charge of \$10 is made to cover special chemicals in this course.

	Title	Hour	Day	Bldg.	Instructor
	Elements of Organic Chemistry (See Organic Chemistry 54w-55s-156f)				
	Elements of Organic Chemistry, Laboratory Course (See Organic Chemistry 57w-58s-159f)				
201f-202w-203s	Organic Chemistry Seminar (1 cred. per qtr.) (Required of all students taking graduate work in organic chemistry)	1 hr. per week	ar	Ar	Mr. Smith, Mr. Lauer, Mr. Arnold, Mr. Koelsch
205f-206w	Theoretical Organic Chemistry. Structure, reaction mechanisms, relation of physical properties to constitution, and other topics of a theoretical nature (3 cred. per qtr.; prereq. 107)	I	MWF	315C	Mr. Lauer
2s	Physico-Organic Chemistry. Contributions made to organic chemistry by kinetic and equilibrium studies of organic reactions, including mechanisms of catalytic and ionotropic reactions; and an introduction to the current electronic formulations of organic reactions. Lectures, outside reading, and a term paper are required (4 cred.; prereq. 107, Phys. Chem. 103, and calculus, or permission of instructor.	I	MWF	315C	Mr. Arnold
301f-302w-303s	Research in Organic Chemistry (Cred. ar.; prereq. 110)	Ar		Ar Ar	Mr. Smith, Mr. Lauer, Mr. Arnold, Mr. Koelsch

PHYSICAL CHEMISTRY

101f-102w-103s	Physical Chemistry. A general survey of the subject (9 cred.; jr., sr., grad.; prereq. two years college chemistry, one year college physics, and mathematics through differential and integral calculus)	Lect. Rec.	IV IV	MWF S	225C 325C	Mr. MacDougall
104ff-105w†- 106s‡	Physical Chemistry Laboratory (To accompany or follow Course 101-102-103) (1 or 2 cred. per qtr.)		VI, VII, VIII	MW	190C	
107ff	Elementary Physical Chemistry (6 cred.; for premedical students only; prereq. two years college chemistry, one year college physics)	Lect. Rec. Lab.	IV IV	MWFS T	410C 410C	Mr. Crawford
113f	Fundamentals of Reaction Kinetics (3 cred.; jr., sr., grad.; prereq. 103 and calculus)	Ar		Ar Ar		Mr. Livingston
114w	Kinetics of Reactions in Liquid Solutions in Heterogeneous Systems (3 cred.; jr., sr., grad.; prereq. 113)	Ar		Ar Ar		Mr. Livingston
116f-117w-118s	Advanced Physical Chemistry (9 or 12 cred.; jr., sr., grad.; prereq. 103 and calculus)	IV		MWF	215C	Mr. Crawford
128f-129w-130s	Colloid Chemistry (2 cred. per qtr.; sr., grad.; prereq. 103)	Ar		Ar	ArC	Mr. Reyerson
131ff-132w†- 133s‡	Colloid Chemistry Laboratory (Cred. ar.; sr., grad.; prereq. 129 or 130)	Ar		Ar Ar		Mr. Reyerson
175s	Photochemistry (3 cred.; jr., sr., grad.; prereq. 103 and Physics 9)	Ar		Ar Ar		Mr. Livingston

† A fee of \$2 per quarter is charged for this course. The student should purchase a \$5 chemistry deposit card from the bursar in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The \$2 course fee, laboratory material, and breakage will be charged against the deposit.

AGRICULTURAL BIOCHEMISTRY

Students in this college may elect courses in Agricultural Biochemistry by arrangement with the division. See the program of the College of Agriculture, Forestry, and Home Economics in this bulletin.

CHILD WELFARE

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

Major advisers in the College of Education—Professor Anderson and Mrs. Fuller.

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
10s	Introduction to Child Study. Orientation in the child development. (2 cred.; 3rd qtr. fr., soph.; no prereq.)	V	TTh	202Pt	Mrs. Cummings
40f*	Child Training (3 cred.; soph., jr., sr.; prereq. Psy. 1-2)	VI	TTh	202Pt	Miss Peterson
40w*	Child Training (See 40f)	V	MW	100Pt	Mrs. Fuller
	Sec. 1	VI	TTh	202Pt	Miss Peterson
	2				
40s*	Child Training (See 40f)	VI	TTh	202Pt	Miss Peterson

Note—See also Family Life 25f,w,s (Child Development and Adjustment) under General Studies, page 54.

Senior College Courses

Course 80 is open to sophomores who have an average grade of at least C in Psychology 1-2. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

80f	Child Psychology (3 cred.; jr., sr.; prereq. Psy. 1-2)				
	Sec. 1	III	MWF	202Pt	Miss Kuenne
	2	VII	MWF	202Pt	Miss Templin
80w	Child Psychology (See 80f)	IV	MWF	202Pt	Mr. Harris
80s	Child Psychology (See 80f)	IV	MWF	202Pt	Miss Kuenne
90f	Home, School, and Family Relations (2 cred.; jr., sr.; prereq. 80)	II	TTh	202Pt	Mrs. Cummings
130f	Motor, Linguistic, and Intellectual Development of the Child (3 cred.; sr., grad.; prereq. 12 cred. in psy. or equiv.)	II	MWF	202Pt	Mr. Anderson
131w	Personality, Emotional, and Social Development of the Child (3 cred.; sr., grad.; prereq. 12 cred. in psy. or equiv.)	II	MWF	202Pt	Mr. Anderson
132s	Later Childhood and Adolescence (3 cred.; sr., grad.; prereq. 80 or equiv.)	II	MWF	202Pt	Mr. Harris
133f-134w-135s	Research Methods (2, 4, or 6 cred.; sr., grad.; prereq. 10 cred. in psy. or ed. psy.)	VII, VIII	TTh	204EPt	Mr. Anderson

* Not open to Home Economics students, who should take Home Economics Education 90, which is offered fall and spring on the University Farm campus. See the program of the College of Education in another part of this bulletin.

	Title	Hour	Day	Bldg.	Instructor
	Behavior Problems in Younger Children (2 cred.; sr., grad.; prereq. ed. psy., or soc.)				12 cred. in psy.,
		III, IV	S	202Pt	Miss Goodenough
140s	Behavior Problems in Younger Children (See 140f)	VIII, IX	Th	202Pt	Miss Kuenne
141w	Behavior Problems in Older Children (2 cred.; sr., grad.; prereq. ed. psy., or soc.)				12 cred. in psy.,
		III, IV	S	202Pt	Miss Goodenough
142s	Psychology of Atypical Children (3 cred.; sr., grad.; prereq. 12 cred. in psy.)	II	TThS	202Pt	Miss Goodenough
150f-151w-152s	Childhood Education (2, 4 or 6 cred.; sr., grad.; prereq. 12 cred. in psy. or equiv.)	VIII	TTh	100Pt	Mrs. Fuller
160s	Physical Growth and Development (3 cred.; sr., grad.; prereq. 12 cred. in psy. or equiv.)	III	MWF	204EPt	Dr. Booth
166f	Maturity and Aging: Developmental Changes and Adjustment (3 cred.; sr., grad.; prereq. 15 cred. in psy., educ., or soc.)	VI	MWF	202Pt	Mr. Harris
170w	Parent Education (3 cred.; sr., grad.; prereq. 15 cred. in child welfare or home econ. or educ. or psy. or soc. or public health)	V	MWF	202Pt	Mrs. Cummings
185s	Children in a Changing World (3 cred.; sr., grad.; prereq. 12 cred. in psy., educ., or soc.)	VI	MWF	202Pt	Miss Templin
190f	Principles of Mental Measurement of Young Children (2 cred.; sr., grad.; prereq. 12 cred. in psy., ed. psy., or soc.)	III	TTh	100Pt	Miss Goodenough

For Graduate Students Only

220f-221w-222s	Seminar in Current Research	Ar	Ar	202Pt	Mr. Harris
225s	Seminar in Developmental Theory	Ar	Ar	202Pt	Mr. Anderson
230f-231w-232s	Seminar in Recent Literature	IX	M	202Pt	Miss Goodenough
270f-271w-272s	Readings and Research in Child Development	Ar	Ar	101Pt	Mr. Anderson and others
274w-275s	Technique and Field Work in Parent Education	Ar	Ar	204EPt	Ar
290w-291s	Mental Examination of Preschool Children	Ar	Ar	205Pt	Miss Kuenne

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

CLASSICS

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

GREEK

The elementary course 1-2-3 and twenty-seven credits in courses numbered above 50, which may include nine credits in Latin courses numbered above 50, or nine credits in ancient history.

LATIN

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

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

Major adviser in the College of Education—Professor Heller.

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

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

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

GREEK

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†	Beginning Greek (10 cred.; no prereq.)	I	MTWThF	115F	Mr. Heller
3s	Selections from Attic Prose (5 cred.; prereq. 1-2)	I	MTWThF	115F	Mr. Heller

Senior College Courses

Courses 51, 52, 53, 73 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18. Students who continue Greek in the Senior College will enroll in Greek 171, 172, 173, "Independent Reading Courses." The subject matter of these courses will be varied to meet the needs of the individual student.

51f	Lucian (3 cred.; jr., sr.; prereq. 1-2-3)	II	MWF	112F	Mr. Heller
52w	Homer (3 cred.; jr., sr.; prereq. 1-2-3)	II	MWF	112F	Mr. Heller
53s	Plato, Apology and Selections (3 cred.; jr., sr.; prereq. 1-2-3)	II	MWF	112F	Mr. Heller
73s	New Testament (3 cred.; jr., sr.; prereq. any two of 51, 52, 53)	Ar	Ar	118F	Mr. Ogle
121-122-123†	Advanced Composition (9 cred.; jr., sr., grad.; prereq. 24 cred. in Greek) (Not offered)				
171f,*172w,*	Independent Reading Courses (3 cred. per qtr.; open to students of exceptional ability with the consent of the instructor)				
173s*		Ar	Ar	112F	Mr. Heller

For Graduate Students Only

201f-202w-203s	Graduate Seminar: Greek Literary Bibliography and Criticism (9 cred.)	Ar	Ar	112F	Mr. Heller
211-212-213	Graduate Seminar: Greek Epic (9 cred.) (Not offered)				
221-222-223	Graduate Seminar: Greek Drama and Lyric Poetry (9 cred.) (Not offered)				
231-232-233	Graduate Seminar: Greek Philosophy (9 cred.) (Not offered)				

Courses for Which No Knowledge of Greek Is Required

(See page 40)

* Since the authors to be read vary from term to term and from year to year, this course may be repeated for credit.

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

LATIN

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†	Beginning Latin (10 cred.; no prereq.)	IV	MTWThF	110F	Mr. Cram
3s	Intermediate Latin (5 cred.; prereq. 1-2, or 1 yr. of high school Latin)	IV	MTWThF	110F	Mr. Cram
11f	Vergil I (5 cred.; prereq. 1-2, 3, or 2 yrs. of high school Latin)	III	MTWThF	17F	Mr. Cram
12w	Vergil II (5 cred.; prereq. 11, or 3 yrs. of high school Latin)	III	MTWThF	17F	Mr. Cram

Senior College Courses

Courses 51, 52, 53, 63, 73-74-75, 81-82-83 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

51f	Selected Readings from Prose and Poetry (3 cred.; jr., sr.; prereq. 12, or 3 or 4 yrs. of high school Latin)	IX	MWF	110F	Mr. Ogle
52w	Horace (3 cred.; jr., sr.; prereq. 51 or 63)	IX	MWF	110F	Mr. Ogle
53	<i>Suetonius, Selected Lives</i> (3 cred.; jr., sr.; prereq. 51 or 52 or 63) (<i>Not offered</i>)				
63s	Plautus and Terence (3 cred.; prereq. § 12, or 4 yrs. of high school Latin)	II	TThS	110F	Mr. Ogle
73f-74w-75s†	Prose Composition (3 cred.; prereq. 12, or 4 yrs. of high school Latin)	Ar	Ar	Ar	Mr. Cram
81-82-83	<i>Survey of Roman Literature</i> (9 cred.; jr., sr.; prereq. any one of Courses 51, 52, 53, 63) (<i>Not offered</i>)				
111f-112w-113s†	Advanced Prose Composition (3 cred.; jr., sr., grad.; prereq. 73-74-75)	VII	T	110F	Mr. Ogle
121f	Advanced Vergil (3 cred.; jr., sr., grad.; prereq.*)	II	MWF	115F	Mr. Ogle
131	<i>Juvenal</i> (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
133s	Vulgar Latin (Development of Latin into Romance) (3 cred.; jr., sr., grad.; open to advanced students of Latin or a Romance language with the consent of instructor)	III	MWF	115F	Mr. Ogle
142w	Tacitus (3 cred.; jr., sr., grad.; prereq.*)	II	MWF	115F	Mr. Ogle
151	<i>Advanced Cicero</i> (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
152	<i>Lucretius</i> (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
171f,172w,173s	Independent Reading Course (3 cred. per qtr.; prereq.*; open to students of exceptional ability with the consent of department)	Ar	Ar	118F	Ar

For Graduate Students Only

201-202-203	<i>Graduate Seminar: Cicero</i> (9 cred.) (<i>Not offered</i>)				
211f-212w-213s	Graduate Seminar: The Latin Epic (3 cred. per qtr.)	VIII-IX	Th	115F	Mr. Ogle
221-222-223	<i>Graduate Seminar: Lyric Poetry</i> (9 cred.) (<i>Not offered</i>)				
231-232-233	<i>Graduate Seminar: Latin Historiography</i> (9 cred.) (<i>Not offered</i>)				
241f-242w-243s	Graduate Seminar: Introduction to Classical Philology (9 cred.)	VIII, IX	Th	110F	Mr. Cram

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

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

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

Courses for Which No Knowledge of Greek or Latin Is Required

No.	Title	Hour	Day	Bldg.	Instructor
14f-15w-16s	Basic Readings in Ancient Civilization (6 cred.; prereq. Hist. 14-15-16 or concurrent registration in the same)	VII	MF	114F	Mr. Heller
14Af-15Aw-16As	Basic Readings in Ancient Civilization (9 cred.; no prereq., but students who have had or are taking Hist. 14-15-16 may not register for this course)	VII	MF	114F	Mr. Heller
		VII	W	110P	
24s	Greek and Latin Elements in English. This course aims to familiarize the student with the Greek and Latin roots, prefixes, and suffixes which occur frequently in English words, especially in scientific words. (The same as English 24.) (2 cred.; soph., jr., sr.; no prereq.)	III	TTh	110F	Mr. Cram
31f,32w¶	Greek and Latin Drama. Representative tragedies and comedies of the Greek and Latin dramatists are read and discussed. Lectures on the origin and development of the ancient drama and its relation to modern drama. (The same as English 31, 32.) (2 cred. per qtr.; soph., jr., sr.; no prereq.)	IV	MW	115F	Mr. Ogle
42w	Greek Mythology. The origin and development of myths (2 cred.; soph., jr., sr.; no prereq.)	V	MW	114F	Mr. Heller
43s	Ancient Mythology in Relation to Literature and Art (The same as English 43) (2 cred.; soph., jr., sr.; no prereq.)	V	MW	114F	Mr. Heller
106f-107w	Introduction to the Study of Language (3 cred. per qtr.; jr. sr., grad.; prereq. any two courses numbered above 50 in a foreign language)	VIII	MWF	115F	Mr. Ogle
108s	Cultural Aspects of Language (3 cred.; jr., sr., grad.; prereq. any two courses numbered above 50 in a foreign language)	VIII	MWF	115F	Mr. Ogle
192w,193s	Classical Literary Tradition (2 cred. per qtr.; jr., sr., grad.; prereq. 9 cred. in English or a foreign language)	Ar	Ar	Ar	Mr. Ogle

COMMUNICATION

See General Studies, page 53.

COMPARATIVE PHILOLOGY AND LINGUISTICS

See Linguistics and Comparative Philology, page 79.

DRAWING AND DESCRIPTIVE GEOMETRY

INSTITUTE OF TECHNOLOGY

Junior College Courses

- 1-2 Engineering Drawing. Elements of drafting, including an introductory course in methods of representation and constructive geometry. Graphs and formulas. Sketching, lettering, working drawings, conventions, standards, tracing, and blueprinting. (3 cred. per qtr.; prereq. solid geometry)
 This course may be taken for credit by students of the College of Science, Literature, and the Arts; but arrangements for their admission to the course must be made through the Junior College office, 106 Folwell Hall.

¶ Students may enter either quarter.

No.	Title	Hour	Day	Bldg.	Instructor
41-42-43f,w,s	Technical Drawing. (a) General course in the theory and practice of freehand drawing. Principles of perspective, sketching, rendering, convention, lettering, and industrial drawing. (b) Modification of the above course of particular interest to dental, medical, and scientific students. (6 cred.; no prereq.) (Sections limited to 40 each)				
	Sec. 1	I, II	MWF	411C	Mr. Doseff
	2	VI, VII	MWF		
	3	VIII, IX	MWF		
44f,w,s	Lettering. A practical course in plain lettering. (1 cred.; no prereq.) (Sections limited to 50 each quarter)	IV	T	21E(fall) 21E(winter) 107E(spring)	
45f,w,s	Alphabets. Construction and analysis of classic and modern roman, italic, script, and gothic styles, including Old English. Exercises in composition. Reference work. (2 cred.; soph., jr., sr.; prereq. 44) (Sections limited to 50 each qtr.)	III	TS	7E	

Senior College Courses

See	Graphic Arts. Field, development, and application in art and industry. Design and composition. Discussion of materials, style, and technique. Course 64w is one of three related in general subject matter of special interest to students of journalism and advertising. The other two, listed elsewhere in this bulletin, are Journalism 65f, "Graphic Arts: Processes," and Business Administration 194s, "Advanced Advertising Procedure." (3 cred.; jr., sr.; prereq. 15 cred. in econ.)	IV	MWF	206E	Mr. Doseff
81-82-83f,w,s	Advanced Drawing. Principles of design—traditional and modern. Layouts, composition, and illustration. Black and white and color. Scientific modeling. (3 cred. per qtr.; prereq. 43 or equiv.)	Ar	Ar	Ar	Mr. Doseff
86-87f,w,s†	Anatomical Drawing (3 cred. per qtr.; prereq. 43 or equiv.)	Ar	Ar	Ar	Mr. Doseff

Other courses offered by the Department of Drawing and Descriptive Geometry and listed in the Bulletin of the Institute of Technology are open to students of this college only by special permission of the Students' Work Committee.

ECONOMICS

For courses, major advisers, and major sequences in Economics, see the program of the School of Business Administration, in another part of this bulletin. The courses listed there under the heading "Economics" are regularly open to students of the College of Science, Literature, and the Arts. For freshmen and sophomores, there are courses in industrial history, money and banking, the principles of economics, accounting, statistics, and secretarial training which includes typewriting, shorthand, and secretarial procedure; and for juniors and seniors there is a large variety of advanced courses. The courses under the heading "Business Administration" are normally open only to Business Administration Students.

EDUCATION

The following courses in Education are regularly open to students in the College of Science, Literature, and the Arts:

Art Education (Design)

ArtEd.1-2-3	General Design
ArtEd.20-21-22	Fundamental Experiences in Design (Not offered in 1946-47)
ArtEd.50A,50B,50C	Introduction to Commercial Design
ArtEd.51	Introduction to Industrial Design (Not offered in 1946-47)
ArtEd.52A,52B	Interior Design

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

Art Education (Drawing and Painting)

ArtEd.4,6,8	Basic Drawing. ArtEd. 4, Introduction to Materials and Techniques; 6, Introduction to Still Life and Figure; 8, Introduction to Landscape and Figure.
ArtEd.23	Pictorial Composition
ArtEd.24A,24B,24C	Water Color Painting
ArtEd.26A,26B,26C	Oil Painting
ArtEd.28A,28B,28C	Advanced Drawing Techniques
ArtEd.61	Figure Drawing and Painting
ArtEd.62	Portrait Drawing and Painting
ArtEd.63	Landscape Drawing and Painting
ArtEd.66A,66B	Fashion Illustration
ArtEd.67A,67B,67C	Illustration for Advertising and Other Purposes
ArtEd.68A,68B,68C	Print Processes
ArtEd.124A,124B, 124C	Advanced Specialized Drawing and Painting

Art Education (Handcrafts)

ArtEd.31,32,33,34	General Handcrafts. ArtEd. 31, Texture Exercises. Work in metal, wood and clay; 32, College, montage, mobiles, three dimensional compositions, combining all materials; 33, Paper, cardboard, papier mache, decorative papers, hand puppets, cords, belts, knitting, crochet, hooking, cardboard weaving; 34, Leather tooling, book binding, basketry, needlework, netting, card weaving, etc.
ArtEd.70A,70B,70C	Wood Sculpture and Carving
ArtEd.73A,73B,73C	Ceramics
ArtEd.74	<i>Bookbinding (Not offered in 1946-47)</i>
ArtEd.75	<i>Metal (Not offered in 1946-47)</i>
ArtEd.76,77	Textiles. ArtEd. 76, Fundamental Weaving; 77, Advanced Weaving
ArtEd.78,79	Textile Design. ArtEd. 78, Weaving; 79, Printing Processes; tie-dye, batik, silk screen, block printing, etc.

Music Education

Mu.Ed.63	Band Conducting. A course designed to give practical experience in conducting recommended band literature of all grades.
Mu.Ed.65	Instrumentation. Theoretical study of orchestra and band instruments, in combination; physics of tone color; revision of materials; discussion of capacity and capability of school performance on the various instruments.
Mu.Ed.68	Conducting of Instrumental Music and Survey of Materials. Training of directors of orchestra and band ensembles, and a critical survey of available music materials adaptable to school music purposes.

Educational Psychology

Ed.Psy.60	Introduction to Measurements and Statistics. This course includes a study of measures of central tendency, variability, and correlation, as well as principles of test construction.
Ed.Psy.120	Basic Principles of Measurement. Principles of measurement applied to the construction and evaluation of tests and to the interpretation of scores. Illustrations from achievement, intelligence, interest, attitude, and personality tests.
Ed. Psy.140	Instruments and Techniques of Measurement. An intensive study of selected instruments for measuring intelligence, achievement, interests, attitudes, and personality traits with emphasis on their use in educational guidance, personnel work, administration, and supervision.
Ed.Psy.141	Group Aptitude Testing. A study of group aptitude tests for all school levels with emphasis on their reliability and validity as instruments for educational and vocational guidance.
Ed.Psy.142	Individual Aptitude Testing. A study of methods and practice in the administration of individual mental tests.

Physical Education

pages 11 and 13, under the headings "Physical Education for Men" and "Physical Education for Women."

For hours, days, credits, prerequisites, etc., see the Education section of this Combined Class Schedule.

Other courses in Education may be taken by students of the College of Science, Literature, and the Arts only by special permission of the Students' Work Committee and the consent of the College of Education. Requests for the special permission should be submitted by Junior College students to Assistant Dean Cooper in 106 Folwell Hall and by Senior College students to Assistant Dean Buchta in 146 Physics.

ENGLISH

Major advisers in the College of Science, Literature, and the Arts—Professor Warren; Associate Professor Jackson; Assistant Professors Allen, Montgomery, Sanford.

Major sequence in the College of Science, Literature, and the Arts—A total of at least 31 credits for the entire sequence, comprising the following:

A. Courses 75, Chaucer; 55-56, Shakespeare; 62, Milton.

B. Eighteen additional credits in Senior College courses, of which at least twelve must be from courses numbered 100 or above.

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

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

Major advisers in the College of Education—Professor Dora Smith and Assistant Professor Allen.

Requirements for a teacher's certificate—

a. English as a major subject in the College of Education:

English 22-23. Introduction to Literature	10
English 55-56. Shakespeare	6
English 73-74. American Literature	6
English 165. Historical Study of Modern English	3
Composition 27-28. Advanced Writing	6
Speech	6
Additional credits, all of which must be secured in courses numbered 100 or above	3

Total credits

40

b. English as a minor subject in the College of Education:

English 22-23. Introduction to Literature	10
English 55-56. Shakespeare	6
English 73-74. American Literature	6
Composition 27-28. Advanced Writing	6

Total credits

28

Education students who major in English are required to take Ed.C.I. 122, Literature for Adolescents.

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
A-B-C	Freshman English. Two hours of composition (meets the requirement for graduation as an equivalent of Comp. 4-5-6) and three hours of literature: Readings in American and English literature selected as exemplifying the statement that "literature is an interpretation of life." For program, see page 47.				
	English A: The Drama of American Life				
	English B: The Larger World				
	English C: The Significance of the Human Drama				

No.	Title	Hour	Day	Bldg.	In
21f-22w-23s**	Introduction to Literature. 21f: Marlowe, Spenser, Bacon, Browne, Milton, and 22w: Dryden, Pope, Swift, Addison and Steele, Johnson, Boswell, Fielding, and Sheridan; 23s: Wordsworth, Byron, Shelley, Keats, Lamb, Carlyle, Browning, and Arnold (15 cred.; prereq.*)				
	Sec. 1	III	MTWThF	301F	Miss Jackson
	2	VI	MTWThF	301F	Mr. R. E. Moore
	3	VIII	MTWThF	301F	Mr. Sanford
24s	Greek and Latin Elements in English Language (The same as Classics 24) (2 cred.; soph., jr., sr.; no prereq.)				
		III	TTh	110F	Mr. Cram
31f,32w†	Greek and Latin Drama in English (The same as Classics 31, 32) (2 cred. per qtr.; soph., jr., sr.; no prereq.)				
		IV	MW	115F	Mr. Ogle
37f-38w-39s‡	Twentieth-Century Literature. Readings in British and American literature since the 1890's, arranged by types of discourse—37f: The literature of opinion, biography, travel, etc., with some reading in the short story; 38w: Poetry and drama; 39s: The novel since Thomas Hardy. This course, as a general introduction to the intelligent reading of literature, is intended for students in all colleges, and not particularly for those meaning to specialize in English. (9 cred.; soph., jr., sr.; prereq.*)				
		VII	MWF	301F	Ar
40w-41s‡	The Bible as Literature (6 cred.; prereq.*)				
		IV	MWF	113F	Mr. Dunn
43s	Ancient Mythology in Relation to Literature and Art (The same as Classics 43) (2 cred.; soph. jr., sr.; no prereq.)				
		V	MW	114F	Mr. Heller
45	<i>American Life in American Literature.</i> This course is intended for students in all colleges, and not particularly for those who mean to specialize in English (3 cred.; soph., jr., sr.; prereq.*) (<i>Not offered</i>)				

Attention of students is called to Humanities 1-2-3, 11-12-13, and 21-22-23 (page 54).

Senior College Courses

Courses 52-53, 54, 55-56, 62, 73-74, 75 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

52f-53w‡	The English Novel. 52f: The reading of novels of Defoe, Fielding, Fanny Burney, Jane Austen, Scott, Thackeray; 53w: The reading of novels by Dickens, Charlotte and Emily Brontë, George Eliot, Trollope, Meredith (6 cred.; jr., sr.; prereq.§)				
		VII	MWF	204F	Mr. Hillhouse
54	<i>English Prose from Morris to Shaw</i> (3 cred.; jr., sr.; prereq.§) (<i>Not offered</i>)				
55f-56w	Shakespeare. Course 55f: The reading of <i>The Comedy of Errors</i> , <i>The Two Gentlemen of Verona</i> , <i>The Taming of the Shrew</i> , <i>The Merchant of Venice</i> , <i>Much Ado about Nothing</i> , <i>Twelfth Night</i> , with collateral reading, <i>A Midsummer Night's Dream</i> , <i>The Tempest</i> , to be read independently. Course 56w: The reading of <i>Richard II</i> , <i>Henry IV</i> , 1 and 2, <i>Henry V</i> , <i>Richard III</i> , <i>Julius Caesar</i> , <i>Hamlet</i> , <i>Macbeth</i> , with collateral reading (6 cred.; jr., sr.; prereq.*)				
	Sec. 1	I	TThS	113F	Mr. Hessler
	2	VI	MWF	104F	Mr. Dunn
	3	VII	MWF	303F	Ar
	4	VIII	MWF	303F	Ar
55w-56s	Shakespeare (see 55f-56w)				
	Sec. 1	II	TThS	311F	Mr. R. E. Moore
	2	III	TThS	303F	Miss Christie
	3	VI	MWF	113F	Miss Atkins

* English A-B-C or Composition 4-5-6 or Communication 1-2-3, or exemption from requirement.

§ Composition 4-5-6 or Communication 1-2-3, and 6 additional credits; or English A-B-C; or 10 credits in 21-22-23.

† Students may enter any quarter.

** Students may enter any quarter. Two quarters are required as prerequisite for a major sequence; the second and third quarters are required for a teacher's certificate. Three quarters are recommended.

ENGLISH

No.	Title	Hour	Day	Bldg.	Instructor
55s	Shakespeare (1st qtr. of 55-56. See 55f-56w)				
	Sec. 1	I	TThS	113F	Mr. Hessler
	2	II	TThS	124F	Ar
	3	VI	MWF	104F	Ar
	4	VII	MWF	303F	Mr. Dunn
56f	Shakespeare (2nd qtr. of 55-56. See 55f-56w)				
	Sec. 1	II	TThS	311F	Ar
	2	III	TThS	303F	Mr. Stein
	3	VI	MWF	113F	Miss Atkins
62f	Milton (3 cred.; jr., sr.; prereq. 21-22 or 55-56)	IV	MWF	113F	Mr. Dunn
62w	Milton (See 62f)	VII	MWF	213F	Ar
62s	Milton (See 62f)	VI	MWF	110F	Mr. Dunn
73f-74w‡	American Literature. Notable authors from Jonathan Edwards to John Steinbeck. (6 cred.; jr., sr.; prereq.*)	II	MWF	301F	Mr. McDowell
75f	Chaucer (4 cred.; jr., sr.; prereq.*)	III	MTWF	113F	Mr. Dunn
75w	Chaucer (See 75f)	III	MTWF	113F	Mr. Dunn
75s	Chaucer (See 75f)	III	MTWF	113F	Ar
97f-98w-99s	Independent Reading Course (9 cred.; jr., sr.; prereq. permission of department)	Ar	Ar	111F	Mr. Hessler
100f	Old English (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	II	TWThF	205F	Mr. Allen
102w	Old English Poetry (3 cred.; jr., sr., grad.; prereq. 100)	II	MWF	204F	Ar
103s	Beowulf (3 cred.; jr., sr., grad.; prereq. 100)	II	MWF	204F	Mr. Clark
105-106	<i>Eighteenth-Century Poetry</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50) (<i>Not offered</i>)	VII	MWF	205F	Mr. C. A. Moore
107w-108s	<i>Eighteenth-Century Prose</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VII	MWF	205F	Mr. C. A. Moore
109f-110w	Romantic Poets. 109f: Wordsworth, Coleridge, Scott; 110w: Byron, Shelley (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	IV	MWF	205F	Ar
111-112	<i>Seventeenth-Century Prose</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50) (<i>Not offered</i>)	IV	MWF	205F	Ar
113s	American Short Story (3 cred.; jr., sr., grad.; prereq. 73-74)	II	MWF	305F	Mr. McDowell
114f	The Midwest in Literature (3 cred.; jr., sr., grad.; prereq. 73-74 or History 20-21-22)	III	MWF	305F	Ar
115f-116w	The Development of English Prose Style (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VI	MWF	213F	Ar
117	<i>American Essay</i> (3 cred.; jr., sr., grad.; prereq. 73-74) (<i>Not offered</i>)	VI	MWF	213F	Ar
118f-119w	Nineteenth-Century Prose. 118f: The literature of social criticism: Carlyle, Ruskin, Arnold, and others; 119w: Literature concerned largely with science and religion; Newman, Huxley, Spencer, Butler, and others. (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50 or consent of instructor)	III	TThS	125F	Mr. Bentley
120f-121w	The Interpretation of Poetry (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	III	MWF	302F	Mr. Warren
123f-124w-125s	Technique of the Novel (9 cred.; sr., grad.; prereq. 6 cred above 50 and permission of instructor)	IX, X	T	204F	Mr. Beach
126f-127w	Drama, 1660-1900 (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VII	MWF	302F	Ar

* Composition 4-5-6 or Communication 1-2-3, and 6 additional credits; or English A-B-C; or 10 credits in 21-22-23.

‡ Students may enter either quarter.

No.	Title	Hour	Day	Bldg.	Instructor
129s	Modern Drama (3 cred.; jr., sr., grad.; prereq. 55-56 or 126-127)	VI	MWF	204F	Mr. Hillhouse
133	<i>Ballads</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50) (<i>Not offered</i>)				
135	<i>Spenser</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50) (<i>Not offered</i>)				
136s	Advanced Shakespeare (3 cred.; jr., sr., grad.; prereq. 55-56)	I	MWF	205F	Ar
137s	Late Eighteenth-Century Poetry (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	IV	MWF	205F	Mr. C. A. Moore
140w	Advanced Chaucer (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 75)	VI	MWF	308F	Mr. Clark
143f-144w-145s	American Folklore (The same as History 143-144-145) (9 cred.; jr., sr., grad.)	I	MWF	112Bu	Mr. Jordan
147-148-149	<i>The Literature of England in the Middle Ages Exclusive of Chaucer.</i> Reading includes Anglo-French and Latin documents in translation; special attention to the period from the Norman Conquest to 1500. (9 cred.; jr., sr., grad.; prereq. 6 cred. above 50 including 75) (<i>Not offered—offered in 1947-48</i>)				
150	<i>Victorian Poetry</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50) (<i>Not offered</i>)				
151s	Recent Poetry (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	IV	TWThF	305F	Miss Jackson
152	<i>Medieval and Early Elizabethan Drama</i> (3 cred.; jr., sr., grad.; prereq. 55-56) (<i>Not offered</i>)				
153f	Seventeenth-Century Lyricists (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VII	MWF	205F	Mr. C. A. Moore
154w-155s¶	American Novel (6 cred.; jr., sr., grad.; prereq. 73-74 or 52-53)	III	MWF	305F	Ar
156	<i>American Drama</i> (3 cred.; jr., sr., grad.; prereq. 73-74 or 126-127) (<i>Not offered</i>)				
157f-158w	Elizabethan Non-Dramatic Literature (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 55-56 or 170)	I	MWF	205F	Ar
159	<i>Colonial Literature in America</i> (3 cred.; jr., sr., grad.; prereq. 73-74) (<i>Not offered</i>)				
162	<i>Restoration Non-Dramatic Literature</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50) (<i>Not offered</i>)				
163f-164w	Restoration Drama (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	IV	MWF	204F	Mr. C. A. Moore
165w	The Historical Study of Modern English. An introductory course for all who major in English, both in S. L. & A. and in Education (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50; not open to students who have taken 100)	VI	MWF	311F	Mr. Allen
167f-168w	English Literary Criticism (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	II	MWF	206F	Mr. Warren
169s	Browning and Tennyson (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	III	MWF	110F	Ar
170	<i>Elizabethan Drama.</i> Shakespeare's later contemporaries. (3 cred.; jr., sr., grad.; prereq. 55-56) (<i>Not offered</i>)				
171f-172w-173s	The Development of Standard English (9 cred.; sr. with consent of instructor; grad. prereq. 100; required for Ph.D. in English)	VI, VII	T	304F	Mr. Allen
174s	American English (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VII	Th		
175f-176w¶	The History of English Verse (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)	VI	MWF	311F	Mr. Allen
179-180	<i>Social and Intellectual Backgrounds of American Literature</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. of American history, philosophy, political science, or literature) (<i>Not offered</i>)	IV	MWF	305F	Miss Jackson

Attention is also called to the following courses offered in other language departments for which no knowledge of a foreign language is required: Classics 106, 107, 108; Scandinavian 161, 171; German 73-74-75, 183, 195.

¶ Students may enter either quarter.

For Graduate Students Only

213f-214w-215s Eighteenth-Century Drama	IX, X	Th 312Lib	Mr. C. A. Moore
231f-232w-233s Shakespeare's Tragic and Comic Art	IX, X	T 312Lib	Ar
253f-254w-255s American Romanticism I: New England	IX, X	F 312Lib	Mr. McDowell
262f-263w-264s Studies in Nineteenth Century Novel	10:30-12:30	S 312Lib	Mr. Hillhouse

See also Composition 200-201-202.

COMPOSITION

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

Major sequence in the College of Science, Literature, and the Arts—Course 67-68; 69-70-71 or 81-82-83; and 101-102-103; and 15 credits in Senior College courses in English to be chosen under the direction of a major adviser from a list of recommended courses.

(Prerequisites: Course 27 and two of the following: 28, 29, 65; also English 21-22 or 22-23.)

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

Important note—No student may register for any course in Freshman English without having taken a placement test. Assignment to a particular course in Freshman English will depend on the student's record in the placement test.

Freshman English is a 15-credit course consisting of 9 credits of literature and 6 credits of composition. Composition 4-5-6 and Communication 1-2-3 are 9-credit courses in composition. Any of these courses satisfies the requirement in English for graduation or for admission to the Senior College. Students who have already completed one or more quarters of Freshman English in another college should consult Professor Hillhouse, 219 Folwell Hall, before registering.

Any student who receives an A in composition in Course A or B or in Composition 4 or 5 may, upon recommendation of his instructor, be exempted from any further requirement in English.

Any student who receives an A or B in Course 4 or 5 may, upon recommendation of his instructor, elect the following quarter of A-B-C.

Junior College Courses

Af-Bw-Cs Freshman English. Two hours of composition (meets the requirement for graduation as an equivalent of Comp. 4-5-6) and three hours of literature: Readings in American and English literature selected as exemplifying the statement that "literature is an interpretation of life." (15 cred.; prereq. placement test. Corresponds to G.E.D. Test No. 1. See p. 17.)

English A: The Drama of American Life

English B: The Larger World

English C: The Significance of the Human Drama

I	MTWThF	Ar	Ar
II	MTWThF		
III	MTWThF		
IV	MTWThF		
V	MTWThF		
VI	MTWThF		
VII	MTWThF		
VIII	MTWThF		
IX	MTWThF		

No.	Title	Hour	Day	Bldg.	Instructor
Aw-Bs	Freshman English (2 qtrs. of A-B-C. See Af-Bw-Cs)	I	MTWThF	Ar	Ar
Cf	Freshman English (3rd qtr. of A-B-C. See Af-Bw-Cs)	VI	MTWThF	Ar	Ar
4f-5w-6s	Freshman Composition (9 cred.; prereq. placement test. Corresponds to No. 1. See p. 17.)	I	MWF	Ar	Ar
	Sec. 1	I	MWF	Ar	Ar
	2	II	MWF		
	3	III	MWF		
	4	IV	MWF		
	5	V	MWF		
	6	VI	MWF		
	7	VII	MWF		
	8	VIII	MWF		
	9	IX	MWF		
	10	I	TThS		
	11	II	TThS		
	12	III	TThS		
	13	IV	TThS		
4w-5s	Freshman Composition (2 qtrs. of 4-5-6. See 4f-5w-6s)	II	TThS	Ar	Ar
	Sec. 1	II	TThS	Ar	Ar
	2	IV	TThS		
	3	V	MWF		
	4	VIII	MWF		
4s	Freshman Composition (1st qtr. of 4-5-6. See 4f-5w-6s)	III	TThS	Ar	Ar
	Sec. 1	III	TThS	Ar	Ar
	2	IV	TThS		
	3	V	MWF		
	4	VIII	MWF		
6f	Freshman Composition (3rd qtr. of 4-5-6. See 4f-5w-6s)	VII	MWF	Ar	Ar
	Sec. 1	VII	MWF	Ar	Ar
	2	VIII	MWF		
Attention is called to Communication 1-2-3 (page 53).					
27f-28w*	Advanced Writing. In the first half of this course the writing is exposition, with stress on logical organization; in the second it consists of description and narration. (6 cred.; prereq. A-B-C or 4-5-6 or Communication 1-2-3 or exemption from requirement)	II	MWF	Ar	Mr. Scott
	Sec. 1	II	MWF	Ar	Mr. Scott
	2	III	MWF	Ar	Miss Scallon
	3	III	MWF	Ar	Mr. Gimmetad
	4	IV	TThS	Ar	Mr. Hulme
	5	VI	MWF	Ar	Mrs. Smith
	6	VI	MWF	Ar	Mr. Duffey
	7	VI	TTh	Ar	Miss Christie
		VII	T		
	8	VI	TTh	Ar	Mr. Unger
		VII	Th		
	9 (winter only)	II	MWF	Ar	Ar
27w-28s*	Advanced Writing (See 27f-28w)	I	MWF	Ar	Mr. Stein
	Sec. 1	I	MWF	Ar	Mr. Stein
	2	I	MWF	Ar	Mr. Cronin
	3	IV	MWF	Ar	Mrs. Del Plaine
	4	IV	MWF	Ar	Miss Culhane(w)
					Mrs. Phelan(s)
	5	VII	MWF	Ar	Mr. Seeley

* To receive credit for any part of this course a student must complete 27-28 or 27, 29.

No.	Title	Hour	Day	Bldg.	Instructor
27s*	Advanced Writing (1st qtr. of 27-28. See 27f-28w)				
	Sec. 1	II	MWF	Ar	Mr. Scott
	2	III	MWF	Ar	Miss Scallon
	3	III	MWF	Ar	Mr. Gimmetstad
	4	VI	MWF	Ar	Mrs. Smith
	5	VI	MWF	Ar	Mr. Duffey
	6	IV	TThS	Ar	Mr. Hulme
	7	VI	TTh	Ar	Miss Christie
		VII	T		
	8	VI	TTh	Ar	Mr. Unger
		VII	Th	Ar	
28f*	Advanced Writing (2nd qtr. of 27-28. See 27f-28w)				
	Sec. 1	I	MWF	Ar	Mr. Stein
	2	I	MWF	Ar	Mr. Cronin
	3	II	MWF	Ar	Mr. Hessler
	4	IV	MWF	Ar	Mrs. Del Plaine
	5	IV	MWF	Ar	Miss Culhane
	6	VII	MWF	Ar	Mr. Seeley
29f*	Advanced Writing. The nature of the writing is left as far as possible to the choice of the students. The instructor will divide the class into several groups according to the types of writing students wish to do. (3 cred.; prereq. 27)				
		III	MWF	Ar	Miss Atkins
29w	Advanced Writing (See 29f)				
		II	MWF	Ar	Mr. Hessler
29s	Advanced Writing (See 29f)				
	Sec. 1	II	MWF	Ar	Mr. Hessler
	2	III	MWF	Ar	Miss Atkins
36s	Technical Writing. Consult the Bulletin of the Institute of Technology.				

Senior College Courses

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

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

Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

65	<i>The Writing of Term Papers and Theses</i> (3 cred.; jr., sr.; prereq. A-B-C or 4-5-6 or Com. 1-2-3, and 6 additional cred. in English, or 10 cred. in Eng. 21-22-23) (<i>Not offered</i>)				
67f-68w	Problems of Style (6 cred.; jr., sr.; prereq. average of B in two qtrs. of 27-28, 29, 65)	IV	MWF	304F	Mrs. Phelan
69f-70w-71s	Short-Story Writing (6 cred.; jr., sr.; prereq. average of B in two qtrs. of 27-28, 29, 65)	VIII, IX	M	304F	Mrs. Phelan
81-82-83	<i>Essays; Articles; Term Papers or Theses</i> (6 cred.; jr., sr.; prereq. average of B in two qtrs. of 27-28, 29, 65) (<i>Not offered</i>)				
101f-102w-103s	Seminar in Writing (taught in alternate years by Mr. Warren and Mrs. Phelan) (9 cred.; sr., grad.; prereq. permission of instructor and for undergraduates 6 cred. in Senior College courses in composition)	VIII, IX	W	304F	Mrs. Phelan

For Graduate Students Only

200f-201w-202s	Graduate Seminar in Writing (9 cred.; open to graduates and to special students not candidates for degrees on consent of instructor; credits may be counted as part of the distribution requirement in Plan B for the M.A. or as the minor in Plan A)	VIII, IX	M	203F	Mr. Warren
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FAMILY LIFE

See General Studies, page 53.

* To receive credit for any part of this course a student must complete 27-28 or 27, 29.

FINE ARTS

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

The courses offered by the Department of Fine Arts are planned to develop critical understanding and practical skill in the arts through the study of subject matter, the history and criticism of style, as well as practical design and studio work. They are offered not only as a field of specialized or professional training, but also are intended to serve the related fields of the humanities—i.e., history, literature, and philosophy, as well as journalism, the social sciences, and education.

The basic introductory course is Fine Arts 1-2-3 which the student is expected to take as early as possible, preferably in the freshman or sophomore year. In it are combined the elementary principles of style and technique of the arts of painting, sculpture, architecture and related arts, with a systematic survey of their development from earliest times through the present day.

Subsequent courses are arranged in two sequences in accordance with the historical or practical interests of the student:

Sequence A is concerned primarily with the historical and critical study of the various stylistic periods, artists, and important works. The selection of courses required and suggested for this sequence offers the student not only a broad acquaintance with the fields of the humanities either as an end in itself or as a foundation for further study, but it also affords practical training in art criticism and writing, library, museum, and education work in the arts.

Sequence B is intended for students desiring a practical acquaintance with the various technical processes as well as artistic expression in drawing, painting, and general studio design. Special curricula in commercial art, occupational therapy, and other professional arts are available to students of the College of Science, Literature, and the Arts through this sequence.

In both elementary and advanced courses the extensive facilities of the University and the Twin Cities are planned as an integral part of the curriculum. These include: the current exhibitions shown at the University Gallery, the collection of prints, reproductions, and art reference pamphlets in the Fine Arts Reading Room of the gallery, the original works of art on exhibit in the Minneapolis Institute of Arts, the Walker Art Center, the St. Paul Gallery of Art, and the studio facilities of the University Department of Art Education and the Institute of Technology.

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

Sequence A. Art History. Requirements for students majoring in the history and theory of art are Courses 1, 2, 3 (Introduction to Art) and 33 credits in courses numbered above 50. Strongly recommended, but not required, are 6 or more credits of studio work, a reading knowledge of at least one foreign language, and basic courses in history and literature.

Sequence B. Practical Studio Work. Requirements for students majoring in practical art are: Courses 1, 2, 3 (Introduction to Art); 9 credits in art history courses with numbers above 70; and 27 credits in practical art courses given by the School of Architecture and the Departments of Art Education and Drawing and Descriptive Geometry. For a list of these courses see pages 21, 41, and 40 of this bulletin.

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f	Introduction to Art: Modern Art. Modern architecture, painting, and sculpture in Europe and America, with a critical analysis of the various schools, the theories, and the principal works of contemporary art. Particular emphasis is placed upon the study of important architectural monuments in St. Paul and Minneapolis as well as the original works of art in the Minneapolis Institute of Arts, the Walker Art Center, and the St. Paul Gallery of Art. These, together with the current exhibitions and art reproductions in the University Gallery, are the working laboratories of the course. (3 cred.; no prereq.)	III and 1 hr. ar	TTh	MuAud	Ar
2w	Introduction to Art: Ancient and Medieval Art. A general history of painting, sculpture, and architecture from prehistoric times through the Egyptian, Greek, and Roman styles to the end of the Romanesque and Gothic periods of Medieval Europe. (3 cred.; no prereq.)	III and 1 hr. ar	TTh	MuAud	Ar
3s	Introduction to Art: Renaissance and Baroque Art. The history of painting, sculpture, and architecture from the early Renaissance in Italy to the French Revolution. (3 cred.; no prereq.)	III and 1 hr. ar	TTh	MuAud	Ar
10f,w†	Photography. Fundamental principles of photography: the use of cameras, developing, printing and other elementary techniques. (The same as Journalism 10) (3 cred.; soph., jr., sr.; no prereq.)	V and 1 hr. ar	T	311MurH	Ar
	Lect.	V	T	311MurH	Ar
	Lab. Sec. 1	I-II	TTh	20MurH	Ar
	2	VII, VIII	MW	20MurH	Ar

Senior College Courses

Courses 51-52-53, 57-58-59, and 71, 72, 73 are open to sophomores who have completed 9 credits in Fine Arts, with an average grade of C. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

51f-52w-53s†	History of Architecture. This is the same course as Arch. 51-52-53. It is intended to present the basic elements of architecture (design, plan, elevation, decoration, and function) as illustrated in the great historic examples. (9 cred.; jr., sr.; prereq. consent of instructor)	IV	MWF	320E	Mr. Robertson
57-58-59	<i>Art in the Americas.</i> A comprehensive study of painting, sculpture, and architecture in North and South America, treating the important pre-Columbian traditions, the development of the various colonial styles, and the significant national schools of the nineteenth century. In the spring quarter the important schools of modern architecture and painting will be covered, particularly in Mexico and the United States. (3 cred. per qtr.; jr., sr.; prereq. 1-2-3 or 51-52-53 or consent of instructor) (<i>Not offered</i>)				
61f-62w-63s	Tutorial Work. (The same as Arch. 61-62-63) (2 cred. per qtr.; for students majoring in architecture or in fine arts, Sequence A only; prereq. consent of instructor)	Ar	Ar	Ar	Ar
71f	Modern Art: Classicism and Romanticism. The development of sculpture and painting from the period of the French Revolution to about 1850 in France, Germany, Spain, and England, as well as parallel developments in America. (3 cred.; jr., sr.; prereq. 1-2-3 or 51-52-53 or consent of instructor)	VI	MWF	2J	Mr. Harris
72w	Modern Art: Realism and Impressionism. Painting and sculpture in Europe during the second half of the nineteenth century with particular emphasis on the various schools of Paris, their influence and parallels in England, Germany, and the United States. (3 cred.; jr., sr.; prereq. 1-2-3 or 51-52-53 or consent of instructor)	VI	MWF	2J	Mr. Harris

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

‡ A fee of \$5 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
73s	Modern Art: Contemporary Art in Europe and America. The development of painting in Europe from Post-Impressionism (Cezanne, Van Gogh, Gauguin) through contemporary Surrealism, together with the related movements in the United States. (3 cred.; jr., sr.; prereq. 1-2-3 or 51-52-53 or consent of instructor)	VI	MWF	2J	Mr. Harris
141	<i>Art in Egypt and the Near East.</i> The development of architecture, painting, sculpture, and the minor arts of vase painting, mosaic, and metal work in Egypt, Mesopotamia (Hittite, Sumerian, Babylonian, and Assyrian), and Persia. Particular emphasis will be placed on the history and exploitation of the various archeological sites as well as on the methods of archeological research. (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in hist. or lit. with consent of instructor) (<i>Not offered</i>)				
142	<i>Greek Art.</i> A study of the various Aegean styles (Minoan, Helladic) and particularly the evolution of Greek architecture and sculpture from the archaic through the Classic and Hellenistic periods. (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in hist. or lit. with consent of instructor) (<i>Not offered</i>)				
143	<i>Etruscan and Roman Art.</i> Architecture, painting, and sculpture from the early Etruscan period through Rome of the Republic and Imperial epochs and the period of Constantine. (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in hist. or lit. with consent of instructor) (<i>Not offered</i>)				
151	<i>Foundations of Christian Art.</i> The study of architecture, sculpture, mosaics, manuscript illumination, and mural painting from the early Christian period through the age of Charlemagne. (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts or 9 cred. in history or literature with consent of instructor) (<i>Not offered</i>)				
152	<i>Monastic Art of the Middle Ages.</i> The study of architecture, sculpture, and related religious arts as developed in the great monastic centers of Europe, particularly in the eleventh and twelfth centuries. (3 cred.; jr., sr., grad.; prereq. same as for 151) (<i>Not offered</i>)				
153	<i>The Art of the Great Cathedrals.</i> A study of the important cathedrals of Europe both from the standpoint of the development of the Gothic style in architecture, sculpture, and stained glass, and as expressions of medieval culture. (3 cred.; jr., sr., grad.; prereq. same as for 151) (<i>Not offered</i>)				
154f	Italian Painting and Sculpture of the Early Renaissance. The development of painting and sculpture in Italy from Masaccio and Ghiberti to Donatello and the great painters of the fifteenth century in Florence, Rome, and Venice. (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in hist. or lit. with consent of instructor)	IV	MWF	2J	Ar
155w	Great Masters of the High Renaissance. A study of the sources and the important works of Leonardo da Vinci, Raphael, Michelangelo, Titian, and Correggio, with a survey of their influence on the Renaissance art of Spain, France, and Flanders. (3 cred.; prereq. 9 cred. in fine arts, or 9 cred. in hist. or lit. with consent of instructor)	IV	MWF	2J	Ar
156s	Renaissance Art in Northern Europe. The development of painting and sculpture in Flanders, Northern France, and Germany from the Van Eycks to Albrecht Dürer and Hans Holbein. Particular emphasis will be given to the evolution of the graphic arts in the fifteenth century, their influence and contribution to the culture of the Renaissance. (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in hist. or lit. with consent of instructor)	IV	MWF	2J	Ar
157	<i>Baroque Art. The Classic Tradition.</i> The development of painting from the academic schools of the late Renaissance in Italy, through the art of Peter Paul Rubens in Flanders, and the classic period of French painting (Poussin, Lorrain). (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in history or literature with consent of instructor) (<i>Not offered</i>)				
158	<i>Baroque Art in Spain.</i> Painting during the Golden Age of Spanish culture with particular emphasis on the painting of El Greco and Velasquez (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in history or literature with consent of instructor) (<i>Not offered</i>)				
159	<i>Baroque Art in Holland.</i> Painting and the graphic arts in the Low Countries during the seventeenth century, with special study of Rembrandt, Frans Hals, and the minor masters of the Dutch schools (3 cred.; jr., sr., grad.; prereq. 9 cred. in fine arts, or 9 cred. in history or literature with consent of instructor) (<i>Not offered</i>)				

For Graduate Students Only

201f-202w-203s Seminar. Special Problems in American Art. (3 cred. per qtr.; prereq. 18 cred. in Senior College courses in fine arts or consent of instructor)

Ar Ar Ar

FRENCH

See Romance Languages, page 113.

GENERAL STUDIES

The Department of General Studies includes inter-departmental or divisional courses devised especially for the purposes of general education. They are designed to supplement the courses of other departments in helping the student to achieve a well-rounded education, and they are adapted to the needs of students expecting to specialize elsewhere as well as to those in the College of Science, Literature, and the Arts.

The courses have been arranged in six groups, each dealing with a different phase of the student's general educational development. In registering for these courses, write the group heading in the column labeled "department," as indicated in the listings below.

COMMUNICATION

No.	Title	Hour	Day	Bldg.	Instructor
Com.1f-2w-3s	Communication. Experience in the arts of effective speaking and writing as well as discriminating reading and listening; and a study of agencies and methods for communicating ideas. This course is regarded as an equivalent of Composition 4-5-6 in satisfying any requirements of the University. (Formerly Communication 4-5-6) (9 cred.; prereq. placement test, see page 47. Corresponds to G.E.D. Test No. 1. See p. 17.)				
	Sec. 1	I	MWF	Ar	Mr. Allen
	2	II	MWF		and others
	3	III	MWF		
	4	IV	MWF		
	5	V	MWF		
	6	VI	MWF		
	7	VII	MWF		
	8	VIII	MWF		
	9	IX	MWF		
	10	I	TThS		
	11	II	TThS		
	12	III	TThS		
	13	IV	TThS		
Com.1w-2s	Communication (2 qtrs. of 1-2-3. See 1f-2w-3s)				
	Sec. 1	V	MWF	Ar	Ar
	2	VIII	MWF		
Com.1s	Communication (1st qtr. of 1-2-3. See 1f-2w-3s)				
	Sec. 1	V	MWF	Ar	Ar
	2	VIII	MWF		

FAMILY LIFE

With recognition that preparation for marriage and family living is an important part of general education, five courses are provided below. While it is assumed that the student will elect only those courses most appropriate to his personal needs, a maximum of 15 hours credit in the field may be applied toward the B.A. degree.

F.L.1f,w,s Preparation for Marriage. A discussion of such topics as the function of the family today, problems of dating and courtship, the engagement, relations of husband and wife, family crises and bases of marital stability. (Formerly Marriage A) (3 cred.; no prereq.) (An admission card to this class must be obtained when tallying at 106 Folwell Hall)

II MWF 311F Ar

No.	Title	Hour	Day	Bldg.	Instructor
F.L.14w,s†	Nutrition and Food Management. Scientific principles of nutrition; food purchasing; food preparation and service. The class is limited to 20 students, and will afford practical laboratory experience. (5 cred.; no prereq.) (An admission card to this class must be obtained when tallying at 106 Folwell Hall)	VIII and IX	MTWThF	5UHS	Mrs. Tucker
F.L.15f,w,s	The Home and Its Furnishing. Postwar housing problem; essential elements of building or remodeling the home; the choice of appropriate furnishings and accessories. (3 cred.; no prereq.)	IV	MWF	206WeH	Miss Goldstein
F.L.20f	Consumer Education. Aid to wise buying; effective consumer demand upon the market; consumer credit and banking procedures; insurance and annuities from the buyer's viewpoint; distribution and stability of income; governmental efforts to protect consumers. (3 cred.; no prereq.)	II	TThS	301VH	Miss Canoyer
F.L.25f,w,s	Child Development and Adjustment. Physical growth and care; development of basic habits, skills, attitudes and adjustments; the development of self control and the provision of good environment for child growth. (3 cred.; no prereq.)	IV	MWF	202Pt	Mr. Harris
	Winter	III	MWF	202Pt	Mr. Harris
	Spring	I	TThS	202Pt	Mr. Harris

HUMANITIES

Junior College Courses

Hum.1f	Humanities in the Modern World I. The intellectual, political, and economic revolutions which gave humanity its modern world. Period: from about 1770 to about 1830. Authors: Voltaire, Rousseau, Burke, Paine, Goethe, and the poets. One historical novel. (5 cred.; no prereq.)				
	Sec. 1	I	MTWThF	305F	Mr. Loban
	2	II	MTWThF	166Ph	Mr. Cronin
	3	II	MTWThF	133Ph	Miss Shaw
	4	III	MTWThF	227F	Ar
	5	IV	MTWThF	303F	Mr. Livingston
	6	V	MTWThF	303F	Mr. Swanson
	7	VI	MTWThF	JAud	Mr. Reichardt
	8	VI	MTWThF	133Ph	Mr. Wolf
	9	VII	MTWThF	166Ph	Mr. Montgomery
	10	VIII	MTWThF	150Ph	Mr. Castell
Hum.2w	Humanities in the Modern World II. The Industrial Revolution and Liberalism. How these bulked large in the nineteenth century. Period: from about 1830 to about 1870. Authors: Carlyle, Mill, Marx, Ibsen, Dostoevsky, Zola, and the poets. (5 cred.; no prereq.)				
	Sec. 1	I	MTWThF	305F	Mr. Loban
	2	II	MTWThF	166Ph	Mr. Cronin
	3	II	MTWThF	133Ph	Miss Shaw
	4	III	MTWThF	227F	Ar
	5	IV	MTWThF	303F	Mr. Livingston
	6	V	MTWThF	303F	Mr. Swanson
	7	VI	MTWThF	JAud	Mr. Reichardt
	8	VI	MTWThF	133Ph	Mr. Wolf
	9	VII	MTWThF	166Ph	Mr. Montgomery
	10	VIII	MTWThF	150Ph	Mr. Castell
Hum.3s	Humanities in the Modern World III. The impact of evolution; socialism and imperialism; religion and morals in a changing world; the wars and totalitarianisms. Period: from about 1870 to about 1914. Authors: Huxley, Turgeneff, Nietzsche, Shaw, Lenin, Forster, and the poets. (5 cred.; no prereq.)				
	Sec. 1	I	MTWThF	305F	Mr. Loban
	2	II	MTWThF	166Ph	Mr. Cronin
	3	II	MTWThF	133Ph	Miss Shaw
	4	III	MTWThF	227F	Ar
	5	IV	MTWThF	303F	Mr. Livingston
	6	V	MTWThF	303F	Mr. Swanson
	7	VI	MTWThF	JAud	Mr. Reichardt
	8	VI	MTWThF	133Ph	Mr. Wolf
	9	VII	MTWThF	166Ph	Mr. Montgomery
	10	VIII	MTWThF	150Ph	Mr. Castell

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

No.	Title	Hour	Day	Bldg.	Instructor
Hum.11f-12w-13s	The European Heritage: from Homer to Molière. Great books as ideal representations of civilized man by himself, taken in association with notable works of fine art. Stress will be laid on ideals and forces of continuing importance for us in present-day civilization. (Formerly Humanities 5-6-7)				
Hum.11f	The Greek Heritage. The heroic age of legend—"Men like gods"; the golden age of Athens—tragedy, the concepts of goodness and beauty, the struggle for the state; the age of reason—the concepts of reason, justice, order. Selected readings in the historians and Aristotle; longer readings in Homer, Plato, the dramatists. Greek architecture and sculpture. (5 cred.; no prereq.)				
		III	MTWThF	204F	Mr. Beach
Hum.12w	The Roman and the Medieval Heritage. Roman jurisprudence and organization; epicureanism and stoicism. Selections from Lucretius, Epictetus, Marcus Aurelius. Medieval faith, theocracy, chivalry, monasticism. Selections from St. Augustine, St. Thomas Aquinas, the Rule of St. Benedict. Longer readings from Dante, Chaucer. Early religious painting, ecclesiastical and feudal architecture. (5 cred.; no prereq.)				
		III	MTWThF	204F	Mr. Beach
Hum.13s	The Renaissance Heritage. Humanism; magnificence and individualism; secularism, scepticism, political realism; the protestant strain; modern science and scientific method. Selected readings in Machiavelli, Castiglione, Valla, Petrarch, More, Luther, Calvin; longer readings in Montaigne, Cervantes, Shakespeare, Milton, Bunyan, Molière. Renaissance architecture, sculpture and painting: Dürer, Raphael, Michelangelo, Leonardo, Velasquez, Rubens, Rembrandt. (5 cred.; no prereq.)				
		III	MTWThF	204F	Mr. Beach
Hum.21f	Humanities in the United States I. The growth and the interrelation of nationalism, regionalism, and internationalism in American social thought, literature, and the fine arts, against a background of history. (Formerly Humanities 10) (3 cred.; no prereq.)				
	Sec. 1	III	MWF	308F	Mr. McDowell
	2	III	MWF	108NH	Mrs. Tyler
	3	VII	MWF	200Pt	Mr. Kwiat
	4	VII	MWF	6F	Miss Turpie
Hum.22w	Humanities in the United States II. The growth and interrelation of individualism and democracy, with particular attention to the status of minorities. (Formerly Humanities 11) (3 cred.; no prereq.)				
	Sec. 1	III	MWF	308F	Mr. McDowell
	2	III	MWF	108NH	Mrs. Tyler
	3	VII	MWF	200Pt	Mr. Kwiat
	4	VII	MWF	6F	Miss Turpie
Hum.23s	Humanities in the United States III. The conquest of nature, the pursuit of happiness, the good life: their implications and interrelations. (Formerly Humanities 12) (3 cred.; prereq. 21 or 22)				
	Sec. 1	III	MWF	308F	Mr. McDowell
	2	III	MWF	108NH	Mrs. Tyler
	3	VII	MWF	200Pt	Mr. Kwiat
	4	VII	MWF	6F	Miss Turpie

Senior College Courses

Senior College courses in this department are not open to Junior College students except by special permission of the Students' Work Committee.

Hum.51f-52w-53s	Humanities in the Modern World. This course is similar to Humanities 1-2-3 except that it is confined to juniors and seniors. A student may not receive credit for any quarter of this course if he has completed the corresponding quarter of Humanities 1-2-3. (15 cred.; jr., sr.; no prereq.)				
		I	MTWThF	322F	Mr. Bentley
Hum.61f-62w-63s	The European Heritage: from Homer to Molière. This course is similar to Humanities 11-12-13 except that it is confined to juniors and seniors. A student may not receive credit for any quarter of this course if he has completed the corresponding quarter of Humanities 11-12-13. (15 cred.; jr., sr.; no prereq.)				
		I	MTWThF	303F	Mr. Clark

No.	Title	Hour	Day	Bldg.	Instructor
Hum.71f-72w- 73s	Humanities in the United States. This course is similar to Humanities 21-22-23 except that it is confined to juniors and seniors. A student may not receive credit for any quarter of this course if he has completed the corresponding quarter of Humanities 21-22-23. (9 cred.; jr., sr.; no prereq.)	VII	MWF	218P	Ar
Hum.131f-132w- 133s	Humanities Proseminar. Topic for course: The Place of the Humanities in an Age of Science. (Formerly Humanities 97-98-99) (2 cred. per qtr.; sr., grad.)	Ar	Ar	Ar	Mr. Castell

For information concerning a major in the Humanities, see page 73.

NATURAL SCIENCE

Several general education courses in natural science are listed below, each serving a distinctive purpose. Natural Science 1-2-3 is intended for students desiring an introduction to the total field of science, 4-5-6 is for those desiring an acquaintance with the physical universe, while 7-8-9 is for those wishing to explore the world of life.

Any Junior College course when taken in its entirety will fulfill the group "D" requirement in the natural sciences for admission to the Senior College of Science, Literature, and the Arts, the School of Business Administration, and the College of Education. Students taking 1-2-3 may not receive credit for 4-5-6 or 7-8-9, but they may take both 4-5-6 and 7-8-9 for credit.

Junior College Courses

Nat.Sci.1f-2w- 3s*	Orientation in the Natural Sciences. An integrated survey course in which the student is introduced to the subject matter and methods of the physical and biological sciences. 1f: Astronomy and certain phases of physics; 2w: Chemistry, geology and the biological sciences; 3s: Some phases and applications of the biological sciences, such as the infections and communicable diseases, and public health; readings in anthropology and psychology. (15 cred.; fr., soph.; no prereq. Corresponds to G.E.D. Test No. 3. See p. 17.)	Ar	Ar	Ar	Ar	
Nat.Sci.4f-5w- 6s†	The Physical World. Essential elements of astronomy, physics, chemistry and geology, selected to illustrate the methods of science and to acquaint the student with the universe around him. (10 cred.; fr., soph.; no prereq.)	Lect.	IV	MWF	166Ph	Mr. Buchta (f,w) Mr. Thiel(s)
	Lab. Sec. 1	VI-VII	M	Ar	Ar	
	2	VIII, IX	M	Ar	Ar	
	3	III, IV	T	Ar	Ar	
	4	VI, VII	W	Ar	Ar	
	5	III, IV	Th	Ar	Ar	
	6	VI, VII	Th	Ar	Ar	
	7	VI, VII	F	Ar	Ar	
	8	I, II	S	Ar	Ar	
Nat.Sci.7f-8w- 9s††	General Biology. The main principles of plant and animal life with particular reference to man and his place in the biological world. (10 cred.; fr., soph., no prereq.)	Lect.	II	MW	BoAud	
	Lab. Sec. 1 (Limit 125)	I, II	TTh	Ar		
	2 (Limit 60)	IX, X	W	Ar		
		I, II	S			
	3 (Limit 60)	IX, X	MF	Ar		

* Students may enter any quarter.

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

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

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

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

No.	Title	Hour	Day	Bldg.	Instructor
Nat.Sci.81f-82w-83s*	Science and Civilization. The course attempts to provide an adequate understanding of the evolution of the sciences and of the scientific point of view within the frame of the history of civilization; the meaning of the fundamental problems, methods, concepts, and assumptions of modern science; and the human and social implications of science in the contemporary world. (The same as Philosophy 81-82-83) (Formerly Philosophy 80-81-82) (9 cred.; designed primarily as a senior integrative course, but open to juniors on consent of instructor; no prereq.)				
		III	MWF	210P	Mr. Feigl

PERSONAL ORIENTATION

The successful person cannot be content with a knowledge of such fields as natural and social science. He must also know himself—his abilities, interests, habits, and their relation to educational and vocational requirements. The following courses seek to provide such understanding and to promote personal competence.

Per.Or.1f,w,s	How To Study. Practical assistance to the student in developing efficient study habits, organizing materials, training the memory, preparing for examinations and improving the speed and comprehension of reading. (2 cred.; no prereq. Written permission from the Junior College Counseling Office, 108 Folwell Hall, is necessary to take this course.)				
	Sec. 1	I	MWF	108NH	Mr. Herbert
	2	II	MWF	108NH	Mr. Herbert
	3	VIII	MWF	108NH	Miss Power
	4	IX	MWF	108NH	Miss Power
Per.Or.11f,w,s	Choosing a Vocation. Assistance to the student in analyzing his abilities and interests, and in examining educational-vocational requirements and opportunities. Emphasis throughout on practical application of principles of the course to the problems of the students in the class. (Formerly Vocational Orientation 1) (2 cred.; no prereq.)				
		VI	MWF	211NH	Ar(f) Mr. Page(w,s)

SOCIAL SCIENCE

It is important that every student understand the crisis of our age. Course 1-2-3 provides a broad social orientation for Junior College students while Course 71 helps the student to integrate his own social philosophy.

Junior College Courses

Soc.Sci.1f-2w-3s	Introduction to Social Science. A study of the great social issues of our time and analysis of the proposed solutions. Information and insights from every source—sociological, economic, political, geographic, historical—are utilized to assist the student in making judgments necessary for effective citizenship. The entire course (12 cred.), but not any part of it, will satisfy the social science requirement for admission to the Senior College of Science, Literature, and the Arts and the College of Education. (12 cred.; no prereq. Corresponds to G.E.D. Test No. 2. See p. 17.)				
	Sec. 1	III	MTWF	133Ph(f,w) 150Ph(s)	Mr. Levi
	2	II	MTWF	104NH	Mr. McClosky
	3	IV	MTWF	200Pt	Mr. Kylonen
	4	V	MTWF	211NH	Mr. Sewrey
	5	VIII	MTWF	221Bu	Mr. Kendall
	6	IX	MTWF	221Bu	Mr. Kempelman

* Students may enter any quarter.

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

No.	Title	Hour	Day	Bldg.	Instructor
Soc.Sci.71s	Design for America. A discussion of the aims of American life with the future as a frame of reference. Potentialities in economics, politics, art, science, and education in their interrelations. Student and faculty participation is stressed. (The same as Philosophy 71) (Formerly Philosophy 21) (5 cred.; designed primarily as a senior integrative course, but open to juniors on consent of instructor; no prereq.)	VI	MTWThF	321F	Mr. Brameld

GEOGRAPHY

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

Major sequence in the College of Science, Literature, and the Arts—Twenty-seven credits from Geography 53, 71, 101, 102, 103, 104, 110, 111, 120, 125, 133, 241, 251, 252, 253; Economics 172, 176; Geology 110; History 80-81-82; Botany 131. At least 20 credits must be in Geography.

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

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

Major adviser in the College of Education—Professor Davis.

Requirements for a teacher's certificate—Major recommendation: a minimum of 28 credits from the following courses in Geography: 11, 41, 47, 53, 71, 101, 102, 103, 104, 110, 111, 120, 125, 133, 241, 251, 252, 253.

An additional 5 or 6 credits from the following courses in Geology: 1-2 or 8.

Minor recommendation: 18 credits from the following courses in Geography: 11 or 41, 53, 71, 101, 102, 103, 104, 110, 120.

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

Junior College Courses

11f	Human Geography. A study of environmental factors as they limit human activities. Current problems in the use of our natural resources are used as illustrative material. Approximately five weeks are devoted to maps and a study of weather and climate, both of value in everyday life. (An admission card to this class must be obtained when tallying at 106 Folwell Hall.) (5 cred.; no prereq.)				
	Sec. 1	II	MTWThF	103Bu	Mr. Davis
	2	III	MTWThF	103Bu	Mr. Brown
	3	V	MTWThF	103Bu	Mr. Weaver
11w	Human Geography (See 11f) (An admission card to this class must be obtained when tallying at 106 Folwell Hall.)				
	Sec. 1	II	MTWThF	103Bu	Mr. Davis
	2	III	MTWThF	103Bu	Mr. Brown
	3	V	MTWThF	103Bu	Mr. Weaver
11s	Human Geography (See 11f) (An admission card to this class must be obtained when tallying at 106 Folwell Hall.)				
	Sec. 1	II	MTWThF	103Bu	Mr. Davis
	2	III	MTWThF	103Bu	Mr. Brown
	3	V	MTWThF	103Bu	Mr. Weaver
35f,w	Geographic Basis of Current World Affairs. A series of illustrated lectures dealing with areas of current interest. (An admission card to this class must be obtained when tallying at 106 Folwell Hall.) (1 cred.; no prereq.)				
		I	T	103Bu	Mr. Davis and staff

§ There is no prerequisite for either Course 11 or Course 41; but students who intend to take both are advised to take Course 11 first.

No.	Title	Hour	Day	Bldg.	Instructor
41f,w,s	Geography of Commercial Production. Types of production and their geographic basis. Emphasis on the production of commodities of commercial significance. (An admission card to this class must be obtained when tallying at 106 Folwell Hall.) (5 cred.; no prereq. §)				
		VI	MTWThF	103Bu	Mr. Dicken
43	<i>Political Geography</i> (5 cred.; soph., jr., sr.; no prereq.) (<i>Not offered</i>)				
47s	Geography of Minnesota (An admission card to this class must be obtained when tallying at 106 Folwell Hall.) (3 cred.; soph., jr., sr.; no prereq.)				

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

53s	Historical Geography of North America (3 cred.; jr., sr.; prereq. 11, or 15 cred. in history)				
		IV	MWF	103Bu	Mr. Brown
71f	Geography of North America (3 cred.; jr., sr.; prereq. 11)	VIII	MWF	103Bu	Mr. Weaver
101f	Geography of Europe (3 cred.; jr., sr., grad.; prereq. 8 cred. or permission of instructor)	VII	MWF	103Bu	Mr. Dicken
102w	Trade Routes and Trade Centers (3 cred.; jr., sr., grad.; prereq. 41)	VII	MWF	103Bu	Mr. Dicken
103w	Geography of Africa (3 cred.; jr., sr., grad.; prereq. 8 cred. or permission of instructor)	IV	MWF	103Bu	Mr. Brown
104s	Geography of Australasia (2 cred.; jr., sr., grad.; prereq. 8 cred. or permission of instructor)	VIII	MW	103Bu	Mr. Weaver
110f	Geography of South America (3 cred.; jr., sr., grad.; prereq. 8 cred. or permission of instructor)	IV	MWF	103Bu	Mr. Brown
111	<i>Cartography and Graphic Representation</i> (3 cred.; jr., sr., grad.; prereq. 10 cred.) (<i>Not offered</i>)				
120s	Geography of Asia (3 cred.; jr., sr., grad.; prereq. 10 cred. or permission of instructor)	I	MWF	103Bu	Mr. Davis
125w	Geography of the Polar Areas (3 cred.; jr., sr., grad.; prereq. 8 cred.)	VIII	MWF	103Bu	Mr. Weaver
133	<i>Climatology</i> (3 cred.; jr., sr., grad.; prereq. 10 cred. incl. 11) (<i>Not offered</i>)				

Primarily for Graduate Students

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

GEOLOGY AND MINERALOGY

Major adviser in the College of Science, Literature, and the Arts—Professor Thiel. Major sequences in the College of Science, Literature, and the Arts—No major sequence in geology should be undertaken without at least two quarters of college chemistry. Trigonometry and physics (preferably Physics 7-8-9) are required. Calculus is

§ There is no prerequisite for either Course 11 or Course 41; but students who intend to take both are advised to take Course 11 first.

required for advanced courses in geophysics. A course in surveying (preferably Civil Engineering 17) is required. (For courses in surveying see the Bulletin of the Institute of Technology.) Course 23 should be taken as early as possible. One field trip is required of all students majoring in geology.*

Sequence A. For general geology, federal, and state surveys, etc. Courses 91-92-93, 101, 110, 111, 121, (124 and 125) or (144 and 145), 151-152-153.

Sequence B. For petroleum geologist. Courses 91-92-93, 101, 105, 112, 119, (144 and 145) or (124 and 125), 151-152-153.

Sequence C. For mining geologist and mineralographer. Courses 110, 111, 119, 121, 124, 125, 144, 145, 166-167.

Sequence D. For paleontologist. Courses 91-92-93, 101, 103-104, 105, 107-108, 151-152-153. (General zoology is recommended.)

Sequence E. For mineralogist. Courses 61, 105, 106, 110, 111, 121, 131-132, 166-167.

Sequence F. For petrographer. Courses 105, 106, 110, 111, 121, 124, 131-132, 140-141.

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

Major adviser in the College of Education—Professor Thiel.

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

For a specialized curriculum in geophysics see the Bulletin of the Institute of Technology.

Junior College Courses

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

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†	General Geology (Dynamic and Historical). (A synoptical treatment of the materials of the earth and of geologic processes, together with a study of the history of the earth and its inhabitants as recorded in the rocks (6 cred.; no prereq.)				
	Sec. 1	II	TThS	2P	Mr. Thiel
	2	VI	MWF	210P	Ar
Af†-Bw§‡	General Geology Laboratory (Dynamic and Historical). (4 cred.; with or after 1-2)				
	Sec. 1	I, II	TTh	22P	Ar
	2	III, IV	WF	22P	Ar
	3	VI, VII	MW	22P	Ar
	4	VI, VII	TTh	22P	Ar
1w-2s†	General Geology (Dynamic and Historical) (See 1f-2w)				
	Sec. 1	IV	TThS	2P	Mr. Thiel
	2	VII	MWF	210P	Ar
Aw‡-Bs‡‡	General Geology Laboratory (Dynamic and Historical) (See Af-Bw)				
	Sec. 1	I, II	MW	22P	Ar
	2	III, IV	MW	22P	Ar
	3	VIII, IX	TTh	22P	Ar
1s	General Geology (Dynamic) (1st qtr. of 1-2. See 1f-2w)				
	Sec. 1	III	TThS	2P	Mr. Thiel
	2	VI	MWF	210P	Ar

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

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

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

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

No.	Title	Hour	Day	Bldg.	Instructor
As†§	General Geology Laboratory (Dynamic) (1st qtr. of A-B. See Af-Bw)				
	Sec. 1	III, IV	TTh	22P	Ar
	2	I, II	TTh	22P	Ar
	3	VI, VII	TTh	22P	Ar
	4	VI, VII	MW	22P	Ar
2ff	General Geology (Historical) (2nd qtr. of 1-2. See 1f-2w)				
		IV	MWF	210P	Mr. Swain
Bf§	General Geology Laboratory (Historical) (2nd qtr. of A-B. See Af-Bw.)				
		III, IV	TTh	22P	Ar
8f	Earth Features and Their Meaning—An Introductory Course. An explanation of the natural landscape as produced by such agents as the atmosphere, water, glaciers, volcanoes and mountain building forces acting on the materials of the earth. (5 cred.; no prereq.)				
		III	MTWThF	2P	Mr. Sharp
8w	Earth Features and Their Meaning—An Introductory Course (See 8f)				
		III	MTWThF	2P	Mr. Sharp
8s	Earth Features and Their Meaning—An Introductory Course. (See 8f)				
		II	MTWThF	2P	Mr. Sharp
23ff-24w†	Elements of Mineralogy (10 cred.; soph., jr., sr.; prereq. a course in chemistry)				
	Lect.	I	MWF	110P	Mr. Gruner
	Rec.	VIII	T	110P	
	Lab.	VI, VII	TTh	100P	
23w-24s†	Elements of Mineralogy (Primarily for students in the Institute of Technology) (See 23f-24w)				
	Schedule for 23w Lect.	I	TThS	110P	Mr. Gruner
	Rec.	VIII	M	110P	
	Lab.	VI, VII	MW	100P	
	Schedule for 24s Lect.	I	TThS	110P	Mr. Gruner
	Rec.	Ar	Ar	Ar	
	Lab.	III, IV	TTh	100P	

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

51	<i>Elements of Paleontology</i> (5 cred.; jr., sr.; prereq. 1 and Zool. 1-2-3) (<i>Not offered—offered in alternate years</i>)				
61w	Blowpipe Analysis (3 cred.; jr., sr.; prereq. 24)				
	Lect.	II	TThS	100P	Mr. Gruner
	Lab.	VII, VIII	F	100P	
		IX	Th	100P	
91f-92w-93s	Invertebrate Paleontology (9 cred.; jr., sr.; prereq. 2 or 51)				
	Fall	VI, VII, VIII	TTh	105P	Mr. Bell
	Winter	VIII, IX	T	105P	
		VI, VII	WF		
	Spring	VIII, IX	T	105P	
		VI, VII	TTh		
100**	Field Work in Northern Minnesota—July 15 to 30, approximately. Students interested in this field trip should consult the department. (3 cred.; jr., sr.; prereq. 105)				
			Ar		Mr. Gruner
101f-102w	Sedimentation (6 cred.; jr., sr., grad.; prereq. 24)				
	Schedule for 101f Lect.	II	MWF	210P	Mr. Thiel
	Schedule for 102w Lect.	VI	M	208P	Mr. Thiel
	Lab.	VII, VIII	MW	208P	

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

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

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

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

** A more comprehensive report will be required for Graduate School credit.

No.	Title	Hour	Day	Bldg.	Instructor
103w-104s	Micropaleontology (6 cred.; jr., sr., grad.; prereq. 51 or 91)	Ar	Ar	Ar	Mr. Swain
105s	Rock Study (2 cred.; jr., sr., grad.; prereq. 24)	I	TS	218P	Mr. Grout
	Lect.	I, II	Th	200P	
106f	Petrography (2 cred.; jr., sr., grad.; prereq. 105)	I, II	Th	200P	Mr. Grout
	Sec. 1	VI, VII	M	200P	
	2	VI, VII	TTh	200P	Mr. Grout
107f-108w-109s	Stratigraphic Paleontology (9 cred.; jr., sr., grad.; prereq. 91-92-93)	Ar	Ar	Ar	Mr. Bell
110f	Principles of Economic Geology (3 cred.; jr., sr., grad.; prereq. 24)	I	TThS	210P	Mr. Schwartz
111w	Ore Deposits—Metallic and Non-metallic (3 cred.; sr., grad.; prereq. 2 and 110)	I	TThS	210P	Mr. Schwartz
112s	Geology of Petroleum (3 cred.; sr., grad.; prereq. 111)	I	TThS	105P	Mr. Swain
114	<i>Geology of Minnesota and Adjoining Areas</i> (3 cred.; jr., sr., grad.; prereq. 105) (<i>Not offered</i>)				
118f	Principles of Geomorphology. Origin and evolution of constructional and destructional land features produced by current geological processes such as weathering, mass movements, wind, running water, glaciers, waves and currents, vulcanism, and diastrophism. (3 cred.; jr., sr., grad.; prereq. 2)	Ar	Ar	Ar	Mr. Sharp
119w	Geomorphology of the United States. Regional study by physiographic units emphasizing surface features and tracing the influence of process, structure, and geological history. Discussion of the characteristic forms and principal problems in each area. (3 cred.; jr., sr., grad.; prereq. 2)	Ar	Ar	Ar	Mr. Sharp
120s	Glacial Geology. Origin of glaciers, existing glaciers, glacial mechanics, topical treatment of erosional and deposition products of continental and mountain glaciations, chronology of the Pleistocene, ancient glaciations. (3 cred.; jr., sr., grad.; prereq. 2)	Ar	Ar	Ar	Mr. Sharp
121f	Crystallography (3 cred.; jr., sr., grad.; prereq. Math. 7 and Inorg.Chem. 6-7-8 or 9-10)	Ar	Ar	100P	Mr. Gruner
124w	Metamorphic Geology (3 cred.; jr., sr., grad.; prereq. 2 and 105)	II	MWF	218P	Mr. Schwartz
125f	Structural Geology (3 cred.; jr., sr., grad.; prereq. 2 and 105)	II	MWF	218P	Mr. Schwartz
131s-132f	Advanced Petrology (10 cred.; jr., sr., grad.; prereq. 106)	I	MWF	200P	Mr. Grout
	Lect.	VI	M	200P	
	Rec.	VI, VII	WF	200P	
137	<i>Testing Economic Minerals</i> (3 cred.; jr., sr., grad.; prereq. 2 and 105) (<i>Not offered</i>)				
140w-141s	Applied Petrography (6 cred.; jr., sr., grad.; prereq. 131)	II	F	200P	Mr. Grout
	Lect. (winter)	VIII, IX	MW	200P	
	Lab.	IV	W	200P	
	Lect. (spring)	VIII, IX	MW	200P	
144w	Interpretation of Geological Maps. Laboratory problem study of geological maps, structure contours, and mine maps. Mathematical and geometrical treatment of geological elements pertaining to strata, veins, faults and other bodies in three dimensions. (3 cred.; jr., sr., grad.; prereq. 2)	VI, VII, VIII	WF	220P	Mr. Sharp
145s	Use and Interpretation of Aerial Photographs. Elements of aerial photographs, simple photogrametric procedures, planimetric maps from photos, normal and stereoscopic study, geological interpretation and field use. (3 cred.; jr., sr., grad.; prereq. 2)	VI, VII, VIII	TTh	220P	Mr. Sharp
146f,w-147w,s	Soil Mineralogy (8 cred.; jr., sr., grad.; prereq. one year of college chemistry)	Ar	Ar	Ar	Ar

No.	Title	Hour	Day	Bldg.	Instructor
150*	Field Geology (Black Hills)—June 15 to July 15, approximately (Jr., sr., grad.; prereq. 125)				
		Ar	Ar	Ar	Mr. Gruner
151f-152w-153s	Stratigraphy (9 cred.; jr., sr., grad.; prereq. 2)	III	MWF	105P	Mr. Bell
161w	Crystal Structure (3 cred.; jr., sr., grad.; prereq. 121, elem. phys. and anal. geom.)	Ar	Ar	Ar	Mr. Gruner
166w-167s	Mineralography (6 cred.; sr., grad.; prereq. 111, 131)				
	(Winter)	VI, VII	MTTh	207P	Mr. Schwartz
	(Spring)	VI, VII	MWF	207P	Mr. Schwartz
170f,w,s	Geological Problems (3 cred.; jr., sr., grad.; prereq. permission of major adviser)	Ar	Ar	Ar	Ar

Refresher Courses for War Veterans

The following courses have been designed to fit the needs of students who entered military service before their major work was completed, and for those who took an accelerated program adopted as a war emergency measure. Some students were allowed to receive degrees without certain courses which are essential for competent professional work. These courses will aid in reorienting the student in the field of his major interest. No more than three of the following courses may be taken for credit by any one student. Students should consult the major adviser before registering.

113	Theory of Ore Deposits (3 cred.; sr., grad.; prereq. 112)				Mr. Schwartz
117	Paleontologic Problems (3 cred.; sr., grad.; prereq. 109)				Mr. Bell
122	Problems in Sedimentation (3 cred.; sr., grad.; prereq. 102)				Mr. Thiel
123	Advanced Mineralogy (3 cred.; jr., sr., grad.; prereq. 24)				Mr. Gruner
126	Advanced Structural Geology (3 cred.; sr., grad.; prereq. 125)				Mr. Grout, Mr. Schwartz
142	Petrographic Problems (3 cred.; sr., grad.; prereq. 131)				Mr. Grout

GEOPHYSICS

See Physics, page 94.

GERMAN

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

Major sequence in the College of Science, Literature, and the Arts—Eighteen credits from Group A or Group B, and 15 additional credits in courses, other than 73-74-75, numbered 50 or above.

A. Courses 50-51-52, 53-54-55, 56-57, 58, 70, 80.

B. Courses 60, 61, 62, 63, 64, 65, 68, 70, 77.

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

Major adviser in the College of Education—Professor Burkhard.

Requirements for a teacher's certificate—Major recommendation: Courses 50-51-52, 53-54-55, 56-57, 58, 68, and 15 additional credits in courses, other than 73-74-75, numbered 50 or above.

* A maximum of 6 credits will be granted after field report is completed. The course will not be given for fewer than six students.

Minor recommendation: Courses 50-51-52, 58, and 8 additional credits in courses, other than 73-74-75, numbered 50 or above.

Sequence of courses for academic students—Without entrance German: Courses 1, 2, 3, 4, other courses numbered 50 or above. With one year of entrance German: Courses 2, 3, 4, other courses numbered 50 or above. With two years of entrance German: Courses 3, 4, other courses numbered 50 or above. With three years of entrance German: Course 4 and other courses numbered 50 or above. With four years of German: courses numbered 50 or above.

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f	Beginning A (5 cred.; no prereq.)	I	MTWThF	212F	Ar
		II	MTWThF	213F	Ar
		III	MTWThF	207F	Ar
		IV	MTWThF	212F	Ar
		VI	MTWThF	209½F	Ar
		VII	MTWThF	209½F	Ar
		VIII	MTWThF	209½F	Ar
1af*	Beginning A—Conversational section (5 cred.; no prereq.)				
	Demonstration	VII	MTWThF	209F	Ar
	Plus Laboratory Drill	VIII	MTWThF	209F	Ar
1w	Beginning A (See 1f)				
		I	MTWThF	213F	Ar
		II	MTWThF	209F	Ar
1s	Beginning A (See 1f)				
		I	MTWThF	213F	Ar
		II	MTWThF	125F	Ar
2f	Beginning B (5 cred.; prereq. 1 or one year of high school German)	III	MTWThF	212F	Ar
		VII	MTWThF	8F	Ar
2w	Beginning B (See 2f)				
		I	MTWThF	212F	Ar
		II	MTWThF	213F	Ar
		III	MTWThF	207F	Ar
		IV	MTWThF	212F	Ar
		VI	MTWThF	209½F	Ar
		VII	MTWThF	209½F	Ar
		VIII	MTWThF	209½F	Ar
2aw*	Beginning B—Conversational section (5 cred.; prereq. 1af)				
	Demonstration	VII	MTWThF	209F	Ar
	Plus Laboratory Drill	VIII	MTWThF	209F	Ar
2s	Beginning B (See 2f)				
		I	MTWThF	8F	Ar
		II	MTWThF	209F	Ar
3f§	Beginning C (5 cred.; prereq. 2 or two years of high school German)				
		I	MTWThF	209½F	Ar
		VI	MTWThF	207F	Ar
	(Premed. students only)§	II	MTWThF	209½F	Ar
3w	Beginning C (See 3f)				
		III	MTWThF	212F	Ar
		VII	MTWThF	8F	Ar

* The conversational method will be used in these sections; somewhat less home study will be required than in the standard sections. For further information see Professor Genschmer in Room 214, Folwell Hall.

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

No.	Title	Hour	Day	Bldg.	Instructor
3s	Beginning C (See 3f)	I	MTWThF	212F	Ar
		II	MTWThF	213F	Ar
		III	MTWThF	207F	Ar
		IV	MTWThF	212F	Ar
		VI	MTWThF	209½F	Ar
		VII	MTWThF	209½F	Ar
		VIII	MTWThF	209½F	Ar
		3as*	Beginning C—Conversational section (5 cred; prereq 2a)	VII	MTWThF
	Demonstration	VIII	MTWThF	209F	Ar
	Plus Laboratory Drill				
4f	Intermediate German (5 cred; prereq. 3 or three years of high school German)	III	MTWThF	209½F	Ar
		IX	MTWThF	209½F	Ar
4w	Intermediate German (See 4f)	I	MTWThF	209½F	Ar
		VI	MTWThF	207F	Ar
4s	Intermediate German (See 4f)	III	MTWThF	212F	Ar
		VII	MTWThF	8F	Ar
24f-25w-26s	Chemical German (9 cred.; chemists, miners; no prereq.)	IV	MWF	209½F	Ar
24af-25aw-26as	Chemical German (12 cred.; pharmacists and agricultural students; no prereq.)	IV	MTWF	124F	Ar
27f-28w-29s	Chemical Prose (9 cred.; chemists, pharmacists, miners; prereq. two years of high school German or one year of college German)	IV	MWF	209F	Ar
30f-31w-32s	Medical German (9 cred.; premed.; prereq. 3)	II	MWF	113F	Ar
33w-34s	Medical German (10 cred.; premed.; prereq. 3)	II	MTWThF	209½F	Ar
41f-42w-43s	Readings from German Chemical Periodicals (6 cred.; sr.; prereq. 26 or equiv.)	IV	TS	209F	Ar

Senior College Courses

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50f-51w-52s	Composition. A review of German grammar; writing of dialogs, with emphasis upon colloquial usage, and of original compositions. (6 cred.; jr., sr.; prereq. 4)	I	TTh	207F	Mr. Downs
53f-54w-55s	Conversation. A work of fiction and a conversational manual provide the basis for oral practice to develop an elementary command of spoken German. (6 cred.; jr., sr.; prereq. 4)	VI	TTh	205F	Mr. Genschmer
56f-57w	Essay Writing (6 cred.; jr., sr.; prereq. 52)	III	TThS	302F	Mr. Pfeiffer
58s	German Pronunciation (2 cred.; jr., sr.; prereq. 4)	III	TTh	302F	Mr. Downs
59w,s	German Pronunciation and Diction (Open only to candidates for the German play) (1 or 2 cred.; jr., sr.; prereq. 3)	Ar	Ar	Ar	Ar
60w	The Modern Short Story (3 cred.; prereq. 4 or four years of high school German)	III	MWF	205F	Mr. Holske
61	Lyrics and Ballads (3 cred.; jr., sr.; prereq. 3 cred. above 59) (Not offered)				
62s	Nineteenth-Century Prose (3 cred.; jr., sr.; prereq. 3 cred. above 59)	III	TThS	205F	Mr. Pfeiffer

* The conversational method will be used in this section; somewhat less home study will be required than in the standard sections. For further information see Professor Genschmer in Room 214, Folwell Hall.

No.	Title	Hour	Day	Bldg.	Instructor
63f	Classical Drama (3 cred.; jr., sr.; prereq. 60 or 4 with a grade of B)	IV	MWF	207F	Mr. Burkhard
64w	Nineteenth-Century Drama (3 cred.; jr., sr.; prereq. 3 cred. above 59)	IV	MWF	207F	Mr. Burkhard
65s	Modern Drama (3 cred.; jr., sr.; prereq. 3 cred. above 59)	IV	MWF	207F	Mr. Burkhard
68w	Introductory Survey of German Literature (3 cred.; jr., sr.; prereq. 6 cred. above 59)	III	MWF	209½F	Mr. Burkhard
70f	Early German Literature. Reading and discussion of Old High German and Middle High German classics in Modern German translation. (3 cred.; jr., sr.; prereq. 3 cred. above 59)	VI	MWF	115F	Mr. Downs
73f-74w-75s‡	German Classics in English Translation. German literature from medieval to modern times, with consideration of its relation to other literatures. Topics include <i>Parzival</i> , <i>Tristan and Isolde</i> , <i>Nibelungenlied</i> , minnesinger and meistersinger; Humanism; Reformation and Counter-Reformation; Goethe, Schiller and the new humanism; Romanticism; Heine; Wagner, Nietzsche; Hauptmann, Mann, Werfel. (6 cred.; sr.; no prereq.)	VII	MW	212F	Mr. Downs, Mr. Holske
77s	Faust I (3 cred.; jr., sr.; prereq. 63 and 3 additional cred. above 59)	III	MWF	209½F	Mr. Burkhard
80w	History of the German Language (3 cred.; jr., sr.; prereq. 6 cred. above 60)	VI	MWF	115F	Mr. Downs
90-91-92*	Reading in the Student's Major Field (or in Military or Naval German) (1 cred. per qtr.; jr., sr.; prereq. 4 and consent of instructor) (<i>Not offered</i>)				

For a complete list of graduate offerings see "The Graduate School Announcement."

Courses numbered 100 to 199 are open to seniors upon recommendation of advisers.

COURSES IN GERMAN LITERATURE

100-101-102†	History of German Literature (9 cred.; sr., grad.; prereq. 68 and 9 cred. above 59) (<i>Not offered</i>)				
103-104-105†	Bibliography and Methods (3 cred.; grad.) (To be taken concurrently with Course 100-101-102. Required of all candidates for advanced degrees) (<i>Not offered</i>)				
130-131-132	The Age of Luther (9 cred.; sr., grad.; prereq. 101 or equivalent and 11 cred. above 59) (<i>Not offered</i>)				
143f-144w-145s	The Classical Period: Goethe (9 cred.; sr., grad.; prereq. 101 and 11 cred. above 59 or equivalent)	Ar	Ar	Ar	Mr. Holske
150f-151w-152s	Studies in German Literature of the Nineteenth Century: Die Novelle (9 cred.; sr., grad.; prereq. 102 or equivalent and 11 cred. above 59)	VIII, IX, X	T	301Lib	Mr. Burkhard
153-154-155	The Modern Drama. From Hauptmann to the present. (9 cred.; sr., grad.; prereq. 102 or equivalent and 11 cred. above 59) (<i>Not offered</i>)				
160-161-162	Lyric Poetry (9 cred.; sr., grad.; prereq. 100-101-102 or equivalent and 11 cred. above 59) (<i>Not offered</i>)				
163-164-165	The Nineteenth Century Novel (9 cred.; sr., grad.; prereq. 102 or equivalent and 11 cred. above 59) (<i>Not offered</i>)				

COURSES IN LINGUISTICS AND PHILOLOGY

110-111-112†	Middle High German. Linguistic introduction and readings in Middle High German literature. (9 cred.; sr., grad.; prereq. 68 and 11 cred. above 59) (<i>Not offered</i>)
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* A student may earn 6 credits in German 90-91-92.

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

‡ This course presupposes no knowledge of the German language.

No.	Title	Hour	Day	Bldg.	Instructor
113-114-115	Gothic and Old High German (9 cred.; sr. with completed major sequence, grad.; prereq. 68 and 11 cred. above 59)				
	113f Gothic. Introduction to German linguistics. (The same as Scandinavian 113) (4 cred.)	VIII, IX, X and 1 hr. ar	W	302F	Mr. Reichardt
	114w Gothic Texts (The same as Scandinavian 114) (2 cred.)	VIII, IX	W	302F	Mr. Reichardt
	115s Old High German (3 cred.)	VI	MWF	10F	Mr. Downs
125	<i>History of the German Language</i> (3 cred.; sr., grad.; prereq. 68 and 11 cred. above 59) (Not offered)				
126	<i>Historical German Grammar</i> (3 cred.; sr., grad.; prereq. 110-111-112 or 113-114-115) (Not offered)				
183	<i>Germanic Heroic Poetry</i> (The same as Scandinavian 183) (3 cred.; sr., grad.; prereq. 68 and 9 cred. above 59) (Not offered)				
195	<i>Introduction to Old Norse Language and Literature.</i> Old Norse phonology and morphology. Survey of Old Icelandic history and literature. (The same as Scandinavian 195) (4 cred.; sr., grad.; prereq. 113) (Not offered)				

Courses for Graduate Students

COURSES IN GERMAN LITERATURE

253-254-255	<i>Seminar: Literary Problems</i> (9 cred.; grad.; prereq. 101-102-103 or equivalent and 9 additional credits in German Literature)				
	a. <i>German Baroque Literature: from the Renaissance to the Age of Reason</i> (Not offered)				
	b. <i>Goethe and the Middle-Class Tradition</i> (Not offered)				
	c. <i>Romanticism</i> (Not offered)				
	d. <i>Nineteenth Century Drama: Kleist, Grillparzer and Hebbel</i> (Not offered)				
	e. <i>The Problem of Tragedy in Modern Drama</i> (Not offered)				

COURSES IN LINGUISTICS AND PHILOLOGY

218f-219w-220s	<i>Seminar: Germanic Languages and Literature</i> (9 cred.; grad.; prereq. at least 2 Germanic dialects)				
	a. <i>Problems in Middle High German Literature</i> (Not offered)				
	b. Texts in Germanic Dialects: Runic Inscriptions	VIII, IX, X	T	302F	Mr. Reichardt
	c. <i>Old High German.</i> Linguistic interpretation of texts. (Not offered)				

GREEK

See Classics, page 37.

HISTORY

Major advisers in the College of Science, Literature, and the Arts—Professors Krey, Osgood, and Steefel.

Major sequence in the College of Science, Literature, and the Arts—Students will take the equivalent of at least two nine-credit courses numbered from 50 to 100. These will normally come in the junior year. In the senior year students, if they have maintained to the end of the junior year an honor point average of 1.5 in all work, will take at least one course numbered 150 or above; all other majors in history will take an additional number of courses with numbers 50 to 100 in the senior year, but will not take courses numbered 150 or above. Normally a history major will consist of Senior College courses aggregating at least 27 credits. Credits in Political Science 153, 192-193, will be accepted toward the major in history.

(Prerequisites: Courses 1-2-3 or 4-5-6 or 14-15-16, and 20-21-22.)

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

Major adviser in the College of Education—Professor Krey.

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

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

No major recommendation to teach history will be given unless the candidate has taken the general course in American history, History 20-21-22, or equivalent.

(Prerequisites: Courses 1-2-3 or 4-5-6 or 14-15-16, and 20-21-22.)

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

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

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

Junior College Courses

Most of these courses are announced for f-w-s or w-s; but students may enter any quarter.

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w-3s	Civilization of the Modern World. 1f: The rise of the European state system as the framework within which Western civilization developed, and the economic, cultural, political, intellectual, and religious implications of the emerging system; 2w: The struggle for control over the Western states system, and the emergence of liberal democracy in the modern world; 3s: The impact of industrialism upon Western and world civilization, the origins and backgrounds of the period of confusion that is the twentieth century world. (9 cred.; no prereq.)				
	Lect. Sec. 1	II	TTh	BuAud	Mr. Wolf
	Rec. Secs.*	I	M	218P	
		I	T	114F	
		I	Th	114F	
		I	F	218P	
		II	M	110P	
		II	W	110P	
		II	S	101F	
		IV	T	218P	
		IV	Th	218P	
		VIII	T	210P	
		VIII	Th	210P	
	Lect. Sec. 2	VII	MW	BuAud	Mr. Wolf
	Rec. Secs.	I	W	218P	
		IV	T	210P	
		VI	Th	218P	
		VII	T	218P	
		VII	Th	218P	
		VII	F	110P	
		VIII	T	218P	
		VIII	Th	218P	
		IX	T	218P	
		IX	Th	218P	

* Recitation sections in Courses 1f, 2w, 3s and 20f, 21w and 22s will not meet until after the first lecture.

No.	Title	Hour	Day	Bldg.	Instructor	
1w-2s	Civilization of the Modern World (2 qtrs. of 1-2-3. See 1f-2w-3s)	Lect.	II	MW	206Pt	Mr. Deutsch
		Rec. Secs.	II	T	200Pt	
			II	Th	200Pt	
			VI	T	200Pt	
			VI	Th	200Pt	
2f-3w	Civilization of the Modern World (2nd and 3rd qtrs. of 1-2-3. See 1f-2w-3s)	Lect.	VI	MW	206Pt	Mr. Deutsch
		Rec. Secs.	IV	T	110P	
			IV	Th	110P	
			VI	T	110P	
			VI	Th	110P	
3f	Civilization of the Modern World (3rd qtr. of 1-2-3. See 1f-2w-3s)	Lect.	II	MW	206Pt	Mr. Deutsch
		Rec. Secs.	II	T	200Pt	
			II	Th	200Pt	
			VI	T	200Pt	
			VI	Th	200Pt	
4f-5w-6s	English History. 4f: Conquest and settlement, the feudal age, foreshadowings of limited monarchy and popular government; 5w: Tudors and Stuarts, parliament versus king, colonization; 6s: The coming of democracy, Britain and Europe, Empire and Commonwealth. (9 cred.; no prereq.)	Lect.	II	MW	BuAud	Mr. Burt
		Rec. Secs.	I	T	9F	
			I	Th	9F	
			I	S	9F	
			II	T	9F	
			II	Th	9F	
			II	F	110P	
			II	S	9F	
			III	T	9F	
			III	Th	9F	
			V	T	9F	
			VII	T	9F	
			VII	Th	9F	
			11f-12w-13s	Medieval History. 11f: The Roman heritage, the "age of faith," the feudal age; 12w: The crusades, towns and trade, learning and literature, Gothic; 13s: Renaissance and Reformation, the rise of national states, exploration and discovery. (9 cred.; for music and art students only; no prereq.)	IV	
VII	MWF	112Bu			Miss Thompson	
VII	TWTh	114F			Mr. Jones	
14Af-15Aw-16As	Ancient Civilization with Basic Readings (15 cred.; no prereq. This course is a combination of History 14-15-16 and Classics 14-15-16, see p. 40)	VII	MTWThF	114F	Mr. Jones,	
					Mr. Heller	
17s	Modern Economic and Social Problems. A historical survey of contemporary problems created by changes in the organization and methods of production and trade, in class relationships, political institutions and ideas; and of the efforts made by farmers, manufacturers, bankers, wage-earners, consumers, voluntary associations, and governments to find conservative, reformist, or revolutionary solutions. (5 cred.; 3rd qtr. fr., soph., jr., sr.; no prereq)	Lect.	II	TThS	221Bu	Mr. Heaton
		Rec. Secs.	III	TTh	110P	
			VIII	TTh	111Bu	

No.	Title	Hour	Day	Bldg.	Instructor
20f-21w-22s	American History. A survey of the political, economic, and social history of the United States with emphasis on the forces that resulted in the emergence of modern America. 20f: Colonial and Early National Period; 21w: Sectionalism and National Development; 22s: Modern America. (9 cred.; soph., jr., sr.; no prereq.)				
	Lect. Sec. 1	II	TTh	206Pt	Mr. Osgood
	Rec. Sec.*	IV	T	111Bu	
		IV	Th	111Bu	
		IV	F	110P	
	Lect. Sec. 2	VIII	TTh	206Pt	Mr. Loehr
	Rec. Secs.*	VI	F	108NH	
		VII	F	211NH	
		VIII	M	111Bu	

Senior College Courses

Except where otherwise stated, there are no prerequisites for the courses numbered 50 to 100. Most of these courses are announced for f-w-s or w-s, but students may enter any quarter.

Course 70-71-72 is open to prelegal sophomores who have completed Course 4-5-6 or Course 1-2-3 with a grade of at least C, and also to prelegal sophomores who have an average grade of C in all their work, even if that work includes no course in history. Senior College courses with numbers less than 100 are open to third quarter sophomores who have an average grade of at least C in 9 credits of history. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50f-51w-52s	History of Greece to 200 B.C. (9 cred.; jr., sr.)	I	TThS	112Bu	Mr. Jones
50a-51a-52a	<i>History of Rome</i> (9 cred.; jr., sr.) (<i>Not offered</i>)				
50b-51b-52b	<i>History of the Ancient Near East</i> (9 cred.; jr., sr.) (<i>Not offered</i>)				
53f-54w-55s	Medieval European History. 53f: Decline of the Roman Empire; 54w: The Feudal Age; 55s: The Crusades, Gothic Architecture, Thomas Aquinas. (9 cred.; jr., sr.)	III	MWF	221Bu	Mr. Krey
53a-54a-55a	<i>Renaissance and Reformation</i> . 53a: The Age of Dante and Petrarch; 54a: Italian Renaissance; 55a: The European Renaissance and Reformation. (9 cred.; jr., sr.) (<i>Not offered—offered in alternate years</i>)				
56-57-58	<i>Continental Europe</i> . 56: 1559-1661, the Era of the Thirty Years' War; 57: 1661-1774, the Age of Louis XIV, the "Age of Reason" and the "Enlightened Despots"; 58: 1774-1815, the French Revolution and the Napoleonic Empire. (9 cred.; jr., sr.) (<i>Not offered—offered in alternate years</i>)				
56af-57aw-58as	Russia. 56af: The Origins of the Slavs, the Eastward Movement and the Rise of the Principality of Moscow; 57aw: The Empire from Peter the Great to the Revolution of 1917; 58as: The Soviet Union. (9 cred.; jr., sr.)	IV	MWF	111Bu	Mr. Anderson
59f-60w-61s	Continental Europe. 59f: Reconstruction after the Napoleonic Wars, Liberalism and Nationalism, the Revolutions of 1820, 1830, 1848; 60w: Napoleon III, the first "Modern" Dictator; making the Kingdom of Italy and the Second German Reich; 61s: 1871-1914, Forty Years of Peace and Preparation for War. (9 cred.; jr., sr.)	VII	MWF	111Bu	Mr. Steefel
62-63-64	<i>European Overseas Expansion</i> . 62: Voyages of Discovery and Overseas Expansion, 1400-1600; 63: Colonial Rivalries in the West Indies, East Indies, and India, 1600-1815; 64: Imperialism since 1850. (9 cred.; jr., sr.) (<i>Not offered—offered in alternate years</i>)				
65f-66w-67s	Europe in the Twentieth Century (9 cred.; jr., sr.)	I	MWF	211Bu	Mr. Deutsch
68w-69s	American History since 1900 (6 cred.; jr., sr.)	VII	MWF	221Bu	Mr. Stephenson

* Recitation sections in Courses 1f, 2w, 3s and 20f, 21w and 22s will not meet until after the first lecture.

No.	Title	Hour	Day	Bldg.	Instructor
68af-69aw	The Immigrant in American History and Life. A chapter in social, religious, cultural, and political history. (6 cred.; jr., sr.)	III	MWF	111Bu	Mr. Stephenson
70f-71w-72s	English Constitutional History. 70f: The Medieval Period; 71w: Early Modern Times; 72s: In the Last Two Centuries. (9 cred.; open to prelegal soph. with at least a C average in Courses 4-5-6, 1-2-3, or in all their college work, and to all jrs. and srs.)	I	MWF	221Bu 111Bu	Miss Thompson Mr. Willson
73f-74w-75s	Modern England. 73f: Tudors and Stuarts to 1640; 74w: The Later Stuarts and the Eighteenth Century, 1640-1815; 75s: England since 1815. (9 cred.; jr., sr.)	II	MWF	111Bu	Mr. Willson
76f-77w-78s	Canadian History and Canadian American Relations. 76f: Rise and Fall of the French Empire in America; 77w: From British Conquest to Federation; 78s: The Dominion of Canada from Its Formation. (9 cred.; jr., sr.)	III	TThS	221Bu	Mr. Burt
79af-79bw-79cs	Foundations of National Power. A discussion of the power potentials of states in the modern world and of the areas of possible conflict. This is primarily a course for N.R.O.T.C. students, but it will be open to a limited number of civilian students. (9 cred.; jr., sr.; no prereq.)	VII	MWF	211Bu	Mr. Loehr
80f-81w-82s	Introduction to Economic History. 80f: Economic Life in Ancient and Medieval Times; 81w: Economic Developments in the Early Modern World; 82s: Economic Developments since 1750. (9 cred.; jr., sr.)	I	TThS	111Bu	Mr. Heaton
83f-84w-85s	American Economic and Social History. 83f: Colonial Life; 84w: From the Revolution to 1860; 85s: Developments since 1860. (9 cred.; jr., sr.)	III	TThS	211Bu	Mr. Loehr
83as	American Agricultural History. Development of American agriculture from the Colonial period to the present. (3 cred.; soph., jr., sr.)	II	MWF	116SnH(UF)	Mr. Loehr
86f-87w-88s	American Colonies. 86f: In the Seventeenth Century; 87w: In the Eighteenth Century; 88s: The Revolutionary Crisis. (9 cred.; jr., sr.)	II	MWF	112Bu	Mrs. Tyler
86af-87aw-88as	Social and Intellectual History of the United States. (9 cred.; jr., sr.)	III	MWF	112Bu	Mrs. Tyler
89w	Economic History of Modern War. Economic Aspects of the French Revolution and Napoleonic Wars, and of the First and Second World Wars. (3 cred.; jr., sr.)	III	TThS	112Bu	Mr. Heaton
90f-91w-92s	The American West. An interpretation of the American frontier from its establishment in the colonies to its disappearance as a factor in American life. 90f: The Colonial Frontier; 91w: Mid-America; 92s: The Far West. (9 cred.; jr., sr.)	III	TThS	111Bu	Mr. Osgood
93f-94w-95s	American Diplomatic History. 93f: American Diplomacy, 1776-1846; 94w: The Period of National Development; 95s: The United States as a World Power. (9 cred.; jr., sr.)	VI	MWF	112Bu	Mr. Beatty
93af-94aw-95as	Survey of Latin-American History. 93af: The Colonial Period; 94aw: The Latin-American Republics; 95as: Recent Latin-American History. (9 cred.; jr., sr.)	VIII	MWF	112Bu	Mr. Jones
97f-98w-99s	Minnesota and the Northwest (9 cred.; jr., sr.)	III	MWF	316Lib	Mr. Jordan
<p>Courses numbered 150 to 200 are open to seniors, and to graduate students upon recommendation of advisers; prerequisites are appropriate lecture courses and consent of the department.</p>					
135f-136w-137s	Selected Readings in Ancient History. (9 cred.; jr., sr., grad.) (The same as Anthropology 135-136-137)	Ar	Ar	Ar	Mr. Jones, Mr. Cline
143f-144w-145s	American Folk Lore (The same as English 143-144-145) (9 cred.; jr., sr., grad.)	I	MWF	112Bu	Mr. Jordan

150-151-152	<i>Selected Readings in Ancient History.</i> Cultural history of Egypt. (9 cred.; sr., grad.) (The same as Anthropology 150-151-152) (<i>Not offered</i>)				
153f-154w-155s	<i>Selected Readings in Medieval and Renaissance History.</i> (9 cred.; jr., sr., grad.)	VIII, IX	W 328Lib	Mr. Krey	
156f-157w-158s	<i>Selected Readings in European History</i> (9 cred.; sr., grad.)				
	Recent European History	Ar	Ar Ar	Mr. Deutsch	
	Seventeenth Century France (prereq. reading knowledge of French)	Ar	Ar Ar	Mr. Wolf	
	Russian History (prereq. 56a-57a-58a and reading knowledge of Russian, German, or French, or consent of instructor)	Ar	Ar Ar	Mr. Steefel	
170f-171w-172s	<i>Selected Readings in English History.</i> Tudor and Stuart periods. (9 cred.; sr., grad.)	VIII, IX	Th 314Lib	Mr. Willson	
176f-177w-178s	<i>Selected Readings in Canadian History</i> (9 cred.; sr., grad.)				
		Ar	Ar 219Bu	Mr. Burt	
180f-181w-182s	<i>Selected Readings in European Economic History Since 1700</i> (9 cred.; sr., grad.)	VI, VII	T 111Bu	Mr. Heaton	
183f-184w-185s	<i>Selected Readings in American Economic History</i> (9 cred.; sr., grad.)	VI, VII	Th 301Lib	Mr. Loehr	
190f-191w-192s	<i>Selected Readings in American History</i> (9 cred.; sr., grad.)				
	Third Party Movements since the Civil War	VI, VII	T 328Lib	Mr. Stephenson	
	Civil War and Reconstruction	VI, VII	Th 328Lib	Mrs. Tyler	
	The Colonial West	VIII, IX	W 339Lib	Mr. Osgood	
	Minnesota	Ar	Ar Ar	Mr. Jordan	
	<i>Social Aspects of American History with Special Reference to the Northwest</i> (<i>Not offered</i>)				

HOME ECONOMICS

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

The program of courses in Home Economics (with course numbers and titles, credits, prerequisites, schedule of hours and days, etc.) is given in the College of Agriculture, Forestry, and Home Economics section of this bulletin.

A statement at the beginning of that program tells which courses are open to students of the colleges on the Minneapolis campus and under what conditions the students may register for them.

Science, Literature, and the Arts students who want to take Courses 1, 2, 20, 30, 31, 34, 56A-56B, 120 may register for them on their regular registration days provided they get written permission in 106 Folwell Hall.

Science, Literature, and the Arts students who want other courses open to them in home economics should inquire at 106 Folwell Hall as to how and when they may register for those courses.

HOW TO STUDY

See General Studies, page 57.

HUMAN PHYSIOLOGY

See Physiology, page 97.

HUMANITIES

Major advisers in the College of Science, Literature, and the Arts—For sequence A: Professor Castell; for Sequence B: Professor Ogle.

Two major sequences in the Humanities are offered by the Humanities Division under the general provisions of the *Curriculum in Liberal Arts* which are stated in the Bulletin of the College of Science, Literature, and the Arts for 1946-47. The purpose of these divisional majors is to enable the student to obtain a broad acquaintance with the whole humanities field such as would not be possible in a single departmental major.

Sequence A—This major rests upon the general Humanities courses offered in the Department of General Studies, with Senior College electives in the several departments of the Humanities Division. Specifically, these requirements are as follows:

1. Any two general Humanities courses, taken either in Junior or Senior College.
2. Nine Senior College credits in History or in the Social Science Division.
3. Nine Senior College credits in Fine Arts or Music.
4. Nine Senior College credits in Philosophy.
5. Eighteen Senior College credits in literature (English or foreign).
6. Six Senior College credits in Humanities Proseminar.

Sequence B—This major is distinguished by its emphasis upon foreign language and a concentration in a particular period of culture. The specific requirements are as follows:

1. Two years of Senior College work in one foreign language.
2. A reading knowledge, attainment of which may be determined by examination, of at least one other foreign language.
3. Concentration on one of the four great periods of culture—Ancient, Medieval, Renaissance, or Modern. The courses in literature, history, fine arts, philosophy, and other expressions of one of these periods are to be chosen so as to complement each other. At least 90 credits are to be taken in the field of concentration, of which at least 60 credits must be in Senior College courses.

For courses labelled "Humanities," see the Department of General Studies, page 54. For all other courses in the division, see the separate departments mentioned in the above lists of requirements.

ITALIAN

See Romance Languages, page 116.

JAPANESE

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w-3s	Beginning Japanese. 1f: Introduction to conversational Japanese using romazi; 2w: Reading of text in Japanese; instruction in writing of characters, use of Chinese-Japanese character dictionary and further conversation; 3s: Advance work in the language using the above method. (15 cred.; no prereq.)	VII	MTWThF	115F	Mrs. Syro-Boyarsky
51f-52w-53s	Advanced Japanese. Study of grammatical construction; drill in conversation; reading Japanese text (3 cred.; jr., sr.; prereq. 3)	VIII	MWF	4F	Mrs. Syro-Boyarsky

JOURNALISM

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

Major sequence in the College of Science, Literature, and the Arts—Courses 51-52, 55, 69 or 73, 101, 109-110, 112, 140-141, and 9 additional credits in journalism chosen in

conference with the adviser. (*A modified major sequence for students specializing in newspaper management and advertising is described below.*) Students of marked ability may substitute for these 9 additional credits Senior College courses in other departments with the approval of the major adviser in journalism.

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

The additional credits will be arranged to prepare students for the following types of journalistic work: (1) metropolitan journalism—news, editorial, business management, advertising, circulation, or press association work; (2) small daily and weekly journalism—editing and management; (3) journalism-advertising (see below); (4) magazine writing, magazine editing; editorial direction and business management of trade, technical, and professional journals, book editing and publishing; (5) radio news processing and radio script writing (see below); (6) public relations; (7) agricultural journalism—consult *Journalism-Agriculture* major sequence and minor sequence requirements below and the Bulletin of the College of Agriculture, Forestry, and Home Economics; (8) teacher training in journalism—consult minor sequence requirements below and the Bulletin of the College of Education.

For students with major interest in radio news editing, radio script writing, radio advertising and like work, a special sequence of journalism courses, supplemented by selected speech courses, is provided.

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

Students must have maintained a C average in all work to enter any journalism course, except by consent of the director of the school.

(Prerequisites: Courses 13, 14-15, or 12, 15; and Composition 27-28.) In addition to these prerequisites, selections from among the following Junior College courses are recommended as providing, in most cases, a sound foundation for a major in journalism: Political Science 1-2-3, 7 and 25; Sociology 1 and 2; Psychology 1-2; History 20-21-22 or 1-2-3; Social Science 1-2-3; Natural Science 1-2-3 or 4-5-6; Humanities (two or more quarters); Geography 11 and 41; English 37-38-39; Economics 6-7 (especially recommended for students specializing in journalism-business management and journalism-advertising).

Major sequence for journalism students with newspaper management and advertising specialization—Courses 51, 55, 65, 69 or 73, and 112; 93 and 94 or 94 and 95; and 15 additional credits chosen in conference with the adviser from among 77, 101, 104, 109-110, 111, 130-131, and 140-141.

Minor sequence for such students—Courses B.A. 77 and 88 and Psychology 56, and 6 additional credits selected from among Drawing 64, B.A. 69 and 194, Journalism 130 and Psychology 140. Junior College prerequisites are Economics 6-7 and Psychology 1-2. Prerequisite for B.A. 194 is Economics 5 or B.A. 70.

A number of courses offered by the School of Journalism, giving special attention to communications and public opinion problems, are of general interest. Among them are 5, 63, 103, 111, 115, 130-131, and 205.

Adviser for students in all colleges—Professor Casey.

Combined curriculum in Journalism and Agriculture—This curriculum is intended for those who wish to prepare for some branch of journalism which relates to agriculture. Students intending to major in agricultural journalism may register in the College of Science, Literature, and the Arts or in the College of Agriculture, Forestry,

and Home Economics. For the complete curriculum, students should consult advisers in either the School of Journalism or in the office of the dean of the College of Agriculture, Forestry, and Home Economics.

Minor sequence—For students in the College of Agriculture, Forestry, and Home Economics, the Institute of Technology, and the School of Business Administration: Courses 13, 41, 69, and 6 additional credits in Senior College journalism courses, to be chosen in conference with the adviser. Courses 66, 78, 110, 111, and 130 are recommended.

Minor sequence in the College of Education—Courses 13, 41, 69, 82, and at least 6 additional credits in Senior College journalism courses.

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

Fees—Students registered for any journalism course, except Course 5, are required to pay a general fee of \$1 a quarter, regardless of the number of courses pursued. Courses 10, 41, 51-52, 55, 58, and 66 require laboratory fees in addition.

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
5s	The American Newspaper. A survey of the history, organization, and methods of contemporary journalism and an analysis of the relation of newspapers to their readers. (3 cred.; 3rd qtr. fr., soph., with average of C, jr., sr.; not open to journalism majors; no prereq.)	II	TThS	420MurH	Mr. Ford
10f,w††	Photography. Fundamental principles of photography: the use of cameras, developing, printing and other elementary techniques (The same as Fine Arts 10). (3 cred.; soph., jr., sr.; no prereq.)	Lect. V Lab. Sec. 1 I, II 2 VII, VIII	T 311MurH TTh 20MurH MW 20MurH	Ar Ar Ar	
12	<i>Newspaper Reporting</i> (5 cred.; substantially equivalent to 13, 14; soph., jr., sr., with average of C; prereq. Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or exemption from English requirement, and consent of instructor) (<i>Not offered</i>)				
13f,w	Introduction to Reporting (for majors) (3 cred.; soph., jr., sr., with average of C; prereq. Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or exemption from English requirement)				
	Schedule for fall				
	Sec. 1	I, II	MWF	212MurH	Mr. Kildow
	2	VI, VII	MWF	212MurH	Mr. Emery
	3	VIII, IX	MWF	212MurH	Mr. Jensen
	4	I, II	TThS	212MurH	Mr. Charnley
	5	VII, VIII, IX	TTh	212MurH	Mr. Emery
	Schedule for winter				
	Sec. 1	I, II	MWF	212MurH	Mr. Emery
	2	III, IV	MWF	212MurH	Ar
	3	VI, VII, VIII	TTh	212MurH	Mr. Kildow
13f	Introduction to Reporting (for minors in the College of Agriculture, Forestry, and Home Economics, College of Education, Institute of Technology, and School of Business Administration) (3 cred.; soph., jr., sr., with average of C; prereq. Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or Rhetoric 1-2-3 or exemption from English requirement)	I	MWF	308MurH	Mr. Ford

†† A fee of \$5 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
14w-15s†	Newspaper Reporting (for majors) (6 cred.; soph., jr., sr.; prereq. for 14, C average in 13 and in all work, or consent of instructor, and Comp. 27-28§; for 15, C average in 13-14 or 12 and in all work, or consent of instructor, and Comp. 27-28§)				
	Sec. 1 (winter, spring)	VI, VII	MWF	212MurH	Ar
	2 (winter, spring)	VIII, IX	MWF	212MurH	Ar
	3 (winter, spring)	I, II	TThS	212MurH	Ar
	4 (winter, spring)	III, IV	TThS	212MurH	Ar
14s	Newspaper Reporting (1st qtr. of 14-15. See 14w-15s)				
	Sec. 1	I, II	MWF	212MurH	Mr. Emery
	2	VII, VIII, IX	TTh	212MurH	Ar
15f	Newspaper Reporting (2nd qtr. of 14-15. See 14w-15s)				
		III, IV	TThS	212MurH	Ar
41w‡	Editing for Nonmajors (not open to S. L. and A. students without permission of the director of the School of Journalism) (3 cred.; jr., sr.; prereq. 12 or 13)				
	Lect.	IV	MW	420MurH	Mr. Ford
	Lab. Sec. 1	VI, VII	Th	206MurH	
	2	VIII, IX	M	206MurH	
	3	VIII, IX	F	206MurH	
<i>Senior College Courses</i>					
Senior College courses in the School of Journalism are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.					
51f‡‡-52w‡‡	News Editing (6 cred.; jr., sr.; prereq. 15)				
	Lect.	IV	T	308MurH	Mr. Kildow
	Lab. (Fall quarter)				
	Sec. 1	VIII, IX	M	206MurH	Mr. Kildow
	2	VIII, IX	W	206MurH	Ar
	3	I, II	T	206MurH	Ar
	4	I, II	Th	206MurH	Ar
	Lab. (Winter quarter)				
	Sec. 1	VIII, IX	TTh	315,206MurH	Ar
	2	VI, VII	WF	315,206MurH	Ar
	3	VIII, IX	TTh	315,206MurH	Mr. Emery
	4	IV, V	WF	315,206MurH	Ar
51s‡‡	News Editing (3 cred.; jr., sr.; prereq. 12 or 14)				
	Lect.	IV	T	308MurH	Mr. Emery
	Lab. Sec. 1	VIII, IX	M	206MurH	Mr. Emery
	2	VIII, IX	F	206MurH	Ar
	3	I, II	W	206MurH	Ar
52f‡‡	News Editing (3 cred.; jr., sr.; prereq. 51)				
	Lect.	IV	T	311MurH	Mr. Emery
	Lab. Sec. 1	VIII, IX	TTh	315,206MurH	Ar
	2	III, IV	MW	315,206MurH	Ar
55f,w,s‡‡‡	Advertising and Newspaper Typography (3 cred.; jr., sr.; prereq. 15, or 13 and 41)				
	Lect.	VII	M	308MurH	Mr. Barnhart
	Lab. Sec. 1	VIII, IX	MW	315,320MurH	
	2	VI, VII	TTh	315,320MurH	
	3	I, II	MW	315,320MurH	
58w‡‡	Advanced Typography. Individual projects in advertising composition, newspaper makeup, booklet planning, and linoleum woodcut carving. Extensive use of laboratory facilities. Emphasis is upon functional design. (2 cred.; jr., sr.; prereq. 55 and consent of instructor)				
		Ar	Ar	315,320MurH	Mr. Barnhart
60-61-62	<i>The Weekly Newspaper</i> (9 cred.; jr., sr.; prereq. 15) (Not offered)				

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

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

§ May be taken at the same time.

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

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

No.	Title	Hour	Day	Bldg.	Instructor
63f	Development of Radio Broadcasting. Historical and economic growth of broadcasting; government regulation; radio and the press; radio as a social factor; aspects of listenership; broadcasting in other countries. (2 cred.; jr., sr. journalism majors and speech-radio majors; prereq. 15 for journalism majors, 13 for speech-radio majors)	VII	TTh	302MurH	Mr. Charnley
65f*	Graphic Arts: Processes. Discussion of reproduction processes—letter press, planography, intaglio; also engravings, inks, paper stocks, binding, and miscellaneous printing operations. (3 cred.; jr., sr.; prereq. consent of major adviser in the School of Journalism or in the School of Business Administration)	IV	MWF	105MurH	Mr. Kildow
66f,s†	News Photography. The analysis, use, and influence of the news picture, with elementary instruction in the use of the news camera. (3 cred.; jr., sr.; prereq. consent of instructor)	Lect. VII Lab. VII, VIII	M WF	311MurH 20MurH	Mr. Kildow
67f,w,s	Radio News Writing (3 cred.; jr., sr.; prereq. 15)	Lect. VII Lab. III-IV	WF Ar	302MurH 202MurH	Mr. Charnley Mr. Jensen
68s	Problems in Radio Writing. The radio audience and its responses; planning and writing scripts in advertising, dramatic, public affairs and other radio fields; training in fundamental broadcasting production problems; program-planning; radio station organization. (3 cred.; jr., sr.; prereq. 51 and consent of instructor)	VI	MWF	302MurH	Mr. Charnley
69s	Newspaper and Magazine Articles. Technique of writing feature articles for newspapers and magazines. Study of markets open to free-lance writers. Analysis of published articles. Writing and submitting articles for publication. (3 cred.; jr., sr.; prereq. 15 or 41)	I	MWF	311MurH	Mr. Kildow
70	<i>Business and Specialized Journalism</i> (3 cred.; jr., sr.; prereq. 15 or 69, or consent of instructor) (<i>Not offered</i>)				
73f-74w	Magazine Writing and Editing. 73f: Planning and writing feature articles for general, class and trade magazines; marketing; problems of magazine editing. 74w: Individual projects in advanced feature writing and in magazine editorial work. (6 cred.; jr., sr.; prereq. for 73, 15; for 74, 69 or 73 and consent of instructor)	VI	MWF	311MurH	Mr. Charnley
EdT74	Teachers Course in Journalism. A consideration of course content and special methods of teaching journalism on the secondary school level. (This course is listed among the College of Education courses in this bulletin. It is not regularly open to Science, Literature, and Arts students.)				
76f	Critical Writing. The theory and practice of writing book, theater, and motion picture reviews. Analysis of the work of leading critics and critical periodicals. Weekly reviews are written. (3 cred.; jr., sr.; prereq. consent of instructor)	II	TThS	311MurH	Mr. Ford
77s	Legal Regulations Affecting the Press. Local, state, and federal laws affecting journalistic practice, both editorial and business; labor and social security laws, advertising and fair practice laws, postal regulations, copyright laws; relation of the press to Federal Trade Commission and other governmental bodies. (3 cred.; jr., sr.; prereq. 51-52)	III	TThS	311MurH	Ar
78f	Public Relations. Theories and techniques of the public relations function; the public relations counsel and publicity expert; study and production of public relations programs and campaigns for industry, social agencies, government. (3 cred.; jr., sr.; prereq. 15)	I	MWF	311MurH	Mr. Emery
82s	Supervision of School Publications. For those who plan to become advisers of high school or college newspapers, yearbooks, magazines. Course emphasis is upon editorial content, staff organization, editing, typography, makeup and business management of such publications. (3 cred.; jr., sr.; prereq. 41 or 51-52)	VI	MWF	420MurH	Mr. Kildow

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

† A fee of \$5 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
93f	Weekly Editorial Administration. News and editorial problems of the small-town weekly newspaper. Local and trade-area news, news departments, features, payroll, and other news and editorial costs. Stresses news and editorial responsibility. (3 cred.; jr., sr.; prereq. 51 or concurrent registration in 51)	II	TThS	308MurH	Mr. Barnhart
94w	Newspaper Advertising. The role of newspaper advertising; the newspaper's relations with the retail advertiser, national representative, and advertising agency; organization of advertising departments; rate structure; services. Practice in writing advertising copy, with particular emphasis upon retail advertising. (3 cred.; jr., sr.; prereq. 51)	II	TThS	308MurH	Mr. Barnhart
95s	Circulation and Newspaper Management. The over-all management problem, including advertising, circulation, and commercial printing as sources of income; bookkeeping and cost accounting; plant layout and inventories; operating expenses; business policies. (3 cred.; jr., sr.; prereq. 51)	II	TThS	308MurH	Mr. Barnhart
96	<i>The Journalism of Finance and Commerce</i> (3 cred.; jr., sr.; prereq. 15, and 10 cred. in economics or business administration) (<i>Not offered</i>)	II	TThS	308MurH	Mr. Barnhart
99f,w,s	Readings in Journalism (Cred. ar., not to exceed 3; jr., sr.; prereq. consent of the director of the school)	Ar	Ar	Ar	Staff
101w	The Reporting of Public Affairs. Training in reporting court trials, city, county, state, federal, administrative and legislative agencies; politics, business, and labor. Students attend and report trials, hearings, legislative sessions and press conferences. (3 cred.; jr., sr., grad.; prereq. 51-52 and 9 cred. in political science)	III	TThS	311MurH	Mr. Nafziger
103s	Literary Aspects of Journalism. The literary, creative aspects of journalism as exemplified in the works of English and American fiction writers, poets, critics, essayists, and humorists. Lectures, discussions, and weekly papers. (3 cred.; jr., sr., grad.; prereq. consent of instructor)	IV	MWF	311MurH	Mr. Ford
104s	Advanced Newspaper Advertising. Advanced work in preparation of copy and layouts; surveys, copy testing methods, interview techniques, and research; sales programs and promotion; advertising salesmanship. (2 cred.; jr., sr., grad.; prereq. 51, 94, and consent of instructor)	VIII	TTh	311MurH	Mr. Barnhart
109w-110s	History of Journalism. 109w: Development of newspapers and periodicals from early beginnings in Europe through the 1860's in the United States. 110s: The emergence of modern journalism in the post-civil war period. (6 cred.; jr., sr., grad.; prereq. 15)	II	MWF	105MurH	Mr. Ford
111f	International Communications and the Foreign Press. A study of international news channels, including communications facilities, the newsgathering agencies, and the foreign press. The role of foreign correspondents and factors affecting the flow of news throughout the world. (3 cred.; jr., sr., grad.; prereq. 51 and a history or political science course in international relations, or consent of instructor)	II	MWF	311MurH	Mr. Nafziger
112s	Current Newspaper Problems. The individual project method is used to make analyses of the press and its operations in light of its social environment and changes in the social structure. The course is conducted in small seminar-like groups. (3 cred.; sr., grad.; prereq. 140-141)	VI VII	TTh T	105MurH	Mr. Casey, Mr. Nafziger, Mr. Charnley
114	<i>The Influence of the Newspaper</i> (3 cred.; jr., sr., grad.; prereq. 15 or 41) (<i>Not offered</i>)				
115s	Communication Media Analysis. Methods developed recently for analyzing the content and reader- or listenership of newspapers, periodicals, radio broadcasts, and motion pictures. Attitude studies and reading tests involving these media. (3 cred.; jr., sr., grad.; prereq. 51 or consent of instructor)	III	MWF	311MurH	Mr. Nafziger

No.	Title	Hour	Day	Bldg.	Instructor
130f-131w	Communication Agencies and Public Opinion. The major agencies of communication—press, radio, and motion pictures—and their role in the opinion-forming process. Theories of public opinion formation and propaganda; propaganda techniques of governments, political parties, pressure groups, and other organized bodies. (6 cred.; jr., sr., grad.; prereq. 15 cred. in the social studies and psychology)	III	MWF	105,311MurH	Mr. Casey
140f-141w†	Interpretation of Contemporary Affairs. Analysis of major political, economic, and social developments that have public interest and significance. Interpretation of these trends and problems in the editorial, interpretative article, and commentary. A study of authoritative source materials in the backgrounding of the news. (6 cred.; sr., grad.; prereq. 109-110 and 20 cred. in the social studies or consent of major adviser in journalism)	VI IV or VII	TTh T	105MurH	Mr. Casey, Mr. Charnley, Mr. Nafziger
150s	Public Relations in Community Services. Principles and practices of public relations and educational campaigns in public health, social work, and other community service fields. (2 cred.; jr., sr., grad.; prereq. consent of major adviser and director of School of Journalism)	VIII-IX	F	105MurH	Mr. Casey, Mr. Emery

For Graduate Students Only

205f,w,s	Topics in International News Communications (3 cred.; seminar for grad. students; prereq. consent of director of the school)	Ar	Ar	405MurH	Mr. Nafziger
210f,w,s	Research in Newspaper Problems (2 cred.; seminar course for grad. students; prereq. consent of director of the school)	Ar	Ar	105MurH	Mr. Casey, Mr. Nafziger

LATIN

See Classics, page 37.

LIBRARY METHODS

Note—For the special course in library training see the Bulletin of the College of Science, Literature, and the Arts. For professional courses in library science see the program of the Division of Library Instruction, page 9.

1f,w,s*	Use of Books and Libraries. Use of catalog, reference books, indexes, and bibliographies, for personal and class purposes. Preparation of reference lists. (2 cred.; fr., soph. only; no prereq.)	II	MW	3Lib	Mr. Russell,
	Sec. 1	IV	MW	3Lib	Miss Moen
	2	VI	MW	3Lib	
	3				

LINGUISTICS AND COMPARATIVE PHILOLOGY

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

Major sequence in the College of Science, Literature, and the Arts—Courses Ling. 106-107, Ling. 105 or 108, and at least 18 additional credits in courses listed below, chosen after consultation with adviser. All candidates are expected to have a fair knowledge of Latin.

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

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

GENERAL COURSES

No.	Title	Hour	Day	Bldg.	Instructor
105f	Phonetics (The same as Anthropology 105) A survey of speech sounds followed by practice in phonetic recording. Analysis of phonetic patterns in language. Practical work in dictation of Chippewa, Dakota, Finnish, and other languages. (3 cred.; jr., sr., grad.; no prereq.)				
		II	MWF	6WeH	Ar
106f,107w	Introduction to the Study of Language (The same as Classics 106, 107) (3 cred. per quarter; jr., sr., grad.; prereq. any two courses numbered above 50 in a foreign language)				
		VIII	MWF	115F	Mr. Ogle
108s	Cultural Aspects of Language (The same as Classics 108) (3 cred.; jr., sr., grad.; prereq. any two courses numbered above 50 in a foreign language)				
		VIII	MWF	115F	Mr. Ogle

CELTIC

134-135-136	<i>Introduction to Celtic Philology: Old Irish Phonology, Morphology, and Text Interpretation.</i> (9 cred.; sr. with consent of instructor, grad.; prereq. at least two Senior College courses in early Indo-European languages, preferably Ling. 131-132 or German 113-114) (<i>Not offered</i>)				
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CLASSICS

133s	Vulgar Latin (Development of Latin into Romance) (3 cred.; jr., sr., grad.; open to advanced students of Latin or a Romance language with the consent of the instructor)				
		III	MWF	115F	Mr. Ogle
242w	Historical Latin Grammar (3 cred.)				
		VIII, IX	Th	110F	Mr. Cram

ENGLISH

100f	Old English (4 cred.; jr., sr., grad.; prereq. 6 cred. above 50)				
		II	TWThF	205F	Mr. Allen
102w	Old English Poetry (3 cred.; jr., sr., grad.; prereq. 100)				
		II	MWF	204F	Ar
103s	Beowulf (3 cred.; jr., sr., grad.; prereq. 100)				
		II	MWF	204F	Mr. Clark
160-161	<i>History of the English Language</i> (6 cred.; jr., sr., grad.; prereq. 6 cred. above 50, including 100) (<i>Not offered</i>)				
165w	The Historical Study of Modern English (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50; not open to students who have taken 100)				
		VI	MWF	311F	Mr. Allen
174s	American English (3 cred.; jr., sr., grad.; prereq. 6 cred. above 50)				
		VI	MWF	311F	Mr. Allen

FRENCH

171f-172w-173s†	History of French Language (3 cred.; jr., sr., grad.; prereq. one year of Latin or permission of instructor)				
		Ar		Ar Ar	Mr. Brackney
201f-202w-203s	Old French Phonology and Morphology (6 cred.; grad.)				
		Ar		Ar 203F	Mr. Brackney
204f-205w-206s	Reading in Old French Literature (6 cred.; grad.)				
		Ar		Ar 203F	Mr. Brackney

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

GERMAN

No.	Title	Hour	Day	Bldg.	Instructor
110-111-112†	<i>Middle High German</i> . Linguistic introduction and reading in Middle High German literature. (9 cred.; sr., grad.; prereq. 68 and 11 cred. above 59) (<i>Not offered</i>)				
113f-114w	Gothic (The same as Scandinavian 113-114) (6 cred.; sr. with completed major sequence, grad.)				
	113f Gothic. Introduction to Germanic linguistics and to a comparative study of Indo-European languages. (4 cred.; sr. with completed major sequence; grad.)	VIII, IX, X	W	302F	Mr. Reichardt
	114w Gothic Texts (2 cred.; prereq. 113)				
		VIII, IX	W	302F	Mr. Reichardt
115s	Old High German (3 cred.; sr. with completed major sequence; grad.; prereq. German 113)				
		VI	MWF	10F	Mr. Downs
125	<i>History of the German Language</i> (3 cred.; sr., grad.; prereq. 68 and 11 credits above 59) (<i>Not offered</i>)				
126	<i>Historical German Grammar</i> (3 cred.; sr., grad.; prereq. 110-111-112 or 113-114-115) (<i>Not offered</i>)				
176	<i>The Germanic Languages: Problems and Research Trends</i> (3 cred.; sr., grad.; prereq. at least two medieval Germanic dialects) (<i>Not offered</i>)				
178	<i>The German Dialects</i> (3 cred.; sr., grad.; prereq. German 110-111-112 or 113) (<i>Not offered</i>)				
194	<i>Old Saxon</i> (3 cred.; sr., grad.; prereq. German 113) (<i>Not offered</i>)				
218f-219w-220s	Seminar: Germanic Languages and Literature (9 cred.; grad.; prereq. at least 2 medieval Germanic dialects)				
	Texts in Germanic Dialects. Their linguistic, literary, and cultural background.	VIII, IX, X	T	302F	Mr. Reichardt
	<i>Old High German. Linguistic interpretation of texts.</i> (<i>Not offered</i>)				

SANSKRIT

131w-132s	Introduction to Sanskrit. Phonology and morphology from comparative viewpoint (4 cred.; sr. with consent of the instructor, grad.; prereq. at least two Senior College courses in early Indo-European languages, preferably Greek, Gothic, or Latin)	VIII, IX	F	302F	Mr. Reichardt
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SCANDINAVIAN

185	<i>History of the Scandinavian Languages</i> (3 cred.; sr., grad.; prereq. Scand. 4-5-6 or 10-11-12 or consent of instructor) (<i>Not offered</i>)				
195	<i>Introduction to Old Norse</i> (The same as German 195) (4 cred.; sr., grad.; prereq. German 113 or permission of the instructor) (<i>Not offered</i>)				
196	<i>Eddic Poetry</i> . Philological interpretation. (The same as German 196) (3 cred.; sr., grad.; prereq. Scand. 195) (<i>Not offered</i>)				

SEMITIC

121f-122w-123s	Introduction to Arabic Grammar and Reading (9 cred.; jr., sr., grad.; prereq. two courses above 50 in any foreign language)	Ar	Ar	Ar	Mr. Cline
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SPANISH

241-242-243	<i>Old Spanish Philology</i> (6 cred.; grad.) (<i>Not offered</i>)				
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MATHEMATICS

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

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

(Prerequisites: Mathematics 6, 7, 30.)

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

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

Major adviser in the College of Education—Professor Hart.

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

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

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

Placement tests—In each of Courses 1, 6, 8, and 15 a placement test will be given at some time within the first two weeks of the quarter. Any student who fails in the test in Course 1 may be required to drop the course and to review his elementary mathematics before taking college mathematics. Any student who offers not more than one-half year of high school higher algebra as a substitute for Course 1 and who fails the placement test given in Course 6, 8, or 15 will be required to take Course 1 before taking more advanced mathematics. A student who has had a complete year of elementary algebra, and a corresponding course in higher algebra for one-half year, should be able to pass the placement test in Course 6, 8, or 15.

Prerequisites for any course in mathematics may be waived if a petition for registration in the course is approved by the department chairman.

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f*	Higher Algebra (5 cred.; prereq. one yr. of elem. algebra§; open for credit to any student offering not more than one-half yr. of high school higher algebra for entrance)				
	Sec. 1	I	MTWThF	133Ph	Ar
	2	III	MTWThF	104F	Ar
	3	VI	MTWThF	102F	Ar
	4	VIII	MTWThF	102F	Ar
In choosing one of the sections of the above course the student should be guided by the schedule of hours for its winter quarter continuation. The fall-winter sequences are: At I hour, 1f-8w, and 1f-15w; at III hour, 1f-6w; at VI hour, 1f-6w; at VIII hour 1f-8w.					
1w*	Higher Algebra (See 1f)				
	Sec. 1	I	MTWThF	124F	Ar
	2	V	MTWThF	124F	Ar
	3	VI	MTWThF	105F	Ar
	4	VIII	MTWThF	166Ph	Ar
1s*	Higher Algebra (See 1f)				
	Sec. 1	I	MTWThF	206Pt	Ar
	2	V	MTWThF	105F	Ar
	3	VII	MTWThF	101F	Ar
	4	VIII	MTWThF	133Ph	Ar
6f**	Trigonometry (5 cred.; prereq. plane geometry and Course 1 or high school higher algebra§; open for credit even to students offering high school trigonometry for entrance)				
	Sec. 1	II	MTWThF	105F	Ar
	2	VII	MTWThF	125F	Ar
6w**	Trigonometry (See 6f)				
	Sec. 1	III	MTWThF	104F	Ar
	2	VI	MTWThF	102F	Ar

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

** No student may receive credit for both Course 6-7 and Course 15-16. If a student has taken Course 6 and wants more mathematics, he should take Course 7; if he has taken Course 15-16 and wants more mathematics, he should consult the chairman of the department, Room 119 Folwell Hall.

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

No.	Title	Hour	Day	Bldg.	Instructor
6s**	Trigonometry (See 6f)				
	Sec. 1	I	MTWThF	124F	Ar
	2	VI	MTWThF	105F	Ar
7f**	College Algebra (5 cred.; prereq. 6, or high school trigonometry if approved by the department chairman)				
	Sec. 1	II	MTWThF	124F	Ar
	2	VI	MTWThF	105F	Ar
7w**	College Algebra (See 7f)				
	Sec. 1	II	MTWThF	105F	Ar
	2	VII	MTWThF	125F	Ar
7s**	College Algebra (See 7f)				
	Sec. 1	III	MTWThF	102F	Ar
	2	VI	MTWThF	102F	Ar
8f†	Commerce Algebra. College algebra including logarithms. (5 cred.; primarily for pre-business students* but open also to others; prereq. 1, or high school higher algebra§)				
	Sec. 1	IV	MTWThF	104F	Ar
	2	VII	MTWThF	JAud	Ar
8w*†	Commerce Algebra (See 8f)				
	Sec. 1	I	MTWThF	133Ph	Ar
	2	VIII	MTWThF	JAud	Ar
8s*†	Commerce Algebra (See 8f)				
	Sec. 1	VI	MTWThF	101F	Ar
	2	VIII	MTWThF	166Ph	Ar
15f-16w**	Elementary Mathematical Analysis. A course for premedical and other students who desire a survey of college mathematics including trigonometry, algebra, and calculus with emphasis on fundamental ideas rather than on technical preparation for more advanced courses in mathematics. (10 cred.; prereq. plane geometry and Course 1 or high school higher algebra§)				
	Sec. 1	III	MTWThF	105F	Ar
	2	V	MTWThF	105F	Ar
15w-16s**	Elementary Mathematical Analysis (See 15f-16w)				
		I	MTWThF	102F	Ar
20w*	Mathematics of Investment (5 cred.; prereq. 8, or 6 and 7, or 15 and 16)				
	Sec. 1	IV	MTWThF	JAud	Ar
	2	VII	MTWThF	JAud	Ar
20s*	Mathematics of Investment (See 20w)				
	Sec. 1	I	MTWThF	133Ph	Ar
	2	VIII	MTWThF	102F	Ar
21s	Introduction to the Mathematics of Life Insurance (3 cred.; prereq. 20)				
		IV	MWF	104F	Ar
30f	Analytic Geometry (5 cred.; prereq. 6 and 7 or 6 and 8, or 15 and 16)				
		I	MTWThF	101F	Ar
30w	Analytic Geometry (See 30f)				
		II	MTWThF	124F	Ar
30s	Analytic Geometry (See 30f)				
	Sec. 1	II	MTWThF	105F	Ar
	2	VII	MTWThF	102F	Ar
G.E.70f,w,s	The Slide Rule (1 cred.; prereq. Math. 6 or 8, or 15 and 16) (For the schedule of hours and days see General Engineering 70 in the Bulletin of the Institute of Technology)				

Senior College Courses

Courses 50, 51, 105 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

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

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

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

** No student may receive credit for both Course 6-7 and Course 15-16. If a student has taken Course 6 and wants more mathematics, he should take Course 7; if he has taken Course 15-16 and wants more mathematics, he should consult the chairman of the department, Room 119 Folwell Hall.

No.	Title	Hour	Day	Bldg.	Instructor
50f	Calculus I. Differential Calculus. (5 cred.; jr., sr.; prereq. 30)	III	MTWThF	102F	Mr. Brink
50w	Calculus I. Differential Calculus. (See 50f)	I	MTWThF	101F	Ar
50s	Calculus I. Differential Calculus. (See 50f)	II	MTWThF	101F	Ar
51w	Calculus II. Integral Calculus. (5 cred.; jr., sr.; prereq. 50)	III	MTWThF	102F	Mr. Brink
51s	Calculus II. Integral Calculus. (See 51w)	I	MTWThF	101F	Ar
60	<i>Synthetic Metric Geometry</i> (3 cred.; jr., sr.; prereq. 30) (<i>Not offered</i>)				
62w	Introduction to the Theory of Equations (3 cred.; jr., sr.; prereq. 50 or registration in 50 and consent of instructor)	VII	MWF	104F	Ar
70	<i>History of Elementary Mathematics</i> (3 cred.; jr., sr.; prereq. 30) (<i>Not offered</i>)				
102f-103w	Advanced Analytic Geometry (6 cred.; jr., sr., grad.; prereq. 51)	II	TThS	104F	Mr. Bussey
105f	Intermediate Calculus (5 cred.; jr., sr., grad.; prereq. 51)	I	MTWThF	102F	Ar
105s	Intermediate Calculus (See 105f)	III	MTWThF	104F	Mr. Brink
106f	Differential Equations (3 cred.; jr., sr., grad.; prereq. 51)	IV	MWF	101F	Mr. Olmsted
107w-108s	Advanced Calculus (6 cred.; jr., sr., grad.; prereq. 105 and either some acquaintance with solid analytic geometry or consent of instructor)	IV	MWF	101F	Mr. Olmsted
109	<i>Theory of Numbers</i> (3 cred.; jr., sr., grad.; prereq. 51) (<i>Not offered</i>)				
110f,w,s	A Tutorial Course in Advanced Mathematics. Qualified students whose needs are not met by courses offered may make special arrangements for obtaining, through reading and conferences, the content of other graduate courses regularly offered by the department. (3 to 6 cred.; jr., sr., grad.; prereq. 51)	Ar	Ar	Ar	Ar
113	<i>Mathematics of Exterior Ballistics</i> (3 cred.; jr., sr., grad.; prereq. 105 or 106 or equiv.) (<i>Not offered</i>)				
115	<i>Differential Geometry</i> (3 cred.; jr., sr., grad.; prereq. 136) (<i>Not offered</i>)				
118-119-120	<i>Vectors and Matrices</i> (9 cred.; jr., sr., grad.; prereq. 51) (<i>Not offered</i>)				
121f-122w-123s	Mathematical Theory of Statistics (9 cred.; jr., sr., grad.; prereq. 51)	IV	TThS	101F	Mr. Hart
125	<i>Theory of Geometrical Constructions</i> (3 cred.; jr., sr., grad.; prereq. 30) (<i>Not offered</i>)				
131s	Advanced Algebraic Theory (3 cred.; jr., sr., grad.; prereq. 62 or 105)	II	TThS	104F	Ar
136f	Solid Analytic Geometry (3 cred.; jr., sr., grad.; prereq. 50 or registration in 50)	VII	MWF	102F	Ar
137s	Advanced Theory of Equations (3 cred.; jr., sr., grad.; prereq. 51, 62)	VII	MWF	104F	Ar
140	<i>Projective Geometry</i> (3 cred.; jr., sr., grad.; prereq. 51 or consent of instructor) (<i>Not offered</i>)				
142	<i>Theory of Invariants</i> (3 cred.; jr., sr., grad.; prereq. 131 or 137) (<i>Not offered</i>)				
144-145-146	<i>Topics in Analysis</i> (9 cred.; jr., sr., grad.; prereq. 51) (<i>Not offered</i>)				
149	<i>Introduction to Group Theory</i> (3 cred.; jr., sr., grad.; prereq. 51, 62) (<i>Not offered</i>)				

For Graduate Students Only

206f-207w-208s	Theory of Functions (9 cred.; grad.; prereq. 108)	II	MWF	104F	Mr. Cameron
241f-242w-243s	Series and Integral Solutions of Differential Equations (9 cred.; grad.; prereq. 208)	IV	MWF	102F	Mr. Cameron

No.	Title	Hour	Day	Bldg.	Instructor
245-246-247	<i>Advanced Theory of Functions</i> (9 cred.; grad.; prereq. 208) (<i>Not offered</i>)				
271-272-273	<i>Theory of Linear Differential and Integral Equations</i> (9 cred.; grad.; prereq. 206 or registration in 206) (<i>Not offered</i>)				

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

MARRIAGE

See General Studies, page 53.

MILITARY SCIENCE AND TACTICS

See the program of Military Science and Tactics, page 11.

MUSIC

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

He must earn thirty credits in practical music selected from Courses 11 to 27,§ the number of credits in his major instrument to be determined by the department. At the end of the sophomore year a qualifying examination must be taken to insure that the student is prepared for Senior College work.

Major advisers in the College of Science, Literature, and the Arts—Professors Oberg and Ferguson; Associate Professor Hull.

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

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

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

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

A. Practical Music

Courses 1T-2T-3T, 34-35-36, and twelve credits in practical music (Courses 11 to 27) in the Junior College plus ten credits in practical music (Courses 11 to 27) in the Senior College.

B. History and Criticism

Courses 1T-2T-3T, 34-35-36, 76, and 50-51-52 or 53-54-55 or 56-57-58.

C. Ensemble

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

* All students majoring in organ or piano will also take Keyboard Harmony, 37-38-39.

§ Students may not take special examinations in practical music (Music 11-27) for work done elsewhere while they are in residence at the University.

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

Entrance requirements, according to the instrument selected—

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

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

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

Organ: Same as for piano.

To register in the music course a student must meet the entrance requirements in practical music before a committee of the faculty of the Music Department. This applies also to academic students who wish to elect courses in practical music for credit.

Fees—

Music 11 to 27 inclusive, Mu.Ed. 225:

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

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

1. One individual lesson per week, no credit	25.00
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Practical music—Students may enter courses in practical music (private lessons) any quarter.

Courses numbered from 11 to 27,* inclusive, carry either 2 or 4 credits a quarter. The first twelve credits in any one of these courses count as credits in Junior College courses; additional credits count as credits in Senior College courses.

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1Tf-2Tw-3Ts	Music Theory. A correlated course including Ear Training, Sight Singing, Melodic and Harmonic Dictation, Keyboard and Written Harmony. (9 cred.; primarily for music majors and minors. Students must make arrangements for a placement test in the office of the Department of Music)				
	Sec. 1	II	MTWThF	3Mu	Miss Malcolm
	2	VII	MTWThF	3Mu	Miss Malcolm
1Tw-2Ts	Music Theory (1st two qtrs. 1T-2T-3T. See 1Tf-2Tw-3Ts)				
		I	MTWThF	4F	Ar
4Tf-5Tw-6Ts	Music Theory. (Continuation of Music Theory 1T-2T-3T (12 cred.; prereq. 3T)				
	Sec. 1	III	MTWThF	3Mu	Ar
	2	VI	MTWThF	3Mu	Miss Malcolm
1f,w,s	Ear Training (2 cred.; for non-music majors; no prereq.)				
		I	MTWTh	3Mu	Miss Malcolm
7w-8s	Counterpoint (6 cred.; soph., jr., sr.; prereq. 1T-2T-3T)				
		III	MWF	103Mu	Mr. Ferguson

* Students may not take special examinations in practical music (Music 11-27) for work done elsewhere while they are in residence at the University.

No.	Title	Hour	Day	Bldg.	Instructor
31f-32w-33s¶	Music Appreciation. Cultivation of better understanding of music heard today. The course is designed for students with a general interest in music rather than for those majoring in music. (6 cred.; no prereq.)	III	MWF	MuAud	Mr. Oberg and others
34f-35w-36s¶	History of Music (6 cred.; soph., jr., sr.; no prereq.)	II	MW	4Mu	Mr. Ferguson
	Lect.	II	F		
	Rec.	II			
37f-38w-39s	Keyboard Harmony (3 cred.; prereq. 4-5)	II	TTh	103Mu	Mr. Jennings
40f-41w-42s§¶¶	Orchestra (6 cred.; prereq. consent of director)	7:00 p.m.	T	NMA	Mr. Oberg
43f-44w-45s¶¶¶	University Chorus (3 cred.; prereq. consent of director)	IV	MWF	4Mu	Ar
	Sec. 1	VIII	MWTh	NMA	Ar
	2				
43Uf-44Uw-45Us	University Farm Music Ensembles—Vocal and Instrumental. For students in Agriculture, Forestry, and Home Economics only. With special reference to music used in extension, farm, home, school, and recreational activities. (3 cred.; no prereq.)	X	TTh	102Hort	Mr. Rymer
46f-47w-48s§§§	Concert Band (3 cred.; prereq. consent of director)	IX	MTTh	4NMA	Mr. Prescott

Courses in Practical Music§

For a statement about credits and prerequisites for courses in practical music other than Courses 40-41-42 and 43-44-45, see page 86.

The first twelve credits in any one of Courses 11 to 27 count as credits in Junior College courses: additional credits count as credits in Senior College courses.

Af-Bw-Cs†§	Piano (No cred.; for students without entrance requirements for piano; no prereq.)	VIII	Th	MuAud	Ar
Df-Ew-Fs†§	Voice (No cred.; for students without entrance requirements in voice; no prereq.)	VIII	Th	MuAud	Ar
11f,w,s†	Piano—Individual Lessons	VIII	Th	MuAud	Ar
	and lesson hrs. to be ar.				
11Cf,w,s†	Piano—Class Lessons*	VIII	Th	MuAud	Ar
	and one of the following sections				
	Sec. 1	II	TTh	Mu	Ar
	2	III	TTh	Mu	Ar
	3	VI	TTh	Mu	Ar
12f,w,s†	Voice—Individual Lessons	VIII	Th	MuAud	Ar
	and lesson hrs. to be ar.				
12Cf,w,s†	Voice—Class Lessons*	VIII	Th	MuAud	Ar
	and one of the following sections				
	Sec. 1	VI	MWF	Mu	Ar
	2	VII	MWF	Mu	Ar

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

† See statement of fees, page 86.

§ May be taken only with the consent of director.

¶ Students may enter any quarter.

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

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

§§ Students may receive credit for two years of concert band.

No.	Title	Hour	Day	Bldg.	Instructor
13f,w,s†	Violin	VIII and lesson hrs. ar.	Th	MuAud	Ar
14f,w,s†	Viola	VIII and lesson hrs. ar.	Th	MuAud	Ar
15f,w,s†	Cello	VIII and lesson hrs. ar.	Th	MuAud	Ar
16f,w,s†	Double Bass	VIII and lesson hrs. ar.	Th	MuAud	Ar
17f,w,s†	Flute	VIII and lesson hrs. ar.	Th	MuAud	Ar
18f,w,s†	Oboe	VIII and lesson hrs. ar.	Th	MuAud	Ar
19f,w,s†	Clarinet or Saxophone	VIII and lesson hrs. ar.	Th	MuAud	Ar
20f,w,s†	Bassoon	VIII and lesson hrs. ar.	Th	MuAud	Ar
21f,w,s†	Trumpet	VIII and lesson hrs. ar.	Th	MuAud	Ar
22f,w,s†	French Horn	VIII and lesson hrs. ar.	Th	MuAud	Ar
23f,w,s†	Trombone	VIII and lesson hrs. ar.	Th	MuAud	Ar
24f,w,s†	Tuba	VIII and lesson hrs. ar.	Th	MuAud	Ar
25f,w,s†	Percussion	VIII and lesson hrs. ar.	Th	MuAud	Ar
26f,w,s†	Harp	VIII and lesson hrs. ar.	Th	MuAud	Ar
27f,w,s†	Organ	VIII and lesson hrs. ar.	Th	MuAud	Ar

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50f-51w-52s	Music of the Eighteenth Century (6 cred.; jr., sr.; prereq. 35)	III	TTh	104Mu	Ar
53f-54w-55s	Romantic Movement (6 cred.; jr., sr.; prereq. 35)	VII	WF	104Mu	Miss Kendall
56f-57w-58s	Bach and Beethoven (9 cred.; sr.; prereq. 34-35-36)	VI, VII	TTh	104Mu	Mr. Ferguson
59s	Technique of Voice (2 cred.; jr., sr.; prereq. 4T and 6 cred. in Course 12 or 12C)	VI	TTh	4Mu	Ar
60f-61w-62s	Instrumental Ensemble (6 cred.; jr., sr.)	VI	MWF	104Mu	Mr. Stephens

† See statement of fees, page 86.

No.	Title	Hour	Day	Bldg.	Instructor
63f-64w-65s	Vocal Ensemble (6 cred.; jr., sr.; prereq. 6 cred. in Course 12 or 12C)	VIII	WF	209Mu	Miss Hull
66f-67w-68s	Advanced Vocal Ensemble (6 cred.; jr., sr.; prereq. consent of instructor)	Ar	Ar	104Mu	Ar
70f-71w-72s	Normal Piano (6 cred.; jr., sr.; prereq. 2 years of piano)	I	MWF	103Mu	Miss Kendall
73f-74w-75s	Advanced Harmony (6 cred.; jr., sr.; prereq. 6T)	IV, V	T	103Mu	Ar
76f	Form and Analysis (3 cred.; jr., sr.; prereq. 6T and Psy. 1-2)	II	MWF	103Mu	Mr. Stephens
77f-78w-79s	Composition-Orchestration (6 cred.; jr., sr.; prereq. 6T, 7-8)	Ar	Ar	Ar	Mr. Ferguson
80f-81w-82s	Advanced Normal Piano (6 cred.; sr.; prereq. 70-71-72)	VIII	MWF	103Mu	Miss Kendall
83f-84w-85s	Advanced Composition (6 cred.; sr.; prereq. 77-78-79)	Ar	Ar	Ar	Mr. Ferguson
90f-91w-92s	Advanced Instrumental Ensemble (6 cred.; sr.; prereq. 60-61-62)	VI	MWF	104Mu	Mr. Stephens

For Graduate Students Only

200f-201w-202s	Basis of Musical Expression (9 cred.; grad.; prereq. 56-57-58)	VIII, IX	MF	104Mu	Mr. Ferguson
	Conference hour	Ar	Ar	Ar	
205f-206w-207s	Composition in Larger Forms (9 cred.; grad.; prereq. 83-84-85)	Ar	Ar	Ar	Mr. Ferguson
209f-210w-211s	Advanced Topics in Musical Analysis (9 cred.; grad.; prereq. 76)	II	MWF	104Mu	Mr. Oberg
212f,w,s	Special Problems in Music (3 to 9 cred.; grad.; prereq. 202 or 211)	Ar	Ar	Ar	Mr. Oberg, Mr. Ferguson

Attention is called to Philosophy 59f (Esthetics), see page 91.

MUSIC EDUCATION—See Education, page 42.

NATURAL SCIENCE

See General Studies, page 56.

NAVAL SCIENCE AND TACTICS

See the program of Naval Science and Tactics, page 11.

NORWEGIAN

See Scandinavian, page 119.

PERSONAL ORIENTATION

See General Studies, page 57.

PHILOSOPHY

Major advisers in the College of Science, Literature, and the Arts—Professors Conger, Feigl, and Castell.

Major sequence in the College of Science, Literature, and the Arts—Courses 50-51-52 and others, to make a total of at least 27 credits in Senior College courses. Students who take Courses 50-51-52 and 50A-51A-52A must complete at least six credits in courses

numbered above 100; those who take 50-51-52 alone must complete at least twelve credits in courses numbered above 100.

(Prerequisite for major sequence, Course 1; Course 1A will not be accepted for this requirement.)

Modifications of this sequence will be permitted upon petition approved by the major adviser and the assistant dean for the Senior College. In particular, Pol.Sci. 164-165-166 or Humanities 131-132-133 (Humanities Proseminar) may be offered to make a major in philosophy if the major adviser approves.

Most of the courses in philosophy are designed to be in one way or another "integrative"—to take data from other courses and from various fields of interest and ask how they fit together and what their significance is for man and his work. For a list of recommended related courses in other departments consult philosophy instructors or see the bulletin board outside 323 Folwell Hall.

Courses 1, 2, 3, 1A, 2A, and 3A are introductory. They may be taken singly or in any order, but no student may receive credit for both 1 and 1A, or 2 and 2A, or 3 and 3A. The sections of these courses are scheduled so that one may be taken at almost any hour and so that, if another of the courses is elected, it may be taken at the same hour in the following quarter.

Students who, because of sequences or other interests, desire courses marked "Ar" are invited to consult the instructors with regard to possible organization of seminars to cover such work.

Students intending to enter theological seminaries or other institutions for training in religious work should note the special curriculum in liberal arts which is indicated in the Bulletin of the College of Science, Literature, and the Arts (not in this Combined Class Schedule). Philosophy advisers may be consulted with regard to this curriculum.

For Mr. Castell's course, Humanities Proseminar, see page 56; and for other courses in Humanities, see pages 54-56.

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
2Af-1Aw-3As	Selected Problems of Logic, Selected Problems of Philosophy, Selected Problems of Ethics. A special sequence of courses in philosophy especially for prelegal freshmen, but open to other students. Only by special permission of the instructor will prelegal students be admitted to 1Aw-3As without 2Af, or to 3As without 1Aw. (3 cred. per qtr.; open to prelegal fr., some other fr.,* and to soph., jr., sr.; no prereq.)	VI	MWF	101Law	Mr. Sellars
1f	Problems of Philosophy. An introductory course dealing with man's most important attempts to understand the world and himself. Brief survey of great philosophies; methods of obtaining knowledge; chief data of the sciences; doctrines of evolution, especially in their bearing on ethics and religion. (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)	IV	MTWThF	321F	Mr. Wiggins
	Sec. 1	IV	MTWThF	321F	Mr. Conger
	2	VII	MTWThF	321F	Mr. Conger
1Af	Selected Problems of Philosophy. An abbreviated treatment of some material of Course 1. (3 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)	II	MWF	321F	Mr. Wiggins
1w	Problems of Philosophy (See 1f)	I	MTWThF	321F	Mr. Swanson
	Sec. 1	I	MTWThF	321F	Mr. Swanson
	2	III	MTWThF	321F	Mr. Cerf
1s	Problems of Philosophy (See 1f)	V	MTWThF	321F	Mr. Holmer
1As	Selected Problems of Philosophy. (See 1Af)	IV	MWF	202F	Mr. Swanson
	Sec. 1	IV	MWF	202F	Mr. Swanson
	2	VIII	MWF	322F	Mr. Cerf

* Courses 1, 2, 3 and 1A, 2A, 3A are open in any quarter to a limited number of freshmen with the approval of their advisers.

No.	Title	Hour	Day	Bldg.	Instructor
2f	Logic. A study of the difference between logical and fallacious reasoning; types of fallacies; rules of a good definition; syllogisms; proof; hypothesis; generalization; probability. (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)				
	Sec. 1	I	MTWThF	321F	Mr. Cerf
	2	III	MTWThF	321F	Mr. Swanson
2w	Logic (See 2f)	V	MTWThF	321F	Mr. Cerf
2Aw	Selected Problems of Logic. An abbreviated treatment of some material of Course 2. (3 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)	VIII	MWF	322F	Mr. Holmer
2s	Logic (See 2f)				
	Sec. 1	IV	MTWThF	321F	Mr. Wiggins
	2	VII	MTWThF	321F	Mr. Holmer
2As	Selected Problems of Logic (See 2Aw)	II	MWF	321F	Mr. Swanson
3f	Ethics. Problems of life treated in terms of (1) contemporary social, political, and economic forces, and (2) the character of the individual; psychological and philosophical foundations of morality; the reconstruction of morality. (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)	V	MTWThF	321F	Mr. Holmer
3Af	Selected Problems of Ethics. An abbreviated treatment of some material of Course 3. (3 cred.; open to some fr.* and to soph., jr., sr.; no prereq.)				
	Sec. 1	IV	MWF	202F	Mr. Cerf
	2	VIII	MWF	322F	Mr. Holmer
3w	Ethics (See 3f)				
	Sec. 1	IV	MTWThF	321F	Mr. Wiggins
	2	VII	MTWThF	321F	Mr. Holmer
3Aw	Selected Problems of Ethics (See 3Af)	II	MWF	321F	Mr. Wiggins
3s	Ethics (See 3f)				
	Sec. 1	I	MTWThF	321F	Mr. Wiggins
	2	III	MTWThF	321F	Mr. Cerf
10	<i>Science and Religion</i> (2 cred.; soph., jr., sr.; no prereq.) (<i>Not offered</i>)				
20w	Social Philosophy. A study of conflicting social philosophies of today; liberalism vs. authoritarianism; evaluation of various social, political, and economic institutions in terms of ethical ideals; other problems of social morality; social reconstruction; social utopias. (3 cred.; soph., jr., sr.; no prereq.)	VI	MWF	321F	Mr. Cerf

Senior College Courses

Course 70 is open to sophomores who have an average grade of at least C in all their work. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50f-51w-52s§	General History of Philosophy (9 cred.; jr., sr.; no prereq.)	III	MWF	322F	Miss Shaw
50Af-51Aw-52As§	Readings in Philosophical Classics (6 cred.; jr., sr.; no prereq.)	III	TTh	322F	Miss Shaw
59f	Esthetics. An inquiry into the nature of the sense of beauty, followed by studies of various theories of art, and of the social and humanistic implications of the arts. (3 cred.; jr., sr.; no prereq.)	VII	MWF	322F	Mr. Ferguson
70f¶	Philosophies of Social Reform I: from the French Revolution to 1848. Social criticism in the period of rising industrialism. A consideration of the philosophical bases of liberalism, utopian socialism, and democracy. (3 cred.; jr., sr.; no prereq.)	IV	MWF	301F	Miss Shaw

* Courses 1, 2, 3 and 1A, 2A, 3A are open in any quarter to a limited number of freshmen with the approval of their advisers.

§ Students may enter any quarter.

¶ No student may receive credit for both Philosophy 70 and Political Science 162.

No.	Title	Hour	Day	Bldg.	Instructor
71s	Design for America. A discussion of the aims of American life with the future as a frame of reference. Potentialities in economics, politics, art, science, and education in their interrelations. Student and faculty participation is stressed. (The same as Social Science 71) (5 cred.; designed primarily as a senior integrative course, but open to juniors on consent of instructor; no prereq.) (Formerly Philosophy 21s)	VI	MTWThF	321F	Mr. Brameld
73	<i>Philosophy of Law.</i> A survey of the classical philosophies of law from Plato through the nineteenth century. The nature and method of law, justice, and the judicial process in the light of contemporary thought. (3 cred.; soph., jr., sr.; prereq. 6 cred.) (<i>Not offered</i>)				
81f-82w-83s	Science and Civilization. The course attempts to provide an adequate understanding of the evolution of the sciences and of the scientific point of view within the frame of the history of civilization; the meaning of the fundamental problems, methods, concepts, and assumptions of modern science; and the human and social implications of science in the contemporary world. (The same as Natural Science 81-82-83) (Formerly 80-81-82) (9 cred.; designed primarily as a senior integrative course, but open to juniors on consent of instructor; no prereq.)	III	MWF	210P	Mr. Feigl
101f-102w-103s	Principles of Philosophy. Topics for the fall quarter include knowledge, meaning, and truth; for the winter quarter, reality, mind, and nature; for the spring quarter, human values and action. (2 cred. per qtr.; open only to seniors and graduates who have not had Course 1 or Course 2; no prereq.)	VII-VIII	T	316F	Mr. Sellars
106f-107w	Philosophy of Plato (6 cred.; jr., sr., grad.; prereq. 6 cred. including Course 50)	VIII	MWF	321F	Mr. Sellars
110	<i>Rationalism.</i> The philosophies of Descartes, Spinoza, and Leibniz. (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52) (<i>Not offered</i>)				
111f	Empiricism. Philosophies of Locke, Berkeley, Hume. (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52)	III	MWF	304F	Mr. Wiggins
111A	<i>Eighteenth Century Philosophy.</i> A study of the main philosophic trends of the eighteenth century. Empiricism and idealism in England (Locke, Berkeley, and Hume); rationalism and materialism in France (Voltaire, Diderot, d'Alembert, Holbach); criticism in Germany (Kant). The course is designed not only for majors in philosophy but also in history, English literature, French, and German. (3 cred.; jr., sr.; no prereq.) (<i>Not offered</i>)				
112w	Kant (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52)	VII	MWF	316F	Mr. Sellars
113s	Kierkegaard and Scandinavian Philosophy (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52 or consent of instructor)	VI	MWF	322F	Mr. Holmer
114f	American Philosophy from Puritanism to Pragmatism. A study of Puritanism, the Revolutionary period, transcendentalism, evolutionism, idealism, and pragmatism. (3 cred.; jr., sr., grad.; especially for students of American history and literature)	VI	MWF	322F	Mr. Castell
115s	Contemporary Philosophy. A study of current systematic and critical philosophies, especially idealism, naturalism, realism, pragmatism, and positivism, as represented by their principal exponents. (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52)	VII	MWF	306F	Mr. Cerf
116s	Philosophy of John Dewey. A survey of the ethical, social, educational, and logical contributions made to modern thought by this distinctively American thinker. (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52)	III	MWF	304F	Mr. Wiggins
123s	Comparative Philosophy. A survey of the principal Oriental philosophies, Hindu, Buddhist, Taoist, and Confucian, with special attention to comparisons and contrasts with Western systems. (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52 or consent of instructor)	VII	MWF	322F	Mr. Conger

No.	Title	Hour	Day	Bldg.	Instructor
135s	Philosophy in Modern Literature. A survey of the basic philosophical ideas in twentieth century civilization as they are expressed in major works of contemporary literature. Lectures on Spengler, Marx, Darwin, Freud, and others. Readings and discussions of Ibsen, Proust, Joyce, Tolstoy, Shaw, Huxley, Dostoevski, and others. (3 cred.; jr., sr., grad.; prereq. consent of instructor)				
		VI	MWF	308F	Mr. Castell
143f	Theory of Knowledge. An analysis of the logical structure and the experiential roots of knowledge. The topics include meaning, validity, truth, reason and experience, induction, criteria of objectivity and reality. (3 cred.; jr., sr., grad.; prereq. 2 or consent of instructor)				
		IV	MWF	322F	Mr. Feigl
147s	Elements of Symbolic Logic and Semantics. A systematic introduction to modern mathematical logic and the logical analysis of language. The topics include the dimensions of language; calculus of propositions, classes, and relations; applications to foundations of mathematics. (3 cred.; jr., sr., grad.; prereq. course 2 or consent of instructor)				
		IV	MWF	322F	Mr. Feigl
153w*	Philosophy of Science. An attempt to provide a clear understanding of the meaning, methods, and implications of modern science through the examination of basic concepts, presuppositions, and procedures. The topics include description, explanation, prediction, experimentation; space, time, number, matter, energy; causality, probability, statistics; organic life, evolution, mind. (3 cred.; jr., sr., grad.; prereq. course 2 or consent of instructor)				
		IV	MWF	322F	Mr. Feigl
155w	Metaphysics. A study of some recent attempts to discover general principles characteristic of the universe, with special reference to the sciences. (5 cred.; jr., sr., grad.; prereq. two courses from 50-51-52)				
		VII	MTWThF	322F	Mr. Conger
164s	Ethical Theory. Distinguishing characteristics of a moral judgment; applications of moral judgments to motives, acts, consequences, and persons; moral freedom and responsibility; moral relativity, scepticism, and unity; ethical monism and pluralism; paternalism and individualism in ends and means; theory of knowledge as basis of morality; examination of representative systems. (3 cred.; jr., sr., grad.; prereq. two courses from 50-51-52)				
		VII	MWF	316F	Mr. Sellars
165	<i>Political and Social Ethics</i> (3 cred.; jr., sr., grad.; prereq. 6 cred.) (<i>Not offered</i>)				
170f	Philosophy of History. A survey of the mythological, religious, naturalistic, totalitarian, and economic interpretations of history, and a critical analysis of the historical categories: time, succession, causality, continuity, freedom, revolution, and progress. (3 cred.; jr., sr., grad.; prereq. 6 cred. in phil. or 10 cred. in hist.)				
		VII	MWF	305F	Mr. Holmer
180f	History of Religions. A survey of some phases of primitive religions and of the history, literature, and chief teachings of the more highly developed faiths. (3 cred.; jr., sr., grad.; prereq. 6 cred.)				
		VI	MWF	304F	Mr. Conger
181w	Psychology of Religion. Current interpretations of religious experience and behavior, according to various psychologies. (3 cred.; jr., sr., grad.; prereq. 6 cred.)				
		VI	MWF	304F	Mr. Conger
182s	Philosophy of Religion. Discussion of the ground and sanctions of religion, according to various philosophies. (3 cred.; jr., sr., grad.; prereq. 6 cred.)				
		VI	MWF	304F	Mr. Conger
191f-192w-193s	Seminar in Philosophy. Topics to be arranged according to students' interests, e.g., see courses marked Ar. (9 cred.; sr., grad.; prereq. 9 credits or consent of instructor)				
		Ar	Ar	Ar	Mr. Feigl, Mr. Conger, Mr. Castell, and others

Courses Primarily for Graduate Students

191f-192w-193s	See above
241-242-243	<i>Seminar: Philosophy of the Physical Sciences</i> (3 cred. per qtr.; prereq. consent of instructor) (<i>Not offered—offered in alternate years</i>)
244-245-246	<i>Seminar: Philosophy of Biology and Psychology</i> (3 cred. per qtr.; prereq. consent of instructor) (<i>Not offered—offered in alternate years</i>)

* For a more elementary approach to this field, students are advised to register for Course 81-82-83.

No.	Title	Hour	Day	Bldg.	Instructor
247f-248w-249s	Seminar: Logic of the Exact Sciences (3 cred. per qtr.; prereq. consent of instructor)	3			
		Ar	Ar	Ar	Mr. Feigl
250f-251w-252s	Seminar: Philosophy of the Social Sciences (3 cred. per qtr.; prereq. consent of instructor)	3			
		Ar	Ar	Ar	Mr. Feigl

PHYSICAL EDUCATION FOR MEN

See the program of Physical Education for Men, page 11.

PHYSICAL EDUCATION FOR WOMEN

See the program of Physical Education for Women, page 12. Of the courses listed there, Course 54 "Camp Leadership" (2 credits, no prerequisite) is regularly open to S. L. and A. students for credit. The other courses are elective without credit.

PHYSICS

Major advisers in the College of Science, Literature, and the Arts—Professors Buchta and Valasek; Associate Professor Wall.

Major sequence in the College of Science, Literature, and the Arts—Courses 101-103-105, plus 6 additional credits in Senior College courses, and Mathematics 50, 51, and 106.

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

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

Major adviser in the College of Education—Professor Buchta.

Requirements for a teacher's certificate—Courses 7-8-9. This is a general course in physics extending through three quarters.

Major recommendation: The above general course and in addition Courses 107-109-111 and nine credits selected from 110-112, 134, 136, 144.

Minor recommendation: The above general course plus six credits selected from Courses 107-109-111, 134, 136, 144.

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

Prerequisites for any course in physics may be waived if a petition for registration in the course is granted by the department chairman.

Junior College Courses

1f-2w†-3s Introduction to Physical Science. Lectures and experimental demonstrations of the principles underlying physical phenomena. A course designed for those who wish a general cultural introduction to physics but will not major in that subject. (9 cred.; prereq. high school algebra and plane geometry)

III MWF 166Ph Mr. Buchta

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

No.	Title	Hour	Day	Bldg.	Instructor
1af-2aw†-3as‡	Introduction to Physical Science—with laboratory included. Fulfills the laboratory-science group requirement in Science, Literature, and the Arts. (12 cred.; prereq. high school algebra and plane geometry)				
	Lect.	III	MWF	166Ph	Mr. Buchta
	Lab. Sec. 1	I, II	Th	Ar	Mr. Wall
	2	VI, VII	F	Ar	and assistants
	3	III, IV	Th	Ar	
	4	VIII, IX	F	Ar	
4f-5w-6s‡	General Physics (primarily for premedical students). Mechanics and heat (Physics 4); sound and light (Physics 5); electricity (Physics 6). Laboratory work is an integral part of course. (15 cred.; prereq. Math. 15-16, Elementary Mathematical Analysis; or with permission of department chairman Math. 6, Trigonometry, and either Math. 7 or 8, which are courses in college algebra. Premedical students should take Math. 15-16)				
	Lect. and quiz	I	MTWThF	166Ph	Mr. Wall
	Lab. Sec. 1	VI, VII	M	Ar	Mr. Wall
	2	VIII, IX	M		and assistants
	3	VIII, IX	T		
	4	VI, VII	Th		
	5	VIII, IX	F		
	6	III, IV	S		
4s‡	General Physics (See 4f-5w-6s)				
	Lect. and quiz	III	MTWThF	133Ph	Mr. Valasek
	Lab. Sec. 1	VI, VII	M	Ar	Mr. Wall
	2	VIII, IX	M		and assistants
	3	VIII, IX	T		
	4	VI, VII	Th		
	5	I, II	S		
6f‡	General Physics (See 4f-5w-6s) This course is for students who have had Physics 4 or equivalent.				
	Lect. and quiz	III	MTWThF	150Ph	Mr. Valasek
	Lab. Sec. 1	VIII, IX	M	Ar	Mr. Wall
	2	III, IV	W		and assistants
	3	VI, VII	Th		
	4	I, II	F		
	5	I, II	S		
	6	III, IV	S		
7f-8w-9s‡	General Physics (primarily for students majoring in physics, mathematics, or chemistry and for students in the Institute of Technology). Mechanics and heat (Physics 7); electricity (Physics 8); sound and light (Physics 9). Laboratory work is an integral part of course. (15 cred.; prereq.‡ Math. 15-16 or equivalent or registration in differential calculus)				
	Lect. Sec. 1	II	MTWThF	150Ph	Mr. Williams
	2	IV	MTWThF	150Ph	Ar
	3	VI	MTWThF	150Ph	Ar
	Lab. Sec. 1	III, IV	M	Ar	Mr. Wall
	2	VI, VII	M		and assistants
	3	I, II	T		
	4	VI, VII	T		
	5	VIII, IX	T		
	6	V, VI	W		
	7	VIII, IX	W		
	8	III, IV	Th		
	9	VI, VII	Th		
	10	VIII, IX	F		
	11	I, II	S		
	12	III, IV	S		

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

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

§ See statement about prerequisites on page 94.

No.	Title	Hour	Day	Bldg.	Instructor
7w‡	General Physics (See 7f-8w-9s)				
	Lect. and quiz	III	MTWThF	150Ph	Mr. Valasek
	Lab. Sec. 1	VI, VII	M	Ar	Mr. Wall
	2	VIII, IX	M		and assistants
	3	VIII, IX	T		
	4	VI, VII	Th		
	5	I, II	S		
8f‡	General Physics (See 7f-8w-9s)				
	Lect.	III	MTWThF	150Ph	Mr. Valasek
	Lab. Sec. 1	VIII, IX	M	Ar	Mr. Wall
	2	III, IV	W		and assistants
	3	VI, VII	Th		
	4	I, II	F		
	5	I, II	S		
	6	III, IV	S		
9w‡	General Physics (See 7f-8w-9s)				
	Lect. and quiz	I	MTWThF	166Ph	Mr. Wall
	Lab. Sec. 1	VI, VII	M	Ar	Mr. Wall
	2	VIII, IX	M		and assistants
	3	VIII, IX	T		
	4	VI, VII	Th		
	5	VIII, IX	F		
	6	III, IV	S		
29	<i>Introduction to Meteorology.</i> A presentation of the fundamental physical principles underlying meteorological phenomena, accompanied by instrumental observations and weather map study. (3 cred.; prereq. high school physics or equiv.) (<i>Not offered</i>)				

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

52‡	<i>Laboratory Arts</i> (3 cred.; jr., sr.; prereq. 15 cred. in physics and approval of dept.) (<i>Not offered</i>)				
101f-103w-105s	Theoretical Physics (15 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 106 or registration in 106)				
	I	MTWThF	145Ph	Mr. Nier	
107f-109w-111s	Modern Physics (9 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51)				
	VII	MWF	Ar	Mr. Wall	
110w-112s‡¶	Modern Experimental Physics (3 or 4 cred. per qtr.; jr., sr., grad.; prereq. 144)				
	VI-IX	TTh	149Ph	Mr. Williams	
113	<i>Intermediate Acoustics</i> (3 cred.; jr., sr., grad.; prereq. Math. 51, 15 cred. in physics) (<i>Not offered</i>)				
114f-116w-118s¶	Elementary Physical Investigation (9 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51)				
	Ar	Ar	Ar	Ar	
131f	Geometrical Optics. Theory of mirrors, prisms, and lenses. Optical instruments. (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51)				
	II	TThS	Ar	Mr. Valasek	
133w	Physical Optics. Theory of interference and interferometers. Theory of diffraction, resolving power, and diffraction gratings. Polarized light, crystal optics, and applications. (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51)				
	II	TThS	Ar	Mr. Valasek	
134f,w‡	Experimental Optics (3 or 4 cred.; jr., sr., grad.; prereq. 15 cred. in physics)				
	VII, VIII, IX	TTh	348Ph	Mr. Valasek	

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

¶ Students may enter any quarter.

No.	Title	Hour	Day	Bldg.	Instructor
135	<i>Spectroscopy</i> . Light sources, instruments and methods used in spectroscopy of the X-ray, ultra-violet, visible, and infra-red regions of the spectrum. (3 cred.; jr., sr., grad.; prereq. 15 credits in physics, Math. 51) (<i>Not offered</i>)				
136w,s†	Spectrum Analysis (3 or 4 cred.; jr., sr., grad.; prereq. 15 cred. in physics)	VII, VIII, IX	TTh	348Ph	Mr. Valasek
144s‡	Electricity Measurements (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51)	III	TThS	166Ph	Mr. Wall
	Lect.				
	Lab. Sec. 1	VI, VII, VIII, IX	Th	231Ph	
	2	VI, VII, VIII, IX	M	231Ph	
146‡	<i>Physics of Vacuum Tubes and Associated Circuits</i> . Thermionics. (3 cred.; prereq. 144 and permission of instructor) (<i>Not offered</i>)				
152	<i>X Rays</i> (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics) (<i>Not offered</i>)				
154‡	<i>X-Ray Spectroscopy</i> (3 cred.; prereq. Math. 51, and permission of instructor) (<i>Not offered</i>)				
181f-183w-185s	Atomistics and Elementary Quantum Mechanics. Atomic structure, X rays, spectrum analysis and an introduction to wave mechanics. (3 cred. per qtr.; sr., grad.; prereq. 101-103-105 or registration in that course)	I	MWF	143Ph	Mr. Tate
191f-192w-193s	Introduction to Mathematical Physics (15 cred.; sr., grad.; prereq. Phys. 101-103-105, registration in Math. sequence 106-107-108 or equivalent)	II	MTWThF	145Ph	Mr. Hill

PHYSIOLOGY

MEDICAL SCHOOL

Major adviser in the College of Science, Literature, and the Arts—Dr. King.

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

Sequence A. Physiology. Course 103-104; 15 credits in approved Senior College courses in related fields.

Sequence B. Physiological Chemistry. Course 100-101; 15 credits in approved Senior College courses in related fields of chemistry, physics, or biology.

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

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

Junior College Courses

1f*‡‡	Elements of Physiological Chemistry (4 cred.; primarily for students of nursing‡; no prereq.)				
	Lect. and quiz	II	MWF	Ar	Dr. Barnum and others
	Lab. Sec. A	VIII, IX	M	310MH	
	B	VI, VII	Th	310MH	
	C	VIII, IX	Th	310MH	
1s*‡‡	Elements of Physiological Chemistry (See 1f)				
	Lect. and quiz	II	MWF	Ar	Dr. Barnum and others
	Lab.	VIII, IX	Th	310MH	

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

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

‡‡ The student must purchase a \$5 chemistry card from the bursar in the Administration Building. No student will be assigned a desk in the laboratory until he presents this card. The cost of special chemicals, non-returnable equipment and breakage will be charged against the deposit.

§ Others may be admitted by special permission.

No.	Title	Hour	Day	Bldg.	Instructor
2f*	Elements of Physiology. This course covers the following subjects from the standpoint of function in the human: circulation, respiration, digestion, excretion, metabolism and nutrition, special senses, nervous system, and endocrines. (4 cred.; primarily for students of nursing§; no prereq.)				
	Lect. and quiz	II	TThS	Ar	Mrs. Coe and others
	Lab. Sec. A	VIII, IX	T	301MH	
	B	VIII, IX	Th	301MH	
	C	VIII, IX	F	301MH	
2s*	Elements of Physiology (See 2f)				
	Lect. and quiz	II	TThS	Ar	Mrs. Coe and others
	Lab.	VI, VII	Th	301MH	
4f*	Human Physiology (4 cred.; prereq. 1 qtr. zool., 1 qtr. chem.)				
	Lect.	III	MWF	301MH	Staff
	Conference	IV	F		
4s*	Human Physiology (See 4f)				
	Lect.	VIII	T	301MH	Staff
		VII, VIII	Th		
	Conference	VII	T	Ar	

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50f	Physiological Chemistry (4 cred.; primarily for phys. ed. students§; jr., sr.; prereq. inorganic chemistry)				
		VI	MTWThF	Ar	Dr. Michelson and others
51s*	Human Physiology (6 cred.; primarily for phys. ed. students§; jr., sr.; prereq. Zool. 1-2-3; Inorg. Chem. 1-2-3, or 4-5, or equiv.; Physiol. 50; Human Anatomy or Comp. Anatomy)				
		IV	MTWF	MH	Dr. Keys
		VI, VII, VIII, IX	T	MH	and others
56s	Physiological Chemistry (2 cred.; primarily for dental students§; jr., sr.; prereq. org. chem.)				
		I	WS	Ar	Dr. Armstrong, Dr. Glick, and others
57f	Physiological Chemistry (6 cred.; jr., sr.; prereq. 56)				
	Lect.	I	WFS	Ar	Dr. Armstrong, Dr. Glick, Dr. Holman
	Quiz	II	S		
	Lab.	VI, VII, VIII	T		
		II, III, IV	F		
58w*	Human Physiology (5 cred.; primarily for dental students§; sr.; prereq. zool. and Physiol. 56, 57)				
	Lect.	I	TThS	Ar	Dr. King and others
	Quiz	II	S	Ar	
	Lab.	II, III, IV	T	Ar	
59s*	Human Physiology (5 cred.; sr.; prereq. 58 or equiv.)				
	Lect.	I	TThS	Ar	Dr. King and others
	Quiz	II	S	Ar	
	Lab.	II, III, IV	T	Ar	
60s	Human Physiology (6 cred.; primarily for Medical Technology and 5-year nursing students)				
	Lect.	IV	MTWF	Ar	Ar
	Conference	II	S		
	Lab. (Med. Tech.)	VII, VIII, IX	F		
	(5-yr. nurses)	II, III	Th		

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

§ Others may be admitted by special permission.

No.	Title	Hour	Day	Bldg.	Instructor
100w	Physiological Chemistry (7 cred.; jr., sr.; prereq. org. chem. and physics)				
	Lect.	IV	MTWF	Ar	Dr. Armstrong,
	Quiz	I	F		Dr. Barnum,
	Lab.	VII, VIII, IX	WF	310MH	Dr. Holman
100s	Physiological Chemistry (See 100f)				
	Lect.	IV	MTWF	Ar	Dr. Armstrong,
	Quiz	I	F	Ar	Dr. Barnum,
	Lab. Sec. 1	I, II, III	MW	310MH	Dr. Holman
	2	I, II, III	ThS	310MH	
101f	Physiological Chemistry (6 cred.; jr., sr.; prereq. 100)				
	Lect.	VI	MTF	Ar	Dr. Armstrong,
	Quiz	IV	S		Dr. Barnum,
	Lect. Sec. 1	I, II, III	MW	310MH	Dr. Holman
	2	I, II, III	ThS	310MH	
101w	Physiological Chemistry (See 100f)				
	Lect.	VI	MF	Ar	Dr. Armstrong,
	Quiz	IV	S		Dr. Barnum,
	Lab.	VII, VIII, IX	WF	310MH	Dr. Holman
103w¶	Physiology of Circulation, Respiration, etc. (9 cred.; jr., sr.; prereq. zool. and org. chem.)				
	Lect.	I	MTWThFS		Dr. Visscher,
	Conference	III	TS		Dr. Keys,
	Lab.				Dr. King,
	Div. A	VI, VII, VIII	MW		and others
	B	II, III, IV	MW		
104s¶	Physiology of Endocrines, Nervous System, etc. (6 cred.; lect. only, 4 cred.; jr., sr.; prereq. 103 or org. chem. and neurology)				
	Lect.	IV	MTWF	Ar	Dr. Visscher,
	Conference	VII	F		Dr. Gellhorn,
	Lab.				Dr. Bittner,
	Div. A	9:00-11:20	M		and others
		1:30- 4:00	W		
	B	1:30- 4:00	M		
		9:00-11:20	W		
114	<i>Physiology of Muscular Activity</i> (1 or 2 cred.; jr., sr., grad.; prereq. 103 or 51 with grade of A or B) (<i>Not offered</i>)				
115	<i>Measurements in Human Physiology</i> (1 cred.; jr., sr., grad.; prereq. 114 which may be taken concurrently) (Limited to 10 students) (<i>Not offered</i>)				

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

POLITICAL SCIENCE

Major advisers—Professors Anderson and Short; Associate Professors Christensen, Latham; Assistant Professor McLaughlin.

Preparation for Senior College work—Nine credits, including 6 in Course 1-2, and 3 in one of the following courses: 3, 7, 9-10, 15, and 25, except as otherwise noted in the prerequisites for particular Senior College courses.

Preparation for a major sequence and for the major in international relations—Twelve credits, which must include Course 1-2 (6 credits) and at least 3 credits in 7, 9-10, 15, or 25; plus suitable preparation in History (1-2-3, 4-5-6, or 20-21-22), Economics (6-7 and 5) or Sociology (1 and 45). In addition, students are advised to take one or more of the following: Philosophy 2, Geography 43, Psychology 1-2.

Major sequence—The preparatory work noted above is designed to provide a general knowledge of (1) the American system of government, and (2) the principal terms and concepts of political science. To this knowledge the major sequence should add the following: (3) a knowledge of the works of a number of great contributors to political

¶ Students may register for lectures without laboratory.

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

To these ends the student will take in each of his selected fields at least one 9-credit course or a three-quarter sequence of related courses totaling 9 credits. Thus the requirement for the major is at least 27 credits in Senior College courses in political science, distributed among three selected fields and constituting, along with other parts of the student's program, an integrated and co-ordinated plan of study.

Major in international relations (training for the foreign service)—A special program taking the place of a major sequence will be arranged for students of good standing who desire a general introduction to this field. Courses are drawn from Political Science, Economics, History, Geography, and related departments. Those intending to take the examinations for the American foreign service are advised to follow this program and to prepare themselves adequately in modern foreign languages. See bulletin on Preparation for Foreign Service; consult Mr. Christensen or Mr. Levi.

Major in area study—A program of area study adaptable to both cultural and professional objectives and available through several departments became effective in the fall quarter, 1945. Consult Mr. Christensen or Mr. Levi.

Special readings and honors courses—Students who are capable of doing better than average work and who wish to specialize or to study for graduation honors are advised to take Course 91-92-93. This course may be elected for independent work in any of the six fields noted above in the description of the major sequence.

Major adviser in the College of Education—Professor Kirkpatrick.

Requirements for a teacher's certificate—Major recommendation: At least 36 credits in political science including 1-2-3, either 7, 9-10, 15, or 25, and at least 18 credits in Senior College courses.

Minor recommendation: At least 18 credits in political science, including 1-2-3, either 7, 9-10, 15, or 25, and 6 credits in Senior College courses.

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

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w†-3s	American Government and Politics. An explanation and analysis of the principles, organization, procedures, and functions of American government—national, state, and local. Attention will be given throughout to the impact of the war and the postwar world upon American government and politics. (9 cred.; no prereq.)				
	Sec. 1	IV	MWF	BuAud	Mr. Christensen
	2	I	TThS	211Bu	Mr. Weidner
1w-2s†	American Government and Politics (6 cred.; no prereq.)				
		II	MWF	211NH	Mr. Kirkpatrick

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

No.	Title	Hour	Day	Bldg.	Instructor
5s§	American Government and Politics (Covers most of Course 1-2) (5 cred.; no prereq.)	III	MTWThF	JAud	Mr. McLaughlin
7w,s	Comparative European Government. The governments of Great Britain, France, Italy, Germany, and Russia. Constitutions; governmental organizations; parties and elections. (3 cred.; no prereq.)	(Winter) VI (Spring) II	MWF	211Bu	Mr. Levi
9f-10w†*	Fundamentals of Government and Politics. An introduction to the nature of political authority; a comparison of the major features of American government with governmental organization of other nations, and an analysis of the conflict between democracy and dictatorship. (6 cred.; no prereq.)	III	TThS	JAud	Mr. Kendall
11	<i>Special Readings in American Government and Politics</i> (2 cred.; prereq. 1 or 5) (<i>Not offered</i>)				
15f,w	Elements of Political Science. The nature and functions of the state; sovereignty and liberty; constitutions, forms of government. (3 cred.; no prereq.)	(Fall) VI (Winter) II	MWF	2P	Mr. Lippincott
25f,s	World Politics. Introduction to contemporary international relations; the policies of the great powers; nationalism; imperialism; internationalism. (3 cred.; no prereq.)	(Fall) II (Spring) VI	TThS	211Bu	Mr. Mills

Senior College Courses

Senior College courses in this department are open to Junior College students who have an average grade of C in the prerequisite courses, subject to the general rule that courses which carry graduate credit may not be taken earlier than the third quarter of the student's sophomore year.

80f	National Government in the United States—with special reference to current problems and developments (3 cred.; jr., sr.; no prereq. Not open to sophomores or to students who have had Pol. Sci. 1-2 or equiv.)	IV	MWF	211Bu	Mr. Short
85s	Problems of World Politics (3 cred.; jr., sr.; prereq. 25 or Hist. 1-2-3 or consent of instructor)	II	MWF	211Bu	Mr. Mills
91f-92w-93s	Honors Work in Selected Fields (Cred. ar.; jr., sr.; prereq. 18 cred.; consult major advisers)	Ar	Ar	Ar	Ar
97	<i>American and European Colonies of Today</i> (3 cred.; jr., sr.; prereq. 6 cred. or consent of instructor) (<i>Not offered</i>)				
101f	Principles of the American Constitution. The nature of constitutions, judicial review, national, state, and interstate relations. (3 cred.; jr., sr., grad.; prereq. Pol. Sci. 1-2 or equiv.)	II	TThS	209Bu	Mr. Latham
102w	Principles of the American Constitution. Organization and powers of the national government. (3 cred.; jr., sr., grad.; prereq. 101 or equiv.)	II	TThS	209Bu	Mr. Latham
103s	Principles of the American Constitution. Constitutional rights, due process and equal protection of the law. (3 cred.; jr., sr., grad.; prereq. 101 or 102 or equiv.)	II	TThS	209Bu	Mr. Latham
104f-105w	American Constitutional Development (6 cred.; jr., sr., grad.; prereq. 9 cred. or Hist. 20-21-22)	III	TThS	209Bu	Mr. McLaughlin
106	<i>American Constitutional Development—Part 3</i> (<i>Not offered</i>)				

* Students who receive credit for this course may not receive credit for Political Science 7 or 15.
 † To receive credit for any part of this course a student must complete the parts preceding the dagger.

§ This course covers most of Political Science 1-2. No student will be given credit for both courses 1-2 and 5. Course 5 may be substituted for 1-2 whenever 1-2 is required.

No.	Title	Hour	Day	Bldg.	Instructor
108w	Legislative Organization and Procedure. A study of Congress and the state legislatures at work. (3 cred.; jr., sr., grad.; prereq. 6 cred.)	IV	MWF	211Bu	Mr. Short
116f	Local Government: Areas and Organization (3 cred.; jr., sr., grad.; prereq. 9 cred. or consent of instructor)	I	MWF	209Bu	Mr. Weidner
117w	Local Government: Politics, Major Functions, Administration, and Central Supervision (3 cred.; jr., sr., grad.; prereq. 116 or consent of instructor)	I	MWF	209Bu	Mr. Weidner
118s	Local Government: Legal Status, Powers, and Responsibilities (3 cred.; jr., sr., grad.; prereq. 116)	I	MWF	209Bu	Mr. Weidner
120f	Municipal Functions (3 cred.; jr., sr., grad.; prereq. 6 cred.)	II	TThS	111Bu	Mr. Ludwig
121w	Municipal Administration (3 cred.; jr., sr., grad.; prereq. 120 or consent of instructor)	II	TThS	111Bu	Mr. Ludwig
122s	Municipal Problems (3 cred.; jr., sr., grad.; prereq. 121 or consent of instructor)	II	TThS	111Bu	Mr. Ludwig
123f	City Planning. General survey of the economic, governmental, social, and technical phases of city planning and group housing. (The same as Architecture 104, Economics 111, and Sociology 104 (3 cred.; sr., grad.; no prereq.))	III	MWF	320E	Mr. Jones, Mr. Anderson, Mr. Filipetti, Mr. Vaile, Mr. Sletto
124f-125w	Recent Social Legislation. With special reference to the fields of social security, labor, housing, and health. (6 cred.; jr., sr., grad.; prereq. 6 cred.)	VII	MWF	209Bu	Mr. Christensen
126w-127s	Government and the Economic Order (6 cred.; jr., sr., grad.; prereq. 9 cred.)	IV	TThS	211Bu	Mr. Latham
131f	Public Administration: Organization and Areas, Administrative Responsibility (3 cred.; jr., sr., grad.; prereq. 6 cred.)	II	MWF	221Bu	Mr. Short
132w	Public Administration: Personnel Administration (3 cred.; jr., sr., grad.; prereq. 131 or consent of instructor)	II	MWF	221Bu	Mr. Short
133s	Public Administration: Financial Administration (3 cred.; jr., sr., grad.; prereq. 131 or consent of instructor)	II	MWF	221Bu	Mr. Short
135	<i>Problems of Public Planning</i> (2 cred. without term paper, 3 cred. with term paper; jr., sr., grad., and soph. with consent of instructor; prereq. 9 cred.) (<i>Not offered</i>)				
137f	American Political Parties (3 cred.; jr., sr., grad.; prereq. 6 cred. or 12 cred. in soc. sci.)	I	TThS	209Bu	Mr. Christensen
138	<i>American Political Campaigns and Elections</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. or 12 cred. in soc. sci.) (<i>Not offered</i>)				
141f	European Political Institutions (3 cred.; jr., sr., grad.; prereq. 6 cred. or 12 cred. in soc. sci.)	I	MWF	210P	Mr. McClosky
142w	European Parties and Politics (3 cred.; jr., sr., grad.; prereq. 6 cred. or 12 cred. in soc. sci.)	I	MWF	210P	Mr. McClosky
143s	Government of the U.S.S.R. and Adjacent States (3 cred.; jr., sr., grad.; prereq. 9 cred.)	I	MWF	210P	Mr. McClosky
148	<i>European Dictatorships</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. in pol. sci. or 12 cred. in soc. sci.) (<i>Not offered</i>)				
149f	Government and Politics of the British Empire--India and the Tropical Colonies (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor)	III	MWF	211Bu	Mr. Mill*

No.	Title	Hour	Day	Bldg.	Instructor
150w	Government and Politics of the British Empire--Development of Dominion Status (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor)				
		III	MWF	211Bu	Mr. Mills
151s	British Problems of Closer Union. Problems of unity within the British Dominions; regional unions with adjacent states. (3 cred.; jr., sr., grad.; prereq. 149-150 with grade of C+ or better, or consent of instructor)				
		III	MWF	211Bu	Mr. Mills
153f	Far Eastern Governments (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor)				
		II	MWF	209Bu	Ar
155s	Government in Latin America (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of the instructor)				
		III	TThS	209Bu	Mr. Christensen
160f	American Political Thought (3 cred.; jr., sr., grad.; prereq. 6 cred. in pol. sci. or 12 cred. in soc. sci. or consent of instructor)				
		III	MWF	209Bu	Mr. Kirkpatrick
161w	Problems of Democracy (3 cred.; jr., sr., grad.; prereq. 6 cred. in pol. sci. or 12 cred. in soc. sci. or consent of instructor)				
		III	MWF	209Bu	Mr. Kirkpatrick
162s§	Recent Political Thought (3 cred.; jr., sr., grad.; prereq. 6 cred. in pol. sci. or 12 cred. in soc. sci. or consent of instructor)				
		III	MWF	209Bu	Mr. Kirkpatrick
164f	Development of Political Thought: Greece and Rome (3 cred.; jr., sr., grad.; prereq. 6 cred. in pol. sci. or 12 cred. in soc. sci. or consent of instructor)				
		IV	MWF	112Bu	Mr. Kirkpatrick
165w	Development of Political Thought: the Middle Ages (3 cred.; jr., sr., grad.; prereq. 6 cred. in pol. sci. or 12 cred. in soc. sci. or consent of instructor)				
		IV	MWF	112Bu	Ar
166s	Development of Political Thought: Early Modern (3 cred.; jr., sr., grad.; prereq. 6 cred. in pol. sci. or 12 cred. in soc. sci. or consent of instructor)				
		IV	MWF	112Bu	Mr. Kendall
167f-168w- 169s†	Readings in the Classics of Politics (9 cred.; jr., sr., grad.; prereq. 15, or 164-165 with which it may be taken simultaneously, or consent of instructor)				
			2:30 to 3:45	TTh 211Bu	Mr. Lippincott
171s	Political Psychology (The same as Psychology 141) (3 cred.; jr., sr., grad.; prereq. Psy. 140)				
		III	TThS	206Pt	Mr. Bird
180f-181w†- 182s	International Law (3 cred.; jr., sr., grad.; prereq. 9 cred.)				
		I	TThS	221Bu	Mr. McLaughlin
184f	International Organization (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor)				
		IV	MWF	209Bu	Mr. Levi
185w	Problems of International Reconstruction (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor)				
		IV	MWF	209Bu	Mr. Levi
186	<i>War in International Relations</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor) (<i>Not offered</i>)				
187	<i>International Administration</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor) (<i>Not offered</i>)				
192w	International Relations in the Far East (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor)				
		II	MWF	209Bu	Ar
193	<i>Problems of the Pacific</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor) (<i>Not offered</i>)				
195	<i>Colonial Government and the Problems of Imperialism.</i> Motives of American, British, Dutch, French, and Spanish colonization; ancient and modern imperialism. (3 cred.; jr., sr., grad.; prereq. 6 cred. or consent of instructor) (<i>Not offered</i>)				

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

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

No.	Title	Hour	Day	Bldg.	Instructor
196	<i>Colonial Government and the Problems of Imperialism.</i> Varieties of colonial rule in contemporary empires. (3 cred.; jr., sr., grad.; prereq. 195 or consent of instructor) (Not offered)				

Courses Primarily for Graduate Students

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

204w-205s†	Seminar in Public Law (6 cred.; grad.; prereq. 18 cred. in pol. sci. or consent of instructor)	1:00 to 2:20	TTh	209Bu	Mr. Latham
210f-211w-212s†	Special Seminar in Public Administration (9 cred.; grad.; admission only with consent of the staff)	4:00 to 5:20	TTh	13Lib	Mr. Latham, Mr. Ludwig, Mr. Short
229f	Scope and Methods of Political Science (3 cred.; grad.; prereq. admission to graduate major, or consent of instructor)	11:00-12:20	TTh	209Bu	Mr. Anderson
236w-237s	Seminar in Federalism and Intergovernmental Relations (6 cred.; grad.; prereq. consent of instructor)	11:00-12:20	TTh	209Bu	Mr. Anderson
239	<i>Topics in American Political Parties</i> (3 cred.; sr. with consent of instructor, grad.; prereq. 137 or 138) (Not offered)				
242f-243w-244s	Topics in Colonization (9 cred.; grad.; prereq. 195-196 or consent of instructor)	Ar	Ar	215Bu	Mr. Mills
245-246-247	<i>Seminar in Far Eastern Government and International Relations</i> (9 cred.; grad.; prereq. consent of instructor) (Not offered)				
280f	Topics in International and Maritime Law I. Problems of belligerent occupation, military government, jurisdiction of war crimes. (3 cred.; sr. with consent of instructor, grad.; prereq. 180-181-182, or consent of instructor)	Ar	Ar	Ar	Mr. McLaughlin
281w	Topics in International and Maritime Law II. Legal problems in the organization of the United Nations. (3 cred.; sr. with consent of instructor, grad.; prereq. 180-181-182, or consent of instructor)	Ar	Ar	Ar	Mr. McLaughlin
282s	Topics in International and Maritime Law III. The interpretation of treaties and international conventions. (3 cred.; sr. with consent of instructor, grad.; prereq. 180-181-182, or consent of instructor)	Ar	Ar	Ar	Mr. McLaughlin

PREVENTIVE MEDICINE AND PUBLIC HEALTH

See Public Health, page 108.

PSYCHOLOGY

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

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

A. Experimental psychology. Prerequisites: 1-2 and 4-5. Course 55 is recommended. Courses 101-102-103; 125-126; and 12 additional credits in Senior College courses.

B. Human and animal behavior. Prerequisite: 9 credits in Psychology. Courses 114; 148; 151-152-153; and 12 additional credits in Senior College courses either in psychology or zoology.

C. Differential psychology. Prerequisites: 1-2 and 4-5. Course 3 is recommended. Course 70 or equivalent; 125-126-127; 130 or 160; Educational Psychology 120; 3 credits chosen from Ed.Psy. 140, 141, 142; and 6 additional credits in Senior College courses.

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

D. Social and political psychology. Prerequisites: 1-2 and 4-5. Course 70 or equivalent; 140; 141; 167; 168 and twelve additional Senior College credits. It is recommended that students elect Journalism 115; 130-131 as part of the twelve additional credits required. Psy. 56 is recommended to students with certain interests.

All students majoring in psychology are strongly urged to elect courses in mathematics, especially Math. 15-16.

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

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
Af,w,s†	Elementary Psychology. An introduction to psychology with special attention to its applications. Intended for students who do not intend to take Senior College courses in Psychology. See footnote. (5 cred.; fr.,* soph.; no prereq.)	V	MTWThF	BuAud	Mr. Longstaff
1f-2w†§	General Psychology. A general introduction to the study of human behavior with emphasis on the development of the individual. (6 cred.; 3rd quarter fr. with a C average, soph., jr., sr.; no prereq.)	I	MWF	BuAud	Mr. Elliott
	Sec. 1	III	MWF	BuAud	and others
1w-2s†§	General Psychology (See 1f-2w)	VIII	MWF	BuAud	Mr. Heron
	Sec. 1	IX	MWF	BuAud	Mr. MacCorquodale
	2				
1s 2s†§	General Psychology (6 cred.; 3rd quarter fr. with a C average, soph., jr., sr.; no prereq.)	II	MTWThFS	NHAud	Mr Bird
	Sec. 1	IV	MTWThFS	NHAud	Ar
	2				
3s	Psychology Applied to Daily Life. A course in the uses of psychological methods in solving such problems as come up in the treatment of ill health, in the courtroom, reformatory, and prison, in business offices and factories, in advertising, in education, in social and political life, in artistic creation and esthetic enjoyment, and in everyday life. (3 cred.; prereq. A or 1-2)	III	MWF	BuAud	Mr. Paterson, Mr. Longstaff, and others
4f†-5w†	Introductory Laboratory Psychology. Simple experiments illustrating the subject matter of contemporary psychology. Included are human and animal learning, visual experience, differences in artistic, musical, and other kinds of abilities, measurement of each student's personality traits, and reactions to advertisements. (4 cred.; 3rd quarter fr. with a C average, soph., jr., sr.; prereq. A, or may be taken with or after 1-2) (Sections limited to 48)	I, II	TTh	211Psy	Mr. Tinker
	Sec. 1	V, VI	TTh	211Psy	and others
	2	VII, VIII	TTh	211Psy	
	3	V, VI	MW	211Psy	
	4	VII, VIII	MW	211Psy	
	5	III, IV	MW	211Psy	
	6	IX, X	TTh	211Psy	
	7	IX, X	MW	211Psy	
	8	III, IV	TS	211Psy	
	9				

* This course is open to a limited number of first and second quarter freshmen with the approval of their advisers and to third quarter freshmen with a C average.

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

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

§ Psychology 1-2 is intended to be the normal beginning course in psychology and is the course prerequisite to Business, Education, Law, and Medicine, but see footnote to Psy. A. Psychology 1-2, together with Psy. 4-5, meets the natural science requirement for entrance to the Senior College.

¶ Psychology A is intended primarily for students in home economics, nursing, and dental hygiene. Not for students who expect to take Senior College courses in psychology later. Psychology A can not be counted toward meeting the natural science requirement for entrance to the Senior College.

No.	Title	Hour	Day	Bldg.	Instructor
4w†-5s†	Introductory Laboratory Psychology (See 4f-5w)	I, II			
			MW	211Psy	Ar
4s†-5s†	Introductory Laboratory Psychology (See 4f-5w)	V, VI	MTThF	211Psy	Mr. Tinker
	Sec. 1	VII, VIII	MTThF	211Psy	and others
	2	IX, X	MTThF	211Psy	
	3	I, II	TThFS	211Psy	
	4				

Senior College Courses

In this department courses numbered between 50 and 80 are open to sophomores who have an average grade of at least C in all their courses and an average of B in the pre-requisite courses.

52s	Genetic Psychology. Parallelism of habits, customs, ways of living, societies, etc., between animals and human beings. Elemental forms of human behavior and characteristics in animal life. Evaluations of different modes of adaptation. (3 cred.; jr., sr.; prereq. A or 1-2)				
		IV	MWF	115Psy	Mr. Heron
55s	Psychology of Sensation (3 cred.; jr., sr.; prereq. A or 1-2)	IV	MWF	211Psy	Mr. Tinker
56f,w	Psychology of Advertising. Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. (3 cred.; jr., sr.; prereq. A or 1-2 and Principles of Economics)				
	(Fall)	II	MWF	JAud	Ar
	(Winter)	VII	MWF	150Ph	Mr. Longstaff
65f	Advanced General Psychology. An advanced treatment, with demonstrations, of motivation, emotion, perception, thinking, and learning, developing the relations of psychology to other fields such as the medical and social sciences. (3 cred.; jr., sr.; prereq. A or 1-2)				
		II	TThS	115Psy	Mr. Heron
70f,s	Principles of Psychological Measurement. The uses and limitations of the fundamental varieties of psychological measurement. Psychophysical methods, scaling methods, and psychometric methods. (3 cred.; jr., sr.; prereq. 1-2, 4-5)				
	(Fall)	VI	MWF	115Psy	Mr. Clark
	(Spring)	VI	MWF	2P	Mr. Clark
86s	Biographical Psychology. Human personalities in relation to their ancestries, their bodies, and their environments, physical and social. (3 cred.; jr., sr.; prereq. 6 cred. in psy.)				
		II	TThS	301F	Mr. Elliott
90f,91w,92s	Readings in Psychology. Tutorially directed reading and preparation of reports on special topics, usually supplementing an advanced course already completed. (Cred. ar.; jr., sr.; prereq. 1-2 and 3 additional cred., and written permission of instructor)				
		Ar	Ar	Ar	Mr. Elliott, Mr. Bird, Mr. Paterson, Mr. Tinker, Mr. Heron, Mr. Longstaff, Mr. Clark, Mr. Meehl
101f-102w†- 103s	Experimental Psychology (3 cred. per qtr.; cred. ar. for honors students; jr., sr., grad.; prereq. 1-2; and 4-5 or equiv. in another science)				
		VII	MWF	116Psy	Mr. Tinker
		VIII	WF		
108f	Systems of Psychology. A reading course. (3 cred.; jr., sr., grad.; prereq. 1-2 and consent of instructor)				
		Ar	Ar	Ar	Mr. Elliott

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

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

§ Psychology 1-2 is intended to be the normal beginning course in psychology and is the course prerequisite to Business, Education, Law, and Medicine, but see footnote to Psy. A. Psychology 1-2, together with Psy. 4-5, meets the natural science requirement for entrance to the Senior College.

No.	Title	Hour	Day	Bldg.	Instructor
114w	Human Behavior (3 cred.; sr., grad.; prereq. 1-2; 4-5 or Zool. 1-2-3, or Phil. 1)	II	TThS	115Psy	Mr. Elliott
124f	Psychology of Learning. An analysis of associationism and the conditioning, bond, and field theories of learning with a consideration of the application of these theories to problems of normal and abnormal behavior. (3 cred.; jr., sr., grad.; prereq. 9 cred. in psy.)	III	TThS	109Psy	Mr. Heron
125f-126w	Psychology of Individual Differences (6 cred.; cred. ar. for honors students; sr., grad.; prereq. 1-2; 4-5 or 5 cred. in statistics)	II	MWF	115Psy	Mr. Paterson
127s	Projects in the Psychology of Individual Differences (3 cred.; jr., sr., grad.; primarily for majors in Sequence C; prereq. 125-126)	Ar	Ar	Ar	Mr. Paterson
130f†	Vocational and Occupational Psychology (3 cred.; jr., sr., grad.; prereq. 9 cred. in psy.)	II	MW	211Psy	
	Lect.	VI, VII	F	211Psy	
130w†	Vocational and Occupational Psychology (See 130f)	IV	TS	211Psy	Mr. Paterson
	Lect.	V, VI	F	211Psy	
	Lab. Sec. 1	II, III	S	211Psy	
	2				
130s†	Vocational and Occupational Psychology (See 130w)	IV	TS	211Psy	Mr. Paterson
	Lect.	VI, VII	W	211Psy	
	Lab. Sec. 1	VIII-IX	W	211Psy	
	2				
135f†-136w†- 137s†	Occupational Counseling. Occupational information as used in counseling. Study of educational and occupational training opportunities and requirements. Psychological techniques in case analysis, interviewing, and remedial work. Types of vocational problems. Illustrative case histories. (6 cred.; sr., grad.; prereq. for 135-136, 9 cred. or consent of instructor; for 137, 130)	VIII, IX	M	115Psy	Ar
140w	Social Psychology (3 cred.; jr., sr., grad.; prereq. 1-2, 4-5, and 9 credits in Social Science)	III	TThS	206Pt	Mr. Bird
141s	Political Psychology (The same as Political Science 171) (3 cred.; jr., sr., grad.; prereq. same as for 140)	III	TThS	206Pt	Mr. Bird
144f-145w†	Abnormal Psychology (6 cred.; jr., sr., grad.; prereq. 9 cred. in psy.; or 6 cred. in psy. and either Zool. 1-2-3 or 12 cred. in soc. sci.)	IV	MWF	206Pt	Mr. Bird
148w	Physiological Psychology. The elements of neural anatomy and physiology, tonus, neuromuscular set, integration, and the neural basis of learning. The treatment of these topics will stress their importance for psychology. (3 cred.; jr., sr., grad.; prereq. 1-2; 4-5 or Zool. 1-2-3, or consent of instructor)	III	MWF	115Psy	Mr. Hathaway
151f	Animal Psychology. The history of the subject and its philosophical and biological foundations; consciousness and its criteria; sensory processes. (3 cred.; jr., sr., grad.; prereq. 1-2; 4-5 or equiv. in another science)	VI	MWF	109Psy	Mr. Heron
152w	Animal Psychology. Emphasis upon the motivation of behavior; learning; conditioning; insight; reasoning; thinking; judgment; social influences. (3 cred.; jr., sr., grad.; prereq. 1-2; 4-5 or equiv. in another science)	VI	MWF	109Psy	Mr. Heron
153s	Individual Investigations in Animal Psychology. (3 cred.; jr., sr., grad.; prereq. 151 or 152)	Ar	Ar	Ar	Mr. Heron
160f	Psychology in Personnel Work (3 cred.; jr., sr., grad.; prereq. 1-2, 4-5, or 3 cred. in statistics, and Principles of Economics or permission of instructor)	III	MWF	206Pt	Mr. Longstaff

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

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

No.	Title	Hour	Day	Bldg.	Instructor
167w	Techniques and Problems of Public Opinion Analysis. Emphasis on the determinants of opinion, formulation of questions, methods of sampling, social implications of polling, and applications of polling to elections, morale, and national and international issues. (3 cred.; sr., grad.; prereq. 140 or 141)				
		VIII	MWF	2P	Mr. Clark
168s	Research Project in Public Opinion Analysis. Students in journalism will be assigned to problems in cooperation with technical advisers in journalism. (3 cred.; sr., grad.; prereq. 167)				
		Ar	Ar	Ar	Mr. Clark
171w-172s†	Introduction to Clinical Psychology. A survey of the methods of clinical psychology in relation to mental deficiency, special abilities and disabilities, behavior problems, personality disorders, and psychosomatic disturbances in adults and children. (6 cred.; sr., grad.; prereq. 144, either 125 or Educ. Psy. 120 or 5 credits in statistics and 6 additional cred. in psy. or child welfare, or ed. psy. Students intending to use this course professionally should postpone taking it until they are in the Graduate School)				
		VI	MWF	115Psy	Mr. Meehl

For Graduate Students Only

200-201-202	History of Psychology I
203-204-205	History of Psychology II
210-211-212	Research Problems
215-216-217	Basic Seminar in Psychology
225	Seminar in Contemporary Research
230-231-232	Field Work in Psychometrics and Applied Psychology
250-251-252	Topics in Psychology
256	Advanced Psychology of Advertising
260-261-262	Seminar in the Applications of Psychological Methods to the Study of Nervous and Mental Diseases
265-266-267	Seminar in Clinical Psychology
270-271-272	Seminar in Recent Literature of Psychology
281-282-283	Clinical Practice in the Student Counseling Bureau
286	Advanced Biographical Psychology
295-296-297	Seminar in Individual Differences and Applied Psychology

PUBLIC HEALTH

MEDICAL SCHOOL

Advisers in the College of Science, Literature, and the Arts—Professors Anderson and Boynton; and Associate Professor Treloar for Biostatistics.

Major advisers in the College of Education—Professors Anderson and Boynton; Associate Professor Grout.

Major sequence in Biostatistics in the College of Science, Literature, and the Arts—Courses 110, 111, 120, 121, 130, 131, and 18 credits in Senior College courses approved by the adviser.

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

Minor sequence in Public Health in the College of Education—Courses 50 or 51 and 57, 59, 102, Bact. 53, and Physiology 2, 4, or 51.

Major sequence in Public Health Nursing—P.H. 53, 62, 63, 65, 66, 67, 133 and Ed. 81; additional P.H. courses, 5 credits.

Additional requirements—Social science (other than sociology), 9 credits; Freshman English or exemption from the requirement; Bact. 53 or 101; Psy. 1-2; Soc. 1, 49, 50, 91, or 129, and 3 additional credits in Child Welfare; natural science courses, 14 credits.

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

Note—The sequence leads to a B.S. degree with a major in public health nursing, the nine-month certificate course having been discontinued except for students already holding a B.A. or B.S. degree.

For additional details of courses of study in public health consult the Bulletin of the School of Public Health.

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
3f§	Personal Health (2 cred.; fr., soph., no prereq.; not open to students who have taken Human Biol. G.C. 10C in the General College)	VI	MW	BuAud	Dr. OBrien
3w§	Personal Health (See 3f)	VI	MW	BuAud	Dr. OBrien
3s§	Personal Health (See 3f)	VI	MW	BuAud	Dr. OBrien
4w,s§	Health Problems of the Community (2 cred.; prereq. 3 or Human Biology G.C. 10C in the General College)	VI	TTh	*	Dr. Thomson

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50w§	Public and Personal Health (3 cred.; open to jrs. and srs. who have not taken Courses 3, 4, 52, 53, or Human Biol. G.C. 10C in the General College; no prereq.)	III	MWF	*	Ar
50s§	Public and Personal Health (See 50f)	II	MWF	*	Ar
51f§	Community Hygiene (3 cred.; jr., sr.; prereq. 3, or Human Biol. G.C. 10C in the General College; not open to students who have taken 4, 50, 52, or 53)	II	MWF	*	Dr. Cowan
51s§	Community Hygiene (See 51f)	IV	MWF	*	Dr. Cowan
52af,s§	Health Care of the Family (2 cred.; soph., jr., sr.; prereq. Bact. 53, Physiol. 4; not open to students who have taken Course 50 or 51)	VI	MW	313HE	Dr. Todd
52bf,w,s§	Health Care of the Family—Laboratory (1 cred.; soph., jr., sr.; prereq. Bact. 53; Physiol. 4; not open to students who have taken Course 50 or 51) (Sections limited to 20)				
	Sec. 1	VII, VIII	T	01MeH(UF)	Ar
	2	VII, VIII	Th	01MeH(UF)	Ar
53f,s	Elements of Preventive Medicine and Public Health (For nurses and students in pre-social work and others by permission) (5 cred.; prereq. 3 or 50, or equiv. and a course in bacteriology)				
	Lect.	II	MWF	*	Dr. Anderson
	Rec. Sec. 1	III	TTh	*	Miss O'Leary
	2	VI	TTh	*	Miss O'Leary
55w	Nursing and Social Problems in the Control of Gonorrhoea and Syphilis (2 cred.; prereq. 53 and 62. Soc. 90 or 109 may be substituted by pre-social work students. Course 55 may be taken concurrently with any of these prerequisites)	VI	MW	*	Miss O'Leary
56s	First Aid and Safety for Nurses (3 cred.; nurses only)	VI, VII, VIII	TTh	*	Dr. Kernan
57s§	Health of Infant and Preschool Child (2 cred.; jr., sr.; prereq. 4, or 50, or 51, or 52, or 53)	VII	TTh	*	Dr. Boynton
58w	Maternal and Child Hygiene (For nurses only) (3 cred.; prereq. 53 and 62)	VII	MWF	*	Dr. Boynton

* Classroom schedule will be posted on bulletin board outside of Room 121 Millard Hall at the beginning of each quarter.

§ No credit is granted for this course in the major sequence in Public Health Nursing.

No.	Title	Hour	Day	Bldg.	Instructor
59f,w,s	Health of the School Child (3 cred.; jr., sr.; prereq. 3 and 4, or 3 and 51, or G.C. 10C and 4, or G.C. 10C and 51, or 50, or 52, or 53; will be waived for teachers and school nurses, but credit granted only after completion of prereq.)				
	Schedule for 59f	I	MWF	*	Miss Grout,
	Schedule for 59w	IV	MWF	*	Dr. Thomson
	Schedule for 59s	VIII	MWF	*	
60f,s	Tuberculosis and Its Control (For nurses; others may be admitted by special permission) (2 cred.; prereq. 4, 50, 52, or 53 and 62 which may be taken concurrently)	IV	TS	*	Dr. Myers
62f**	Principles of Public Health Nursing I (Primarily for nurses; others admitted by special permission) (3 cred.; jr., sr.; prereq. 53 or equivalent, but may be taken concurrently)				
	Sec. 1¶	III	WF	*	Ar
		IV	MWF	*	
	2¶	VI	MWF	*	Ar
		VII	WF	*	
63w,s**	Principles of Public Health Nursing (Primarily for nurses; others admitted by special permission) (3 cred.; jr., sr.; prereq. 53 or equivalent, but may be taken concurrently)				
	Schedule for 63w Sec. 1¶	IV	MWF		Ar
		2¶	VI		Ar
	Schedule for 63s	IV	MWF	*	Ar
65,66,67f,w,s‡	Field Practice in Public Health Nursing†† (For public health nurses only) (Cred. ar.; jr., sr.; prereq. 53, 62) The credits are to be allowed, according to experience, to these special fields: P.H. 65—School Nursing (prereq. 67) P.H. 66—Rural Nursing (prereq. 67) P.H. 67—Family Health Agency				
		Ar	Ar	*	Miss O'Leary and associates
70w,s‡	Practice Teaching in Home Nursing for Public Health Nurses (Cred. ar.; jr., sr.; prereq. 67, Ed. 81, or permission of instructor) (Enrolment is limited)	Ar	Ar	*	Miss Grout
76f	Nutrition in Public Health Nursing (The same as Home Economics 76) (3 cred.; jr., sr.; prereq. 62 which may be taken concurrently)	II	TThS	*	Ar
80w‡‡	Elementary Vital Statistics (3 cred.; public health nurses only; prereq. special permission of instructor)				
	Lect.	VII	TTh	*	Mr. Treloar
	Lab.	VIII, IX	TTh	118MH	
102f	Environmental Sanitation I (3 cred.; sr., grad.; prereq. 50 or 51 or 53 or 100 or permission of instructor. This course may be taken concurrently with any of these prerequisites)	I	TThS	*	Mr. Pierce, Mr. Olson
103f,w,s	Public Health Bacteriology (3 cred.; sr., grad.; prereq. Bact. 101-102, 116 and permission of instructor)	II, III	MWF	*	Dr. Kabler
104f	Epidemiology I (3 cred.; jr., sr., grad.; prereq. 53 or 100 and consent of instructor)	I	MWF	*	Dr. Anderson
105w	Epidemiology II (3 cred.; sr., grad.; prereq. 104)	Ar	Ar	*	Dr. Anderson
106w	Public Health Administration (3 cred.; physicians, engineers, nurses, social workers, and others by arrangement; prereq. 53, 100 or equiv. Course 106 may be taken concurrently with any of the prerequisites)	I	TThS	*	Dr. Anderson

* Classroom schedule will be posted on bulletin board outside of Room 121 Millard Hall at the beginning of each quarter.

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

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

¶ Sec. 1 is for students who have not had practical experience in public health nursing. Sec. 2 is for students who have had such experience.

** To receive credit for this course the student must complete both Courses 62 and 63.

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

No.	Title	Hour	Day	Bldg.	Instructor
107f	Child and Adult Hygiene (3 cred.; physicians; graduate students in public health nursing and social work admitted by permission of instructor)	VI, VII, VIII	TTh	*	Dr. Boynton
108w	Care of the Handicapped Child (For physicians and nurses) (2 cred.; prereq. 53, 57, 58 or 100 or permission of instructor)	VI	TTh	*	Ar
122s	Public Health Administration Problems (Cred. ar.; prereq. 106)	III	MWF	*	Dr. Anderson
125w	The Community Health Education Program (3 cred.; prereq. 53 or 104, and 106 or to be taken concurrently with 106 or permission of instructor)	VIII, IX	WF	*	Miss Grout
126f	Industrial Health Problems (3 cred.; prereq. 53, Chem. 1-2 or equiv., or by permission of instructor)	Ar	Ar	*	Ar, Miss Henriksen
127f	Industrial Health Problems. Nursing Aspects. (1 cred.; to be taken in conjunction with 126)	IX	TTh	*	Miss Henriksen
128w	Industrial Health Problems II. (3 cred.; prereq. 126, 127)	IX	TTh	*	Dr. Foker
129f,w,s	Field Work in Industrial Nursing, including Emergency Service (15-30 cred.; prereq. 53, 62, 126, 127)	Ar	Ar	*	Miss Henriksen
133w	Mental Hygiene Aspects of Public Health Nursing (3 cred.; jr., sr., grad.; prereq. 62 or experience)	Ar	Ar	*	Dr. Clarke
135s	Conservation of Hearing (For nurses only) (1 cred.; jr., sr., grad.; prereq. 53 and 62 or to be taken concurrently)	I	M	*	Dr. Boies and associates
136s	Sight Conservation (For nurses only) (1 cred.; jr., sr., grad.; prereq. 53 and 62 or to be taken concurrently)	I	W	*	Dr. Hanson and associates
137s	Dental Hygiene (For nurses only) (1 cred.; jr., sr., grad.; prereq. 53 and 62 or to be taken concurrently)	I	F	*	Dr. Jordan
138f,w,s	Field Work in Child Hygiene (Cred. ar.; prereq. 67 or equiv. experience)	Ar	Ar	*	Dr. Aldrich, Miss Mouw, and associates
141s	Social and Economic Aspects of Medical Care (3 cred.; sr., grad.; prereq. 106)	IV	TThS	*	Dr. Weaver
170s	Supervision in Public Health Nursing (For public health nurses only) (3 cred.; sr., grad.; prereq. 53, 61 or 133, 63 and experience in public health nursing or by permission of instructor)	III	TThS	*	Ar
171f,w,s	Problems in Public Health Nursing (For public health nurses only) (Cred. ar.; sr., grad.; prereq. 170, or permission of instructor)	Ar	Ar	*	Ar
173f,w,s,††	Field Work in Supervision (For public health nurses only) (Cred. ar.; sr., grad.; prereq. 170 which may be taken concurrently)	Ar	Ar	*	Ar
174s	Supervision Laboratory (For public health nurses only) (2 cred.; to be taken concurrently with 170)	Ar	Ar	*	Ar
190f,w,s	Field Work in the Community Health Education Program (Cred. ar.; prereq. 125, 227)	Ar	Ar	*	Miss Grout

* Classroom schedule will be posted on bulletin board outside of Room 121 Millard Hall at the beginning of each quarter.

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

For Graduate Students Only

No.	Title	Hour	Day	Bldg.	Instructor
200f,w,s	Research	Ar	Ar *		Dr. Anderson, Dr. Diehl, and others
210f,w,s	Seminar in Public Health (By permission)	Ar	Ar *		Dr. Anderson and staff
227f,w,s	Problems in the Community Health Education Program (Cred. ar.; prereq. consent of instructor)	Ar	Ar *		Miss Grout

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

BIOSTATISTICS

110f	Biometric Principles (3 cred.; jr., sr., grad.; prereq. 18 cred. in biol. sci. or math. through anal. geom.; to be taken with 111)	III	TThS *		Mr. Treloar
110s	Biometric Principles (See 110f)	I	TThS *		Mr. Treloar
111f‡	Biostatistics Laboratory (2 cred.; to be taken with 110)				
	Sec. 1	I, II	TThS	118MH	Miss Martin
	2	VI, VII, VIII	TTh		
	3	I, II	MWF		
	4	III, IV	MWF		
111s‡	Biostatistics Laboratory (See 111f)				
	Sec. 1	II, III	TThS	118MH	Miss Martin
	2	I, II	MWF		
	3	III, IV	MWF		
120s	Correlation Analysis (3 cred.; sr., grad.; prereq. 110 or consent of instructor; to be taken with 121)	III	TThS *		Miss Martin
121s‡	Correlation Laboratory (2 cred.; to be taken with 120)				
	Sec. 1	I, II	MWF	118MH	Miss Martin
	2	VI, VII, VIII	MW		
130w	Random Sampling Distributions (3 cred.; sr., grad.; prereq. 110 or consent of instructor)	III	TThS *		Mr. Treloar
131w‡	Sampling Laboratory (2 cred.; to be taken with 130)				
	Sec. 1	I, II	TThS	118MH	Miss Martin
	2	VI, VII, VIII	MW		
140f‡	Vital Statistics (3 cred.; sr., grad.; prereq. permission of instructor; to be taken in conjunction with 104)				
	Lect.	VII	WF	118MH	Mr. Treloar
	Lab.	VIII, IX	WF		
150‡	<i>Life Tables</i> (3 cred.; prereq. permission of instructor) (<i>Not offered</i>)				
200f,w,s	Research in Biometry (Cred. ar.; prereq. permission of instructor)	Ar	Ar *		Mr. Treloar
211f,w,s	Seminar in Biometry (1 cred.)	Ar	Ar *		Mr. Treloar

RADIO

Courses relating to radio are offered by the School of Journalism and the Department of Speech to juniors and seniors who have had the fundamental prerequisite courses.

* Classroom schedule will be posted on bulletin board outside of Room 121 Millard Hall at the beginning of each quarter.

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

ROMANCE LANGUAGES

Major advisers in the College of Science, Literature, and the Arts—Associate Professors Grismer and Pattison; Assistant Professor Clefton.

Major sequence in the College of Science, Literature, and the Arts—

FRENCH

Courses 70-71-72 or 73-74; 53-54, if the student has not taken French 20; a minimum of 18 additional credits chosen from courses numbered 50 or above, of which at least 9 must be in literary courses.

ITALIAN

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

SPANISH

Courses 65-66-67 or 68-69; 53-54, if the student has not taken Spanish 20; 55; a minimum of 15 additional credits chosen from courses numbered 50 or above. Students planning to do graduate work in Spanish must include in this program 9 credits in literary courses numbered above 100.

A COURSE IN LATIN-AMERICAN STUDIES

See the Bulletin of the College of Science, Literature, and the Arts.

MIXED (FRENCH, ITALIAN, AND SPANISH)

Five credits in conversation and composition.

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

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

Major advisers in the College of Education—French: Assistant Professor Clefton; Spanish: Associate Professor Pattison.

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

Major recommendation in Spanish: 35 credits in courses numbered above 4, these courses to include 65-66-67 or 68-69 or 74-75-76; 53-54 (or 20); 55; 60 and eight credits chosen from the following: 56; 70-71-72; 103-104-105; 171-172-173.

Minor recommendation: 17 credits in one language in courses numbered above 4 including Survey of French Literature, Survey of Spanish Literature, or Survey of South American Literature.

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

FRENCH

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w	Beginning French (10 cred.; no prereq.)				
		I	MTWThF	227F	Ar
		VI	MTWThF	226F	Ar
		VIII	MTWThF	201F	Ar

No.	Title	Hour	Day	Bldg.	Instructor
1af-2aw§	Beginning French—Conversational Section (10 cred.; no prereq.)				
	Demonstration	I	MTWThF	6F	Ar
	Plus Laboratory Drill Sec. 1	VII	MTWThF	17F	Ar
	2	VIII	MTWThF	17F	
	3	VIII	MTWThF	207F	
1w-2s	Beginning French (See 1f-2w)	III	MTWThF	101F	Ar
		VII	MTWThF	227F	Ar
1s	Beginning French (1st qtr. of 1-2. See 1f-2w)	III	MTWThF	201F	Ar
		VII	MTWThF	202F	Ar
2f	Beginning French (2nd qtr. of 1-2. See 1f-2w)	III	MTWThF	202F	Ar
		VI	MTWThF	6F	Ar
3f-4w	Intermediate French (10 cred.; prereq. 1-2, or two years of high school French. Students who have had three years of high school French will omit Course 3 and take Course 4)	III	MTWThF	226F	Ar
		VII	MTWThF	202F	Ar
3w-4s	Intermediate French (See 3f-4w)	III	MTWThF	202F	Ar
		VI	MTWThF	6F	Ar
3s	Intermediate French (1st qtr. of 3-4). (See 3f-4w)	I	MTWThF	227F	Ar
		VI	MTWThF	226F	Ar
		VIII	MTWThF	201F	Ar
3as§	Intermediate French—Conversational Section (5 cred.; prereq. 1af-2aw)				
	Demonstration	I	MTWThF	6F	Ar
	Plus Laboratory Drill Sec. 1	VII	MTWThF	17F	Ar
	2	VIII	MTWThF	17F	
	3	VIII	MTWThF	207F	
4f	Intermediate French (2nd qtr. of 3-4; prereq. 3, or three years of high school French)	II	MTWThF	212F	Ar
		VI	MTWThF	101F	Ar
4af	Intermediate French—Conversational Section (2nd qtr. of 3a) (5 cred.; prereq. 3a)				
	Demonstration	III	MTWThF	205F	Ar
	Plus Laboratory Drill	VII	MTWThF	10F	Ar
20w,s	Oral and Written French (5 cred.; prereq. 4, or four years of high school French)				
	(Winter)	VI	MTWThF	8F	Ar
	(Spring)	III	MTWThF	226F	Ar

Senior College Courses

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

50w	French Pronunciation (3 cred.; jr., sr.; prereq. 3-4)	II	TThS	203F	Miss Guinotte
52s	French Pronunciation and Diction (Open only to candidates for the French play) (1 or 2 cred.; jr., sr.; prereq. 3-4)	Ar	Ar	Ar	Ar
53f	French Composition (3 cred.; jr., sr.; prereq. 3-4)	VI	MWF	202F	Mr. Fermaud
54w-55s	French Conversation (6 cred.; jr., sr.; prereq. 53 or 20)	VI	MWF	203F	Mr. Fermaud

§ The conversational method will be used in these sections. Substantially less home study will be required than in the standard sections. Registration in French 1af-2aw-3as is limited. Written permission must be obtained from Professor Strich in Room 200 Folwell Hall or, during registration week in the fall, in Room 103 Folwell Hall.

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

No.	Title	Hour	Day	Bldg.	Instructor
3f-64w	Advanced French Composition (6 cred.; jr., sr.; prereq. 53 or 20 with a grade of B)	II	MWF	203F	Miss Guinotte
65s	Advanced French Conversation (3 cred.; jr., sr.; prereq. 54-55 or 20 with a grade of B)	II	MWF	203F	Miss Guinotte
70f-71w-72s**	Survey of French Literature (9 cred.; jr., sr.; prereq. 3-4)	IV	MWF	201F	Mr. Cleton
73w-74s**	Survey of French Literature (10 cred.; jr., sr.; prereq. 3-4)	III	MTWThF	109F	Mr. Brackney
75f-76w-77s	French Civilization and Culture (9 cred.; jr., sr.; prereq. 3-4)	III	MWF	203F	Mr. Fermaud
80f	French Literature: 19th Century—Chateaubriand and Romantic Prose (3 cred.; jr., sr.; prereq.*)	II	MWF	201F	Mr. Barton
81w	French Literature: 19th Century—Drama (3 cred.; jr., sr.; prereq.*)	II	MWF	201F	Mr. Barton
82s	French Literature: 19th Century—Poetry (3 cred.; jr., sr.; prereq.*)	Ar	Ar	Ar	Ar
90f-91w-92s	Reading in the Student's Major Field (English, History, Philosophy, etc.) (1 or 2 cred. per qtr.; jr., sr.; prereq. 4 and consent of instructor)	Ar	Ar	Ar	Ar
103f-104w-105s	French Syntax and Composition (3 cred.; jr., sr., grad.; prereq. 63 or registration in 63)	VI	F	201F	Mr. Barton
115f-116w-117s**	French Literature: 17th Century (9 cred.; jr., sr., grad.; prereq.*)	Ar	Ar	Ar	Mr. Fermaud
118f-119w-120s**	French Literature: 18th Century (9 cred.; jr., sr., grad.; prereq.*)	Ar	Ar	Ar	Mr. Sirich
121-122-123	French Literature: 16th Century (9 cred.; jr., sr., grad.; prereq. 9 cred. in literature courses above 74 or permission of instructor) (<i>Not offered</i>)				
130f	French Romantic Poetry—Victor Hugo (3 cred.; jr., sr., grad.; prereq.*)	Ar	Ar	Ar	Mr. Cleton
131	Parnassian Poetry (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
132	Baudelaire, Verlaine, Rimbaud (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
146	Contemporary French Dramatic Literature (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
156s	French Realistic Novel (3 cred.; jr., sr., grad.; prereq.*)	VII	MWF	201F	Mr. Barton
157	French Novel, 1880-1915 (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
158	Contemporary French Novel I. Course conducted in French. (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
159	Contemporary French Novel II. A continuation of French 158. (3 cred.; jr., sr., grad.; prereq.*) (<i>Not offered</i>)				
171f-172w-173s†	History of French Language (3 cred.; jr., sr., grad.; prereq. one year of Latin or permission of instructor)	Ar		Ar 203F	Mr. Brackney

For Graduate Students Only

201f-202w-203s	Old French Phonology and Morphology (6 cred.)	Ar		Ar Ar	Mr. Brackney
204f-205w-206s	Reading in Old French Literature (6 cred.)	Ar		Ar Ar	Mr. Brackney
225f-226w-227s	French Seminar: Modern Period (6 cred.)	Ar		Ar Ar	Ar

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

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

** Students may enter any quarter with permission of instructor.

ITALIAN

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w¶	Beginning Italian (8 cred.; no prereq.)	IV	MTWTF	302F	Miss Nissen
3s or 4s	Intermediate Italian (4 cred.; prereq. 3, or 2 with grade of C)	IV	MTWTF	302F	Miss Nissen
5w¶	Reading Knowledge of Italian (5 cred.; prereq. knowledge of French, Latin, or Spanish. No previous knowledge of Italian is necessary)	VI	MTWThF	302F	Miss Nissen

Senior College Courses

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

69f	Survey of Italian Literature I (3 cred.; jr., sr.; prereq.§)	II and 1 hr. ar	TTh	302F	Miss Nissen
70w	Survey of Italian Literature II (3 cred.; jr., sr.; prereq.§)	II and 1 hr. ar	TTh	302F	Miss Nissen
71	Modern Poetry (<i>Leopardi, Carducci</i>) (3 cred.; jr., sr.; prereq.§) (<i>Not offered</i>)				
72	Modern Drama (<i>Giacosa, Bracco, Pirandello</i>) (3 cred.; jr., sr.; prereq.§) (<i>Not offered</i>)				
73s	Boccaccio (3 cred.; jr., sr.; prereq.§)	II	MWF	302F	Miss Nissen
74	Petrarch (3 cred.; jr., sr.; prereq.§) (<i>Not offered</i>)				
159f-160w**	Dante (6 cred.; jr., sr., grad.; prereq. one course above 50)	II	MWF	302F	Miss Nissen
161-162	The Sixteenth Century (6 cred.; jr., sr., grad.; prereq. one course above 50) (<i>Not offered</i>)				
164s§§	Dante in English (3 cred.; jr., sr., grad.; prereq. consent of instructor)	II and 1 hr. ar	TTh	302F	Miss Nissen

PORTUGUESE

1f-2w	Beginning Portuguese (10 cred.; prereq. Span. 1-2 or French 1-2 or permission of instructor)	VII	MTWThF	206F	Ar
3s	Intermediate Portuguese (5 cred.; prereq. 1-2)	VII	MTWThF	206F	Ar

SPANISH

Junior College Courses

1f-2w	Beginning Spanish (10 cred.; no prereq.)	I	MTWThF	226F	Ar
		IV	MTWThF	226F	Ar
		VI	MTWThF	227F	Ar
		VII	MTWThF	113F	Ar
		IX	MTWThF	201F	Ar

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

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

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

** Students may enter any quarter with permission of instructor.

§§ No knowledge of Italian is required for this course.

No.	Title	Hour	Day	Bldg.	Instructor
1af-2aw*	Beginning Spanish—Conversational Section (10 cred.; no prereq.)				
	Demonstration	VII	MTWThF	207F	Ar
	Plus Laboratory Drill Sec. 1	VI	MTWThF	203F(f)	Ar
		2	VIII	MTWThF	202F(w)
		3	VIII	MTWThF	205F
					206F
1w-2s	Beginning Spanish (See 1f-2w)	III	MTWThF	206F	Ar
		VII	MTWThF	109F	Ar
		IX	MTWThF	202F	Ar
1s	Beginning Spanish (1st qtr. of 1-2. See 1f-2w)	II	MTWThF	226F	Ar
		VII	MTWThF	213F	Ar
2f	Beginning Spanish (2nd qtr. of 1-2. See 1f-2w)	II	MTWThF	202F	Ar
		VIII	MTWThF	202F	Ar
3f-4w	Intermediate Spanish (10 cred.; prereq. 1-2 or two years of high school Spanish. Students who have had three years of high school Spanish will omit Course 3 and take Course 4)	II	MTWThF	226F	Ar
		IV	MTWThF	9F	Ar
		VI	MTWThF	110F	Ar
		IX	MTWThF	226F	Ar
3w-4s	Intermediate Spanish (See 3f-4w)	II	MTWThF	202F	Ar
		VIII	MTWThF	202F	Ar
3s	Intermediate Spanish (1st qtr. of 3-4. See 3f-4w)	I	MTWThF	226F	Ar
		IV	MTWThF	226F	Ar
		VI	MTWThF	227F	Ar
		VII	MTWThF	113F	Ar
		IX	MTWThF	201F	Ar
3as*	Intermediate Spanish—Conversational Section (5 cred.; prereq. 1af-2aw)				
	Demonstration	VII	MTWThF	207F	Ar
	Plus Laboratory Drill Sec. 1	VI	MTWThF	202F	Ar
		2	VIII	MTWThF	205F
		3	VIII	MTWThF	206F
4f	Intermediate Spanish (2nd qtr. of 3-4; prereq. 3, or three years of high school Spanish)	II	MTWThF	227F	Ar
		IV	MTWThF	227F	Ar
		VI	MTWThF	8F	Ar
4af*	Intermediate Spanish—Conversational Section (2nd qtr. of 3a-4a; prereq. 3a)				
	Demonstration	VII	MTWThF	124F	Ar
	Plus Laboratory Drill Sec. 1	VI	MTWThF	302F	Ar
		2	VIII	MTWThF	12F
20w	Oral and Written Spanish (5 cred.; prereq. 4 or four½ years of high school Spanish)	III	MTWThF	201F	Ar
20s	Oral and Written Spanish (See 20f)	III	MTWThF	125F	Ar
		IV	MTWThF	206F	Ar
30w,s	Commercial Spanish (5 cred.; prereq. 20 or 53)	VII	MTWThF	10F	Mr. Cuneo

Senior College Courses

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior

* The conversational method will be used in these sections. Substantially less home study will be required than in the standard sections. Registration in Spanish 1af-2aw-3as and 4af is limited. Written permission must be obtained from Professor Sirich in Room 200 Folwell Hall or, during registration week in the fall, in Room 103 Folwell Hall.

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

College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

No.	Title	Hour	Day	Bldg.	Instructor
52w	Spanish Pronunciation and Diction (Open only to candidates for the Spanish play; open to others with permission of instructor) (2 cred.; jr., sr.; prereq. 3-4)	Ar	Ar	Ar	Ar
53f	Spanish Composition (3 cred.; jr., sr.; prereq. 3-4)	II	TThS	206F	Mr. Cúneo
		III	TThS	203F	Mr. Cúneo
54w-55s	Spanish Conversation (6 cred.; jr., sr.; prereq. 53 or 20)	II	TThS	206F	Mr. Cúneo
	Sec. 1	III	TThS	203F	Mr. Cúneo
	2	VII	MW	203F	Mr. Le Fort
56s	Spanish Phonetics and Diction (5 cred.; jr., sr.; prereq. 20 or 53)	VII, VIII, IX	Th	203F	Mr. Le Fort
60f	Advanced Spanish Composition (3 cred.; jr., sr.; prereq. 53 or 20 with grade of B)	VI	MWF	209F	Mr. Le Fort
61w-62s	Advanced Spanish Conversation (6 cred.; jr., sr.; prereq. 54-55 or 20 with grade of B)	VI	MWF	209F	Ar
65f-66w-67s	Survey of Spanish Literature (9 cred.; jr., sr.; prereq. 3-4)	VI	MWF	205F	Mr. Pattison
68w-69s	Survey of Spanish Literature (10 cred.; jr., sr.; prereq. 3-4)	VI	MTWThF	206F	Ar
70f-71w-72s	Latin-American Civilization and Culture (9 cred.; jr., sr.; prereq. 5 credits above 4 or permission of instructor)	IV	MWF	203F	Mr. Le Fort
74f-75w-76s	Survey of Spanish-American Literature: Contemporary Prose and Poetry (9 cred.; jr., sr.; prereq. 3-4)	II	MWF	304F	Mr. Le Fort
103f-104w-105s	Spanish Syntax and Composition (3 cred.; jr., sr., grad.; prereq. 60 or registration in 60)	Ar	Ar	Ar	Mr. Pattison
110f-111w-112s	Spanish Literature: 19th Century (9 cred.; jr., sr., grad.; prereq.*)	IV	MWF	316F	Mr. Pattison
115-116-117	<i>Spanish Literature: 17th Century</i> (9 cred.; jr., sr., grad.; prereq.*) (Not offered)				
120	<i>The Ballad</i> (3 cred.; jr., sr., grad.; prereq.*) (Not offered)				
130	<i>Cervantes: Don Quijote</i> (3 cred.; jr., sr., grad.; prereq.*) (Not offered)				
131	<i>The Picaresque Novel</i> (3 cred.; jr., sr., grad.; prereq.*) (Not offered)				
140f-141w-142s	Contemporary Latin-American Literature (9 cred.; jr., sr., grad.; prereq. 65-66-67 or 68-69 or 74-75-76)	VIII	MWF	110F	Mr. Le Fort
155-156-157	<i>Spanish Literature: 16th Century</i> (9 cred.; jr., sr., grad.; prereq.*) (Not offered)				
171-172-173	<i>History of the Spanish Language</i> (3 cred.; jr., sr., grad.; prereq. 4 and 1 yr. of Latin or permission of instructor) (Not offered)				
174-175-176	<i>Contemporary Spanish Literature</i> (9 cred.; jr., sr., grad.; prereq.*) (Not offered)				

For Graduate Students Only

241-242-243	<i>Old Spanish Philology</i> (6 cred.) (Not offered)				
244-245-246	<i>Readings in Old Spanish Literature</i> (6 cred.) (Not offered)				
250f-251w-252s	Spanish Seminar (6 cred.)	VIII, IX	W	203F	Mr. Pattison
253f-254w-255s	Seminar in Spanish-American Literature (6 cred.)	Ar	Ar	Ar	Ar

RUSSIAN

Junior College Courses

1f-2w	Beginning Russian (10 cred.; no prereq.)	VII	MTWThF	311F	Miss Niemi
3s	Intermediate Russian (5 cred.; prereq. 1-2)	VII	MTWThF	311F	Miss Niemi

* The prerequisite is 65-66-67 or 68-69.

Senior College Courses

Senior College courses with numbers less than 100 are open to Junior College students who have an average grade of at least C in the prerequisite courses.

No.	Title	Hour	Day	Bldg.	Instructor
51f-52w-53s	Advanced Russian (9 cred.; jr., sr.; prereq. 3)	VI	MWF	212F	Miss Niemi
55s	Russian Pronunciation (2 cred.; jr., sr., prereq. 3)	IV	TF	204F	Mr. Reichardt
61f-62w-63s	Russian Composition (6 cred.; jr., sr.; prereq. 3)	VI	TTh	209F	Miss Niemi
71f-72w-73s	Rapid Reading of Russian Literature. Selected readings of modern Russian prose, with the aim of attaining facility in reading. (9 cred.; jr., sr.; prereq. 51-52-53 or consent of instructor)	VIII	MWF	306F	Miss Niemi
81-82-83	<i>Reading of Non-literary Russian Texts</i> (9 cred.; jr., sr.; prereq. 51-52-53 or consent of instructor) (<i>Not offered</i>)				
101-102-103*	<i>Survey of Russian Literature</i> . 101: Pushkin, Lermontov, Gogol, Turgenev; 102: Dostoevski and Tolstoy; 103: The Period from 1880. (9 cred.; jr., sr., grad.; prereq. 8 credits in literature) (<i>Not offered</i>)				
131-132-133	<i>From Pushkin to Tolstoy—Advanced Interpretation</i> (9 cred.; jr., sr., grad.; prereq. 71-72-73 or consent of instructor) (<i>Not offered</i>)				

SCANDINAVIAN

Junior College Courses

1f-2w	Beginning Norwegian (10 cred.; no prereq.)	VI	MTWThF	12F	Mr. Olson
3s	Intermediate Norwegian (5 cred.; prereq. 1-2 or equiv.)	VI	MTWThF	12F	Mr. Olson
4f-5w-6s	Advanced Norwegian (9 cred.; prereq. 1-2-3 or equiv.)	VII	MWF	12F	Mr. Olson
7f-8w	Beginning Swedish (10 cred.; no prereq.)	II	MTWThF	12F	Mrs. Lorenzen
9s	Intermediate Swedish (5 cred.; prereq. 7-8 or equiv.)	II	MTWThF	12F	Mrs. Lorenzen
10f-11w-12s	Advanced Swedish (9 cred.; prereq. 7-8-9 or equiv.)	IV	MWF	12F	Ar
22w-23s§	Scandinavian Life Today and Yesterday (6 cred.; no prereq.)	Ar	Ar	Ar	Mr. Gustafson and staff
					with lectures by Mr. Blegen, Mr. Reichardt, Mr. Steefel, Mr. Stephenson

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

51§	<i>Scandinavian Literature in the 19th Century</i> (2 cred.; jr., sr.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) (<i>Not offered</i>)				
52§	<i>Characteristic Trends in Contemporary Scandinavian Literature</i> (2 cred.; jr., sr.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) (<i>Not offered</i>)				
113f-114w	Gothic (6 cred.; sr. with completed major sequence, grad.) (The same as German 113-114)				
	113f Gothic. Introduction to Germanic Linguistics (4 cred.)	VIII, IX, X	W	302F	Mr. Reichardt
	114w Gothic Texts (2 cred.)	VIII, IX	W	302F	Mr. Reichardt

* No knowledge of the Russian language is required.

§ No knowledge of Scandinavian languages is required.

No.	Title	Hour	Day	Bldg.	Instructor
153s	The Modern Scandinavian Home As an Expression of Northern Art (The same as Art Ed. 153) (3 cred.; jr., sr., grad.)	Ar	Ar	Ar	Miss Lien
161f§	The Modern Scandinavian Novel (3 cred.; jr., sr., grad.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature)	III	MWF	12F	Mr. Gustafson
171s§	The Modern Scandinavian Drama (3 cred.; jr., sr., grad.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature)	III	MWF	12F	Mr. Gustafson
183§	<i>Germanic Heroic Poetry</i> (The same as German 183) (3 cred.; sr., grad.; prereq. 8 cred. in literature) (<i>Not offered</i>)				
185	<i>History of the Scandinavian Languages</i> (3 cred.; sr., grad.; prereq. 4-5-6 or 10-11-12 or at least one Germanic language) (<i>Not offered</i>)				
195	<i>Introduction to Old Norse Language and Literature.</i> Old Norse Phonology and Morphology. Survey of Old Icelandic history and literature. ((The same as German 195) (4 cred.; sr., grad.; prereq. 113) (<i>Not offered</i>))				

For Graduate Students Only

215-216-217	<i>Studies in Scandinavian Romanticism</i> (<i>Not offered</i>)				
218f-219w-220s	Studies in Late Nineteenth-Century Scandinavian Literature	Ar	Ar	Ar	Mr. Gustafson
221f-222w-223s	Biographical Problems in Strindberg	Ar	Ar	Ar	Mr. Gustafson
230f-231w-232s	Seminar: Germanic Languages and Literature (9 cred.; prereq. at least two Germanic dialects)				
	Texts in Germanic Dialects. Runic Inscriptions. (The same as German 218-219-220)	VIII, IX, X	T	302F	Mr. Reichardt

SECRETARIAL TRAINING

Courses in typewriting, shorthand, and secretarial procedure are regularly offered to Science, Literature, and the Arts students. The courses are listed under the heading "Economics" in the School of Business Administration part of this bulletin.

SOCIAL SCIENCE

See General Studies, page 57.

SOCIOLOGY AND SOCIAL WORK

Major advisers in the College of Science, Literature, and the Arts—Professors Chapin, Fenlason, Kirkpatrick, Monachesi, Nelson, and Vold; Associate Professors Clendening, Doyle, Kidneigh, Shea, Sletto; Assistant Professors Guilford, Schneider and Scott; Instructor Nagel.

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

Group I—General Sociology Sequences—

Sequence A. Sociological principles. Courses 100, 101, 103, 120, 140, 145 and 10 additional credits elected from other courses numbered 100 and above.

Sequence B. Sociological Orientation to the Modern World. Courses 50, 53, 100, 101, 119, 120 and 10 additional credits elected from other courses numbered 100 and above.

Group II—Sequences with Vocational Emphasis—

Sequence C. Criminology and Penology. Courses as follows: 50, 53, 102, 105, 106 or 107, 132 and 10 additional credits.

§ No knowledge of Scandinavian languages is required.

Sequence D. An interdepartmental sequence recommended as preparation for graduate study in the School of Social Work.* It may be taken as a substitute for the major and minor sequences required for the B.A. degree. Courses 50, 51, 53, 91, 101, 114; three Senior College courses in Sociology numbered 100 or above in addition to those specifically required; Economics 82, 83 (unless the student has had Economics 6-7, Principles of Economics, or its equivalent); Psychology 144-145; Philosophy 70 or Soc. 145; at least six credits in Senior College courses in history or political science; two Senior College courses in public health.

(Prerequisites: For Sequence D, Sociology 1, 45, 49; Political Science 1-2; Psychology 1-2. For recommended Junior College electives see the statement about preparation for graduate social work in the Bulletin of the College of Science, Literature, and the Arts.)

Students who are taking this Major Sequence D may elect, and get credit for, a maximum of 18 credits in the following courses in Art Education and Physical Education which are ordinarily not open to Science, Literature, and the Arts students. This privilege is primarily for students preparing for graduate training in group work directed to leadership in recreation.

Art Education

31,32,33,

34 Orientation in Handcraft Processes

73A,B,C Ceramic Materials and Processes

74 Bookbinding Process

75 Metal Work

76 Textile Materials and Processes

81A-B Techniques of Puppetry

Physical Education for Men

56 Nature and Function of Play

136E Leadership in Community Recreation

141E Administration and Supervision of Public Recreation

142E Group Leadership and Community Organization for Recreation

Physical Education for Women

54 Camp Leadership

60 Principles of Play

63 Technique of Teaching Folk Dancing

80 Principles of Rhythm

Sequence E. Social Administration, with emphasis on leadership and planning. Courses 50, 51, 53, 91, 101, 104; one from 110, 114, 119; 160, 161, and 5 additional credits elected from other courses numbered 100 or above.

Sequence F. Social Research. Courses 112, 122 or equivalent, 123, 141, 162-163-164, and 13 additional credits elected from other courses numbered 100 or above.

(Prerequisites: For Sequences A, B, C, E, and F, Soc. 1 and 45, and a total of 15 credits from courses in sociology, anthropology, education, history, philosophy, political science, psychology, and zoology.)

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

Major adviser in the College of Education—Professor Kirkpatrick.

Requirements for a teacher's certificate—Major recommendation: 36 credits including 1, 2, and 14.

Minor recommendation: 19 or 20 credits including 1, 2, and 14.

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

* This interdepartmental sequence is more fully described in the Bulletin of the College of Science, Literature, and the Arts.

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

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f,w,s	Introduction to Sociology. A study of the characteristics of human group life. An analysis of the factors associated with the development of human group life and man's social environment; the structure of the social environment and its influence upon the individual's behavior. (5 cred.; no prereq.)				
	Lect.	I	TThS	BuAud	Mr. Monachesi
	Rec. Sec. 1	I	WF	2J	and others
	2	II	MW	2J	
	3	IV	MW	110P	
	4	VI	MW	111Bu	
	5	VII	MW	211NH	
	6	III	TTh	308F	
1f,w	Introduction to Sociology (For students of the College of Agriculture, Forestry, and Home Economics only) (3 cred.; no prereq.)				
		III	TThS	102Hr(UF)	Mr. Schneider
1s	Introduction to Sociology (For students of the College of Agriculture, Forestry, and Home Economics only) (3 cred.; no prereq.)				
		I	TThS	240OD(UF)	Mr. Schneider
2f,w,s	Individual and Minority Group Adjustment. The influence of social interaction on personality and personality adjustment with special reference to the family. The role of attitude and prejudice in relation to racial and other minority groups. Forms of social opposition including competition, class tension, and warfare. (5 cred.; prereq. 1)				
	Lect.	I	TThS	JAud	Mr. Kirkpatrick
	Rec. Sec. 1	I	WF	113F	
	2	II	TTh	210P	
	3	IV	MW	218P	
	4	VI	TTh	210P	
14w,s	Rural Sociology. A presentation of factual data necessary to an understanding of the problems of rural social life. (3 cred.; prereq. 1)				
		IV	MWF	2P(f)	Mr. Nelson,
				211NH(w,s)	Mr. Marshall
14f,w	Rural Sociology (For students of the College of Agriculture, Forestry, and Home Economics) (3 cred.; prereq. 1)				
		I	TThS	102Hr(UF)	Mr. Nelson,
					Mr. Marshall
45f,w,s	Social Statistics (5 cred.; prereq. 1. Not open to students who have received credit in Econ. 5)				
	Lect.	IV	MWF	108NH	Mr. Sletto
	Lab. Sec. 1	VI, VII	MW	108NH	
	2	VI, VII	TTh	108NH	
48f	Social Control and Criminal Behavior. A study of the basis of orderliness and law-abiding behavior and its disintegration into criminal behavior. (3 cred.; prereq. 1)				
		VII	MWF	2P	Mr. Vold
48s	Social Control and Criminal Behavior (See 48f)				
		VII	MWF	2P	Mr. Vold
49f	Social Problems. A survey course in contemporary social problems with especial emphasis on personal demoralization and social disorganization. (3 cred.; prereq. 1)				
		I	MWF	JAud	Mr. Schneider
49w	Social Problems (See 49f)				
		II	MWF	JAud	Mr. Schneider
49s	Social Problems (See 49f)				
		I	MWF	JAud	Mr. Schneider

Senior College Courses
COURSES IN SOCIOLOGY

Course 53 is open to third quarter sophomores who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

No.	Title	Hour	Day	Bldg.	Instructor
50f-51w	Areas of Social Work (5 cred. each qtr. for Sequence D students; 4 cred. other students; jr., sr.; prereq. 49, 50, or 51)	III	TThS	110P	Miss Nagel
		VII	and Th	211NH	
					and 3 hrs. of observation for Sequence D students
50w-51s	Areas of Social Work (See 50f-51w)	II VI	TThS Th	110P 211Bu	Miss Nagel
					and 3 hrs. of observation for Sequence D students
53f,w,s	Elements of Criminology. A general survey of the field of criminology. (3 cred.; jr., sr.; prereq. same as for 49)	III	MWF	211NH	Mr. Vold
57	<i>Leisure in the Modern World</i> (3 cred.; open only to students in the College of Education; prereq. Soc. 1 or equiv.) (<i>Not offered</i>)				
91f	Case Method Applied to the Study of Human Problems (3 cred.; jr., sr.; prereq. 50 or 51 or consent of major adviser)	II	TThS	2J	Mrs. Fenlason
91s	Case Method Applied to the Study of Human Problems (See 91f)	III	TThS	2J	Mrs. Fenlason
95f	Introduction to Public Welfare. The public welfare function of American government with especial emphasis on the social security programs. (3 cred.; jr., sr.; prereq. 50 or 51 or consent of major adviser)	III	TThS	112Bu	Mr. Guilford
97f-98w-99s	Tutorial and Honors Work in Selected Fields (9 cred.; jr., sr.; prereq. consent of major adviser in sociology)	Ar	Ar	Ar	Ar
100f	Social Psychology (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	IV	TThS	108NH	Mr. Kirkpatrick
101s	Social Organization (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	II	TThS	211NH	Mr. Chapin
102s	Contemporary Penology (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	II	MWF	209Bu	Mr. Vold
103w	Sociology of Conflict (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	II	MWF	211Bu	Mr. Vold
104f	City Planning. General survey of the economic, governmental, social, and technical phases of city planning and group housing. (The same as Architecture 104, Economics 111, and Political Science 123) (3 cred.; jr., sr., grad.; no prereq.)	III	MWF	320E	Mr. Jones, Mr. Anderson, Mr. Filipetti, Mr. Vaile, Mr. Sletto

No.	Title	Hour	Day	Bldg.	Instructor
105f	Criminological Theories—Historical and Contemporary. (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	IV	MWF	211NH	Mr. Vold
106	<i>Police Problems and Practices in the United States.</i> A study of personnel, organization, and public relations of police forces with special attention to successful techniques of integrating police work with other community agencies. (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor) (<i>Not offered</i>)				
107w	Adult Parole and Probation. A critical examination of problems and practices in the supervision of adult criminals. (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	VII	MWF	2J	Mr. Vold
110f	Rural Community Organization (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	I	MWF	211NH	Mr. Nelson
112s	Problems in Rural Social Research (2 cred.; sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	VIII-IX	M	2J	Mr. Nelson
114w	Rural Social Institutions (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	I	TThS	211NH	Mr. Nelson
115	<i>Religion As a Social Institution</i> (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor) (<i>Not offered</i>)				
116	<i>The Newspaper As a Social Institution</i> (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor) (<i>Not offered</i>)				
118w	Interaction of Racial and Cultural Groups in America (3 cred.; jr., sr., grad.; prereq. Soc. 1 and 15 credits in social science, child welfare, education, philosophy, psychology, or consent of instructor)	II	TThS	108NH	Mr. Kirkpatrick
119w	The Family—with special reference to contemporary marriage problems (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	IV	TThS	211NH	Mr. Kirkpatrick
119s	The Family—with special reference to contemporary marriage problems (See 119w)	IV	TThS	211NH	Mr. Kirkpatrick
120f	Social Life and Cultural Change. The theory of cultural lag. The idea of progress. The genesis of the unilinear conception of change and its implications for sociological theory. (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	II	MWF	211NH	Mr. Schneider
122f	Statistical Methods (3 cred.; grad.*; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	II	TThS	104J	Mr. Chapin
123f	Methods of Social Research (3 cred.; jr., sr., grad.; prereq. Soc. 45 or equiv.)	II	MWF	211Bu	Mr. Sletto
132s	Juvenile Courts and Probation (3 cred.; jr., sr., grad.; prereq. 53)	III	TThS	108NH	Mr. Monachesi
140w	Theories of Social Order. A survey of the leading theories of social organization in the European tradition, including the theory of hierarchy of estates and the doctrine of harmony of interests; the theory of the contract of society and equilibrium of interests; and the realist or conflict theory. Christianity and social order. (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	I	MWF	211NH	Mr. Schneider

* For graduate students only, except by petition.

No.	Title	Hour	Day	Bldg.	Instructor
	Problems in Social Measurement (3 cred.; jr., sr., grad.; prereq. 45 or 122 or equiv.)	III	MWF	2J	Mr. Sletto
145s	Theories of Social Reconstruction. American reformers and reform movements from the 1830's to the present. Societies of cooperation and religious communisms in the United States. The muckrakers. The effects of war behavior on social reconstruction and reform movements. (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	III	TThS	200Pt	Mr. Schneider
146¶	<i>Community Organization and the Social Setting of Recreation</i> (3 cred.; jr., sr., grad.; prereq. for Arts College students, 3 courses in soc.; for students in Education, 3 courses in soc. sci. including Soc. 57) (<i>Not offered</i>)				
147¶	<i>Group Leadership and Organization</i> (3 cred.; jr., sr., grad.; prereq. Soc. 146 or equiv.) (<i>Not offered</i>)				
148¶	<i>Supervisory Problems in Recreation</i> (Open only to majors or minors in recreation curriculum) (3 cred.; jr., sr., grad.; prereq. Soc. 147 or equiv.) (<i>Not offered</i>)				
160f	Population Trends and Policies (3 cred.; jr., sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	IV	MWF	125F	Mr. Marshall
161w	Social Aspects of Housing and Standards of Living (3 cred.; sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	II	TThS	211NH	Mr. Chapin
162f-163w-164s	Field Work and Laboratory Training in Social Research (6 cred.; jr., sr., grad.; prereq. 45 or 122 which may be taken simultaneously)	Ar	Ar	Ar	Mr. Sletto

COURSES IN SOCIAL WORK

109f§	The Field of Social Work (3 cred.; grad.*; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor)	IV	TThS	2J	Mrs. Doyle
109w§	The Field of Social Work (See 109f)	I	TThS	2J	Mrs. Doyle
122f	Statistical Methods (3 cred.; grad.*; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor) (The same as Soc. 122)	II	TThS	108NH	Mr. Chapin
124f,s	Community Organizations (3 cred.; grad.*; prereq. 109 or equiv.)	I	TThS	211NH	Mr. Kidneigh
125f	Principles of Group Work (3 cred.; grad.*; prereq. 109, which may be taken simultaneously, or equiv.)	IV	TS	102F	Miss Blake
		VI	Th	2J	
125s	Principles of Group Work (See 125f)	Ar	Ar	Ar	Miss Blake
126s	Problems of Supervision in Group Work (3 cred.; grad.*; prereq. 125, 156)	Ar	Ar	Ar	Ar
127w	Legal Aspects of Social Work (3 cred.; grad.*; prereq. 109, which may be taken simultaneously)	I	TThS	218P	Mr. Bachelder
128w	Principles of Administration, Publicity, and Finance Applied to Social Work (2 cred.; grad.*; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor—Social Work 109 or equiv. must be included)	IV	TS	108NH	Mr. Kidneigh

* For graduate students only, except by petition.

§ This course is for mature students who have not had Courses 49 and 50-51.

¶ Open only to majors in sociology and social work or recreation.

126 COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

No.	Title	Hour	Day	Bldg.	Instructor
129f	Principles of Social Case Work I (3 cred.; grad.*; prereq. 109, which may be taken simultaneously)			109,	which may be taken simultaneously)
	Sec. 1 For students without social work experience	III	TThS	2J	Mrs. Scott
	2 For students with social work experience	I	TThS	108NH	Mrs. Scott
129w	Principles of Social Case Work I (See 129f)				
	Sec. 1 For students without social work experience	IV	TThS	125F	Mrs. Scott
	2 For students with social work experience	I	TThS	108NH	Mrs. Scott
130w	Principles of Social Case Work II (3 cred.; grad.*; prereq. 129)	II	TThS	2J	Mrs. Scott
130s	Principles of Social Case Work II (See 130w)	I	TThS	108NH	Mrs. Scott
131s	Social Work in Rural Communities (3 cred.; grad.*; prereq. 129, 153, 114 or equiv.)	IV	TThS	2J	Mr. Guilford
132s	Juvenile Courts and Probation (3 cred.; jr., sr., grad.; prereq. 53 (The same as Soc. 132))	III	TThS	108NH	Mr. Monachesi
133f	Social Case Work in Health Problems (3 cred.; grad.*; prereq. 129, 136)	IV	TThS	211NH	Mrs. Clendening
134f	The Child and the State (3 cred.; grad.*; prereq. 109 or equiv.)	II	TThS	211NH	Mr. Guilford
135	Survey of Social Work for Children (2 cred.; grad.*; prereq. 109, which may be taken simultaneously, or equiv.) (Not offered)				
136s	Medical Information for Social Workers (3 cred.; grad.*; prereq. P.H. 50 or 51 or equiv.)	IX VIII, IX	T Th	Ar	Mrs. Clendening and Med. Staff U. H.
137s	The History and Theory of Social Work (3 cred.; grad.*; no prereq.)	I	TThS	2J	Mrs. Doyle
138f	Case Work with Children (3 cred.; grad.*; prereq. 130, 154)	II	TThS	218P	Ar
138s	Case Work with Children (See 138f)	III	TThS	211NH	Mrs. Shea
139w	Personality Development As It Affects Case Work Practice. A consideration of factors involved in personality development and how these factors aid case work practice (3 cred.; grad.*; prereq. 170 or equiv. and consent of instructor)	IV	TThS	102F	Mrs. Shea
139s	Personality Development As It Affects Case Work Practice (See 139w)	II	TThS	2J	Mrs. Shea
151f-152w	Public Welfare (6 cred.; sr., grad.*; prereq. 109 or equiv. Course 152 is open to graduate students only)	I	TThS	306F	Mr. Guilford
151w-152s	Public Welfare (See 151f-152w)	III	TThS	218P	Mr. Guilford
153f,w,s†					
154f,w,s†					
155f,w,s†	Field Training in Case Work (Cred. ar.; grad.*; prereq. 129, which may be taken simultaneously, or equiv.)	Ar	Ar	Ar	Staff
156f,w,s†					
157f,w,s†					
158f,w,s†	Field Training in Group Work (Cred. ar.; grad.*; prereq. 125, which may be taken simultaneously)	Ar	Ar	Ar	Ar

* For graduate students only, except by petition.

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

No.	Title	Hour	Day	Bldg.	Instructor
161w	Social Aspects of Housing and Standards of Living (3 cred.; sr., grad.; prereq. Sociology 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or consent of instructor) (The same as Soc. 161)	II	TThS	211NH	Mr. Chapin
169s	Principles of School Social Work (2 cred.; grad.*; prereq. consent of social work adviser)	Ar	Ar	Ar	Miss Laabs
170f	Introductory Psychiatry (3 cred.; grad.*; no prereq.)	II	TThS	Ar	Dr. Hinckley
171w	Descriptive Neuropsychiatry (The same as Medicine 171) (2 cred.; grad.*; prereq. 170 or equiv.)	4:00 to 5:00	MWF	Ar	Dr. Baker
172s	Advanced Considerations in Psychiatry (The same as Medicine 172) (1 cred.; grad.*; prereq. 171 or equiv.)	IV	T	Ar	Ar
173Af	Behavior Problems in Younger Children (The same as Child Welfare 140) (2 cred.; sr., grad.; prereq. 12 cred. in psy., ed. psy., or soc.)	I, II	S	202Pt	Miss Goodenough
173Bw	Behavior Problems in Older Children (The same as Child Welfare 141) (2 cred.; sr., grad.; prereq. 12 cred. in psy., ed. psy., or soc.)	I, II	S	202Pt	Miss Goodenough
174s	Seminar in Psychiatric Social Work (2 cred.; grad.*; prereq. 130, 139 or equiv., 170)	VIII, IX	Th	Ar	Ar
175f	Advanced Medical Information for Social Workers (2 cred.; grad.*; prereq. 136)	Ar	Ar	Ar	Mrs. Clendening and Med. Staff U. H.
197f-198w-199s	Special Topics in Social Work (Cred. ar.; grad.*)	Ar	Ar	Ar	Ar

For Graduate Students Only

COURSES IN SOCIOLOGY

200f,w,s	Seminar: Research Problems in Criminology				Mr. Vold
201	Seminar: Social Psychology of Family Relationships (Not offered)				
202f,w,s	Seminar: Topics in Urban Sociology				Mr. Sletto
203-204-205	Seminar in Social Theory (Not offered)				
206-207-208	Seminar: Statistical Theory in Relation to Social Theory and Practice (Not offered)				
209-210-211	Seminar: The Theory of Social Evolution (Not offered)				
215f	Seminar in Rural Sociology: Rural Life in Latin America				Mr. Nelson
216w	Seminar in Rural Sociology: Rural Life in Selected Countries of Europe				Mr. Nelson
217s	Seminar in Rural Sociology: Current Rural Social Problems in the United States				Mr. Nelson
234f,w,s	Seminar in Juvenile Delinquency and Treatment				Mr. Monachesi
238f-239w†	Principles of Sociology (6 cred.)				Mr. Monachesi

COURSES IN SOCIAL WORK

217s	Advanced Case Work				Mrs. Fenlason
218f-w-s	Seminar in Family Case Work				Mrs. Fenlason
219f-w-s	Seminar in Case Work with Children				Mrs. Shea
220f-w-s	Seminar in Medical Social Work				Mrs. Clendening
221f,w,s†					
222f,w,s†					
223f,w,s†	Graduate Field Training				Staff
224f,225w,226s	Advanced Medical Social Work				Mrs. Clendening
227f,w,s†					
228f,w,s†					
229f,w,s†	Advanced Field Training				Staff
230f,w,s	Seminar in Public Welfare				Mr. Kidneigh
231f,w,s	Seminar in Group Work				Ar

* For graduate students only, except by petition.

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

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

No.	Title	Hour	Day	Bldg.	Instructor
232f,w,s	Seminar in Rural Social Work				Mr. Guilford
233f,w,s	Seminar in Social Agencies and Social Institutions				Mrs. Doyle
234f,w,s	Seminar in Juvenile Delinquency and Treatment (Same as Soc. 234)				Mr. Monachesi
235f,w,s	Seminar in Psychiatric Social Work				Mrs. Shea
236f,w,s	Special Studies in Social Work (Fulfills 9 cred. requirement Plan B)				Staff
237f,w,s	Recent Research in Social Work				Mrs. Shea
240f,w,s	General Seminar in Social Work				Staff

SPANISH

See Romance Languages, page 113.

SPEECH

Major advisers in the College of Science, Literature, and the Arts—Professors Rarig and Bryngelson; Associate Professor Gilkinson; Assistant Professor Whiting.

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

A. General: Courses 61, 67; 81-82-83; 101-102-103; 105 or 109 and 9 additional Senior College credits in one of the following: English, Philosophy, History, Political Science.

B. Theater: Courses 61; 81-82-83; 91, 92, 93; 111-112-113 and a comprehensive examination in the theater.

C. Speech Pathology: Courses 61; 67; 121-122; 162-163; 141-142-143.

D. Radio: Courses 65, 66, 67; 78-79; 81-82-83 and 6 to 9 additional credits in courses to be selected in conference with adviser.

(Prerequisites: 1-2-3 or 5-6; Psychology 1-2. For Sequence B, Speech 31, 32-33, 34 are required. For Sequence C, Psychology 4-5 and Physiology 2 are also required.)

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

Major advisers in the College of Education—Professors Rarig and Bryngelson; Associate Professor Gilkinson; Assistant Professor Whiting.

Requirements for a teacher's certificate—Major recommendation: Speech 1-2 or 5, 31, 32, 61, 67, 71-72-73, 81-82, 101-102; 121; total 41 or 42 credits. Psychology 4-5 is advised.

Minor recommendation: Students minoring in speech are required to take Speech 1-2 or 5 plus other speech courses, totaling 27 hours. These courses are to be selected with the aid of an adviser according to the needs of the student. Differential sequences are recommended according to whether the student is primarily interested in General Speech, Theater, Interpretation, Speech Pathology, or Radio.

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

Because of the close relation between English and speech in the high schools of Minnesota, students majoring in speech must have a minor in English as well as one other minor. Modification of the minor requirement may be made on recommendation of a departmental adviser with the approval of the Students' Work Committee.

Students majoring in speech should register for Ed.T. 66Am, the Teaching of Composition in Senior High School, as well as Special Methods and Directed Teaching in Speech, Ed.T. 88A-88B-88C. See the program of the College of Education.

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

All candidates for the M.A. and Ph.D. degrees are required to take Speech 122.

Speech activities—All students in the University are entitled to participate in Intercollegiate Debating, the Freshman-Sophomore Debate, the Freshman-Sophomore Oratorical Contest, the Pillsbury Oratorical Contest, the Verse Reading Contest, and the activities of the University Theater.

Note—The University maintains a clinical service for students with speech-hearing defects. Students who desire treatment should consult the director of the Speech Clinic, 411 Folwell Hall. The clinic also accepts a limited number of full-time outpatients who pay a fee of \$85 per quarter. Half-time outpatients pay \$45 per quarter.

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2wf-3s†	Fundamentals of Speech (An admission card to this class must be obtained when tallying at 106 Folwell Hall (9 cred.; fr.,* soph., jr., sr.; no prereq.)				
	Sec. 1 (Fall, winter only)	I	MWF	308F	Mr. Gilkinson
	2	II	MWF	306F	and others
	3	III	MWF	306F	
	4	VI	MWF	305F	
	5 (Fall, winter, only)	II	TThS	305F	
	6 (Fall, winter only)	III	TThS	306F	
	7 (Fall, winter only)	VII	MWF	308F	
	8 (Fall, winter only)	VIII	MWF	308F	
	(Dental hygiene students only)	IV	MWF	306F	
1w-2s††	Fundamentals of Speech (An admission card to this class must be obtained when tallying at 106 Folwell Hall) (2 qtrs. of 1-2-3. See 1f-2w-3s)				
	Sec. 1	II	MWF	303F	Ar
	2	VII	MWF	305F	Ar
1s†	Fundamentals of Speech (An admission card to this class must be obtained when tallying at 106 Folwell Hall) (1st qtr. of 1-2-3. See 1f-2w-3s)				
		IV	MWF	9F	Ar
2f††	Fundamentals of Speech (An admission card to this class must be obtained when tallying at 106 Folwell Hall) (2nd qtr. of 1-2-3. See 1f-2w-3s)				
		III	MWF	125F	Ar
3f†	Fundamentals of Speech (An admission card to this class must be obtained when tallying at 106 Folwell Hall) (3rd qtr. of 1-2-3. See 1f-2w-3s)				
		II	MWF	308F	Ar
5f-6w†	Fundamentals of Speech (An admission card must be obtained when tallying at 106 Folwell Hall) (10 cred.; fr.,* soph., jr., sr.; no prereq.)				
	Sec. 1	III	MTWThF	6F	
	2	IV	MTWThF	6F	
	3	VI	MTWThF	9F	
5w-6s†	Fundamentals of Speech (An admission card must be obtained when tallying at 106 Folwell Hall) (See 5f-6w)				
	Sec. 1	IV	MTWThF	311F	
	2	VI	MTWThF	303F	
5s†	Fundamentals of Speech (An admission card must be obtained when tallying at 106 Folwell Hall) (1st qtr. of 5-6. See 5f-6w)				
	Sec. 1	III	MTWThF	6F	
	2	IV	MTWThF	6F	
	3	VIII	MTWThF	305F	
6f†	Fundamentals of Speech (An admission card must be obtained when tallying at 106 Folwell Hall) (2nd qtr. of 5-6. See 5f-6w)				
		VI	MTWThF	303F	
31f††	Introduction to the Theater (3 cred.; soph., jr., sr.; prereq. 1-2-3 or 5-6 or concurrent registration)				
		I	MWF	19Mu	Mr. Whiting

* Open to a limited number of freshmen with the approval of their advisers and the Department of Speech.

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

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

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

No.	Title	Hour	Day	Bldg.	Instructor	
31s††	Introduction to the Theater (See 31f)	I	TThS	19Mu	Mr. Thompson	
32f-33w††	Beginning Acting, Creative Approach (6 cred.; soph., jr., sr.; prereq. Sp. 31)	II	MWF	19Mu	Mrs. Turner	
		32w-33s††	Beginning Acting, Creative Approach (See 32f-33w)			
	Schedule for 32w Sec. 1	I	MWF	19Mu	Mr. Whiting	
		2	TThS	19Mu	Ar	
		Schedule for 33s Sec. 1	I	MWF	19Mu	Mr. Whiting
		2	TThS	19Mu	Mrs. Turner	
34f††**	Stagecraft—Construction and Painting (3 cred.; soph., jr., sr.; prereq. 31)	Lect.	II	Th	Stage Mu Mr. Andrus	
		Lab.	I-II	TS		

Senior College Courses

Courses 51, 67, 81-82-83 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

51s†	Advanced Public Speaking (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6)	II	MWF	308F	Ar
55-56-57††§	Argumentation and Debating (9 cred.; jr., sr.; prereq. 1-2-3 or 5-6; Phil. 2, Logic, is recommended) (<i>Not offered</i>)				
61f†	Personality Development Through Speech (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6; Psy. 1-2)	VI	MWF	308F	Mr. Bryngelson
65f†	Radio Speech. Speech arts and psychology of the radio. Practice, exercises, projects, and reports on problems of appeal and audience response. (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6)	II	MWF	302MurH	Mr. Ziebarth
65s†	Radio Speech (See 65f)	II	TThS	302MurH	Mr. Ziebarth
66f,w††	Radio Drama. A study of the historical development of radio drama, with an analysis of the various types of radio dramas including production, direction, and acting techniques. (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6; 65 recommended)	III	MWF	302MurH	Mr. Dusenbury
67f,s†¶	Phonetics (3 cred.; jr., sr.; prereq. 1-2-3 or 5-6)	I	MWF	306F(f) 308F(s)	Mr. Dusenbury
71f-72w- 73s††**	Play Production: Problems of Dramatic Production in the Secondary School. Primarily for students in the College of Education. (9 cred.; jr., sr.; prereq. 1-2, 31, 32)	IX	MWF	19Mu	Ar
78w-79s††	Advanced Acting—Characterization and Dialect (6 cred.; jr., sr.; prereq. 31, 32-33)	III	TThS	19Mu	Mr. Dusenbury
81f-82w-83s†	Interpretative Reading (9 cred.; jr., sr.; prereq. 1-2-3 or 5-6)	IV	MWF	308F	Mr. Rarig
		2	VI	MWF	306F
81w-82s†	Interpretative Reading (See 81f-82w-83s)	I	TThS	308F	Mr. Rarig
83f†	Interpretative Reading (3rd qtr. of 81-82-83. See 81f-82w-83s)	I	TThS	308F	Mr. Rarig

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

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

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

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

** No student may receive credit for Course 71-72-73 and Courses 34, 91-92-93, 111-112-113.

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

No.	Title	Hour	Day	Bldg.	Instructor
91w††**	Stage Design (3 cred.; jr., sr.; prereq. 31)				
	Lect.	III	Th	20Mu	Ar
	Lab.	III, IV	TS		
92s††**	Stage Lighting (3 cred.; jr., sr.; prereq. 31)				
	Lect.	III	Th	20Mu	Mr. Andrus
	Lab.	III, IV	TS		
93f††**	Stage Costuming (3 cred.; jr., sr.; prereq. 31)				
	Lect.	III	Th	24Mu	Ar
	Lab.	III, IV	TS		
97f,w,s	Intercollegiate Oratory and Debate (3 cred.; jr., sr.; prereq. §)	Ar	Ar	308F	Mr. Rarig, Mr. Howell
101f-102w-103s	Argumentation and Persuasion (9 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6; Psy. 1-2; 10 cred. in soc. sci.)	III	MWF	303F	Mr. Howell
105s*	Theory of Reading and Acting (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6, 81-82-83, and Psy. 1-2)	III	MWF	311F	Mr. Rarig
106	<i>Public Speaking and Discussion</i> (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6, and permission of instructor) (<i>Not offered</i>)				
109*	<i>Classical Rhetoric</i> (3 cred.; jr., sr., grad.; prereq. 101-102-103, Psy. 140) (<i>Not offered</i>)				
111f-112w-113s††**	Stage Direction (9 cred.; sr., grad.; prereq. 31, 32, 34, 91-92-93)	III	MWF	19Mu	Mr. Whiting
115-116	<i>Playwriting and Production</i> (1 to 3 cred. per qtr.; sr., grad.; prereq. 31, 32-33 and permission of instructor) (<i>Not offered</i>)				
117s	Writing Radio Drama (1 to 3 cred.; sr., grad.; prereq. 31, 32-33 and permission of instructor)	II	MWF	2Mu	Mr. Dusenbury
121s	Advanced Speech Problems (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6, Psy. 1-2)	II	TThS	308F	Mr. Gilkinson
122f	Introduction to Research (3 cred.; sr., grad.; prereq. 1-2-3 or 5-6, Psy. 1-2)	II	TThS	308F	Mr. Gilkinson
131††	<i>Community Dramatics</i> (Children's Theater). The cultural values of community and children's theaters. Dramatic educational and critical literature of the field. Specimen projects, reports, term papers. (3 cred.; sr., grad.; prereq. 91-92-93 and 111-112-113, or permission of instructor) (<i>Not offered</i>)				
141f-142w-143s	Voice Science (9 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6, 67; Psy. 1-2 and 4-5)	VII	MWF	406F	Mr. Hedgecock
162w-163s††	Speech Pathology (6 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6; 61, 67; and permission of instructor)	VI	T	406F	Mr. Bryngelson
		VI, VII	Th		
164f-165w-166s	Clinical Methods in Speech Pathology and Lip Reading (The same as Ed.C.I. 174-175-176) (9 cred.; sr., grad.; prereq. 1-2-3; 61, 67, 162, and Ed.Psy. 142. May be taken simultaneously with Sp. 163)	VIII and ar	WF	406F	Mr. Bryngelson
171f-172w-173s§	History of the Theater (9 cred.; sr., grad.; prereq. 1-2-3 or 5-6; 31)	VI	T	20Mu	Mr. Thompson
		VI, VII	Th		
174-175-176§	<i>Theater Backgrounds</i> (9 cred.; sr., grad.; prereq. 1-2-3 or 5-6; 31. Courses in literature recommended) (<i>Not offered</i>)				

* Courses 105 and 109 are offered in alternate years.

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

§ Courses 171-172-173 and 174-175-176 are offered in alternate years.

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

** No student may receive credit for Course 71-72-73 and Courses 34, 91-92-93, 111-112-113.

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

No.	Title	Hour	Day	Bldg.	Instructor
181f-182w-183s	Readings in Speech. Directed reading and preparation of reports on selected subjects. (Cred. ar.; jr., sr., grad.; prereq. 1-2,3 or 5-6 and six additional credits and consent of instructor)	Ar	Ar	Ar	Mr. Rarig, Mr. Bryngelson, Mr. Gilkinson, Mr. Whiting
191f-192w-193s	Technical Problems. Advanced problems in the technical phases of the theater. Special problems are assigned to individual students. (9 cred.; jr., sr., grad.; prereq. 111-112-113)	VIII VIII, IX	T Th	20Mu	Mr. Whiting
<i>For Graduate Students Only</i>					
201f,w,s	General Seminar	Ar	Ar	Ar	Staff
207f-208w-209s	Seminar in Rhetoric and Persuasion	Ar	Ar	Ar	Mr. Rarig
211f-212w-213s	Seminar in Dramatic Theory	VIII-IX	T	18Mu	Ar
221f-222w-223s	Seminar in Oral Interpretation of Literature	Ar	Ar	Ar	Mr. Rarig
231f-232w-233s	Seminar in Advanced Speech Problems	Ar	Ar	Ar	Mr. Gilkinson
261f-262w-263s	Seminar in Speech Pathology	Ar	Ar	Ar	Mr. Bryngelson
291f-292w-293s	Research in Special Problems	Ar	Ar	Ar	Mr. Rarig, Mr. Bryngelson, Mr. Gilkinson, Mr. Whiting

SWEDISH

See Scandinavian, page 119.

ZOOLOGY

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

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

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

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

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

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

Major adviser in the College of Education—Professor Wodsedalek.

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

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

For a specialized curriculum in Natural Science see College of Education Bulletin.
For a course in General Biology see Department of General Studies, p. 56.

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

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f-2w-3s*†‡	General Zoology. Structure, physiology, embryology, classification, and evolution of animals. (10 cred.; no prereq.)				
	Lect. Sec. 1 (Limited to 320)	II		TTh 06Bo	Mr. Minnich
	2 (Limited to 320)	IV		WF 06Bo	Ar
	3 (Limited to 320)	VII		TTh 06Bo	Ar
	4 (Limited to 320)	VIII		WF 06Bo	Ar
	Lab. Sec. 1 (Limited to 174)	I, II		MF 101Z	Ar
	2 (Limited to 174)	III, IV		MF 101Z	
	3 (Limited to 174)	V, VI		MF 101Z	
	4 (Limited to 174)	VII, VIII		MF 101Z	
	5 (Limited to 174)	IX, X		MF 101Z	
	6 (Limited to 174)	III, IV		TTh 101Z	
	7 (Limited to 174)	III, IV		WS 101Z	
12†	General Zoology. Structure, physiology, embryology, classification, and evolution of animals. (For students of the College of Agriculture, Forestry, and Home Economics) (6 cred.; no prereq.)				
14f-15w†‡	Lect.	VII		TTh 150Ph	Mr. Dawson
	Lab. Sec. 1	V, VI		TTh 101Z	Ar
	2	VIII, IX		TTh 101Z	Ar
21f‡§¶	Histology (5 cred.; soph., jr., sr.; prereq. 1-2-3) (Sections limited to 60 each. An admission card to this class must be obtained when tallying at 106 Folwell Hall)				
	Lect.	III		TThS 313Z	Mr. Ringoen
	Lab. Sec. 1¶	I, II		TThS 201Z	Miss Slider
	2	VI, VII, VIII		TTh 201Z	Mr. Ringoen
22w†‡	Comparative Anatomy (5 cred.; soph., jr., sr.; prereq. 1-2-3) (Sections limited to 40 each. An admission card to this class must be obtained when tallying at 106 Folwell Hall)				
	Lect.	III		TThS 313Z	Mr. Eddy
	Lab. Sec. 1	VI, VII, VIII		TTh 3SZ	
	2	VI, VII, VIII		MW 3SZ	
	3	III, IV		MWF 3SZ	
46w-47s†	Ornithology (6 cred.; soph., jr., sr.; prereq. 1-2-3 and permission of instructor)				
	Lect.	VI, VII, VIII		MW 307MNH	Ar

Senior College Courses

Courses 50, 51, 52, 53, 81, 82, and 83 are open to sophomores who have a grade of at least C in Course 1-2-3. Other Senior College courses in this department are open to Junior College students only by special permission of the Students' Work Committee. See a statement on page 18.

Students planning to elect Course 81 and any course numbered above 100 should consult the chairman of the department before completing his program.

* Lectures may be elected without laboratory with the consent of the chairman of the department. Laboratory must be taken with the lectures, however, if zoology is offered as the required laboratory science. Students should elect lecture sections in which they can continue throughout the three quarters.

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

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

¶ All zoology majors should register for Section 1.

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

†† A fee of \$7.00 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
50s‡§	Introduction to Comparative Physiology (5 cred.; soph., jr., sr.; prereq. 1-2-3 or 15 cred. in bot.; and 10 cred. in chem. or permission of instructor) (Section limited to 20)				
	Lect.	III	TThS	211Z	Ar
	Lab.	I, II	TThS	18Z	
51f†	Introductory Animal Parasitology (5 cred.; jr., sr.; prereq. 1-2-3) (Sections are limited. An admission card must be obtained to the laboratory when tallying at 106 Folwell Hall)				
	Lect.	VI	MWF	313Z	Mr. Wallace
	Lab. Sec. 1 (Limited to 80)*	VII, VIII	MWF	208Z	
	2 (Limited to 80)	I, II	MWF	208Z	
	3 (Limited to 40)	III, IV	MWF	208Z	
52w‡	Introductory Entomology (5 cred.; jr., sr.; prereq. 1-2-3) (Section limited to 26. An admission card must be obtained to the laboratory when tallying at 106 Folwell Hall)				
	Lect.	VI	MWF	211Z	Mr. Mickel
	Lab.	VII, VIII	MWF	402Z	
53s‡	Faunistic Zoology (5 cred.; jr., sr.; prereq. 1-2-3) (Limited to 40. An admission card must be obtained to the laboratory when tallying at 106 Folwell Hall)				
	Lect.	VI	MWF	211Z	Mr. Eddy
	Lab.	VII, VIII	MWF	3SZ	
		IX	F	3SZ	
75s‡	Nature Study (3 cred.; jr., sr.; prereq. 15 cred. including 1-2-3. Required of all zoology majors and minors in the College of Education in the junior year)				
	Lect. and lab.	VI, VII, VIII	TTh	204Z	Mr. Wodsedalek
81s‡	Invertebrate Zoology (3 cred.; jr., sr.; prereq. 1-2-3) (Limited to 24. An admission card must be obtained to the laboratory when tallying at 106 Folwell Hall)				
	Lect.	I	WF	211Z	Mr. Dawson
	Lab.	I, II	TTh	107Z	
82w	Organic Evolution (3 cred.; jr., sr.; prereq. Zool. 1-2-3 or Bot. 1, 7, 21)				
		II	MWF	313Z	Mr. Dawson
83f,s	Introduction to Genetics and Eugenics (3 cred.; jr., sr.; prereq. 1-2-3 or 10 cred. in bot.)				
		II	MWF	313Z	Ar
107w†-108s‡	Protozoology (6 cred.; jr., sr., grad.; prereq. 15 cred.)				
	Lect. and lab.	VII, VIII, IX	TTh	208Z	Mr. Osterud
109f†-110w†-111s‡	General Physiology of Animal Reactions (9 cred.; jr., sr., grad.; prereq. 15 cred.)				
	Lect. and lab.	III, IV	MWF	211Z	Mr. Minnich
112f	Advanced Comparative Physiology (3 cred.; jr., sr., grad.; prereq. 15 cred. with consent of instructor)				
	Lect.	Ar	Ar	211Z	Ar
113w‡	Laboratory Methods in General Physiology of Absorption and Secretion Problems (3-5 cred.; grad.; prereq. 112 and consent of instructor)				
	Lab.	Ar	Ar	3Z	Ar
117f†-118w†-119s‡¶	Animal Ecology (9 cred.; jr., sr., grad.; prereq. 15 cred.)				
	Lect.	VI	TTh	211Z(f,s)	Mr. Eddy
	Lab.	VII, VIII	TTh	3SZ(f,s)	Mr. Hodson
				301Ad(UF)	(w)**
120s¶	General Ecology of Insects (3 cred.; jr., sr.; prereq. 15 cred. in zool. or ent.)				
	Lect.	VI, VII, VIII	TTh	15Ad(UF)	Mr. Hodson
121f‡	Ichthyology (3 cred.; jr., sr., grad.; prereq. 15 cred.)				
	Lect.	IX, X	MWF	211Z	Mr. Eddy
	Lab.	Ar	Ar	Ar	

* For students in Medical Technology only except by written permission from the Department of Zoology.

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

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

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

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

** Note that in the winter quarter this course is offered at the University Farm.

	Title	Hour	Day	Bldg.	Instructor
126w†-127s†	Advanced Entomology (9 cred.; jr., sr., grad.; prereq. 15 cred.) Lect. Lab.	I I, II, III	TTh	211Z S 402Z	Mr. Mickel
132	<i>General Physiology of Development</i> (3 cred.; jr., sr., grad.; prereq. 50 and 180 or consent of instructor) (<i>Not offered</i>)				
133s	Genetics of Development (3 cred.; jr., sr., grad.; prereq. proper preparation in advanced genetics or consent of instructor)	VI	MWF	209Z	Ar
144w†-145s†-146s†	Animal Parasites and Parasitism (6 or 9 cred.; jr., sr., grad.; prereq. 15 cred.)	VI, VII, VIII	MW	208Z	Mr. Wallace
149w†-150s†	Histology and Organology (6 cred.; jr., sr., grad.; prereq. 15 cred. in zool.) Lect. and lab.	VI, VII, VIII	TTh	209Z, 201Z	Mr. Ringoen
155w†	Physiology in Relation to Physics (3 cred.; jr., sr., grad.; prereq. 15 cred. in biol. sci. and consent of instructor. Physics recommended)	Ar	Ar	Ar	Ar
160ff†-161w†	Cytology (6 cred.; jr., sr., grad.; prereq. 15 cred. with consent of instructor) Lect. and lab.	VI, VII, VIII	TTh	204Z	Mr. Wodsedalek
170ff†-171w†	Advanced Genetics (6 cred.; jr., sr., grad.; prereq. 15 cred. including Course 83, or consent of instructor) Lect. and lab.	VI, VII, VIII	MW	209Z	Ar
180s†	Comparative Embryology (3 cred.; jr., sr., grad.; prereq. 15 cred. including Course 21 or equiv.) Lect. and lab.	III, IV	MWF	313Z	Mr. Ringoen
181f	Endocrines and Reproduction (3 cred.; jr., sr., grad.; prereq. 15 cred. including Course 21 or equiv.) Lect.	III	MWF	313Z	Mr. Ringoen
182w	Experimental Embryology (3 cred.; jr., sr., grad.; prereq. 15 cred. including Course 21 or equiv.) Lect.	III	MWF	313Z	Mr. Ringoen
197f-198w-199s	Problems (5 or more cred.; jr., sr., grad.; prereq. 1-2-3, special requirements)	Ar	Ar	Ar	Ar

For Graduate Students Only

100f-101w-102s	Zoological Techniques				Ar
201f-202w-203s	Research in Entomology				Mr. Mickel
211f-212w-213s	Research in Ecology				Mr. Eddy
217f-218w-219s	Research in Physiology				Mr. Minnich
221f-222w-223s	Research in Biophysics				Mr. Schmitt
229f-230w-231s	Research in Histology				Mr. Ringoen
233f-234w-235s	Research in Embryology				Mr. Ringoen
237f-238w-239s	Research in Cytology				Mr. Wodsedalek
241f-242w-243s	Research in Protozoology				Mr. Osterud
251f-252w-253s	Research in Genetics				Ar
261f-262w-263s	Research in Parasitology				Mr. Wallace
291f-292w-293s	General Seminar				Ar
296f-297w-298s	Special Seminar in Special Research Fields				Ar

ENTOMOLOGY AND ECONOMIC ZOOLOGY

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

† A fee of \$1.50 is charged for this course.

COLLEGE OF EDUCATION

Junior College courses, primarily for freshmen and sophomores, are numbered from 1 to 49; Senior College courses, primarily for juniors and seniors, are numbered from 50 to 99; courses numbered from 100 to 199 are primarily for seniors and graduates; courses numbered 200 and above are for graduate students only.

Since beginning teachers are usually expected to teach several subjects in addition to their major, it is desirable that the student select the best possible combination of subjects. It is also desirable to secure training in one or more extracurricular activities. English teachers are urged to secure credits in library work. Social studies teachers will find a minor in science, mathematics, or a foreign language a valuable addition to their training. Certain selected courses in physical education are recommended for women in some cases. Students may consult Mr. Clifford P. Archer in the Bureau of Recommendations about opportunities in the various fields of education for men and women with a Bachelor's degree. They should consult their major advisers, or Miss Marcia Edwards, assistant dean, or Miss Jean H. Alexander, chairman of the Students' Work Committee, about planning their programs to the best advantage. All curricula leading to a B.S. degree and a teaching certificate in Minnesota are outlined in the College of Education Bulletin.

Because of the serious shortage of teachers, plans for acceleration of programs may be made in many fields. Students should consult their major advisers early in their sophomore year as to ways in which they may complete their work in the shortest possible time.

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

Classes whose meeting places are not scheduled in this bulletin will be assigned rooms at the opening of each quarter. Consult the Official Daily Bulletin or the bulletin board at 210 Burton Hall.

GENERAL COURSES

Note—The following courses should be taken in the order of Ed. 51C-A-B. Ed. 51C is The High School, Ed. 51A is Educational Psychology, and Ed. 51B is Technique of High School Instruction.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.51Cf-51Aw-51Bs††	Introduction to Secondary School Teaching (9 cred.; jr.; prereq. 6 cred. in psy.) Sec. 1	I	MWF	210Bu	Mr. Bossing(f) Mr. Dugan(w) Ar(s)
	2	III	MWF	210Bu	Mr. Boardman (f) Mr. Van Wag- enen(w)
	3	VII	MWF	210Bu	Ar(s) Mr. Anderson

† The entire course must be completed satisfactorily before credit is given for any quarter. Graduates of teachers colleges should consult their advisers before registering for any part of the course.

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

No.	Title	Hour	Day	Bldg.	Instructor
Ed.51A††	Introduction to Secondary School Teaching (See 51C-A-B)				
	Sec. 1	I	MWF	100Pt	Mr. Miller
	2	III	TThS	210Bu	Mr. Van Wagenen
Ed.51As††	Introduction to Secondary School Teaching (See 51C-A-B)				
	Sec. 1	I	MWF	100Pt	Mr. Miller
	2	III	TThS	210Bu	Mr. Van Wagenen
Ed.51Bf††	Introduction to Secondary School Teaching (See 51C-A-B)	VIII	MWF	210Bu	Mr. Anderson
Ed.51Bw††	Introduction to Secondary School Teaching (See 51C-A-B)	III	TThS	210Bu	Mr. Anderson
Ed.51Cw††	Introduction to Secondary School Teaching (See 51C-A-B)				
	Sec. 1	IV	MWF	100Pt	Ar
	2	VII	MWF	100Pt	Mr. Brameld
Ed.51Cs††	Introduction to Secondary School Teaching (See 51C-A-B)				
	Sec. 1	IV	MWF	100Pt	Ar
	2	I	TThS	100Pt	Mr. Anderson
Ed.61C-61A-61B††	<i>Introduction to Elementary School Teaching</i> (6 cred.; jr., prereq. 6 cred. in psy. and a C average) (<i>Not offered</i>) See Ed. 71A-B-C				
Ed.71A†	Introduction to Elementary School Teaching--Individual Differences (5 cred.; jr.; prereq., Psy. 1-2)	III	MWF	100Pt	Mr. Cook
		III-IV	TTh		Tuttle School
Ed.71Bw†	Introduction to Elementary School Teaching--Learning and Adjustment (5 cred.; jr.; prereq., Ed. 71A)	III	MWF	100Pt	Mr. Bond
		III-IV	TTh		Tuttle School
Ed.71Cs†	Introduction to Elementary School Teaching--Curriculum, Methods, and Organization (5 cred.; jr.; Ed. 71B)	III	MWF	100Pt	Mr. Brueckner
		III-IV	TTh		Tuttle School
Ed.81f,w,s	Introduction to Education for Public Health Nurses (3 cred. (Not open to candidates for a degree in the College of Education)	III(f,s)	MWF	Ar	Miss Grout
		II(w)	MWF	Ar	Miss Grout
Ed.Wf,w,s	Professional Preparation for Teaching. This classification is designed for students already holding a baccalaureate degree who desire to complete their preparation for teaching and qualify for the state teacher's certificate. Such students should consult the adviser as to their eligibility and outline for approval a program covering at least three quarters of study. Courses must be selected so as to meet all requirements for major, minor, and professional training. The entire program must be approved by the adviser and completed successfully before credit is allowed for any of the courses taken. (Minimum of 45 cred.; prereq. a Bachelor's degree, a minimum of 135 cred., a 1.75 average in all previous work, and the consent of the course adviser. Special adjustments will be made for veterans.)				
	Ar		Ar	Ar	Ar

AGRICULTURAL EDUCATION

Major adviser--Professor Field.

Agr.Ed.1f,w,s	Introduction to Agricultural Education (1 cred.; fr.; no prereq.)				
	Fall, winter	VI	M	301Hr	Ar
	Spring	Ar	Ar	301Hr	Ar
Agr.Ed.54f,w	Rural Education and Community Leadership (2 cred.; jr., sr.; prereq. Ed. 51A)	IV and	T	301Hr	Mr. Field
		1 hr. ar.			

† The entire course must be completed satisfactorily before credit is given for any quarter. Graduates of teachers colleges should consult their advisers before registering for any part of the course.

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

No.	Title	Hour	Day	Bldg.	Instructor
<i>Agr.Ed.56</i>	<i>Rural Youth Leadership</i> (3 cred.; jr., sr. or permission of instructor; no prereq.) (<i>Not offered 1946-47</i>)				
Agr.Ed.81f,s	Teaching Agriculture (3 cred.; jr.; prereq. Ed. 51A)	IV	MWF	301Hr	Mr. Field
Agr.Ed.82f,w,‡	Methods in Teaching Agriculture (3 cred.; sr.; prereq. 81)	III	MWF	301Hr	Mr. Field
Agr.Ed.91f,w,s,‡	Supervised Teaching Experience (5 cred.; sr.; prereq. 82 and a C+ average in the major)	Ar	Ar	Ar	Mr. Field
Agr.Ed.101w	Adult Education in Agriculture (3 cred.; sr.; prereq. 81)	IV	MWF	301Hr	Mr. Ekstrom
Agr.Ed.103w	Facilities and Materials (3 cred.; sr.; prereq. 81)	II	MWF	301Hr	Mr. Ekstrom
Agr.Ed.104s	Planning Programs (2 cred.; sr.; prereq. 82)	III	TTh	301Hr	Mr. Field
<i>Agr.Ed.121</i>	<i>Enterprise Analysis</i> (2 cred.; prereq. Ed 51A) (<i>Not offered</i>)				
Agr.Ed.154f,w	Rural Education and Community Leadership (2 cred.; prereq. 10 cred. in ed.)	Ar	Ar	Ar	Mr. Field
Agr.Ed.191f,w,s	Seminar in Agricultural Education (No cred.)	Ar	Ar	Ar	Mr. Field
Agr.Ed.199Ef,w,s,‡	Internship (Cred. ar.)	Ar	Ar	Ar	Mr. Field
Agr.Ed.221f,w,s	Field Problems (3 cred. per qtr.)	Ar	Ar	Ar	Mr. Field, Mr. Ekstrom
Agr.Ed.232f,w,s	Research in Agricultural Education (3 to 9 cred.; grad.; prereq. 15 cred. in ed.)	Ar	Ar	Ar	Mr. Field, Mr. Ekstrom
<i>Agr.Ed.286</i>	<i>Current Problems in Agricultural Education</i> (2 to 3 cred.; prereq. consent of instructor) (<i>Offered in Summer Session</i>)				

ART EDUCATION

Major advisers—Professor Ruth Raymond; Assistant Professor Marie Lien; Instructor Clifton Gayne, Jr.

In connection with professional courses in education this department offers a wide variety of basic courses in creative art necessary for the broad training of specialists in art education. Many of these basic courses listed below are open to students in Fine Arts, Home Economics, Social Work, Recreational Leadership, and other departments and colleges which require art training. Many courses are also open for purposes of general education and recreation.

For talented students interested in careers in education or in combining creative art careers with teaching, the Art Education curriculum offers the following:

1. A comprehensive basic training in art (Minimum: 75 credits for art education majors, 27 credits for art education minors)
2. An opportunity to specialize in painting, design, sculpture, crafts, commercial art, illustration, or some other phase of art. A wide choice of subjects is allowed in meeting requirements and electives
3. The B.S. degree with a teaching certificate which qualifies graduates for a variety of educational positions on the completion of the *four-year* curriculum and the master of education with the advanced teaching certificate on the completion of the *fifth year*.

The attention of veterans is called to the fact that through an accelerated program including summer school the four-year requirements may be met in three years or less.

‡ A fee of \$1.00 per credit is charged for this course.

For details of the four- and five-year curricula in Art Education and the variety of course combinations which meet degree requirements see the College of Education Bulletin.

GROUP A—DESIGN

Junior College Courses

ArtEd.1f,2w,3s	General Design (9 cred.; for art education majors; others by permission only; no prereq.))	I-II	MWF 104J	Miss Lien
ArtEd.1f,w	General Design (3 cred.; for non-art education majors; no prereq.)	VI-VII	MWF 104J	Mrs. Torbert
ArtEd.2s	General Design (3 cred.; for non-art education majors; prereq. ArtEd. 1 or permission of instructor)	VI-VII	MWF 104J	Mrs. Torbert
ArtEd.20,21,22	<i>Fundamental Experiences in Design (Not offered 1946-47)</i>			

Senior College Courses

ArtEd.50Af,50Bw, 50Cs§	Introduction to Commercial Design (9 cred.; prereq. 6 cred. General Design and 2 cred. Basic Drawing or equiv., or permission of instructor)	I-II	TThS 104J	Mrs. Pavlicek
ArtEd.51	Introduction to Industrial Design (3 cred.; prereq. 6 cred. General Design and 2 cred. Basic Drawing or equiv., or permission of instructor) (<i>Not offered 1946-47</i>)			
ArtEd.52Af,52Bw	Interior Design (6 cred.; prereq. 6 cred. General Design and 2 cred. Basic Drawing or equiv., or permission of instructor)	VI-VII	TTh 104J	Mrs. Torbert
ArtEd.150w	Advanced General Design: Commercial design and the consumer (3 cred.; jr., sr., grad.; prereq. permission of instructor)	IX-X-XI and ar	M 104J	Miss Lien
ArtEd.151f	Advanced General Design: Industrial design and the consumer (3 cred.; jr., sr., grad.; prereq. permission of instructor)	IX-X-XI and ar	M 104J	Miss Lien

GROUP B—HANDCRAFTS

NOTE—Design either before or concurrent with craft courses is strongly recommended. ArtEd. 31, 32, and 33, 34, serve the needs of recreational leaders, social workers, camp directors, occupational therapists, hobbyists, elementary teachers, and other non-art specialists.

Junior College Courses

ArtEd.31f,s	General Handcrafts: Texture exercises, work in metal, wood, and clay (3 cred.; no prereq.)			
	Lect.	III	TTh 104J	Mr. Rood
	Lab.	Ar	MWF 10J or 11J Ar	
ArtEd.32w	General Handcrafts: Collage, montage, mobiles, three dimensional compositions, combining materials (3 cred.; no prereq.)			
	Lect.	III	TTh 104J	Mr. Rood
	Lab.	Ar	MWF 10J or 11J Ar	
ArtEd.33f	General Handcrafts: Paper, cardboard, papier mache, decorative papers, hand puppets, cords, belts, knitting, crochet, hooking cardboard weaving (3 cred.; no prereq.)			
	Lect.	II	MWF 4J	Miss Berglund
	Lab.	Ar	MWF 4J	Miss Berglund

§ Students may enter any quarter.

COLLEGE OF EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
ArtEd.34w	General Handcrafts: Leather tooling, bookbinding, basketry, needlework, netting, cardweaving, etc. (3 cred.; no prereq.)				
	Lect.	II	MWF	4J	Miss Berglund
	Lab.	Ar	MWF	4J	Miss Berglund

Senior College Courses

ArtEd.70Af,70Bw, 70Cs†‡	Wood Sculpture and Carving (9 cred.; prereq. permission of instructor)				
	Lect.	I	TThS	11J	Mr. Rood
	Lab.	Ar	TThS	11J	Mr. Rood
ArtEd.73Af,73Bw, 73Cs†‡	Ceramics (9 cred.; prereq. 6 cred. General design or permission of instructor)				
	Lect.	II	TThS	10J	Mr. Rood
	Lab.	Ar	TThS	10J	Mr. Rood
ArtEd.74‡	<i>Bookbinding (Not offered 1946-47)</i>				
ArtEd.75‡	<i>Metal (Not offered 1946-47)</i>				
ArtEd.76f,w†	Textiles: Fundamental weaving (3 cred.; prereq. permission of instructor)				
		Ar	MWF	2J	Miss Berglund
ArtEd.77f,w†	Textiles: Advanced weaving (3 cred.; prereq. permission of instructor)				
		Ar	MWF	2J	Miss Berglund

NOTE ON WEAVING COURSES: In order that looms may be used to best advantage, students are expected to work on an average of 18 hours per week while their work is on looms. Hence Fundamental and Advanced Weaving (6 cred.) may be earned in one quarter or 3 cred. may be earned in half a quarter.

ArtEd.78s‡	Textile Design: Weaving (3 cred.; prereq. permission of instructor)				
		I-II	MWF	4J	Miss Berglund
ArtEd.79s‡	Textile Design: Printing processes—tie-dye, batik, stenciling, silk screen, block printing, etc. (3 cred.; prereq. permission of instructor)				
		VI-VII	MWF	2J	Miss Berglund
ArtEd.81A,81B	<i>Puppetry (4 cred.) (Not offered 1946-47)</i>				
ArtEd.170Ef,w,s	Advanced Wood Sculpture and Carving (3 to 9 cred.; grad.; prereq. permission of instructor)				
		Ar	TThS	11J	Mr. Rood
ArtEd.173Ef,w,s	Advanced Ceramics (9 cred.; grad.; prereq. permission of instructor)				
		Ar	TThS	10J	Mr. Rood

GROUP C—DRAWING AND PAINTING

Junior College Courses

ArtEd.4f,6w,8s	Basic Drawing: 4, Introduction to Materials, and Techniques (2 cred.; no prereq.); 6, Introduction to Still Life and Figure (2 cred.; prereq. 4 or equiv., or consent of instructor); 8, Introduction to Landscape and Figure (2 cred.; prereq. 4 or equiv., or consent of instructor)				
	Sec. 1	I, II	WF	207aJ	Ar
	2	III, IV	WF	207aJ	Ar
	3	VI, VII	WF	207aJ	Ar
	4	VIII, IX	WF	207aJ	Ar
	5	I, II	WF	206aJ	Ar
ArtEd.4w,s	Basic Drawing: Introduction to Materials and Techniques (2 cred.; no prereq.)				
	Sec. 1	I, II	WF	207bJ	Ar
	2	III, IV	WF	207bJ	Ar
	3	VI, VII	WF	207bJ	Ar
ArtEd.8f	Basic Drawing: Introduction to Landscape and Figure (2 cred.; prereq. 4 or equiv., or consent of instructor)				
	Sec. 1	III, IV	WF	207bJ	Ar
	2	V, VI	WF	207bJ	Ar
ArtEd.23s	Pictorial Composition (2 cred.; prereq. 6 cred. in drawing or permission of instructor)				
		I, II	TTh	203aJ	Ar

‡ Students may enter any quarter.

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

No.	Title	Hour	Day	Bldg.	Instructor	
ArtEd.24Af,24Bw, 24Cs§	Water Color Painting (6 cred.; prereq. 6, 8, or equiv., or permission of instructor)	I, II	TTh	207aJ	Mrs. Rollins	
ArtEd.26Af26Bw, 26Cs§	Oil Painting (6 cred.; prereq. 6, 8, or equiv., or permission of instructor)	Sec. 1 2	II, III I-IV	TTh S	207bJ 207bJ	Mrs. Rollins Mrs. Rollins
ArtEd.28Af,28Bw, 28Cs§	Advanced Drawing Techniques (6 cred.; prereq. 6, 8, or equiv., or permission of instructor)	VII-VIII	TTh	207aJ	Ar	

Senior College Courses

ArtEd.61f	Figure Drawing and Painting (2 cred.; prereq. 12 cred. drawing or painting, or permission of instructor)	I-IV		S	207aJ	Mrs. Rollins
ArtEd.62w	Portrait Drawing and Painting (2 cred.; prereq. 12 cred. drawing or painting, or permission of instructor)	I-IV		S	207aJ	Mrs. Rollins
ArtEd.63s	Landscape Drawing and Painting (2 cred.; 12 cred. drawing or painting, or permission of instructor)	I-IV		S	207aJ	Mrs. Rollins
ArtEd.66Af,66Bw	Fashion Illustration (4 cred.; prereq. 4 cred. in Basic Drawing)	III, IV		TTh	203aJ	Mrs. Pavlicek
ArtEd.67Af,67Bw, 67Cs§	Illustration for Advertising and Other Purposes (6 cred.; prereq. 12 cred. drawing or painting, or permission of instructor)	VII, VIII, IX		T	207aJ	Mrs. Rollins
ArtEd.68Af,68Bw, 68Cs§	Print Processes: Lithography, silk screen, block print, etc. (6 cred.; prereq. 12 cred. drawing or painting, or permission of instructor)	VI, VII, VIII		Th	203aJ	Mrs. Rollins
ArtEd.124Ef,w.s	Advanced Specialized Drawing and Painting (Cred. ar.; grad.; permission of instructor)	Ar		Ar	Ar	Mrs. Rollins

GROUP D—UNDERSTANDING AND APPRECIATION

Junior College Courses

ArtEd.14f,15w,16s§	Survey of Art in Life and Education (For art majors and others obtaining art experience in studio courses. Lectures, readings, discussions and problems exploring current practices and vocational opportunities for art-educators and artists, and examining professional standards required for various goals.) 14, Present-day varieties of drawing and painting; 15, Foundations of contemporary design; 16, The designer's role in modern life.	Lect. IV		T	200J	Mr. Gayne and others
	Lab.	III III, IV		T	109J	Mr. Gayne
ArtEd.17f,18w,19s§	Survey of Art in Life and Education (For elementary, child welfare and other education majors; others by permission.) A combination lecture and laboratory course in art for the layman for personal growth and preparation for co-operative understanding of the role of art in modern educational programs. 17, How the artist expresses life; 18, Design, the structural basis of art; 19, Influence of modern art on modern life.	Lect. IV		T	200J	Mr. Gayne and others
	Lab. Sec. 1 2	I-II VI, VII		TTh MW	109J 109J	Mr. Gayne Mr. Gayne

§ Students may enter any quarter.

Senior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
ArtEd.153w	Home Design in Society and Education (3 cred.; jr., sr., grad.; prereq. permission of instructor)	II	TThS	203J	Mrs. Torbert
ArtEd.154w	Development of Personality and Its Expression in Costume (3 cred.; jr., sr., grad.; prereq. permission of instructor)	VIII	MWF	203J	Miss Raymond
ArtEd.155f	Painting and Sculpture in Society and Education (3 cred.; jr., sr., grad.; prereq. permission of instructor)	II	TThS	203J	Ar
ArtEd.157s	Art Movements of Twentieth Century Scandinavian (3 cred.; prereq. permission of instructor)	III-IV	S	203J	Miss Lien

NOTE—Nine credits of art history (F.A.1,2,3) is required of art education majors and they are encouraged to take additional courses in that field. Art history courses are available in the Fine Arts Department, the department of art history and criticism on the campus.

GROUP E—PROFESSIONAL COURSES

ArtEd.84w‡	Methods of Teaching Art in the Elementary Grades (3 cred.; prereq. Ed. 71-72-72, or equiv.)	VII	TTh and 1 hr. ar	203J	Mr. Gayne
ArtEd.86f-87w-88s‡§	Special Methods and Directed Teaching in Art (12 cred.; prereq. 51C-A-B)	Ar	MF Ar	Ar	Art Ed. Staff
ArtEd.156w	Intercultural Education through Art (3 cred.; jr., sr., grad.)	II-III	S	203J	Miss Lien
ArtEd.183s	Philosophy of Art Education (3 cred.; sr., grad.)	VIII	MWF	203J	Miss Raymond
ArtEd.184s‡	Advanced Course in Methods and Supervision of Art in the Elementary School (3 cred.; sr., grad.; prereq. 51C-A-B or 61A-B, or equiv.)	VII	TTh and 1 hr. ar	203J	Mr. Gayne
ArtEd.185w‡	Methods of Teaching Art in the Secondary School (3 cred.; sr., grad.)	VIII-IX-X	Th	203J	Miss Lien
ArtEd.189w	Application of Esthetic Theory in Public Education (3 cred.; jr., sr., grad.)	Ar	Ar Ar	Ar	Miss Raymond
ArtEd.284f,w,s	Reading and Research in Art Education (Cred. ar.; grad.)	Ar	Ar Ar	Ar	Ar
ArtEd.295f,w,s	Special Problems in Art Education (Including technical art projects involving advanced studio practice) (Cred. ar.; grad.)	Ar	Ar Ar	Ar	Ar
ArtEd.296f	Seminar in Art Education (No credit)	VIII	T	203J	Miss Lien and staff

CURRICULUM AND INSTRUCTION

Major advisers—Professors Boardman, Bond, Bossing, Brueckner, Cook, Johnson, Dora V. Smith, and Wesley; Associate Professor Archer.

All courses under *Curriculum and Instruction* except seminar courses, carry a fee of \$1 per credit.

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

§ Taking the speech and psychological examinations and a C+ average (1.5 honor points per credit) in the major or the subject in which student teaching is done are prerequisite to registration in this course.

GENERAL COURSES

No.	Title	Hour	Day	Bldg.	Instructor
Ed.C.I.170†	<i>Methods and Materials in Safety Education</i> (3 cred.)				(Not offered)
Ed.C.I.104s†	Adult Education (2 cred.; jr., sr., grad.)				
		IX-X		T 301Lib	Ar
Ed.C.I.105s†	Visual Aids in Teaching (2 cred.; jr., sr., grad.)				
		III-IV		S 206WeH	Mr. Wendt
Ed.C.I.107w†	Radio in Education (3 cred.; jr., sr., grad.; prereq. 9 cred. in ed.)				
		IX-X		W 302MurH	Mr. Tyler
Ed.C.I.107s†	Radio in Education (3 cred.; jr., sr., grad.; prereq. 9 cred. in ed.)				
		III		MWF 302MurH	Mr. Tyler
Ed.C.I.114s†	The School Health Education Program (3 cred.; sr., grad.; prereq. Ed.T. 83, P.H. 50 or equiv.)				
		8-9:30		TTh 3NGW	Miss Starr
Ed.C.I.117f†	Rural Education for Administrators and Teachers (3 cred.; sr., grad.; prereq. consult instructor)				
		III-IV		S 109UHS	Mr. Archer
Ed.C.I.129s†	Principles and Problems of Teaching Social Hygiene (2 cred.; jr., sr., grad.; prereq. 9 hrs. in ed.)				
		VIII-IX		M Ar	Dr. Pearce, Miss Biester
Ed.C.I.145s†	Remedial Reading (3 cred.; prereq. Ed.C.I. 143 or 144 or 159)				
		III-IV		S 106Pt	Mr. Bond
Ed.C.I.151w†	Diagnosis and Remedial Instruction (3 cred.; sr., grad.; prereq. Ed.C.I. 150 or equiv.)				
		III		MWF Ar	Mr. Brueckner
Ed.C..171f,w,s†	Curriculum Laboratory Practice. A course in the analysis and construction of units, courses of study, and curricula; class projects and individual projects according to needs, interests, level, and specialization. A special section will be organized for the winter quarter devoted to community resources available within the Twin Cities for curriculum development. Class discussions, survey, field trips. (2 to 6 cred.; sr., grad.; prereq. 170 or consent of instructor)				
		Ar		Ar Ar	Mr. Bossing, Mr. Cook, Mr. Archer
Ed.C.I.174f-175w-176s†‡§	Clinical Methods in Lip-reading and Practice in Speech Pathology (9 cred.; sr., grad.; prereq. Sp. 1, 2, 3, 61, 67, 162 and Ed.Psy. 142. May be taken simultaneously with Sp. 163)				
		VIII and ar		W 406F	Mr. Bryngelson and staff
Ed.C.I.207f,w,s*†	Problems in Radio Education (1 to 3 cred. per qtr.)				
		Ar		Ar Ar	Mr. Tyler
Ed.C.I.215f,w,s*†	Problems in the School Health Education Program (Cred. ar.; prereq. permission of instructor)				
		Ar		Ar Ar	Miss Grout
Ed.C.I.216f,w,s†	Field Work in the School Health Education Program (Cred. ar.; prereq. permission of instructor)				
		Ar		Ar Ar	Miss Grout
Ed.C.I.217f,w,s	Seminar in the School Health Education Program (Cred. ar.; consult instructor)				
		Ar		Ar Ar	Miss Grout
Ed.C.I.227f,w,s*†	Problems in Rural Education (Cred. ar.)				
		Ar		Ar Ar	Mr. Archer
Ed.C.I.271f,w,s*†	Problems in Curriculum Construction (2 or 3 cred. a qtr. with a maximum of 6; prereq. completion or current enrolment in one of the following: Ed.C.I. 113 or 119 and 170 or consent of instructor)				
		Ar		Ar Ar	Mr. Bossing, Mr. Cook Mr. Archer
Ed.C.I.273f,w,s*†	Problems in Reading (2 to 6 cred.; prereq. previous training in reading such as Ed.C.I. 143 or 144 or equiv.)				
		Ar		Ar Ar	Mr. Bond

* This course may be taken for independent study under Plan B for the Masters degree.

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

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

COLLEGE OF EDUCATION

ELEMENTARY EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
Ed.C.I.60f‡	The Teaching of Reading in the Elementary School (3 cred.; sr.; prereq. Ed. 61A-B)	VI	MWF	100Pt	Mr. Bond
Ed.C.I.61s‡	Teaching the Social Studies in the Elementary School (3 cred.; jr.; prereq. Ed. 61A-B)	VI	MWF	100Pt	Mr. Wesley
Ed.C.I.62Af‡	The Teaching of Arithmetic in Primary Grades (2 cred.; sr.; prereq. Ed. 61A-B)	VI	TTh	100Pt	Mr. Brueckner
Ed.C.I.62Bf‡	The Teaching of Arithmetic in Intermediate Grades (2 cred.; sr.; prereq. Ed. 61A-B)	VII	TTh	100Pt	Mr. Brueckner
Ed.C.I.63Tf‡	Children's Literature (2 cred.; for teachers in service)	IX-X	M	206UHS	Miss Smith
Ed.C.I.63w‡	Children's Literature (2 cred.; sr.; prereq. Ed. 61A-B)	VI	TTh	100Pt	Miss Smith
Ed.C.I.64w‡	The Teaching of English in the Elementary School (3 cred.; sr.; prereq. Ed. 61A-B)	VI	MWF	100Pt	Miss Smith
Ed.C.I.65s‡	The Teaching of Science in the Elementary School (2 cred.; jr., sr.; prereq. Ed. 61A-B)	VI	TTh	100Pt	Mr. Kenneth Anderson
Ed.C.I.102‡	The Teaching of the Social Studies in the Elementary School	II	MWF	106Pt	Mr. Wesley
Ed.C.I.119w‡	Elementary School Curriculum (3 cred.; sr., grad.; prereq. Ed. 61C or equiv.)	III-IV and 1 hr. ar	S	115UHS	Mr. Cook
Ed.C.I.130w,s‡	Problems in Childhood Education (2 cred.; sr., grad.; prereq. 9 cred. in ed. including Ed.T. 55 or equiv.)	VIII-IX	W	202Pt	Mrs. Fuller
Ed.C.I.143f,w‡	Teaching and Supervision of Reading in the Elementary School (3 cred.; jr., sr., grad.; prereq. 9 hrs. in ed. including Ed. 51A or 61A)	(f)4:30-6:30 (w)II and 1 hr. ar	W TTh Ar	106Pt	Mr. Bond Mr. Bond
Ed.C.I.146‡	<i>Current Developments in Language Expression in the Elementary School</i> (2 cred.; jr., sr., grad.; prereq. Ed. 61A-B-C or equiv. Not open to students who have had E.C.I. 64) (<i>Not offered</i>)				
Ed.C.I.147f‡	Workshop in the Language Arts (3 cred.; primarily for teachers in service) The first hour will be given over to a series of lectures on methods and curriculum in reading, writing, speaking, and listening, with different lecturers each week. At the second hour group and individual conferences will be held on problems pursued by individual teachers in relationship to their own teaching. Lectures may be registered for without credit.	II-III		S 210UHS	Miss Smith, Mr. Bond
Ed.C.I.149s‡	The Teaching and Supervision of Arithmetic in the Elementary School (2 cred.; sr., grad.; prereq. Ed. 61A-B-C or equiv.)	I-II		S 115UHS	Mr. Brueckner
Ed.C.I.150f,s‡	Supervision and Improvement of Instruction (3 cred.; sr., grad.; prereq. Ed. 61C or equiv.)	III(f) II(s)	MWF	106Pt 210Bu	Mr. Brueckner Mr. Brueckner
Ed.C.I.153s‡	Supervision and Teaching of English in the Elementary Schools (2 cred.; sr., grad.; prereq. Ed. 61A-B-C or equiv.)	I-II		S 210Bu	Mr. Archer
Ed.C.I.157f,w,s‡	Practice in Supervision (3 cred. a qtr.; sr., grad.; prereq. consent of instructor)	Ar	Ar Ar		Mr. Brueckner

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

No.	Title	Hour	Day	Bldg.	Instructor
Ed.C.I.170A†	<i>Curriculum and Course of Study Construction.</i> A study of the principles and methods for the selection and organization of units, courses of study, and curricula at the elementary school level (3 cred.; sr., grad.; prereq. 119 or consent of instructor) (<i>Not offered</i>)				
Ed.C.I.173As†	Organizing Units of Instruction in the Elementary School. A consideration of the principles and procedures involved in the organization of units (center of interest units, activity units, experience units, etc.) utilizing natural science and social studies content in the development of reading skills, oral and written composition skills, arithmetic skills, study skills, and desirable social behavior (3 cred.; sr., grad.; prereq. 119 or teaching experience)	III-IV	S	109UHS	Mr. Cook
Ed.C.I.181w†	Foundations of Elementary School Methods (3 cred.; sr., grad.; prereq. 9 hrs. in ed.)	II	MWF	210Bu	Mr. Brueckner
Ed.C.I.190†	<i>Principles of Selection of Materials for Reading in the Elementary School</i> (2 cred.; sr., grad.; prereq. 63 or 122 or equiv.) (<i>Not offered—ordinarily offered in alternate years</i>)				
Ed.C.I.226f,w,s	Seminar in Elementary School Problems	IX-X	Th	210Bu	Mr. Brueckner, Mr. Cook, Mr. Archer
Ed.C.I.261f,w,s**	Special Problems in School Supervision (3 cred.; prereq. 10 hrs. in ed. including Ed. 51A or equiv.)	Ar	Ar	220Bu	Mr. Brueckner
Ed.C.I.263f**	Research in Arithmetic Instruction (3 cred.; prereq. Ed.C.I. 148 or 149 or equiv.)	III-IV	S	209UHS	Mr. Brueckner
Ed.C.I.264w*†	Research in Educational Diagnosis (3 cred.; prereq. Ed.C.I. 151 or equiv.)	IX-X	M	115UHS	Mr. Brueckner

SECONDARY EDUCATION

Ed.C.I.113f,w†	High School Curriculum (3 cred.; sr., grad.; prereq. 10 hrs. in ed. including Ed. 51A-B-C)	(f)II (w)I-II and 1 hr. ar	MWF	210Bu	Mr. Bossing Mr. Bossing
Ed.C.I.122s†	Literature for Adolescents (2 cred.; jr., sr., grad.; prereq. Ed. 51C or junior-senior teaching experience)	I-II	S	206UHS	Miss Smith
Ed.C.I.135s†	Teaching of Occupations and Group Guidance (2 cred.; sr., grad.; prereq. Ed. Pay. 133 or permission of instructor)	III-IV	S	105UHS	Mr. Dugan, Miss Wright
Ed.C.I.144s†	Teaching of Reading in Junior and Senior High Schools (3 cred.; sr., grad.; prereq. 9 hrs. in ed. including Ed. 51A)	IX-X and 1 hr. ar	M	100Pt	Mr. Bond
Ed.C.I.168w†	Current Developments in the Social Studies (2 cred.; grad. only)	III-IV	S	207UHS	Mr. Wesley
Ed.C.I.169w†	Extracurricular Activities (2 cred.; prereq. 10 hrs. in ed. including Ed. 51A)	III	TTh	106Pt	Mr. Bossing
Ed.C.I.170Bs†	<i>Curriculum and Course of Study Construction.</i> A study of the principles and methods for the selection and organization of units, courses of study, and curricula at the secondary school level. (3 cred.; sr., grad.; prereq. 113 or 119 and 170 or consent of instructor)	I-II and 1 hr. ar	S	209UHS	Mr. Bossing
Ed.C.I.173Bs†	Organizing Units of Instruction in the Secondary School (2 cred.; sr., grad.; prereq. 113 or consent of instructor)	III-IV and 1 hr. ar.	S	209UHS	Mr. Bossing

* This course may be taken for independent study under Plan B for the Master's degree.

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

COLLEGE OF EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
Ed.C.I.191s‡	Advanced Course in the Teaching and Supervision of Secondary School Mathematics (2 cred.; prereq. Ed. 51C or permission of instructor)	I-II	S	105UHS	Mr. Donovan Johnson
Ed.C.I.198‡	<i>Recent Literature in Methods and Curriculum in Secondary School English</i> (2 cred.; sr., grad.; prereq. Ed.T. 66A-B-C or equiv.) (<i>Not offered</i>)				
Ed.C.I.199Ef,w,s‡	Internship (Cred. ar.; grad.)	Ar	Ar	Ar	
Ed.C.I.201f,w,s*‡	Problems in Teaching the Social Studies (3 cred. a qtr.; grad.; prereq. consent of instructor)	4:00	T	226Bu	Mr. Wesley
Ed.C.I.204s‡	Social Studies Curriculum (2 cred.)	III-IV	S	207UHS	Mr. Wesley
Ed.C.I.222f,w,s	Seminar—Current Problems in Technique of High School Instruction (With or without credit; prereq. Ed. 51B and Ed.C.I. 113)	IX-X	W	210UHS	Mr. Bossing, Mr. Johnson, Miss Smith, Mr. Wesley
Ed.C.I.225f,w,s*‡	Special Problems in Supervision of Instruction in Secondary Schools (Cred. ar.)	Ar	Ar	218Bu	Mr. Boardman
Ed.C.I.254‡	<i>Supervision of the Social Studies</i> (2 cred.; sr., grad.; prereq. Ed. 61A-B-C or equiv.) (<i>Not offered in 1946-47</i>)				
Ed.C.I.266s‡	Supervision of High School Instruction (3 cred.)	III	MWF	Ar	Mr. Boardman
Ed.C.I.287f‡	Advanced Course in the Teaching of Science (2 cred.; sr., grad.; prereq. Ed. 51C)	III-IV	S	106UHS	Mr. Johnson
Ed.C.I.293s*‡	Foundations of Secondary School Methods (3 cred.)	IX-X and 1 hr. ar	F	106UHS	Mr. Johnson
Ed.C.I.294w*‡	Advanced Course in Methods of Teaching English (2 cred.; prereq. Ed.T. 66A-B-C or equiv.)	III-IV	S	209UHS	Miss Smith
Ed.C.I.296f,w,s*‡	Special Problems in Teaching English (Cred. ar.; grad.) Spring—Units of Literature	Ar(f,w) IX-X(s)	S	206Bu	Miss Smith
			M	206UHS	Miss Smith

HIGHER EDUCATION

Ed.C.I.184f‡	Supervision of Student Teaching (2 cred.; sr., grad.)	I-II	S	106UHS	Ar
Ed.C.I.228f,w,s*‡	Problems of Higher Education and Teacher Training (Cred. ar.)	Ar	Ar	Ar	Mr. Peik (Teacher Education), Mr. Cooper and Miss Eckert (Higher Education)
Ed.C.I.250f‡	Higher Education in the United States. Curriculum and instruction (3 cred.; prereq. 18 hrs. in ed.)	I-II and 1 hr. ar.	S	206UHS	Miss Eckert
Ed.C.I.285f‡	Professional Education of Teachers (2 cred.; prereq. 15 hrs. in ed.)	III-IV	S	105UHS	Mr. Peik

* This course may be taken for independent study under Plan B for the Master's degree.

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

EDUCATIONAL ADMINISTRATION

Major advisers—Professors Neale, Boardman, and Bossing.

GENERAL COURSES

No.	Title	Hour	Day	Bldg.	Instructor
Ed.Ad.124f	Public School Administration (3 cred.; sr., grad.; prereq. 10 hrs. in ed.)	I	MWF	106Pt	Mr. Neale
Ed.Ad.210s*	Financial Aspects of Public School Business Administration (3 cred.; prereq. 124, 125)	I	MWF	106Pt	Mr. Neale
Ed.Ad.225w	Pupil Personnel Administration (3 cred.; sr., grad.; prereq. 124)	I	MWF	106Pt	Mr. Neale
Ed.Ad.226s*	School Plant Planning and Management (3 cred.; sr., grad.; prereq. 124, 125)	I	TTh	210Bu	Mr. Neale
Ed.Ad.227f*	Teachers and Employee Administration (3 cred.; sr., grad.; prereq. 124)	II	T		
Ed.Ad.228f,w,s*	Special Problems in Educational Administration (1 or 3 cred.; prereq. 124, 125)	I	TTh	210Bu	Mr. Neale
Ed.Ad.230*	<i>Public Relations for Schools</i> (3 cred.; grad.) (Not offered 1946-47)	Ar	Ar	224Bu	Mr. Neale
Ed.Ad.235f,w,s	Seminar in Educational Administration	Ar	Ar	224Bu	Mr. Neale

ELEMENTARY EDUCATION

Ed.Ad.115w	Organization of the Elementary School (3 cred.; jr., sr., grad.; prereq. 10 hrs. in ed.)	I-II	S	110UHS	Ar
		1 hr. ar			

SECONDARY EDUCATION

Ed.Ad.133f	Guidance in Secondary Schools (3 cred.; sr., grad.; prereq. 9 hrs. in ed.)	III-IV	S	106Pt	Mr. Dugan
Ed.Ad.167f	Junior High School (3 cred.; sr., grad.; prereq. 10 hrs. in ed. including Ed. 51)	I-II	S	105UHS	Mr. Bossing
Ed.Ad.218f,w,s	Recent Literature in Secondary Education (Cred. ar.)	IX-X	W	209UHS	Mr. Boardman, Mr. Bossing
Ed.Ad.263f	The Organization of the Secondary School (3 cred.)	II	MWF	100Pt	Mr. Boardman
Ed.Ad.264w	The Administration of the Instructional Activities of the Secondary School (3 cred.)	II	MWF	100Pt	Mr. Boardman
Ed.Ad.265s	The Administration of the Non-Instructional Activities of the Secondary School (3 cred.)	II	MWF	100Pt	Mr. Boardman
Ed.Ad.270f,w,s*	Special Problems in Secondary Education (Cred. ar.; maximum 9 cred.)	Ar	Ar	Ar	Mr. Boardman, Mr. Bossing

HIGHER EDUCATION

Ed.Ad.174w	The Junior College (3 cred.; sr., grad.; prereq. Ed.51A-B-C)	III	MWF	106Pt	Mr. Boardman
Ed.Ad.253w	Administration in Higher Education (3 cred.; prereq. consent of instructor)	I	TTh	210Bu	Mr. Neale
		II	T		

* This course may be taken for independent study under Plan B for the Master's degree.

EDUCATIONAL PSYCHOLOGY

Major advisers—Professors Bonds, Cook, Miller, Johnson, McConnell, and Wrenn;
Associate Professors Anderson and Van Wagenen.

GENERAL COURSES

No.	Title	Hour	Day	Bldg.	Instructor.
Ed.Psy.60f	Introduction to Measurement and Statistics (2 cred.; jr., sr.; prereq. 6 cred. in psy.)	I-II	S	106Pt	Mr. Van Wagenen
Ed.Psy.60s	Introduction to Measurement and Statistics (3 cred.; see 60f)	II	MWF	106Pt	Mr. Van Wagenen
Ed.Psy.120f,w,s	Basic Principles of Measurement (3 cred.; sr., grad.; prereq. Ed.Psy. 60 or equiv.)	VII	MWF	106Pt	Mr. Cook
Ed.Psy.133f	Guidance in Secondary Schools (3 cred.; sr., grad.; prereq. 9 hrs. in ed.)	III-IV	S	106Pt	Mr. Dugan, Miss Wright
Ed.Psy.140w	Instruments and Techniques of Measurement (3 cred.; sr., grad.; prereq. 120 or equiv.)	VII-VIII	TTh	106Pt	Mr. Cook
Ed.Psy.141w	Group Aptitude Testing (3 cred.; sr., grad.; prereq. 120 or equiv.)	VII	MWF	301Psy	Mr. Miller
Ed.Psy.142f,w,s	Individual Aptitude Testing (3 cred.; sr., grad.; prereq. 120 or equiv.)	VII(f) VIII(w,s)	MWF	100Pt 106Pt	Mr. Bond
Ed.Psy.143f	Individual Mental Testing Laboratory (2 cred.; prereq. Ed.Psy. 142)	IX-X	W Ar		Mr. Bond
Ed.Psy.150w,s	Psycho-educational Clinic (2 to 6 cred.; sr., grad.; permission of instructor; prereq. 120, 140 and 141 or 142)	V	W and ar	Ar	Mr. Bond
Ed.Psy.159f,s	Personality Adjustments in Education (3 cred.; sr., grad.; prereq. 9 hrs. in ed. and psy. including one recent course in psy.) (Spring quarter for graduate students in personnel training only)	IV(f) III(s)	MWF	100Pt 100Pt	Mr. Wrenn
Ed.Psy.208w*	Methods in Educational Research (2 or 3 cred.)	III-IV	S	105UHS	Mr. Johnson and 1 hr. ar
Ed.Psy.216f-217w-218s	Statistical Methods in Education (3 cred. a qtr.; grad.)	II	MWF	109Psy	Mr. Johnson
Ed.Psy.220w-221s	Advanced Theory of Measurement (2 cred. a qtr.; prereq. Ed.Psy. 60 or 120 and 216 or equiv.)	IX-X	T	115Psy	Mr. Van Wagenen
Ed.Psy.225w,226s*	Diagnosis and Counseling in a Student Personnel Program (3 cred.; prereq. Ed. 133 and Ed.Psy. 120 or equiv.) Winter—Diagnosis. Spring—Interviewing and Counseling.	II	TThS	106Pt	Mr. Wrenn
Ed.Psy.233f,w,s	Problems in Guidance and Personnel Work (Cred. ar.; prereq. consent of instructor (Two hour weekly seminar) Fall—College Student Activities. Winter—College Placement. Spring—Personnel Procedures in Non-Academic Agencies.	Ar	Ar	202Bu 113APsy	Miss Edwards Mr. Wrenn
Ed.Psy.240f,w,s*	Problems in Measurement (2 cred. a qtr.)	Ar	Ar Ar		Mr. Johnson
Ed.Psy.243f,w,s	Problems in Statistics for Students in Education and Psychology (With or without credit. Cred. ar.)	Ar	Ar Ar		Mr. Johnson

* This course may be taken for independent study under Plan B for the Master's degree.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.Psy.253f,w,s*	Research Problems (Ar.; prereq. consult instructor) (See also Ed.Psy. 233 and Ed.Psy. 240)	Ar	Ar	Ar	Mr. Miller, Mr. Cook, Mr. Anderson, Mr. Van Wagenen
Ed.Psy.281f,w,s	Practice in Personnel Work (2-3 cred. Maximum 9 cred.; prereq. Ed.Psy. 225, or to be taken concurrently, and consent of instructor)	Ar	Ar	Ar	Miss Edwards, Mr. Wrenn, Mr. Bordin
Ed.Psy.290f-291w	Individual Differences (3 cred. a qtr.; prereq. Ed.Psy. 60 or equiv. and permission of instructor)	III	MWF	301Psy	Mr. Miller
Ed.Psy.292s*	Recent Literature in Educational Psychology (3 cred.; prereq. permission of instructor)	III	MWF	301Psy	Mr. Miller
Ed.Psy.293w*	Psychology of Learning (3 cred. a qtr.; prereq. 12 cred. in psy. and ed. psy.)	IV	TThS	100Pt	Mr. Anderson
Ed.Psy.294s*	Recent Theory and Research in Human Learning (3 cred. Consult instructor)	IV	TThS	100Pt	Mr. Anderson

ELEMENTARY EDUCATION

Ed.Psy.113f-114w-115s	Psychology of Elementary School Subjects (2 cred. per qtr.; jr., sr., grad.; prereq. 10 cred. in psy. and ed.)	IX-X	W	109Psy	Mr. Van Wagenen
Ed.Psy.182w	Education of Handicapped Children (2 cred.; jr., sr., grad.; prereq. Ed. 51A or 61A or equiv.)	II	TTh	100Pt	Mr. Van Wagenen
Ed.Psy.183f	Education of Gifted Children (2 cred.; jr., sr., grad.; prereq. Ed. 51A or equiv.)	II	TTh	100Pt	Mr. Van Wagenen
Ed.Psy.184s	Education of the Slow Learning Child (2 cred.; jr., sr., grad.; prereq. Ed. 51A or equiv.)	II	TTh	100Pt	Mr. Van Wagenen

SECONDARY EDUCATION

Ed.Psy.158s	Psychology of Adolescence (3 cred.; jr., sr., grad.; prereq. Ed. 51A or equiv.)	III	MWF	106Pt	Miss Edwards
Ed.Psy.182w	Education of Handicapped Children (See above)	II	TTh	100Pt	Mr. Van Wagenen
Ed.Psy.183f	Education of Gifted Children (See above)	II	TTh	106Pt	Mr. Van Wagenen

HIGHER EDUCATION

Ed.Psy.252w	Student Personnel Work in College and University (3 cred.; prereq. 250 or 251 or 253 or 254)	III	TThS	100Pt	Mr. Wrenn
Ed.Psy.254s	Measurement and Evaluation in Higher Education (3 cred.; 15 hrs. in ed.)	III-IV	S	106UHS	Mr. Johnson
		1 hr. ar			

* This course may be taken for independent study under Plan B for the Masters degree.

HISTORY AND PHILOSOPHY OF EDUCATION

Major advisers—Professor Wesley; Associate Professor Brameld; Assistant Professor Jean H. Alexander.

GENERAL COURSES

No.	Title	Hour	Day	Bldg.	Instructor
H.Ed.71f,w,s	Brief Course in History of Education (5 cred.; jr., sr.; no prereq.)	IV	MTWThF	210Bu	Miss Alexander
H.Ed.73	<i>Educational Sociology</i> (3 cred.; jr., sr.; prereq. 6 cred. in psy.) (<i>Not offered</i>)				
H.Ed.74w	Social Viewpoints in Education (3 cred.; soph., jr., sr.; no prereq.)	VII	TTh	301Psy	Mr. Brameld
		and 1 hr. ar			
H.Ed.76f,s	Introduction to Philosophy of Education (3 cred.; jr., sr.; no prereq. Not open to students who have taken 140)	VII	MWF	301Psy	Mr. Brameld
H.Ed.101f	Historical Foundations of Modern Education (3 cred.; jr., sr., grad.; no prereq.)	VI	MWF	210Bu	Miss Alexander
H.Ed.102w	History of Modern Secondary and Higher Education (3 cred.; jr., sr., grad.; no prereq.)	VI	MWF	210Bu	Miss Alexander
H.Ed.103	<i>History of Modern Elementary Education</i> (3 cred.; jr., sr., grad.; no prereq. Not open to students who have had H.Ed. 71) (<i>Not offered in 1946-47</i>)				
H.Ed.110s	Intercultural Education (3 cred.; jr., sr., grad.; prereq. 9 cred. in ed. or consent of instructor)	IX-X	T	210Bu	Mr. Brameld, Miss Lien
H.Ed.140w	Philosophies of Modern Education (3 cred.; sr., grad.; no prereq.) (Not open to those who have had H.Ed. 76)	I-II	S	301Psy	Mr. Brameld
		and 1 hr. ar			
H.Ed.155s	History of Public Education in the United States (3 cred.; jr., sr.; no prereq.)	VI	MWF	210Bu	Miss Alexander
H.Ed.176f	Conflicting Issues in Modern Education (2 cred.; jr., sr., grad.; prereq. 6 hrs. in psy.)	I-II	S	301Psy	Mr. Brameld
H.Ed.178f	Education and Problems of American Democracy (3 cred.; jr., sr., grad.; prereq. 6 cred. in soc. sci.)	IX-X	T	301Psy	Mr. Brameld
		and 1 hr. ar			
H.Ed.179	<i>Critical Thinking for Teachers</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. in psy.) (<i>Not offered</i>)				
H.Ed.180	<i>The School and the Social Order</i> (3 cred.; jr., sr., grad.; prereq. 6 cred. in soc. sci.) (<i>Not offered</i>)				
H.Ed.181	<i>Tutorial Work in Educational Sociology and Philosophy</i> (3 cred.; jr., sr., grad.; prereq. 2 cred. from the following: 73, 74, 76, 176, 177, 178, 179, 180) (<i>Not offered</i>)				
H.Ed.241f,w,s	Problems in the History and Philosophy of Education (Cred. ar.; prereq. permission of instructor)	Ar	Ar	226Bu 216ABu 206Bu	Mr. Wesley Mr. Brameld Miss Alexander

SECONDARY EDUCATION

H.Ed.102w	History of Modern Secondary and Higher Education (3 cred.; jr., sr., grad.; no prereq.)	VI	MWF	210Bu	Miss Alexander
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HOME ECONOMICS EDUCATION

Major advisers—Professors Wylle B. McNeal, Clara M. Brown, and Ella J. Rose.

Note—Courses in Home Economics are open to all students in the College of Education who have satisfied the prerequisites or by permission of the chief of the division. For program of courses see page 178.

No.	Title	Hour	Day	Bldg.	Instructor
H.E.Ed.90f,s	Child Training (3 cred.; soph., jr., sr.; prereq. Psy. A or Psy. 1-2 or parallel Psy. 2)	IV	MWF	313HE(f) 313HE(s)	Mrs. Fuller
H.E.Ed.91f,w,s,†‡	Observation, Materials, Teaching in Home Economics (5 cred.; jr., sr.; prereq. H.E. 4, 21, 22, 41, Psy. 1-2, Ed. 51A, 51C, parallel H.E.Ed. 93 and 192; home experience**)	VIII IX and 1 hr. ar for observations, trips to community, etc.	MWF M	114HE	Miss Rosé, Miss Kafka
H.E.Ed.92w,s	Teaching Problems in Home Economics (2 cred.; sr.; prereq. H.E.Ed. 91, 93, 94 or parallel, 192)	VII	TTh	114HE	Miss Rose, Miss Kafka
H.E.Ed.93, 94f,w,s,†‡§	Supervised Teaching in Home Economics (6 cred.; jr., sr.; prereq. H.E. 4, 21, 22, 41, Psy. 1-2, Ed. 51A, 51C, parallel H.E.Ed. 91, 192; home experience**) Ar Ar Ar	3 consecutive hrs. daily between 8:15 and 3:00 and 1 hr. ar	Ar Ar Ar		Miss Rose, Miss Kafka, and others
H.E.Ed.95	Field Experience for Home Demonstration Agents (6 cred.; prereq. completion of jr. yr., consent of head of Home Economics Education and director of Extension)				
H.E.Ed.192f,w,s	Evaluation in Home Economics (2 or 3 cred.; jr., sr., grad.; prereq. Ed. 51A, H.E.Ed. 91 or parallel)	VIII II(f) grad. only	TTh MWF	213HE 114HE	Miss Clara Brown, Miss Rose
H.E.Ed.193Af,s	Home Economics Curriculum (2 or 3 cred.; sr., grad.; prereq. permission of instructor) Secondary school level	IX-X	W	114HE	Miss Clara Brown, Miss Rose
H.E.Ed.193Bw	College level	III	MWF	114HE	Miss Clara Brown
H.E.Ed.194Af,Bs	Adult Education in Home Economics (3 cred. a qtr.; jr., sr., grad.; prereq. H.E.Ed. 91, 93 or parallel)	II-III(f) and 2 hrs. ar { VIII(s) and III-IV	S TTh S	114HE 114HE	Miss Krost Miss Krost

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

‡ A C+ average (1.5 honor points per credit) in the major is prerequisite to registration in this course.

§ A grade of at least C is required in the following courses: H.E. 3, 4, 21, 22, 27, 34 or (170), 40, 41.

** Plans for the home experience prerequisite for H.E.Ed. 91 and 93 will be made in conferences for first quarter juniors on Tuesdays IV hour, in Room 114HE.

COLLEGE OF EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
H.E.Ed.197f,w,s‡	Organization and Methods for Related Art Teaching (1 to 3 cred.; sr.; prereq. H.E.Ed. 91; H.E. 186 or parallel)	II		S 405HE	Miss H. Goldstein
H.E.Ed.199Ef,w,s‡	Internship (Cred. ar.; grad.)	Ar	Ar Ar		Miss Rose
H.E.Ed.243f,w,s	Trends in Home Economics (3 cred.; prereq. permission of instructor)	III-IV		S 114HE	Miss Rose
H.E.Ed.292s*	Problems in Evaluation (3 cred.; prereq. consent of instructor)	VI	MWF	213HE	Miss Clara Brown
H.E.Ed.293f,w,s*	Problems in Home Economics Education (1 to 9 cred.; prereq. H.E.Ed. 294 recommended, permission of instructor)	Ar	Ar Ar		Miss Clara Brown, Miss Rose
H.E.Ed.294f,w,s*	Research Methods (3 to 6 cred.; prereq. H.E.Ed. 192 and permission of instructor)	VI	MWF	203HE	Miss Clara Brown, Miss Rose
H.E.Ed.295f,w,s*	Seminar in Home Economics Education (1-3 cred.)	IX	Th	114HE	Miss Clara Brown, Miss Rose

INDUSTRIAL EDUCATION

Major advisers—Professor Homer J. Smith, Associate Professor Micheels.

Ind.1f	Basic Woodwork (3 cred.; no prereq.)	VIII-IX-X	TTh	6Pt	
Ind.5w	Basic Drawing (3 cred.; no prereq.)	VIII-IX-X	TTh	6Pt	
Ind.10s	Basic Electricity (3 cred.; no prereq.)	VIII-IX-X	TTh	6Pt	
Ind.11f,w,s,‡¶	Special-Class Woodwork (2 cred.; no prereq.; not open to those who have credit in bench woodwork or cabinet making; for teachers of art, subnormal and elementary grade work; not used in substitution) (Limited to 24)	I-IV	S	6Pt	Mr. La Berge
Ind.30	Graphic Presentation (3 cred.; no prereq.) (Not offered)	I-II	S	Ar	Mr. Micheels
Ind.40f	Analysis (2 cred.; no prereq.)	IX-X	F	Ar	Mr. Micheels
Ind.42w	Course Organization (2 cred.; prereq. Ind. 40)	IX-X	M	Ar	Mr. Widdowson
Ind.44s	Equipment and Management (2 cred.; prereq. 40, 42)	IX-X	M	Ar	Mr. Widdowson
Ind.50Af-50Bw-50Cs‡§	Directed Teaching (6 cred.; prereq. Ed. 51A-B-C, Ind. 70 or 75, and 80)	Ar	Ar	6Pt	Mr. Nelson
Ind.60f	Philosophy of Vocational Education (2 cred.; no prereq.)	IX-X	M	Ar	Mr. Widdowson
Ind.61w	Practices in Vocational Education (2 cred.; prereq. Ind. 60)	IX-X	M	Ar	Mr. Widdowson
Ind.66w	Related Subjects (2 cred.; prereq. Ind. 40, 42)	I-II	S	Ar	Mr. Widdowson
Ind.70s‡	Methods in Shop Subjects (3 cred.; prereq. Ind. 40, 42)	IV	MWF	Ar	Mr. Micheels
Ind.75s‡	Methods in Drawing (2 cred.; prereq. Ind. 40, 42)	IX-X	W	Ar	Mr. Micheels

* This course may be taken for independent study under Plan B for the M.A. degree or under Plan Y for the M.Ed. degree.

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

§ A C+ average (1.5 honor points per credit) in the major is prerequisite to registration in this course. Industrial education and shop courses constitute the major.

¶ Not a part of the four-year curriculum.

No.	Title	Hour	Day	Bldg.	Instructor
Ind.80f	General Industrial Training (2 cred.; no prereq.) (Not a shop course)	IX-X	F	Ar	Mr. Micheels
Ind.100s¶	Industrial Instruction (3 cred.; grad. only; not open to those who have had Ind. 70)	III	MWF	Ar	Mr. Smith
Ind.101f	Tests in Industrial Subjects (3 cred.; prereq. Ed. 51A)	IV	MWF	Ar	Mr. Micheels
Ind.102w¶	The General Shop (2 cred.; jr., sr.; prereq. Ind. 80) (Not a shop course)	IX-X	W	Ar	Mr. Micheels
Ind.103w¶	Instructional Aids (3 cred.; jr., sr.; grad.; others with consent of instructor)	IV	MWF	Ar	Mr. Micheels
Ind.104¶	<i>Defense Training</i> (2 cred.; no prereq.; jr., sr., grad.) (Not offered)				
Ind.105s¶	Administration of Industrial Education (3 cred.; jr., sr., grad.)	VIII	MWF	Ar	Mr. Smith
Ind.107f¶	Coordination (2 cred.; jr., sr., grad.; prereq. Ind. 60, 61 or 105, or consent of instructor)	IX-X	T	Ar	Mr. Widdowson
Ind.108w¶	Apprenticeship (2 cred.; jr., sr., grad.; prereq. consent of instructor)	IX-X	T	Ar	Mr. Widdowson
Ind.109s¶	Conference Leading for Industry (2 cred.; prereq. consent of instructor)	IX-X	T	Ar	Mr. Widdowson
Ind.110w	Guidance in the Schools (3 cred.; jr., sr., grad.; prereq. Ed. 51A. See Ed.Psy. 133)	VIII	MWF	Ar	Mr. Smith
Ind.115s¶	Supervision of Industrial Education (3 cred.; jr., sr., grad.; prereq. Ind. 60, 61 or 105)	I-II	S and 1 hr. ar	Ar	Mr. Micheels
Ind.125f¶	Philosophy and Practice of Industrial Education (3 cred.; jr., sr., grad.; others with consent of instructor)	VIII	MWF	Ar	Mr. Smith
Ind.170¶	<i>Day Industrial Schools</i> (2 cred.; jr., sr., grad.) (Not offered)				
Ind.171¶	<i>Evening Industrial Schools</i> (2 cred.; prereq. Ind. 170) (Not offered)				
Ind.172¶	<i>Part-time Education</i> (3 cred.; prereq. Ind. 170, 171, others with consent of instructor) (Not offered)				
Ind.200f,w,s*¶	Research Problems (3, 6, or 9 cred. a qtr.; total of 9 cred. required; grad. only) Conference periods as follows and by arrangement:	III	S	200EdH	Mr. Smith
		IX	Th	200EdH	Mr. Micheels
Ind.250f-251w¶	Industrial Education Literature (3 cred. a qtr.; 6 cred. required; grad. only)	III	MWF	Ar	Mr. Smith

Off-Campus Courses and Services—Mr. Widdowson.

Dunwoody Shop and Drawing Courses—arranged. (Special blank must be used.)

Shop and drawing courses are available in wide variety in the Institute of Technology, University campus, and the Division of Agricultural Engineering, Farm campus. Students may elect to pursue courses, day or evening, at the William Hood Dunwoody Industrial Institute without fees other than those paid to the University, except a deposit of \$1. Degree candidates, especially those transferring from other institutions, should bear in mind the maximum of 45 credits in shop work and drawing combined, which is enforced in this department. Credits in excess of 45 will be recorded but will not be counted toward degree requirements. Graduate students may have such credits recorded but they will not be counted toward their degrees.

Curriculum revision—See College of Education Bulletin for 1946-48 for revised form, or request mimeographed materials at 200 Eddy Hall.

Graduate programs—The departmental office will provide mimeographed materials descriptive of admission requirements and program patterns for both the M.A. and M.Ed. degrees, plans A, B, X, and Y. Conferences and correspondence concerning Ph.D. programs are invited.

* This course may be taken for independent study under Plan B for the M.A. degree or under Plan Y for the M.Ed. degree.

¶ Not a part of the four-year curriculum.

METHODS AND DIRECTED TEACHING

Time required—Students registered for practice teaching spend at least one hour a day in observation and teaching. They should get their practice teaching assignment before completing their registration for other classes. They should count on spending a minimum of 12 hours a week in all directed teaching courses.

Honor point average—For registration in all special methods and directed teaching courses, a C+ average (1.5 honor points) per credit in the major or in the subject in which student teaching is done, is required.

Conference for student teachers—The director of student teaching will arrange for a series of conferences which are a part of the required work in directed teaching. The hours at which these conferences are held will be announced in the fall.

Statement of fees—For all courses in methods, directed teaching, and special methods and directed teaching combined, a fee of \$1 per credit is charged. Taking the speech and psychological examinations given by the College of Education and a C+ average (1.5 honor points per credit) in the major or the subject in which student teaching is done are prerequisite to all special methods and student teaching courses. For Clinical Methods in Lip-reading and Practice in Speech Pathology see Ed.C.I. 174-175-176. For methods and directed teaching in special subjects see department concerned.

NURSING EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
Ed.T.51Af,w†§¶	Special Methods of Teaching in Schools of Nursing (3 cred.; sr., grad.; prereq. Ed. 51A; prereq. or parallel 51B, and Nu.Ed. 69)	VI	MWF	Ar*	Miss Harrington
Ed.T.51Bf,w,s†§¶	Special Methods of Teaching and Directed Teaching in Schools of Nursing (5 cred.; sr., grad.; prereq. Ed.T. 51A; prereq. or parallel Nu.Ed.71)	III	MWF	Ar*	Miss Harrington
		and 2 hrs. ar			

RECREATION LEADERSHIP

Ed.T.85Af-85Bw- 85Cs†§	Practice and Field Work in Recreation Leadership (3 cred. for minors, 6 cred. for majors; sr.; prereq. Phys.Ed. 57, 136, or permission of instructor)	Ar	Ar	Ar	Mr. Haislet
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SCHOOL HEALTH

Ed.T.83w†	Methods and Materials of School Health Education (3 cred.; sr.; prereq. P.H. 3, 4, 59)	III	MWF	201NGW	Miss Starr
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ELEMENTARY EDUCATION

Ed.T.53A-53Bf,w,s†§	Directed Teaching of Handicapped Children (5-8 cred.; sr.)	Ar	Ar	Ar	Mr. Bond
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* Room schedule will be posted on the bulletin board 125 Medical Sciences at the beginning of each quarter.

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

§ Taking the speech and psychological examinations and a C+ average (1.5 honor points per credit) in the major or the subject in which student teaching is done are prerequisite to registration in this course.

¶ Requirements for registration in Ed.T. 51A-B are as follows:

1. A passing grade in Ed. 51A and B.
2. Taking the psychological examinations.
3. Attainment of a scholastic average of 1.5 in the field in which the practice teaching is to be done. A major portion of the work in the teaching field should be completed.
4. The recommendation of the subject-matter department in the major field.
5. Passing of the required speech test.

No.	Title	Hour	Day	Bldg.	Instructor
Ed.T.54A-54B-54C†§	Directed Teaching in the Elementary School (54A, 3 cred.; 54B, 5 cred.; 54C, 3 to 5 cred.; sr.; prereq. Ed. 61A-B, Ed.C.I. 60, 61) (Students may register any quarter; 54A and 54B are required; 54C is elective)	Ar	Ar	Ar	Mr. Staudenmaier
Ed.T.55†	Principles of Early Childhood Education (3 cred.; jr., sr.; prereq. C.W. 80 or simultaneously)	VII	MWF	202Pt	Mrs. Fuller
Ed.T.56†	Methods and Observation in Nursery School and Kindergarten (5 cred.; jr.; prereq. Psy. 1-2, Ed.T. 55 concurrently)	VIII	MTWThF	202Pt	Miss Headley, and ar Miss Peterson
Ed.T.57w†	Nursery School—Kindergarten Laboratory in Art, Literature, and Social Studies (5 cred.; jr.; prereq. Ed.T. 55, 56)	VIII	MTWThF	202Pt	Miss Headley
Ed.T.58s†	Nursery School—Kindergarten Laboratory in Permanent Play Materials, Music, and Science (5 cred.; jr.; prereq. Ed.T. 55, 56, 57)	VIII	MTWThF	202Pt	Miss Peterson
Ed.T.70w†	The Teacher and the Parent (3 cred.; sr.; prereq. Ed.T. 55, 56, 57, 58)	V	TTh and	202Pt	Mrs. Cummings obs. ar
Ed.T.75f,w,s†	Methods and Observation in the Nursery School (3 cred.; sr.; prereq. C.W. 40, Ed.T. 55 and 58) (Open only to students in home economics and nursing education)	IX	M and ar	202Pt	Mrs. Fuller
Ed.T.77Af,w,s†§	Directed Teaching in the Nursery School (4 cred.; sr.; prereq. Ed.T. 55, 56, 57, 59, and 76A)	IX and 15 hrs. ar	M	202Pt	Mrs. Fuller
Ed.T.77Bf,w,s†§	Directed Teaching in the Primary Grades (4 cred.; sr.; prereq. Ed.T. 55, 56, 57, 59, and 76A)	IX and 15 hrs. ar	M	202Pt	Mrs. Fuller
Ed.T.77Cf,w,s†	Directed Teaching in the Kindergarten (4 cred.; sr.; prereq. Ed.T. 55, 56, 57, 59, and 76C)	IX and 15 hrs. ar	M	202Pt	Mrs. Fuller

SECONDARY EDUCATION

Ed.T.52f,w,s†§	Directed Teaching (5 cred.; sr., prereq. Special Methods Course. This course, 5 cred., and Special Methods, 4 cred., satisfy the 9 cred. requirement of Special Methods and student teaching in a secondary school teaching major)	Ar	Ar	Ar	Ar
Ed.T.66Bf-66Aw-66Cs†§	Special Methods and Directed Teaching in Secondary School English (9 cred.; sr.; prereq. consent of instructor)	VIII	TTh(f,w)	210Bu	Miss Smith and 6 hrs. ar
Ed.T.66Amw†§	The Teaching of Composition in Secondary Schools (2 cred.; sr.)	VIII(f)	TTh	210Bu	Miss Smith
Ed.T.66Bmf†§	The Teaching of Literature in Secondary Schools (2 cred.; sr.)	VI-VII(s)	T	206Bu	Ar
Ed.T.67Af-67Bw-67Cs†§	Special Methods and Directed Teaching in Mathematics (9 cred.; sr.; prereq. Math. 50 or 60)	VIII	TTh	211UHS	Miss Smith
		VIII and 6 hrs. ar	TTh	211UHS	Mr. Donovan Johnson

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

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

§ Taking the speech and psychological examinations and a C+ average (1.5 honor points per credit) in the major or the subject in which student teaching is done are prerequisite to registration in this course.

COLLEGE OF EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
Ed.T.67Amf- 67Bmw†‡§	The Teaching of Secondary School Mathematics (4 cred.; sr.; prereq. consent of instructor)	VIII	TTh	211UHS	Mr. Donovan Johnson
Ed.T.68Af-68Bw- 68Cs†‡§	Special Methods and Directed Teaching in Secondary School Science (9 cred.; sr.; prereq. consent of instructor)	IX and 6 hrs. ar	MW	213UHS	Mr. Palmer Johnson
Ed.T.68Amf- 68Bmw†‡§	Methods of Teaching Secondary School Science (4 cred.; sr.; prereq. consent of instructor)	IX	MW	213UHS	Mr. Palmer Johnson
Ed.T.69Af-69Bw- 69Cs†‡§	Special Methods and Directed Teaching in the Social Studies (9 cred.; sr.; prereq. 30 cred. in hist. or soc. sci. Consult instructor)	VIII and 6 hrs. ar	MW	100Pt	Mr. Wesley
Ed.T.69Amf- 69Bmw†‡§	Methods of Teaching the Social Studies (For students with a major in the social studies) (4 cred.; sr.; prereq. consent of instructor)	VIII	MW	100Pt	Mr. Wesley
Ed.T.70Af-70Bw- 70Cs†‡§	Special Methods and Directed Teaching in Modern Languages (9 cred.; sr.; prereq. consent of instructor)	IX and 6 hrs. ar	MW	106UHS	Miss Birkmaier
Ed.T.71Af-71Bw 71Cs†‡§	Special Methods and Directed Teaching in Latin (9 cred.; jr., sr.; prereq. 73 and any two of Latin courses numbered between 50 and 100)	IX and 6 hrs. ar	MW	109UHS	Ar
Ed.T.73Af-73Bw 73Cs†‡§	Special Methods and Directed Teaching in Commercial Subjects (9 cred.; sr.; prereq. consent of instructor) Fall—shorthand; winter—typewriting; spring—bookkeeping and junior business training	VIII and 6 hrs. ar	MW	110UHS	Ar
Ed.T.74w†§	Teachers' Course in Journalism (3 cred.; jr., sr.; prereq. Jour. 41 or 51)	VII	MWF	420MurH	Mr. Kildow
Ed.T.88Af-88Bw- 88Cs†‡§	Special Methods and Directed Teaching in Speech (9 cred.; prereq. 30 cred. in speech)	IX(f) VIII(s) VIII(f,w) and 6 hrs. ar	TTh	308F 210Bu	Mr. Brink Miss Smith

MUSIC EDUCATION

Major advisers—Professor Oberg; Assistant Professor Winslow.

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

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

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

§ Taking the speech and psychological examinations and a C+ average (1.5 honor points per credit) in the major or the subject in which student teaching is done are prerequisite to registration in this course.

No.	Title	Hour	Day	Bldg.	Instructor
Mu.Ed.4f-5w-6s†	Applied Instrumental Technique (6 cred.; soph.; no prereq.)	I	MTWF	4Mu(f)	Mr. Winslow
Mu.Ed.50Af‡¶	Primary Methods (2 cred.; jr.; no prereq.) Sec. 1 (For Mu.Ed. majors)	III	TTh	4Mu	Mr. Winslow
	2 (For nonmajors)	II	TTh	4Mu	Mr. Winslow
Mu.Ed.50Bw‡	Intermediate Methods (2 cred.; prereq. Mu.Ed. 50A)	III	TTh	4Mu	Mr. Winslow
Mu.Ed.52s‡	Technique of Teaching Appreciation (1 cred.; jr.; prereq. Ed. 51A)	III	TTh	4Mu	Mr. Winslow
Mu.Ed.53s‡	High School Methods (3 cred.; jr.; prereq. Ed. 51C and Mu.Ed. 50A,B)	III	MWF	4Mu	Mr. Winslow
Mu.Ed.54w‡	Public Performance (3 cred.; jr.; prereq. Ed. 51C)	III	MWF	4Mu	Mr. Winslow
Mu.Ed.55f‡	Survey and Evaluation of Vocal Materials and Methods (4 cred.; sr.; prereq. Mu.Ed. 50A, 50B, 53)	VI	MTWF	4Mu	Mr. Winslow
Mu.Ed.59w‡***	Choral Literature and Conducting (2 cred. for seniors; 1 cred. for fr., soph., jr.)	V	TTh	BuAud	Mr. Winslow
Mu.Ed.60f-61w-62s†‡§	Supervision and Teaching (9 cred.; sr.; prereq. Ed. 51A,B,C and Mu.Ed. 50A,B, 53 and a C+ average in the major)	IX-X	W	4Mu	Mr. Winslow
Mu.Ed.63f,w,s‡	Band Conducting (2 cred.; jr., sr.; prereq. 4-5-6)	VI	TTh	4NMA	Mr. Prescott
Mu.Ed.64s‡	Band Organization (3 cred.; sr.; prereq. 4-5-6)	VI	MWF	4NMA	Mr. Prescott
Mu.Ed.65f,s‡	Instrumentation (3 cred.; jr.; prereq. Mu. 4-5)	II	TThS	4Mu	Ar
Mu.Ed.68s	Conducting of Instrumental Music and Survey of Materials (4 cred.; sr.; prereq. Mu.Ed. 65)	I-II	MWF	5NMA	Ar
Mu.Ed.103Es	Psychological Foundations of Music Education (3 cred.; sr., grad.; prereq. permission of instructor)	VI and 1 hr. ar	TTh	4Mu	Mr. Winslow
Mu.Ed.150‡	<i>Advanced Course in the Teaching of Elementary School Music</i> (2 cred.; prereq. Mu.Ed. 50A,B or equiv. and consent of instructor) (<i>Not offered</i>)				
Mu.Ed.153	<i>Advanced Course in Secondary School Music</i> (3 cred.; prereq. consent of instructor) (<i>Not offered in 1946-47</i>)				
Mu.Ed.220Ef,w,s	Survey and Evaluation of Research in Music Education (3 cred.; prereq. Mu.Ed. 101E)	Ar	Ar	Ar	Mr. Winslow
Mu.Ed.224Ef,w,s	Seminar and Individual Research Problems in Music Education (2 to 6 cred.)	Ar	Ar	Ar	Mr. Winslow and others
Mu.Ed.225Ef,w,s††	Advanced Applied Music (2 to 4 cred.; prereq. entrance exam.)	Ar	Ar	Ar	Ar

NURSING EDUCATION

Major adviser—Professor Katharine Densford.

For other courses in Nursing see the bulletins of the School of Nursing and the Medical School. For courses in Directed Teaching see page 154. For courses in Public Health Nursing see pages 109-112. For specialized curricula in Nursing Education and Public Health Nursing see the College of Education Bulletin.

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

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

§ Taking the speech and psychological examinations and a C+ average (1.5 honor points per credit) in the major or the subject in which student teaching is done are prerequisite to registration in this course.

¶ In case of conflict students may register for another section with the approval of the instructor. ** Four credits are required for Mu.Ed. 59. This course should be repeated until all four credits are earned.

†† One individual lesson per week, 2 credits, \$25; two individual lessons per week, 4 credits, \$50.

COLLEGE OF EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
Nu.Ed.60w,s	Ward Administration (4 cred.; sr. or grad. nurse; no prereq.)	V	MWThF	Ar*	Mrs. Randall
Nu.Ed.63f	Motion Study (2 cred.; sr. or grad. nurse; no prereq.)	VI, VII, VIII	Th	202ME	Mr. Laitala
Nu.Ed.65w,s	Analysis of Nursing Care (4 cred.; sr. or grad. nurse; prereq. permission of instructor)	VI-VII	TTh	Ar*	Miss Harrington and others
Nu.Ed.67f,s	Field Practice in Ward Administration (6 cred.; sr., grad.; prereq. Nu.Ed. 60, 65, 73 and permission of instructor)	IV and ar	F	Ar*	Mrs. Randall
Nu.Ed.68w	Construction and Use of Examinations and Other Measurements in Basic Nursing Courses (3 cred.; sr. or grad. nurse; no prereq.)	IV	MWF	Ar*	Miss Gordon
Nu.Ed.69f,s	Survey of Conditions and Trends in Nursing (3 cred.; sr., grad.; no prereq.)	IV	MWF	Ar*	Miss Densford
Nu.Ed.71f,s	The Curriculum of the School of Nursing (3 cred.; sr., grad.; prereq. Ed. 51A-B and Nu. 69)	VI-VII(f)	T	Ar*	Miss Harrington
		VI	Th		
		VI(s)	MWF		
Nu.Ed.72w	Principles of Learning and Methods of Teaching in Schools of Nursing (3 cred.; grad. nurse; no prereq.)	VIII	TTh	Ar*	Miss Boyle
		IX	Th		
Nu.Ed.73w	Principles of Economics in Nursing Service Administration (1 cred.; sr., grad.; no prereq.)	V	T	Ar*	Miss Gorgas
Nu.Ed.162s	Personnel Work in Schools of Nursing (3 cred.; sr. or grad. nurse; no prereq.)	I	MWF	Ar*	Miss Gordon

PHYSICAL EDUCATION FOR MEN

Major advisers—Professors Keller and Nordly; Associate Professor Piper; Assistant Professor Bartelma; Instructors Ostrander and Ronning.

For the program in sports education open to all men students in the University, see pages 11-13.

COURSE IN MAJOR AND MINOR CURRICULA IN PHYSICAL EDUCATION FOR MEN

Phys.Ed.4Af-4Bw-4Cs	Fundamentals of Athletic Sports (1 cred. per qtr.; no prereq.)	VII-VIII	TTh	215CH	Mr. McMillan, Mr. Kelly, Mr Svendsen
Phys.Ed.5Af-5Bw-5Cs	Physical Education Activities (3 cred.; no prereq.)	III-IV	T	CH	Mr. Ostrander
		III	Th		
Phys.Ed.6Af-6Bw	Intramural Sports (1 cred. per qtr.; all; no prereq.)	VI	MWF	215CH	Mr. Ostrander
Phys.Ed.6Cs	Intramural Sports (1 cred.; prereq. ability to swim 100 yds.)	V	MWF	215CH	Mr. Thorpe
Phys.Ed.7Af-7Bw-7Cs	Physical Education Activities (1 cred. per qtr.; soph., jr., sr.)	II-III	TTh	CH Gym	Mr. Piper and others
Phys.Ed.8s	Dual Spring Sports (1 cred.; all; no prereq.)	VII	MWF	215CH	Mr. Smith, Mr. Brain

* Room schedule will be posted on the bulletin board 125 Medical Sciences at the beginning each quarter.

No.	Title	Hour	Day	Bldg.	Instructor
Phys.Ed.9s	Rhythms (1 cred.; jr., sr.)	Ar	Ar	Ar	Mr. Piper
Phys.Ed.32s	Introduction to Physical Education (3 cred.; no prereq.)	I	MWF	215CH	Mr. Bartelma
Phys.Ed.50s	Human Anatomy (4 cred.; soph.; prereq. Zool. 1-2-3 or G. C. 101, 102, 103)	III-IV	MWF	Ar	Mr. Keys and others
Phys.Ed.51f	Mechanics of Movement (3 cred.; jr.; prereq. 50)	II	MWF	206CH	Mr. Osell
Phys.Ed.53f†, 54w†,55s††	Methods and Materials in Physical Education (4 cred.; jr.; prereq. 5A-B-C, 6A-B-C, 7A-B-C)	Lect. Lab.	V(f,w,s) Ar	Th 206CH	Mr. Bartelma
Phys.Ed.56w	Nature and Function of Play (2 cred.; jr., sr.; prereq. Psy. 1-2, or equiv.)	VII-VIII	T	Ar	Mr. Haislet
Phys.Ed.57s	Operation and Conduct of Play Centers (3 cred.; jr., sr.; prereq. permission of instructor)	VII	MWF	206CH	Mr. Haislet
Phys.Ed.58s	Instructor's First Aid (2 cred.)	Ar	Ar	Ar	Mr. Osell
Phys.Ed.60s	Prevention and Care of Injuries (2 cred.; jr.)	III	TThS	206CH	Mr. Stein
Phys.Ed.61f	History of Physical Education (2 cred.; sr.)	I	MWF	206CH	Mr. Keller
Phys.Ed.63s	Organization and Administration of Physical Education (3 cred.; sr.; prereq. 53, 54, 55)	III	MWF	206CH	Mr. Piper
Phys.Ed.67s	Coaching of Athletic Sports (Football) (2 cred.; sr.; prereq. 4B and one year experience on Minnesota squad)	II	TThS	214CH	Mr. Bierman
Phys.Ed.68f	Coaching of Athletic Sports (Basketball) (2 cred.; sr.; prereq. 4A)	VI	MWF	214CH	Mr. MacMillan
Phys.Ed.69s	Coaching of Athletic Sports (Track) (2 cred.; sr.; prereq. 4C)	VI	TTh	214CH	Mr. Kelly
Phys.Ed.72w	Coaching of Athletic Sports (Baseball) (2 cred.; sr.; prereq. permission of instructor)	VI	MWF	214CH	Mr. MacMillan
Phys.Ed.73f†, 74w†,75s†§	Directed Teaching (6 cred.; sr.; prereq. 4A-B-C, 5A-B-C, 6A-B-C, 7A-B-C, 53, 54, 55)	V and 5 hrs. ar	M	214CH	Mr. Bartelma
Phys.Ed.78w	Scout Leadership (2 cred.; no prereq.)	VII	MW	206CH	Mr. Osell
Phys.Ed.79s	Camp Leadership (2 cred.; no prereq.)	VII	MW	206CH	Mr. Osell
Phys.Ed.101Ew¶	Principles of Physical Education (3 cred.; sr., grad.; prereq. 53, 54, 55)	I	MWF	206CH	Mr. Keller
Phys.Ed.103Es¶	Physical Examination and Adaptation of Activities (3 cred.; sr., grad.; prereq. 50, 51, Physiol. 50, 51, or equiv.)	VI	MWF	206CH	Dr. Hauser, Mr. Osell
Phys.Ed.133Ew¶	Special Administrative Problems in Physical Education in Secondary Schools (3 cred.; sr., grad.; prereq. 63 or equiv.)	II	MWF	206CH	Mr. Nordly

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

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

§ Taking the speech and psychological examination and a C+ average (1.5 honor points per credit) in the major are prerequisite to registration in this course.

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

No.	Title	Hour	Day	Bldg.	Instructor
Phys.Ed.134Es¶	The Secondary School and College Curriculum in Physical Education (3 cred.; sr., grad.; prereq. 63, 101E or equiv.)	II	MWF	206CH	Mr. Nordly
Phys.Ed.135Es¶	Tests and Measurements in Physical Education (3 cred.; sr., grad.; prereq. 10 hrs. in phys. ed. and Ed.Psy. 60 or equiv.)	I	TThS	206CH	Mr. Keller
Phys.Ed.136Ef¶	Leadership in Community Recreation (3 cred.; sr., grad.; prereq. 56 or equiv. and 10 hrs. in ed. or permission of instructor)	III	MWF	206CH	Mr. Haislet
Phys.Ed.137Ef¶	Recent Literature and Research in Health Education, Physical Education, and Recreation (3 cred.; grad.; permission of instructor)	II	MWF	206CH	Mr. Nordly
Phys.Ed.138Ef¶	Administration of Physical Education in Colleges and Universities (2 cred.; sr., grad.; prereq. 63 or 133E or equiv.)	IX-X	M	206CH	Mr. Keller
Phys.Ed.141Ew¶	Administration and Supervision of Public Recreation (3 cred.; jr., sr., grad.)	III	MWF	Ar	Mr. Hasilet
Phys.Ed.142sE¶	Group Leadership and Community Organization for Recreation (3 cred.; sr., grad.)	III	MWF	Ar	Mr. Fitzgerald
Phys.Ed.237Ef,w,s¶	Problems in Health Education, Physical Education, and Recreation (2 to 6 cred.; grad.; prereq. 137E and Ed. 206; ar.)	Ar	Ar	Ar	Mr. Nordly

PHYSICAL EDUCATION FOR WOMEN

Major advisers—Professor Gertrude M. Baker; Associate Professor Helen M. Starr.

COURSES IN MAJOR, MINOR, AND GRADUATE CURRICULA IN PHYSICAL EDUCATION FOR WOMEN

Open only to students in the College of Education except by permission of instructor.

Statement of fees—A physical education fee of \$1.75 per quarter is charged for all starred courses; a fee of \$3.50 per quarter is charged for Phys.Ed. 21A-B-C and for Phys.Ed. 41A-B-C; maximum fee per student \$3.50 per quarter. For methods and directed teaching courses a fee of \$1 per credit is charged as indicated in the footnotes. The maximum fee per quarter does not apply to the methods and directed teaching courses.

For program in physical education open to all women students in the University, see pages 13-17.

21Af-Bw-Cs*‡ Elementary Physical Education (6 cred.; no prereq.)

Sec.	1 (fall)	Individual Sports: Badminton	VII	TTh	153NGW	Ar
2 (fall)	Team Sports: Fieldball, Soccer, and Speedball	VIII	TTh	60NGW	Ar	
3 (fall)	Fundamentals of Rhythm	VI	TTh	153NGW	Ar	
4 (fall)	Orientation	VI	W	3NGW	Ar	
5 (winter)	Individual Sports: Skating	VI-VII	W	Ar	Ar	
6 (winter)	Teamsports: Advanced Basketball	VIII	TTh	151NGW	Ar	
7 (winter)	Folk Dancing for Elementary and Secondary Schools	VI	TTh	151NGW	Ar	
8 (winter)	Posture and Daily Life Skills	I	TTh	153NGW	Ar	
9 (spring)	Individual Sports: Tennis	III-IV	S	151NGW	Ar	

* Students must pay 50 cents for tennis permit and supply own golf equipment.

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

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

No.	Title	Hour	Day	Bldg.	Instructor
21Af-Bw-Cs*‡	Elementary Physical Education— <i>continued</i>				
	10 (spring) Individual Sports: Golf	VII	TTh	60NGW	Ar
	11 (spring) Aquatics	VIII	TTh	58NGW	Ar
	12 (spring) Ballroom and Country Dance	VI	TTh	151NGW	Ar
25f,w	First Aid (1 cred.; no prereq.)	I (fall) II (winter)	TTh	201NGW	Ar
			MW	201NGW	Ar
41Af-Bw-Cs*‡	Intermediate Physical Education (9 cred.; prereq. 21A-B-C)				
	Sec. 1 (fall) Officiating of Teamsports: Fieldball, Soccer, and Speedball	I-II	S	151NGW	Ar
	2 (fall) Officiating Team Sports: Volleyball	VIII	TTh	151NGW	Ar
	3 (fall) Team Sports: Field Hockey	VI	TTh	60NGW	Ar
	4 (fall) Aquatics	III	TTh	58NGW	Ar
	5 (fall) Elementary Modern Dance	III	MW	151NGW	Ar
	6 (fall) Tumbling and Stunts	I	TTh	153NGW	Ar
	7 (fall) Gymnastics	II	TTh	153NGW	Ar
	8 (winter) Individual Sports: Archery—Bowling	I II	S S	60NGW Ar	Ar Ar
	9 (winter) Intermediate Modern Dance	III	MW	151NGW	Ar
	10 (winter) Team Sports Officiating: Basketball	VIII	TTh	153NGW	Ar
	11 (winter) Apparatus	I	TTh	153NGW	Ar
	12 (winter) Gymnastics	II	TTh	153NGW	Ar
	13 (spring) Individual Sports: Track and Field	VI	TTh	60NGW	Ar
	14 (spring) Officiating of Teamsports: Softball	VIII	TTh	60NGW	Ar
	15 (spring) Aquatics	VI	MWF	58NGW	Ar
	16 (spring) Advanced Modern Dance	II	TThS	153NGW	Ar
	17 (spring) Individual Sports: Advanced Tennis	III	TTh		
50s‡‡	General Anatomy (4 cred.; prereq. Zool. 1-2-3)	III, IV	MWF	312IA	Miss Riddle
51f‡‡	Mechanics of Movement (3 cred.; prereq. 50)	VII, VIII	TTh	3NGW	Miss Riddle
57Aw-Bs‡‡‡	Technique of Teaching Aquatics (2 cred.; jr.; prereq. 21A-B-C)	III (winter, spring)	1ThS	58NGW	Miss Starr
60w	Principles of Play (3 cred.; prereq. Psy. 1-2)	III IV	MWF MWF	201NGW 201NGW	Ar Ar
	(Child Welfare and Elementary Education only)				
61Af-Bw-Cs‡‡‡	Technique of Teaching Team Sports (3 cred.; jr.; prereq. 41A-B-C)	II (fall, winter, spring)	MWF	151NGW	Ar
64w‡‡‡	Technique of Teaching Group Gymnastics (1 cred.; jr., prereq. 41A-B)	VI	TTh	153NGW	Ar

* Students must pay 50 cents for tennis permit and supply own golf equipment.

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

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

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

COLLEGE OF EDUCATION

No.	Title	Hour	Day	Bldg.	Instructor
65As-Bw†	Technique of Teaching Individual and Dual Sports (2 cred.; soph., jr.; prereq. 21A-B-C)	I (spring)	TThS	60NGW	Miss Jaeger
		II (winter)	TThS	60NGW	Miss Jaeger
66s‡	Advanced Physical Education (3 cred.; soph., jr.; prereq. 21A-B-C and 41A-B-C)	VI	MWF	153NGW	Miss Jaeger
73As,Bf,Cw†	Technique of Teaching Rhythm (3 cred.; soph., jr.; prereq. 21A-B-C and 66)	I (spring)	MWF	153NGW	Miss Bockstruck
		I (fall, winter)	TThS	153NGW	Miss Bockstruck
82f	Principles of Physical Education (3 cred.; sr.; permission of instructor)	II	MWF	3NGW	Miss Starr
83f†	Methods and Materials of School Health Education (See Ed.T. 83)				
84w	Problems in Physical Education (2 cred.; prereq. permission of instructor)	III	TTh	201NGW	Ar
85f	Remedial Activities in Physical Education (3 cred.; sr.; prereq. 51)	III	TThS	3NGW	Miss Riddle
86w	Aspects of School Health Appraisal in Physical Education (3 cred.; sr.; prereq. 51 or permission of instructor)	II	MWF	201NGW	Dr. Todd, Miss Starr, Miss Riddle, and others
90Af-Bw- Cst†‡	Student Teaching (8 cred.; sr.; prereq. 65A-B, 60, 61A-B-C, 63, 64, 65)	Lect. II	TThS	3NGW	Miss Starr
		Lab. Ar	Ar	3NGW	Miss Starr
95s	Administration of Physical Education (3 cred.; sr.; prereq. 60, 82, 83)	II	MWF	201NGW	Miss Baker
111Ef*	An Advanced Course in Methods of Teaching Physical Education (3 cred.; sr., grad.; prereq. undergrad. methods courses, 60 and 82 or equiv.)	IX, X	W	3NGW	Miss Baker
		1 hr. ar			
112Es*	Supervision of Physical Education (3 cred.; sr., grad.; prereq. teaching experience)	IX, X	W	3NGW	Miss Baker
		1 hr. ar			
113Ew*	Physical Education in the Elementary Schools (3 cred.; sr., grad.; prereq. 60 and 82 or equiv., and experience teaching elementary grade children)	IX, X	T	3NGW	Miss Baker
		1 hr. ar			
114Es*	The School Health Education Program (See Ed.C.I. 114)				
116Ew*	Problems in Physical Fitness (3 cred.; sr., grad.; prereq. 82, 83 or equiv.)	IX, X	W	3NGW	Ar
		1 hr. ar			

Electives

26s	Advanced Course in First Aid (1 cred.; prereq. 25)	VI	MW	201NGW	Ar
54s††	Camp Leadership (2 cred.; no prereq.)	VIII	MW	201NGW	Ar
		1 hr. ar			
71††	<i>Applied Physiology</i> (3 cred.; prereq. 51 and Physiol. 51) (<i>Not offered in 1946-47</i>)				
79s	Massage and Therapeutic Exercises (2 cred.; prereq. 85)	I	TThS	3NGW	Ar

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

† The entire course must be completed satisfactorily before credit is given for any quarter. Graduates of teachers colleges should consult their advisers before registering for any part of the course.

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

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

‡‡ Taking the psychological examinations and a C+ (1.5 honor points per credit) in the major are prerequisite to this course.

80f	Principles of Rhythm (2 cred.; prereq. some rhythm experience)	V	TTh 3NGW	Miss Bockstruck
87w	Dance Composition (2 cred.; prereq. permission of instructor)	V and	TTh 153NGW	Miss Bell, Miss Bockstruck
		2 hrs. ar.		
88s	Advance Problems in Dance Composition (2 cred.; prereq. 87)	V and	TTh 153NGW	Miss Bell, Miss Bockstruck
		2 hrs. ar.		

PUBLIC HEALTH

The College of Education offers specialized curricula in Public Health Nursing and Nursing Education and School Health. For curricula see College of Education Bulletin. For class schedule see pages 108-112 in this bulletin.

THEORY AND PRACTICE OF TEACHING

For courses formerly listed in this department, see General Courses, Curriculum and Instruction, and Methods and Directed Teaching.

COLLEGE OF AGRICULTURE, FORESTRY, AND HOME ECONOMICS

All courses in the College of Agriculture, Forestry, and Home Economics are scheduled on the University Farm campus except those indicated by an asterisk (*).

AGRICULTURAL BIOCHEMISTRY

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f,s	Elementary Organic Chemistry (5 cred.; soph., jr., sr.; prereq. Inorg.Chem. 1 and 2 or 4 and 5 ¹⁾) (Limited to 125)				
	Fall	II	MTWThF	107En	Mr. Greenwood
	Spring Sec. 1	I	MTWThF	107En	Mr. Greenwood
	2	II	MTWThF	107En	Mr. Greenwood
2f,w†	Quantitative Methods (5 cred.; soph., jr., sr.; prereq. Inorg.Chem. 1 and 2 or 4 and 5) (Limited to 32)				
		VI, VII, VIII,			
		IX	MWF	116SnH	Mr. Greenwood
3f,w	Introduction to Biochemistry (3 cred.; soph., jr., sr.; prereq. 1 or equivalent)				
		I	TThS	113SnH	Ar
5s	Plant Biochemistry (3 cred.; soph., jr., sr.; prereq. 3; Soils 4 advised)				
		I	MWF	116SnH	Mr. Geddes
6s	Animal Biochemistry (3 cred.; soph., jr., sr.; prereq. 3; Soils 4 advised)				
		II	MWF	116SnH	Mr. Boyer

Senior College Courses

103s††§	Dairy Chemistry (6 cred.; jr., sr., grad.; prereq. 2 or equiv.; 6 or equiv.)				
	Lect.	VI	MWF	113SnH	Mr. Jenness
	Lab.	VII, VIII, IX	MWF	208SnH	Mr. Jenness
105s¶**	Plant Biochemistry (3 cred.; jr., sr., grad.; prereq. 3; Soils 4 advised)				
		I	MWF	116SnH	Mr. Geddes
106s¶**	Animal Biochemistry (3 cred.; jr., sr., grad.; prereq. 3; Soils 4 advised)				
		II	MWF	116SnH	Mr. Boyer
108s	Chemistry of Wheat and Wheat Products (3 cred.; jr., sr., grad.; prereq. 5)				
		II	MWF	113SnH	Mr. Geddes
110s††	Flour Laboratory Methods (3 to 5 cred.; jr., sr., grad.; prereq. 2 or equiv.)				
		VI, VII, VIII		208SnH	Mr. Geddes,
		IX	MWF		Mr. Smith
116w	Advanced Animal Nutrition (3 cred.; jr., sr., grad.; prereq. 6 or equiv., 120 advised)				
		III	TThS	113SnH	Ar,
					Miss Kennedy
117s††	Animal Nutrition Laboratory (3 cred.; jr., sr., grad.; prereq. 116, permission of instructor)				
		Ar		Ar 314SnH	Ar,
					Miss Kennedy
118f,w,s	Laboratory Problems in Biochemistry (3 to 5 cred.; jr., sr., grad.; permission of instructor)				
		Ar		Ar Ar	Ar

† A laboratory fee of \$2 is required for this course. A \$5 card (from which the \$2 fee will be deducted) is to be purchased from the cashier's office, University Farm, before a laboratory desk will be assigned.

†† A laboratory fee of \$5 is required for each quarter of this course. The \$5 card purchased from the cashier's office, University Farm, must be presented before laboratory space will be assigned. A \$5 breakage card against which breakage can be charged must be purchased also.

§ Lectures only may be taken upon permission of instructor.

¶ Term paper required.

|| By special permission of the student's adviser General College Courses 37A and 37B will be acceptable as prerequisites for home economics students.

** No credit allowed if course 5 or 6 has been completed.

No.	Title	Hour	Day	Bldg.	Instructor
119f	Colloids (3 cred.; jr., sr., grad.; prereq. 4 or 8 credits in Organic Chemistry, Physics 9 advised)				
		III	MWF	113SnH	Mr. Briggs
120w	Proteins (3 cred.; jr., sr., grad.; prereq. 119 or permission of instructor)	III	MWF	113SnH	Mr. Sandstrom
121w	Carbohydrates (3 cred.; jr., sr., grad.; prereq. 119 or permission of instructor)	II	MWF	113SnH	Mr. Geddes
122s	Lipides (3 cred.; jr., sr., grad.; prereq. 119 or permission of instructor)	IV	MWF	113SnH	Mr. Briggs
123s	Enzymes (3 cred.; jr., sr., grad.; prereq. 119 or permission of instructor)	III	MWF	113SnH	Mr. Sandstrom
129f††	Colloids Laboratory (2 cred.; jr., sr., grad.; prereq. 2, parallel 119)	VI, VII, VIII	TTh	202SnH	Mr. Briggs
130w††	Proteins Laboratory (2 cred.; jr., sr., grad.; prereq. 2, parallel 120)	VI, VII, VIII	TTh	202SnH	Mr. Sandstrom
131w††	Carbohydrates Laboratory (2 cred.; jr., sr., grad.; prereq. 2, parallel 121)	VI, VII, VIII	MW	202SnH	Mr. Geddes
132s††	Lipides Laboratory (2 cred.; jr., sr., grad.; prereq. 2, parallel 122)	VI, VII, VIII	MW	202SnH	Mr. Briggs
133s††	Enzymes Laboratory (2 cred.; jr., sr., grad.; prereq. 2, parallel 123)	VI, VII, VIII	TTh	202SnH	Mr. Sandstrom

(See also courses under Food Technology.)

Courses for Graduate Students Only

201w	Advanced Colloids (3 cred.; prereq. 119, Physical Chemistry 103s)	Ar	Ar	Ar	Mr. Briggs
202f††	Biochemical Micro Methods (3 cred.; prereq. 2, Bact. 53, Physics 9)	VI, VII, VIII, IX		MW 208SnH	Ar
203f,w,s,su††	Research Problems (2 to 5 cred.; permission of instructor)	Ar	Ar	Ar	Ar
205f,w,s,su	Special Topics in Biochemical Literature (1 to 3 cred.; prereq. permission of instructor)	Ar	Ar	Ar	Ar
208f,w,s	Cereal Chemistry Seminar (1 cred.; prereq. 108 and permission of instructor)	Ar	Ar	Ar	Mr. Geddes
212f,w,s††	Special Topics in Nutritional Chemistry (3 cred.; prereq. 116)	Ar	Ar	Ar	Ar, Miss Kennedy
213f,w	Dairy Chemistry Seminar (1 cred.; prereq. 103 and permission of instructor)	Ar	Ar	Ar	Mr. Jenness
216f,w	Nutrition Seminar (1 cred.; prereq. 116 and permission of instructor)	Ar	Ar	Ar	Ar, Miss Kennedy
219f,w	Colloid Chemistry Seminar (1 cred.; prereq. 119 and permission of instructor)	Ar	Ar	Ar	Mr. Briggs
220f,w	Protein Chemistry Seminar (1 cred.; prereq. 120 and permission of instructor)	Ar	Ar	Ar	Mr. Sandstrom
221f,w	Carbohydrate Chemistry Seminar (1 cred.; prereq. 121 and permission of instructor)	Ar	Ar	Ar	Mr. Geddes
222f,w	Lipides Chemistry Seminar (1 cred.; prereq. 122 and permission of instructor)	Ar	Ar	Ar	Mr. Briggs
223t,w	Enzyme Chemistry Seminar (1 cred.; prereq. 123 and permission of instructor)	Ar	Ar	Ar	Mr. Sandstrom
224f,w,s††	General Seminar (1 cred.; prereq. permission of instructor)	Ar	Ar	Ar	Staff

†† A laboratory fee of \$5 is required for each quarter of this course. The \$5 card purchased from the cashier's office, University Farm, must be presented before laboratory space will be assigned. A \$5 breakage card against which breakage can be charged must be purchased also.

†† Required of all graduate students majoring in the division.

AGRICULTURAL ECONOMICS

Junior College Courses

No.	Title	Hour	Day	Bldg.	Instructor
1f	Principles of Economics I (3 cred.; soph., jr., sr.; no prereq.) (Sections limited to 60 each)				
	Sec. 1	I	MWF	109HH	Mr. Lowe
	2	I	TThS	109HH	Mr. Lowe
1w	Principles of Economics I (Same as 1f) (Sections limited to 60 each)				
	Sec. 1	I	TThS	100HH	Mr. Halvorson
	2	III	MWF	109HH	Mr. Lowe
2w	Principles of Economics II (5 cred.; soph., jr., sr.; prereq. 1) (Sections limited to 60 each)				
	Sec. 1	I	MTWThF	109HH	Mr. Lowe
	2	III	MTWThF	100HH	Mr. Halvorson
2s	Principles of Economics II (Same as 2w) (Sections limited to 60)				
	Sec. 1	I	MTWThF	109HH	Mr. Halvorson
	2	III	MTWThF	109HH	Mr. Lowe
3f,w,s	Principles of Economics (Home Economics) (5 cred.; soph., jr., sr.; no prereq.) (Limited to 60)				
		II	MTWThF	109HH	Mr. Lowe
7w	Natural Resources (3 cred.; soph., jr., sr.; no prereq.)				
		III	TThS	109HH	Mr. Dowell
8s	Rural Economics (3 cred.; soph., jr., sr.; prereq. 2 or 3)				
		III	TThS	210HH	Mr. Jesness
25f,w	Principles of Accounting (4 cred.; soph., jr., sr. in Agr., For., and Home Econ. only) (Limited to 50)				
	Lect.	II(f)	MWF	311HH	Mr. Koller
		II(w)	TThS	311HH	
	Lab.	VIII, IX	Th	311HH	
30f	Agricultural Prices (3 cred.; soph., jr., sr.; prereq. 2)				
		II	TThS	312HH	Mr. Waite
40f,s	Principles of Marketing Organization (3 cred.; soph., jr., sr.; prereq. 2)				
		I	MWF(f)	210HH	Mr. Cox
		II	MWF(w)	312HH	
47s	Marketing Accounting (4 cred.; soph., jr., sr.; prereq. 25)				
	Lect.	IV	MWF	311HH	Mr. Koller
	Lab.	VIII, IX	F	311HH	

Senior College Courses

50f§	Farm Finance (5 cred.; jr., sr. in Agr. and For. only; prereq. 2)				
		IV	MTWFS	312HH	Mr. Koller
80s§	Farm Accounting (3 cred.; jr., sr.)				
		I	TThS	312HH	Mr. Engene
90f§	Agricultural Statistics (5 cred.; jr., sr.)				
	Lect.	III	TThS	312HH	Mr. Cox
	Lab.	Ar	Ar		
102w	Farm Organization (3 cred.; jr., sr., grad.; prereq. 2) (Limited to 60)				
		II	TThS	210HH	Mr. Pond
103s	Farm Operation (3 cred.; jr., sr., grad.; prereq. 102) (Limited to 60)				
		II	TThS	100HH	Mr. Pond
104s	Types of Farming (3 cred.; jr., sr., grad.; prereq. 2)				
		III	MWF	312HH	Mr. Pond
110f-111w	Economics of Agricultural Production I and II (6 cred.; jr., sr., grad.; prereq. 2)				
		I	TThS	312HH	Mr. Dowell
126f,s	Economics of Consumption (3 cred.; jr., sr., grad.; prereq. 2 or 3)				
		I	TThS	100HH	Mr. Waite
131w	Market Prices (3 cred.; jr., sr., grad.; prereq. 30, 40)				
		III	TThS	312HH	Mr. Waite
135s	Methods of Price Analysis (3 cred.; sr., grad.; prereq. 30, 191)				
		III	TThS	312HH	Mr. Waite
140f	Marketing Organization: Staples (3 cred.; jr., sr., grad.; prereq. 40)				
		III	MWF	312HH	Mr. Cox

§ Open to sophomores on petition.

No.	Title	Hour	Day	Bldg.	Instructor
141w	Marketing Organization: Dairy and Poultry Products (3 cred.; jr., sr., grad.; prereq. 40)	II	MWF	312HH	Mr. Jesness
142s	Marketing Organization: Fruits and Vegetables (2 cred.; jr., sr., grad.; prereq. 40)	III	MW	311HH	Mr. Cox
143w	Marketing Organization: Livestock and Meats (3 cred.; jr., sr., grad.; prereq. 40)	III	MWF	312HH	Mr. Dowell
144f	Co-operative Organization (3 cred.; jr., sr., grad.; prereq. 40)	II	TThS	311HH	Mr. Jesness
150s	Advanced Farm Finance (3 cred.; jr., sr., grad.; prereq. 50 or equiv.)	2:30-4:00 p.m.	TTh	312HH	Mr. Koller
170s	Land Economics (3 cred.; jr., sr., grad.; prereq. 110)	1:30-3:00 p.m.	WF	312HH	Mr. Dowell
172s	Economics of World Agriculture (3 cred.; jr., sr., grad.; prereq. 110)	I	MWF	312HH	Mr. Dowell
191w	Advanced Agricultural Statistics (3 cred.; jr., sr., grad.; prereq. 90)	IV	MWF	312HH	Mr. Waite

Courses for Graduate Students Only

206w	Seminar in Agricultural Policy (3 cred.)	2:30-5:00 p.m.	Th	312HH	Mr. Jesness
221f	Farm Organization Studies (3 cred.)	Ar	Ar	Ar	Mr. Pond
226s	Advanced Farm Organization (3 cred.)	Ar	Ar	Ar	Mr. Pond
241f	Seminar in the Marketing of Livestock and Livestock Products (3 cred.)	Ar	Ar	Ar	Mr. Dowell

See also Economics and Business Administration in School of Business Administration section.

AGRICULTURAL EDUCATION

For list of courses in Agricultural Education see courses listed under the College of Education, page 137.

AGRICULTURAL ENGINEERING

Junior College Courses

3f,w,s	Mechanical Drawing (3 cred.; no prereq.) (Limited to 40)	III, IV(f) VI, VII(w) III, IV(s)	MWF MWF MWF	303En 303En 303En	Mr. Otis Mr. Otis Mr. Otis
5f‡	Farm Structures Laboratory (3 cred.; prof. agr. eng. only; no prereq.)	I II	MW MW	41En 48En	Mr. Christopherson
6s‡	Farm Buildings (4 cred.; no prereq.) (Limited to 60)	I, II VI, VII, VIII, IX	F	41,305En	Mr. White, Mr. Christopherson
11w	Applied Mathematics (5 cred.; high school elementary algebra and plane geometry or their qualitative equiv.) (Limited to 20)	III	MTWThF	105En	Mr. Manson, Mr. Allred
12s	Agricultural Machinery (3 cred.; prereq. 23 or equiv.)	II	MWF	216En	Mr. Schwantes
13f‡	Gas Engines and Tractors (3 cred.; no prereq.) (Limited to 40)	VI, VII, VIII	MF	216,37En	Mr. Torrance
14s‡	Farm Power and Machinery (4 cred.; prereq. 41, 23 or equiv.) (Limited to 40)	VI, VII VI, VII, VIII	M WF	37,216En	Mr. Torrance, Mr. Johnson

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

No.	Title	Hour	Day	Bldg.	Instructor
15w	Electricity in Agriculture (2 cred.; prereq. 23 or equiv.)				
	Lect.	VI	TTh	101En	Mr. Hustrulid
18s	Agricultural Automotives (4 cred.; prof. agr. eng. only; prereq. Phys. 7)				
	Lect.	VI	TTh	216En	Mr. Torrance,
	Lab.	VII, VIII, IX	TTh	37En	Mr. Strait
19f‡	Elementary Surveying (3 cred.; prereq. 3, 11 or trigonometry) (Sections limited to 28 each)				
	Lect.	V	T	217En	Mr. Manson,
	Lab.	VI, VII, VIII	TTh	303En	Mr. Allred
19s‡	Elementary Surveying (Same as 19f)				
	Lect.	VI	T	217En	Mr. Manson,
	Lab.	VII, VIII, IX	TTh	303En	Mr. Allred
20f‡	Advanced Surveying (3 cred.; prereq. 19) (Limited to 28)				
	Lect.	VI	M	217En	Mr. Manson,
					Mr. Allred
	Lab.	VII, VIII, IX	M	305En	Mr. Manson,
		VI, VII, VIII	W		Mr. Allred
20s‡	Advanced Surveying (Same as 20f)				
	Lect.	VI	M	217En	Mr. Manson,
					Mr. Allred
	Lab.	VII, VIII, IX	MF	305En	Mr. Manson,
					Mr. Allred
21s‡	Elements of Surveying (5 cred.; prof. agr. eng. only; prereq. Draw. 3 and M.&M. 12)				
	Lect.	V	M	105En	Mr. Manson
	Lab.	VI, VII, VIII			
		IX	MWF	305En	Mr. Manson
23w‡	General Physics (5 cred.; no prereq.) (Lab. sections limited to 20 each) (Not open for credit to students offering one unit of high school physics for entrance)				
	Lect.	I	MWF	101En	Mr. Hustrulid
	Lab. Sec. 1	VI, VII, VIII, IX	T	102En	Mr. Tyler
	2	VI, VII, VIII, IX	W	102En	Mr. Hustrulid
24f‡	Agricultural Physics I (4 cred.; prereq. Math. 6 or equiv.) (Lab. sections limited to 16 each)				
	Lect.	III	MWF	101En	Mr. Hustrulid
	Lab. Sec. 1	VI, VII	M	102En	Mr. Hustrulid
	2	VI, VII	F	102En	Mr. Hustrulid
25w‡	Agricultural Physics II (4 cred.; prereq. 24)				
	Lect.	I	TThS	101En	Mr. Hustrulid
	Lab. Sec. 1	VI, VII	M	102En	Mr. Hustrulid
	2	VI, VII	F	102En	Mr. Hustrulid
31w	Principles of Drainage (3 cred.; no prereq.)				
		II(w)	MWF	105En	Mr. Manson
32w	Elements of Supplemental Irrigation (2 cred.; no prereq.)				
		Ar	Ar	Ar	Mr. Allred
33f‡	Introduction to Soil and Water Control (3 cred.; prereq. 11 or equivalent and Soils 5) (Limited to 28)				
		IV	W	105En	Mr. Manson
		VI, VII, VIII	WF		
35f,s‡	Household Physics (3 cred.; no prereq.) (Lab. sections limited to 16 each)				
	Lect. (f)	III	TThS	101En	Mr. Hustrulid
	Lab. (f) Sec. 1	I, II	ThS	102En	Mr. Hustrulid
	2	VI, VII	TTh	102En	Mr. Tyler
	Lect. (s) Sec. 1	I	MWF	101En	Mr. Hustrulid
	2	III	TThS	101En	Mr. Hustrulid
	Lab. (s) Sec. 1	I, II	TTh	102En	Mr. Hustrulid
	2	VI, VII	MF	102En	Mr. Tyler
	3	VI, VII	TTh	102En	Mr. Tyler
	4	VIII, IX	MF	102En	Mr. Tyler
	5	VIII, IX	TTh	102En	Mr. Tyler

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

No.	Title	Hour	Day	Bldg.	Instructor
37w,s	Rural Sanitation and Water Supply (3 cred.; no prereq.) (The spring section for prof. agr. eng. only; prereq. M.&M. 129)	I(w) I(s)	MWF MWF	103En 103En	Mr. Tyler Mr. Tyler
38f	Farm Water Supply and Sewage Disposal (2 cred.; no prereq.)	I	TS	101En	Mr. Tyler
40f‡	Mechanical Training (3 cred.; no prereq.) (Limited to 40)	I, II	MWF	20,106En	Mr. Dent
‡‡	Metal Work (3 cred.; no prereq.) (Limited to 40)	I, II	MWF	20,106En	Mr. Dent
‡‡‡	Art Metal Work (3 cred.; no prereq.) (Limited to 20)	VI, VII, VIII	WF	20,106En	Mr. Dent
	Mechanical Laboratory (3 cred.; prof. agr. eng. only; no prereq.)	I, II, III, IV	S	20,106En	Mr. Dent
	<i>Advanced Drawing</i> (2 cred.; prereq. Draw. 3 or equiv.) (Not offered in 1946-47)	2 hrs. ar			

Senior College Courses

	Soil Moisture Relations (5 cred.; jr. and sr. prof. agr. eng. only; prereq. 21 or parallel, Soils 4, M.&M. 129)	VI	MTWThF	105En	Mr. Manson
	Elements of Farm Machinery (3 cred.; prof. agr. eng. only; prereq. M.&M. 26)	Lect. VI	TTh	216En	Mr. Schwantes
	Lab. VII, VIII, IX	Th	49En		
	Structures (3 cred.; prof. agr. eng. only; prereq. 5, Draw. 3 or equiv.)	Lect. II	TS	305En	Mr. White
	Lab. III, IV	TS	305En		
	Advanced Farm Structures Design (3 cred.; prof. agr. eng. only; prereq. 5, 53, M.&M. 128)	Lect. I	TTh	305En	Mr. White
	Lab. II	TTh	305En		
		I, II	S	305En	
	Dairy Engineering (3 cred.; jr., sr.; prereq. 24)	I	MWF	105En	Mr. Strait
	Design and Economics of Agricultural Machinery (3 cred.; prof. agr. eng. only; prereq. 18, 52, M.E. 27)	Lect. VI	M	105En	Mr. Schwantes,
	Lab. VII	F			Mr. Strait
72s‡‡	Applied Electricity (3 cred.; jr., sr., prof. agr. eng. only; prereq. Phys. 9) (Not offered—offered in alternate years)	VII, VIII, IX	M	49,105En	
73s	Steam Boilers and Heat Engines (3 cred.; prof. agr. eng. only; prereq. 18 and M.E. 131)	Lect. III	MF		
	Lab. VI, VII, VIII, IX	W	Ar	105,49En	Mr. Strait
101f,102w,103s	Advanced Problems in Soil Moisture Regulation (2 to 6 cred. per qtr.; sr., grad.; prereq. 51)	Ar	Ar	Ar	Mr. Manson
104f	The Soil Moisture Relation in Agriculture (3 cred.; sr., grad.; not open to engineers; prereq. 9 cred. in agr. eng. including phys.)	Ar	Ar	105En	Mr. Manson
105w	Advanced Soil and Water Conservation (3 cred.; sr., grad.; prereq. 51 or equiv.)	Ar	Ar	105En	Mr. Manson
111f-112w-113s	Farm Building Problems (2 to 6 cred. per qtr.; sr., grad.; prereq. 67)	Ar	Ar	305En	Mr. White, Mr. Otis, Mr. Christopherson

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

‡‡ A course fee of \$6 per quarter is charged for this course.

‡‡‡ A course fee of \$3 is charged for this course.

No.	Title	Hour	Day	Bldg.	Instructor
114s	Buildings, Equipment, Materials and Methods of Construction (3 cred.; sr., grad.; not open to engineers; prereq. 9 cred. in agr. eng. including Agr.Eng. 3 and 6 or equiv.)	Ar	Ar	305En	Mr. White, Mr. Christopherson
121f,122w,123s	Farm Power and Machinery Problems (2 to 6 cred. per qtr.; sr., grad.; prereq. 71, 72)	Ar	Ar Ar		Mr. Schwantes, Mr. Hustrup
124s	Agricultural Machinery and Mechanical Power Management (3 cred.; sr., grad.; open to engineers; prereq. 9 cred. in agr. eng. including phys. and Agr.Eng. 12)	Ar	Ar	105En	Mr. Schwantes
125s	Topics in Agricultural Physics (3 cred.; sr.; grad.; prereq. 72 or Calculus and or equiv.)	Ar	Ar Ar		Mr. Hustrup
126w	Selection and Management of Agricultural Machinery (3 cred.; sr., grad.; prereq. Agr.Econ. 102)	III	MW	105En	Mr. Hustrup
	Lect.	3 hrs. ar			
	Lab.				

Courses for Graduate Students Only

201f-202w-203s	Research in Soil Moisture Relations (2 to 6 cred. per qtr.; prereq. 101, one qtr. Statistics)	Ar	Ar Ar		
211f-212w-213s	Farm Structures Research (2 to 6 cred. per qtr.; prereq. 111)	Ar	Ar Ar		
221f-222w-223s	Farm Power and Machinery Research (2 to 6 cred. per qtr.; prereq. 121)	Ar	Ar Ar		Mr. Schwantes, Mr. Hustrup, prereq. 18,

AGRICULTURAL JOURNALISM

53w	Publicity (3 cred.; jr., sr.; prereq. Rhet. 1, 2, 3)	I	TThS	107Ad	Mr. Johnson
54f	Editing Agricultural Bulletins (3 cred.; jr., sr.; prereq. Journ. 13-14-15; 51-52; 69 or 73, or permission of instructor)	I	TThS	107Ad	Mr. Johnson
55s	Agricultural Journalism Outlets (3 cred.; jr., sr.; prereq. Journ. 13-14-15; 51-52; 69 or 73, or permission of instructor)	I	TThS	107Ad	Mr. Johnson

For additional courses see under Journalism, College of Science, Literature, and the Arts, page 73.

AGRONOMY AND PLANT GENETICS

Junior College Courses

1f,s	General Farm Crops (3 cred.; no prereq.)	IV	MWF	202Ag	Mr. Dunham
21w	Grain Crops (4 cred.; soph., jr., sr.; prereq. 1)	VI	MWF	202Ag	Mr. Dunham
	Lect.	VII	MWF	201Ag	Mr. Dunham
	Lab.				
22s	Grain and Hay Grading (3 cred.; soph., jr., sr.; prereq. 1)	I, II	MWF	201Ag	Mr. Lambert
23f	Forage Crops (4 cred.; soph., jr., sr.; prereq. 1)	VI, VII	MWF	202Ag	Mr. Schmid
31f,w	Principles of Genetics (4 cred.; soph., jr., sr.)	I	TThS	202Ag	Mr. Lambert
	Lect.	Ar	Ar Ar		Mr. Lambert
	Lab.				

Senior College Courses

	E	Title	Hour	Day	Bldg.	Instructor
12f		Crops (4 cred.; jr., sr., grad.; prereq. 1)				
		Lect.	VI	MWF	202Ag	Mr. Dunham
		Lab.	VII	MWF	201Ag	Mr. Dunham
		in and Hay Grading (3 cred.; jr., sr., grad.; prereq. 1)				
			I, II	MWF	201Ag	Mr. Lambert
67f		Storage Crops (4 cred.; jr., sr., grad.; prereq. 1)				
			VI, VII	MWF	202Ag	Mr. Schmid
		<i>Problems in Farm Crops</i> (3 cred.; jr., sr., grad.; prereq. 1, 31, and at least two courses from 21, 23, 132, 134. Seniors and special students may register in course with approval of instructor) (<i>Not offered</i>)				
126,		<i>Crop Judging</i> (4 cred.; jr., sr., grad.; prereq. 22) (<i>Not offered</i>)				
131f,w		Principles of Genetics (4 cred.)				
		Lect.	I	TThS	202Ag	Mr. Lambert
		Lab.	Ar	Ar	Ar	Mr. Lambert
132w		Farm Crops Plant Breeding (4 cred.; jr., sr., grad.; prereq. 31)				
			VI, VII, VIII	TTh	101Ag	Mr. Rinke
133s		Pasture Crops and Management (4 cred.; jr., sr., grad.; prereq. 23)				
			VI, VII	MWF	202Ag	Mr. Schmid
134s		Seminar in Agronomy (2 cred.; sr., grad.; prereq. Agron. 9 cred.)				
			Ar	Ar	408Ag	Staff

Courses for Graduate Students Only

201f,w,s,su		Research in Farm Crops (3 to 9 cred.)	Ar	Ar	Ar	Ar
202f,w		Farm Crops Seminar (1½ cred.)	Ar	Ar	Ar	Ar
241f,w,s,su		Research in Plant Genetics	Ar	Ar	Ar	Mr. Burnham, Mr. Hayes
242f,s		Plant Breeding Seminar (1 cred.)	VIII, IX	F	408Ag	Mr. Hayes, Mr. Burnham, Mr. Currence, Mr. Krantz, Mr. Wilcox
243f		Methods in Plant Breeding (3 cred.)	Ar	Ar	408Ag	Mr. Hayes
244f,su		Laboratory Methods in Plant Breeding (3 cred.)	Ar	Ar	Ar	Staff
245f		Advanced Genetics (4 cred.)	Ar	Ar	Ar	Mr. Burnham
246w		Genetics Seminar (2 cred.)	VIII, IX	F	408Ag	Mr. Hayes, Mr. Burnham, Mr. Currence, Mr. Krantz, Mr. Wilcox, Mr. Winter
247w		Cytogenetics (3 cred.)	Ar	Ar	Ar	Mr. Burnham
248w		Applied Statistics (3 cred.)	Ar	Ar	Ar	Ar

ANIMAL AND POULTRY HUSBANDRY

ANIMAL HUSBANDRY

Junior College Courses

1f,w,s		Livestock Production (4 cred.; no prereq.)	II	MTWThF	CS	Mr. Harvey
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No.	Title	Hour	Day	Bldg.	Instructor
5s	Livestock Judging (3 cred.; soph., jr., sr.; prereq. 8)	III, IV	MWF	CSt	Mr. Harvey
8f,w	Breeds of Livestock (3 cred.; soph., jr., sr.; prereq. 1)	III, IV III	TS Th	WSt WSt	Mr. Ferrin Mr. Anderson, Mr. Harvey

Senior College Courses

50w	Meat Selection and Utilization (3 cred.; jr., sr.; agr. and home econ. students; no prereq.)	III III, IV	ThS	MSh T	Mr. Anderson
52s	Meats (3 cred.; jr., sr.; prereq. 1, 51)	VI, VII, VIII	TTh	MSh	Mr. Anderson
53f	Advanced Meats (3 cred.; jr., sr.; prereq. 52)	VI, VII, VIII	TTh	MSh	Mr. Anderson
56f-57w	Livestock Feeding (6 cred.; jr., sr.; prereq. 1)	III	MWF	3St	Mr. Ferrin
58f	Market Classes and Grades of Livestock and Livestock Products (3 cred.; jr., sr.; prereq. 1)	II	TThS	3St	Mr. Peters
101f	Livestock Selection (3 cred.; jr., sr., grad.; prereq. 5)	VI, VII	MWF	CSt	Mr. Harvey
102w	Poultry Breeding (3 cred.; jr., sr., grad.; prereq. 1, Agron. 31)	I	MWF	103Ve	Mr. Canfield
107s	Meat Problems (3 cred.; jr., sr., grad.; prereq. 53)	IV	TS	MSh	Mr. Anderson
	Lect.	VI, VII, VIII	F	MSh	
108s	Seminar, Animal or Poultry Husbandry (3 cred.; jr., sr., grad.; prereq. 56-57, 112 or Poultry 153, 154, 102)	II	TThS	3St	Mr. Peters
112w	Animal Breeding (3 cred.; jr., sr., grad.; prereq. Agron. 31)	IV	MWF	3St	Mr. Winters
113s	Livestock Management (3 cred.; jr., sr., grad.; prereq. 56-57, 112)	VI, VII, VIII	MW	3St	Mr. Peters
114s	Artificial Insemination (5 cred.; jr., sr., grad.; prereq. 112 or equiv. and approval of instructor)	III	MWF	MSh	Mr. Green
116f	Prenatal Development of Farm Animals (3 cred.; jr., sr., grad.; prereq. 112 or equiv. and approval of instructor)	IV	MWF	MSh	Mr. Green

POULTRY HUSBANDRY

Junior College Courses

1w.s	Poultry Production (4 cred.; soph., no prereq.)	IV	MTWF	103Ve	Mr. Canfield
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Senior College Courses

51s	Hatchery Management (3 cred.; jr., sr.; prereq. 1, Zool. 14-15)	VII VIII	TTh	103Ve 103Ve	Mr. Canfield
	Lect.	VIII	TTh	103Ve	
	Lab.	VIII	TTh	103Ve	
52f	Poultry Judging (3 cred.; jr., sr.; prereq. 1)	VII, VIII	TTh	103Ve	Mr. Canfield
102w	Poultry Breeding (3 cred.; jr., sr., grad.; prereq. 1, Agron. 31)	I	MWF	103Ve	Mr. Canfield
153w	Poultry Feeding (3 cred.; jr., sr., grad.; prereq. 1)	II	MWF	103Ve	Mr. Sloan
154f	Poultry Products (4 cred.; jr., sr., grad.; prereq. 1)	VI, VII, VIII	MW	103Ve	Mr. Sloan, Mr. Canfield

Courses for Graduate Students Only

No.	Title	Hour	Day	Bldg.	Instructor
201w§	Advanced Animal Breeding I (3 cred.; grad.; prereq. 112)	Ar	Ar	Ar	Mr. Winters
202s§	Advanced Animal Breeding II (3 cred.; grad.; prereq. 201)	Ar	Ar	Ar	Mr. Winters
203s§	Physiology of Reproduction (3 cred., grad.; prereq. 116)	Ar	Ar	Ar	Mr. Green
206w§	Advanced Livestock Feeding I (3 cred.; grad.)	Ar	Ar	Ar	Mr. Ferrin
207s§	Advanced Livestock Feeding II (3 cred.; grad.)	Ar	Ar	Ar	Mr. Ferrin
208f§, 209w§, 210s§	Seminar in Animal Husbandry (1 cred. per qtr.; grad.)	Ar	Ar	Ar	Mr. Peters
211f§	Experimental Methods (3 cred.; grad.)	Ar	Ar	Ar	Mr. Ferrin
212f,w,s§	Research in Meats (3 to 9 cred.; grad.)	Ar	Ar	Ar	Mr. Anderson
213f,w,s§	Research in Animal Husbandry (3 to 9 cred.; grad.)	Ar	Ar	Ar	Mr. Peters Mr. Ferrin, Mr. Winters, Mr. Harvey
214f,w,s§	Research in Poultry Husbandry (3 to 9 cred.; grad.)	Ar	Ar	Ar	Mr. Sloan, Mr. Canfield

DAIRY HUSBANDRY

Junior College Courses

1f,s	Elements of Dairying (3 cred.; prereq. entrance cred. in chem. or Inorg.Chem. 1 or 4) (Limited to 90)	III	MWF	100HH	Mr. Combs
2w	Dairy Bacteriology (3 or 5 cred.; 3 cred. for lect., 2 cred. for lab.; soph., jr., sr.; prereq. Bact. 53) (Lecture taken separately only on permission of instructor)	VI	MWF	210HH	Mr. Macy
	Lect.	VI	MWF	210HH	Mr. Macy
	Lab.	VII-VIII	MWF	212HH	Mr. Olson
3f	Testing Dairy Products (2 cred.; prereq. 1)	VII, VIII	MW	212HH	Mr. Olson
4s	Dairy Products Practice (3 cred.; soph., jr., sr.; prereq. 1)	Ar	Ar	Ar	Mr. Combs
9s	Dairy Cattle Judging (1 cred.; soph., jr., sr.; no prereq.)	VI, VII, VIII	F	DB	Mr. Gilmore
10s	Dairy Products Judging (1 cred.; soph., jr., sr.; prereq. 1)	Ar	Ar	20HH	Mr. Coulter
20s	Household Microbiology (4 cred.; 3rd qtr. fresh., soph., jr., sr.; prereq. approval of adviser and permission of instructor)	VI	MF	100HH	Mr. Macy
		VI, VII	W		

Senior College Courses

51s	Market Milk (3 cred.; jr., sr.; prereq. 1, 2)	IV	MW	210HH	Mr. Macy
		VI, VII, VIII	Th		
101t	Milk Production (5 cred.; jr., sr., grad.; prereq. 1)	IV	MTWFS	210HH	Mr. Fitch
103w	Dairy Stock Feeding (3 cred.; sr., grad.; prereq. 101, An.Hush. 56)	II	TThS	210HH	Mr. Fitch

§ This course meets the nine-hour requirement.

No.	Title	Hour	Day	Bldg.	Instructor
104f	Dairy Stock Selection (2 cred.; jr., sr., grad.; prereq. 9, 101 or parallel)	VI	TTh	9HH	Mr. Gilmore
105f	Seminar I (1 cred.; sr., grad.; prereq. 3 courses in Dairy Husb.)	Ar	Ar	214HH	Mr. Macy
106w	Seminar II (1 cred.; sr., grad.; prereq. 105)	Ar	Ar	214HH	Mr. Macy
110w	Dairy Products: Ice Cream and Frozen Desserts (3 cred.; jr., sr., grad.; prereq. 1, 3)	IV	TS	210HH	Mr. Combs,
		VI, VII, VIII	T		Mr. Thomas
111f	Dairy Products: Butter (3 cred.; jr., sr., grad.; prereq. 1, 2, 3)	VI	MW	210HH	Mr. Coulter,
		VI, VII, VIII	F		Mr. Kunkel
112s	Dairy Products: Cheese (3 cred.; jr., sr., grad.; prereq. 1, 2, 3)	IV	TS	210HH	Mr. Combs
		VI, VII, VIII	T	210HH	Mr. Thomas
113s	Technical Control (3 cred.; sr., grad.; prereq. 2, 111 or 112)	I, II, III	TTh	102HH	Mr. Coulter,
					Mr. Olson
114w	Milk By-Products (3 cred.; jr., sr., grad.; prereq. 1, 3)	I	TTh	210HH	Mr. Coulter
		VI, VII, VIII	Th	24HH	
115s	Advanced Dairy Bacteriology (3 cred.; sr., grad.; prereq. 2, 111 or 112)	Ar	Ar	212HH	Mr. Macy
116s	Milk Secretion (3 cred.; sr., grad.; prereq. physiol. 9 cred. and Agr. Biochem. 103)	I	MWF	214HH	Mr. Petersen
117s	Dairy Cattle Breeding (3 cred.; jr., sr., grad.; prereq. 101, 104, Agron. 31)	Ar	Ar	Ar	Mr. Petersen

Courses for Graduate Students Only

202f,203w,204s	Research in Dairy Production	Ar	Ar	Ar	Mr. Fitch, Mr. Petersen, Mr. Gullickson
205f,206w,207s	Research in Dairy Manufacturing	Ar	Ar	Ar	Mr. Combs, Mr. Coulter
212f,213w,214s	Research in Dairy Bacteriology	Ar	Ar	Ar	Mr. Macy

For course in Dairy Chemistry see Agricultural Biochemistry 103, page 164.

ENTOMOLOGY AND ECONOMIC ZOOLOGY

Junior College Courses

5f,w,s	Economic Entomology (5 cred.; soph., jr., sr.; prereq. Zool. 14-15 or equiv.) (Section limited to 36)	VI, VII, VIII	MWF	301,302Ad	Mr. Daggy
13su	Field Zoology (1½ cred.; no prereq.)	Given at Itasca Park			Mr. Dawson
21s	Principles of Beekeeping (3 or 5 cred.; no prereq.)	VI, VII, VIII	MWF	307Ad	Mr. Haydak

Senior College Courses

51f*‡§	Introductory Parasitology (5 cred.; jr., sr.; prereq. Zool. 14-15 or equiv.) (Sections limited. Written permission must be obtained from the Junior College office, 106 Folwell Hall)	VI, VII, VIII	MWF	208Z	Mr. Wallace
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* Offered on the Minneapolis campus.

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

§ Open to sophomores on petition.

No.	Title	Hour	Day	Bldg.	Instructor
52w*†‡	Introductory Entomology (5 cred.; jr., sr.; prereq. Zool. 14-15 or equiv.) (Laboratory limited to 26)				
	Lect.	VI	MWF	211Z	Mr. Mickel
	Lab.	VII, VIII	MWF	402Z	
55f,su	Entomological Techniques ((9 hrs. lab.; 3 cred.; jr., sr.; ar.)				Mr. Mickel
56w	Forest Entomology (5 cred.; jr., sr.; prereq. Zool. 14-15 or equiv.)	VI, VII, VIII	MWF	307Ad	Mr. Hodson
64w	Economic Vertebrate Zoology (3 cred.; jr., sr.; prereq. Zool. 1-2-3)	III	MWF	100Ad	Mr. Marshall
114s	Apiculture (3 cred.; jr., sr., grad.; prereq. 9 cred. in Ent.)	I	MW	307Ad	Mr. Haydak
		2 hrs. ar			
117f*†-118w‡- 119s*†	Animal Ecology (9 cred.; jr., sr., grad.; prereq. 15 cred. in Zool. or Ent.)	VI, VII, VIII	TTh	211Z(f,s)	Mr. Eddy, 301AdUF(w) Mr. Hodson
120s	General Ecology of Insects (3 cred.; jr., sr., grad.; alternative to 119s, or both may be taken; prereq. 117f-118w)	VI, VII, VIII	TTh	307Ad	Mr. Hodson
121f†	Ichthyology (3 cred.; jr., sr., grad.; prereq. 15 cred. in Zool. or Ent.)	VIII, IX	F	211Z	Mr. Eddy
	Lect.	VIII, IX	F	211Z	Mr. Eddy
	Lab.	Ar	Ar	Ar	
125f†-126w†- 127s*†	Advanced General Entomology (9 cred.; jr., sr., grad.; prereq. 15 cred. in Zool. or Ent.)	I	TTh	211Z	Mr. Mickel
	Lect.	I	TTh	211Z	Mr. Mickel
	Lab.	I, II, III	S	402Z	
128f*-129w	Insect Physiology (8 cred.; jr., sr., grad.; prereq. 15 cred. in Zool. or Ent. and consent of instructor. Zool. 50 or equiv. recommended)	VI	WF	15Ad	Mr. Richards
	Lect.	VI	WF	15Ad	Mr. Richards
	Lab.	VII, VIII, IX	WF	8Ad	
141f-142w	Insects in Relation to Plant Diseases (6 cred.; jr., sr., grad.; prereq. 8 cred. in Ent. or Plant Path.)	I, II	MWF	302Ad	Mr. J. J. Christensen, Mr. Granovsky
144f†-145w†- 146s*†	Animal Parasites and Parasitism (3 to 9 cred.; jr., sr., grad.; prereq. Zool. 9 cred.)	VI, VII, VIII	WF	208Z	Mr. Wallace
150s	Introduction to Aphidology ((3 cred.)	Ar	Ar	Ar	Mr. Granovsky
161f	Waterfowl and Upland Game Birds (3 cred.; jr., sr., grad.; prereq. Zool. 46-47 or equiv.)	III, IV	TS	100Ad	Mr. Marshall
		III	Th		
163f	Mammalogy (4 cred.; jr., sr., grad.; prereq. Zool. 22)	IV	MWF	100Ad	Mr. Marshall
	Lect.	IV	MWF	100Ad	Mr. Marshall
	Lab.	Ar	Ar		
165w	Wildlife Management (3 cred.; jr., sr., grad.; prereq. Zool. 1-2-3 plus 10 cred. in Zool. or Forestry)	I	MWF	100Ad	Mr. Marshall
166s	Methods in Wildlife Management (3 cred.; jr., sr., grad.; prereq. 163, 165)	VI, VII, VIII	TTh	100Ad	Mr. Marshall
167s	Techniques in Forest Wildlife Management (3 cred.; sr., grad.; prereq. Ent. 165)	Given at Cloquet			Mr. Marshall
175s	Insecticides and Their Action (4 cred.; sr., grad.; prereq. inorg. and org. chem.)	III	MWF	302Ad	Mr. Richards
	Lab. hrs. ar				

* Offered on the Minneapolis campus.

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

‡ Open to sophomores on petition.

¶ Note that in the winter quarter this course is offered at the University Farm.

No.	Title	Hour	Day	Bldg.	Instructor
176w	Advanced Economic Entomology (3 cred.; sr., grad.; prereq. 5 or 56, Zool. 117-118-119 or equiv.)	III	MWF	302Ad	Ar
197f,w,s,su	Introduction to Research (5 or more cred.; sr., grad.; prereq. work as prescribed by the division)	Ar	Ar	Ar	Mr. Mickel, Mr. Granovsky, Mr. Haydak, Mr. Hodson, Mr. Marshall, Mr. Richards

Courses for Graduate Students Only

206	Seminar. Assigned topics, each term dealing with some special field of work of the division.	Ar	Ar	Ar	Ar
201-204	Research in Entomology	Ar	Ar	Ar	Mr. Mickel, Mr. Granovsky
205-208	Research in Economic Entomology	Ar	Ar	Ar	Ar
209-212	Research in Economic Vertebrate Zoology	Ar	Ar	Ar	Mr. Marshall
213-216	Research in Insect Ecology	Ar	Ar	Ar	Mr. Hodson
261-264	Research in Parasitology and Medical Entomology	Ar	Ar	Ar	Ar
265-268	Research in Insect Physiology and Insecticides	Ar	Ar	Ar	Mr. Richards
269-272	Research in Apiculture	Ar	Ar	Ar	Mr. Haydak

FOOD TECHNOLOGY§

51f,52w†	Food Analysis (2 cred. per qtr.; jr., sr.; prereq. Agr.Biochem. 2 and 3)	VI, VII, VIII	TTh	102SnH	Ar
101f-102w†	Food Technology (3 cred. per qtr.; jr., sr., grad.; prereq. Agr.Biochem. 3 and 52; Bact. 53; and a course in physics)	II	TThS	116SnH	Ar

FORESTRY

Junior College Courses

1t	General Forestry (3 cred.; no prereq.)	III	TThS	AudGH	Mr. Cheyney
3w	Dendrology (3 cred.; no prereq.)	II	MWF	AudGH	Mr. Rees
4s	Dendrology (4 cred.; no prereq.)	I	MWF	AudGH	Mr. Rees
	Lect.	VI-VII-VIII	T	Ar	Mr. Rees
	Lab. Sec. 1	VI-VII-VIII	Th	Ar	Mr. Rees
	2	VI-VII-VIII	Th	Ar	Mr. Rees
5su	Field Silviculture (1½ cred.; no prereq.)	Given at Itasca Park			Mr. Cheyney
6su	Field Mensuration (1½ cred.; no prereq.)	Given at Itasca Park			Mr. Brown

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

‡ A laboratory fee of \$5 is required for each quarter of this course. The \$5 card purchased from the cashier's office, University Farm, must be presented before laboratory space will be assigned. A \$5 breakage card against which breakage can be charged must be purchased also.

§ See the course offerings in Agricultural Biochemistry, Bacteriology, Botany, Chemistry, Chemical Engineering, Dairy Husbandry, Plant Pathology, Zoology, and other departments, for additional subject-matter courses of interest to students majoring in Food Technology.

No.	Title	Hour	Day	Bldg.	Instructor
7f-8w-9s	Forest Mensuration (9 cred.; all; prereq. 6, Math. 1 and 6)				
	Lect.	IV	MW	206GH	Mr. Brown
	Lab. Sec. 1	VI, VII, VIII	M	206GH	
	2	II, III, IV	S	206GH	
10w	Farm Forestry (3 cred.; not open to students majoring in forestry; no prereq.)	VI	MWF	203GH	Ar
11su	Camp Management (1 cred.; no prereq.)	Given at Itasca Park			Mr. Brown
20w	Grazing (3 cred.; soph., jr., sr.; no prereq.)	II	TThS	201GH	Mr. Allison
49s	House and Furniture Woods (2 cred.; soph., jr., sr.; not open to students majoring in forestry; no prereq.)	III, IV	TS	211GH	Mr. Rees
<i>Senior College and Fifth Year Courses</i>					
53f-54w	Wood Structure and Identification (6 cred.; jr., sr.; prereq. 3, 4)	VI, VII, VIII	WF	211GH	Mr. Rees
56f	Forest Products (3 cred.; jr., sr.; no prereq.)	I	MWF	201GH	Mr. Kaufert
57w	Wood Utilization (3 cred.; sr.; prereq. 53-54)	I	MWF	203GH	Mr. Kaufert
58f	Lumber Merchandising and Grading (3 cred.; sr.; prereq. 53-54)	II	TThS	201GH	Mr. Kaufert
101w	Advanced Dendrology (3 cred.; jr., sr., grad.; prereq. 3, 4)	Ar	Ar	Ar	Mr. Rees
111f-112w- 111w-112s	Advanced Forest Mensuration (6 cred.; sr., 5th year and grad.; prereq. 9)				
	Lect. } 111f,w	VI, VII, VIII, IX	T	206GH	Mr. Brown
	Lab. } 112w,s	VI, VII, VIII, IX	Th	206GH	
113w	Wood Pulp and Paper (3 cred.; jr., sr., grad.)	III	MWF	201GH	Mr. Kaufert
114f	Mechanical and Physical Properties of Wood (3 cred.; jr., sr., grad.; prereq. 53-54, Math. 7)	I	TThS	201GH	Mr. Rees
115w-116s	Mechanical and Physical Properties of Wood (6 cred.; jr., sr., grad.; prereq. 114)	I, II	TThS	3GH	Mr. Rees
	115w	VI, VII, VIII	MW	211GH	Mr. Rees
119s	Advanced Wood Structure I (4 cred.; sr., grad.; prereq. 53-54)	IX	T	209GH	Mr. Kaufert
	Lect.	VI, VII, VIII	TTh	209CH	
120s	Estimating (3 cred.; sr., grad.)	IV	MWF	201GH	Ar
125s	Wood Preservation (3 cred.; jr., sr., grad.; prereq. 53-54)	III	TThS	201GH	Mr. Kaufert
126f	Silvics (3 cred.; 5th yr. and grad.; no prereq.)	III	MWF	203GH	Mr. Cheyney
127w	Silviculture (3 cred.; 5th yr. and grad.)	II	MWF	201GH	Mr. Cheyney
128s	Silviculture Laboratory (6 cred.; sr., grad.)	Given at Cloquet			Mr. Cheyney
130f	Forest Valuation (5 cred.; 5th yr. and grad.)	I	MTWThF	203GH	Mr. Allison
131w	Forest Policy and Administration (5 cred.; 5th yr. and grad.)	IV	MTWFS	201GH	Mr. Allison
132s	Forest Regulation Laboratory (6 cred.; sr., grad.)	Given at Cloquet			Mr. Allison
136w	Forest Economics (3 cred.; jr., sr., grad.; prereq. Agr.Econ. 2)	I	MWF	201GH	Mr. Allison
137w	Seeding and Planting (3 cred.; jr., sr., grad.)	III	TThS	201GH	Mr. Cheyney
140f	Forest Management Plans (3 cred.; 5th yr. and grad.; prereq. 128, 132)	III	TThS	201GH	Mr. Allison
141w	Principles of Silvics (3 cred.; 5th yr. and grad.; prereq. 126)	II	TThS	203GH	Mr. Cheyney

No.	Title	Hour	Day	Bldg.	Instructor
142s	Wood Chemistry (3 cred.; jr., sr., grad.; prereq. Org.Chem. 156)	II	MWF	201GH	Mr. Kaufert
143f	Forest Recreation (3 cred.; jr., grad.)	IV	MWF	202GH	Mr. Cheyney
144s	Forage and Browse Plants (3 cred.; jr., sr., grad.; prereq. Bot. 113 and P.P. 7)	Ar	Ar	Ar	Ar
151s	Logging (3 cred.; jr., sr., grad.)	Ar	Ar	Ar	Mr. Zivnuska
152s	Wood Seasoning (3 cred.; jr., sr., grad.; prereq. 53-54)	I	TThS	201GH	Mr. Rees
155f	Forest Protection (3 cred.; jr., sr., grad.)	II	MWF	201GH	Mr. Zivnuska
156f,w,s- 157f,w,s	Major Report (2 cred. per qtr.; 5th yr. and grad.)	Ar	Ar	Ar	Staff
158f-159w	Forestry Seminar (1 cred. per qtr.; 5th yr. and grad.)	Ar	W	202GH	Staff

Courses for Graduate Students Only

201-202	Research Problems in the Science and Practice of Silviculture				Mr. Cheyney
203-204	Research Problems in Forest Management				Mr. Allison
205-206	Research Problems in Forest Economics				Mr. Allison
207-208-209	Research Problems in Wood Technology				Mr. Kaufert, Mr. Rees
213-214-215	Special Problems in Forest Utilization				Mr. Kaufert, Mr. Rees
218-219	Research Problems in Forest Mensuration				Mr. Brown
223-224-225	Literature Seminar. Assigned topics with special reference to current forestry problems. Critical and historical review of current forestry literature. (1 cred. per qtr.)				Mr. Schmitz and staff

HOME ECONOMICS

Courses offered by the Department of Home Economics are open to students registered in colleges on the Minneapolis campus as indicated below: Home Economics 1, 2, 20, 30, 31, 34, 56A-56B, 120, provided student reports on his registration dates to Room 106, Folwell Hall, for permission. The number of permissions which can be given is limited. For the convenience of students on the Minneapolis campus, a tally is kept in Room 106, Folwell Hall.

Home Economics 3, 21, 22, 23, 25, 27, 40, 85, 121, 122, 125, 170, 180, 186 are open provided students report to the Home Economics office, Room 215, on the following dates: September 28 for fall quarter, January 4 for winter quarter, and March 29 for spring quarter. This procedure is to protect those who must take these courses as a required part of their chosen home economics curriculum.

Other courses are not open to students in other colleges. Students registered in the College of Science, Literature, and the Arts should read the statement about home economics courses on page 72 of this bulletin.

Junior College Courses

1f	Choice and Care of Clothing (4 cred.; fr.; not open to seniors; not open to students having had Gen.Coll. 15A; no prereq.) (Limited to 50)	III	MTWTh	313HE	Ar
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No.	Title	Hour	Day	Bldg.	Instructor
1w	Choice and Care of Clothing (Same as 1f) (Limited to 50)	III	MTWTh	313HE	Ar
1s	Choice and Care of Clothing (Same as 1f) (Limited to 50)	II	MTWTh	313HE	Ar
2f	Introduction to Textiles (3 cred.; for S.L.&A., Bus.Adm., and ArtEd.; no prereq. Permission must be obtained from the Junior College office, 106 Folwell Hall) (Limited to 30)	VI, VII	MWF	307HE	Mrs. Greenwood
3f	Clothing Construction A (3 cred.; fr., soph., prereq. 1) (Limited to 20)	VI, VII, VIII	TTh	305HE	Mrs. Greenwood
3w	Clothing Construction A (Same as 3f) (Limited to 20)	VI, VII, VIII	TTh	305HE	Ar
3s	Clothing Construction A (Same as 3f) (Limited to 20)	VI, VII, VIII	TTh	305HE	Mrs. Greenwood
4f*	Clothing Construction B (3 cred.; soph., jr.; prereq. 3 and home practice in clothing) (Limited to 20)	VI, VII, VIII	TTh	304HE	Miss Gorham
4w*	Clothing Construction B (Same as 4f) (Sections limited to 20 each)	III, IV	MWF	304HE	Ar
	Sec. 1	VI, VII, VIII	TTh	304HE	Miss Gorham
	2	VI, VII, VIII	TTh	304HE	Miss Gorham
4s*	Clothing Construction B (Same as 4f) (Limited to 20)	VI-VII	MWF	304HE	Ar
6f,w,s	Institution Experience (3 cred.; no prereq.; fr.; each section limited to 3. Institution management majors, consent of instructor)	Ar	Ar	Cafeteria	Miss Dunning
10f	Vocational Opportunities in Home Economics (2 cred.; 1st qtr. fr. only; no prereq.)	II	TTh	203HE	Miss McNeal and heads of sections
14w,s	Nutrition and Food Management (Same as Family Life 14w,s on page 54. Not open to students registered in the College of Agriculture, Forestry, and Home Economics)				
15f,w,s	The Home and Its Furnishing (Same as Family Life 15f,w,s on page 54. Not open to students registered in the College of Agriculture, Forestry, and Home Economics)				
17f,w,s	Personal and Family Living (3 cred.; fr., soph., jr., sr.; no prereq.) (Sections limited to 40)	III(f,s)	TThS	213HE	Miss Studley
	Sec. 1	II(w)	TThS	213HE	Miss Studley
	2	IV(f,w,s)	MWF	213HE	Miss Studley
20f,w	Introduction to Related Art (4 cred.; fr.; not open to seniors; no prereq.) (Limited to 50)	II	MWFS(f)	203HE	Miss Myron
		II	MTWTh(w)	203HE	Miss V. Goldstein
20s	Introduction to Related Art (Same as 20f,w) (Sections limited to 50 each)	II	MTWTh	203HE	Ar
	Sec. 1	IV	MTWF	203HE	Miss V. Goldstein
	2				
21f	Color and Design I (3 cred.; prereq. 20) (Limited to 24)	I, II	MWF	402HE	Miss Paulsen
21w	Color and Design I (Same as 21f) (Sections limited to 24 each)	VI, VII	MWF	402HE	Ar
	Sec. 1	VI, VII, VIII	TTh	402HE	Ar
	2				
21s	Color and Design I (Same as 21f) (Limited to 24)	III, IV	MWF	402HE	Miss Myron
	Sec. 1	VI, VII, VIII	TTh	402HE	Ar
	2				
22f	Color and Design II (3 cred.; all; prereq. H.E. 1, 20) (Sections limited to 24 each)	VI, VII	MWF	402HE	Ar
	Sec. 1	VI, VII	MWF	401HE	Miss Walter
	2				
22w	Color and Design II (Same as 22f) (Sections limited to 24 each)	III, IV	MWF	402HE	Ar
	Sec. 1	VI, VII, VIII	TTh	401HE	Miss Walter
	2				

* Home practice in clothing construction is required as prerequisite for Course 4 (or Course 53 for teachers).

No.	Title	Hour	Day	Bldg.	Instructor
22s	Color and Design II (Same as 22f) (Sections limited to 24 each)				
	Sec. 1	VI, VII	MWF	110HE	Ar
	2	VI, VII, VIII	TTh	110HE	Miss Walter
23w	Advanced Design (3 cred.; soph., jr.; prereq. 21 or 22) (Limited to 24)	I, II	TTh	401HE	Ar
24s	Problems in Home Planning and Furnishing (5 cred.; soph.; prereq. 20) (Limited to 24)				
	Sec. 1	III, IV	MTWF	401HE	Miss Paulsen
	2	VI, VII, VIII	MW	401HE	Miss Paulsen
		VI, VII	F		
25f,s	Design Applied to Crafts (3 cred.; prereq. 21 or 22) (Limited to 24)	III, IV	TS(s)	110HE	Miss Walter
		III	Th(s)		
		I-II	MWF(f)	401HE	Ar
27f	Related Art Problems (3 cred.; soph., jr., sr.; prereq. 21) (Limited to 24)	I, II	TThS	401HE	Miss Paulsen
27w	Related Art Problems (Same as 27f) (Sections limited to 24 each)				
	Sec. 1	I, II	MWF	401HE	Miss V. Goldstein
	2	VI, VII	MWF	401HE	Miss H. Goldstein
27s	Related Art Problems (Same as 27f) (Limited to 24)	VI, VII, VIII	TTh	401HE	Miss Paulsen
30s*§	Introduction to Nutrition (2 cred.; not open to home econ. students; no prereq.)	VI	TTh	2P	Miss Biester
31f	Introduction to Nutrition (3 cred.; fr.; not open to seniors; no prereq.) (Sections limited to 60 each)				
	Sec. 1	IV	MWF	203HE	Ar
	2	V	MWF	213HE	Ar
31w	Introduction to Nutrition (Same as 31f) (Limited to 60)				
	Sec. 1	II	MWF	213HE	Ar
	2	III	TThS	203HE	Ar
31s	Introduction to Nutrition (Same as 31f) (Limited to 60)	III	MWF	203HE	Miss Zander
33f	Nutrition I (4 cred.; soph., jr., sr.; prereq. Agr.Biochem. 4, Physiol. 4 or parallel) (Each laboratory section limited to 16)				
	Lect.	III	MWF	211,213HE	Ar
	Lab.	VI, VII, VIII	T		
34f	Nutrition Problems (4 cred.; 3rd qtr. soph., jr., sr.; prereq. 31, 40, physiol. or human biol.) (Limited to 35)	I	TWThF	203HE	Miss Zander
34s	Nutrition Problems (Same as 34f) (Limited to 75)	I	MTWTh	204So	Ar
35w	Nutrition II (4 cred.; soph., jr., sr.; prereq. 33) (Each lab. section limited to 16)	II	MWF	106HE	Ar
		VI, VII, VIII	T	211HE	Ar
40f,w,s	Food Preparation (5 cred.; freshmen with honor point ratio of 1 or above; prereq. 2 qtr. chem.) (Sections limited to 20 each)	III, IV	MTWThF	103HE	Miss Montgomery
	2	VI, VII	MTWThF	103HE	Ar
	3	VIII, IX	MTWThF	103HE	Ar
41f	Food Management and Marketing (5 cred.; soph., jr., sr.; prereq. 31, 40) (Sections limited to 16 each)				
	Sec. 1	III, IV	MTWF	207HE	Miss Turnbull
		V	TF		
	2	VII, VIII	TWThF	207HE	Miss Montgomery
		IX	TTh		

* Offered on the Minneapolis campus.

§ Intended for students in Science, Literature, and the Arts. Open to students in Home Economics only by special permission of chief of division.

No.	Title	Hour	Day	Bldg.	Instructor
41w	Food Management and Marketing (Same as 41f)	(Sections limited to 16 each)			
	Sec. 1	III, IV, V	MT	207HE	Miss Montgomery
		III, IV	WF	107HE	
	2	III, IV, V	WF	207HE	Miss Turnbull
		III, IV	MT	107HE	
	3	VI, VII	TWThF	207HE	Miss Montgomery
		VIII	TTh	207HE	
41s	Food Management and Marketing (Same as 41f)	(Sections limited to 16 each)			
	Secs. 1 and 2	III, IV	MTWF	105HE	Miss Montgomery
		V	MF	207HE	
45f¶	Quantity Cookery (6 cred.; soph., jr., sr.; prereq. 40)	(Limited to 12)			
	Lect.	V	TTh	313HE	Ar
	Lab.	I, II, III	TThS	Cafeteria	Ar
45w,s¶	Quantity Cookery (Same as 45f)	(Winter sections limited to 12 each; Sec. 1, spring, limited to 8; Sec. 2, spring, limited to 12)			
	Lect.	V	TTh	313HE	Ar
	Lab. Sec. 1	I, II, III	TThS	Cafeteria	Ar
	2	I, II, III	MWF	Cafeteria	Ar
46f,w,s¶	Cafeteria Experience (3 cred.; soph., jr., sr.; no prereq.)	(Sections limited to 10)			
	Lect.	IV	W	Cafeteria	Miss Dunning
	Lab. Sec. 1	IV, V	MF	Cafeteria	Miss Dunning
	2	IV, V	TTh	Cafeteria	Miss Dunning

Senior College Courses

50f	Textiles (3 cred.; jr., sr.; prereq. 1)	(Sections limited to 30 each)			
		III, IV	TS	307HE	Ar
		III	Th		
50w	Textiles (Same as 50f)	(Sections limited to 30 each)			
	Sec. 1	III, IV	MWF	307HE	Ar
	2	I, II	TThS	307HE	Ar
50s	Textiles (Same as 50f)	(Sections limited to 30 each)			
		I, II	TThS	307HE	Ar
53f,w,s*	Advanced Clothing (3 cred.; jr., sr.; prereq. 4, 50 or parallel)	(Limited to 20)			
		VI, VII	MWF	305HE	Miss Gorham
54s	Problems in Clothing Construction (3 cred.; jr., sr.; prereq. 53 or permission of instructor)				
		V, VI, VII	TTh	112HE	Miss Gorham
56Af-56Bs	Applications of Color and Design (3 cred. each; not open to home econ. students; no prereq.; courses must be taken in the sequence indicated. Written permission must be obtained from the Junior College office, 106 Folwell Hall)	(Limited to 24)			
	56Af	VI, VII, VIII	TTh	402HE	Miss H. Goldstein
	56Bs	VI, VII	MWF	402HE	Miss H. Goldstein
64f	Institution Buying (4 cred.; jr., sr.; prereq. 45 and 46. May parallel one or the other.)				
	Lect.	I	MWF	313HE	Ar
	Lab.	VI, VII, VIII	F		
65s	Institution Management Problems (3 cred.; jr., sr.; prereq. 45, 46, 64)				
	Lect.	III	ThS	313HE	Miss Dunning
	Lab.	III, IV	T	313HE	Miss Dunning
70s	Advanced Food Preparation (3 cred.; prereq. Agr.Biochem. 4, H.E. 40)	(Limited to 16)			
		VII, VIII	MWF	105HE	Ar
71	Demonstrations (1 cred.; open to 3rd qtr. jr., sr.; prereq. 41)	(Not offered in 1946-47)			
76f§	Nutrition (3 cred.; not open to home econ. students; for public health nurses only; prereq. permission of instructor)				
		II	TThS	301F	Ar

* Home practice in clothing construction is required as prerequisite for Course 4 (or Course 53 for teachers).

§ Offered on the Minneapolis campus.

¶ Open only to home economics students registered in the College of Agriculture, Forestry, and Home Economics.

No.	Title	Hour	Day	Bldg.	Instructor
79s¶	Selected Problems for Dietitians (3 cred.; jr., sr.; prereq. 170 or equiv.)	II	MWF	213HE	Ar
85f,w,s	Home Management: Operation and Maintenance, Lectures (4 cred.; jr., sr.; prereq. H.E. 40, H.E.Ed. 90 or parallel)	VII VIII	MWF M	203HE	Miss Jeary
86f,w,s	Home Management: Operation and Maintenance, Laboratory (4 cred.; jr., sr.; prereq. 85 or parallel, H.E. 40, H.E.Ed. 90, Public Health 52a and b) (Sections limited to 12 each)	I and other hours	S	Home Mgt. House	Miss Studley Miss Jeary
98	<i>Home Economics Extension</i> (3 cred.; jr., sr.; prereq. H.E.Ed. 91 or parallel) (<i>Not offered in 1946-47</i>)				
102f	Advanced Textiles 3 cred.; jr., sr., grad.; prereq. 50, Agr.Biochem. 4, Agr.Econ. 3 or parallel) (Limited to 16)	VI, VII, VIII	TTh	307,311HE	Miss Phelps
107w	Textile Analysis (3 cred.; jr., sr., grad.; prereq. 102, Agr.Biochem. 2)	VI, VII, VIII	MWF	311HE	Miss Phelps
115s	Economic and Social Aspects of Clothing (3 cred.; jr., sr., grad.; prereq. 50 and Princ. of Econ.)	IX	MWF	313HE	Ar
116f	Family Clothing Problems (3 cred.; jr., sr., grad.; prereq. H.E.50)	Ar	Ar	Ar	Ar
120f,w,s	Art History and Appreciation (3 cred.; open to Senior College and grad. students only)	VIII	MWF	313HE	Miss H. Goldstein, Miss V. Goldstein
121f	Textile Design (3 cred.; jr., sr., grad.; prereq. 27, 50) (Limited to 24)	VI, VII, VIII	TTh	401HE	Ar
122s	Advanced Interior Design (3 cred.; jr., sr., grad.; prereq. 27, 120 or permission of instructor) (Limited to 20)	I, II	TThS	402HE	Miss V. Goldstein
125w	Advanced Costume Design (3 cred.; jr., sr., grad.; prereq. 4 or permission of instructor, 22, 25 recommended) (Limited to 20)	VI, VII	MWF	110HE	Miss Walter
142f¶	Experimental Cookery (3 cred.; jr., sr., grad.; prereq. 40, Agr.Biochem. 4) (Sec. 1 limited to 12; Sec. 2 limited to 8)	VI, VII, VIII	MW	107HE	Miss Turnbull
	Sec. 1	VI, VII, VIII	TTh	107HE	Miss Noble
142s¶	Experimental Cookery (Same as 142f) (Limited to 12)	VI, VII, VIII	TTh	107HE	Miss Montgomery
146s¶	Special Food Problems (3 cred.; sr., grad.; prereq. 142) (Limited to 16)	VI, VII, VIII	MW	107HE	Miss Noble
170f	Nutrition of the Family (3 cred.; jr., sr., grad.; prereq. 31, 40, Agr.Biochem. 4, Physiol. 3 cred.) (Limited to 40)	II	MWF	106HE	Miss Biester
170w	Nutrition of the Family (Same as 170f) (Limited to 40)	II	MWF	313HE	Ar
171w,s	Child Nutrition (3 cred.; jr., sr., grad.; prereq. 170, H.E.Ed. 90) (Limited to 30)	III	MW	213HE	Miss Leichsenring
	Lect.	III*	F	Ar	
	Lab.	IV* (See instructor before completing registration)			

¶ Open only to home economics students registered in the College of Agriculture, Forestry, and Home Economics.

No.	Title	Hour	Day	Bldg.	Instructor
173s¶	Nutrition in Disease (4 cred.; jr., sr., grad.; prereq. 170; 35 also advised) (Each lab. section limited to 20)				
	Lect.	I	MWF	213HE	Miss Zander
	Lab. Sec. 1	I, II	T	107HE	Miss Zander
	2	I, II	Th	107HE	Miss Zander
176w	Advanced Nutrition (4 cred.; jr., sr., grad.; prereq. 35 or parallel, Agr.Biochem. 2) (Limited to 12)				
	Lect.	IV	MW	313HE	Miss Biester
	Lab.	II, III, IV	TTh	311HE	
177s	Digestion and Metabolism (3 cred.; jr., sr., grad.; prereq. 35) (Limited to 15)				
		VI, VII, VIII	MW	107HE	Miss Leichsenring
178f,w,s¶	Clinical Problems in Nutrition (2 cred.; jr., sr., grad.; prereq. 170, 35 or parallel) (Each lab. section limited to 6) (See instructor before completing registration)				
	Lect.	V	M	313HE	Miss Zander
	Lab. Sec. 1	VI, VII, VIII*	T	Ar	
	2	VI, VII, VIII*	Th	Ar	
179f	Readings in Nutrition (2 cred.; jr., sr., grad.; prereq. 170) (Limited to 15)				
		III	TTh	106HE	Miss Leichsenring
179w	Readings in Nutrition (Same as 179f) (Limited to 15)				
		V	WF	106HE	Miss Zander
179s	Readings in Nutrition (Same as 179f) (Limited to 15)				
		IV	MW	106HE	Ar
180f,w	Home Planning and Furnishing (5 cred.; jr., sr., grad.; prereq. 27; 120 recommended) (Limited to 24)				
		III, IV	MTWF	401HE	Miss H. Goldstein
180s	Home Planning and Furnishing (Same as 180f)				
		I, II	MTWF	401HE	Miss H. Goldstein
185	<i>Family Relationships</i> (2 cred.; jr., sr., grad.; prereq. 86 or parallel, H.E.Ed. 90) (Not offered in 1946-47)				
186s	Problems in Income Management (3 cred.; jr., sr., grad.; prereq. 85 or parallel, 86 or parallel, 34 or equiv., Agr.Econ. 126 or parallel)				
		VII	MWF	203HE	Miss Studley

Courses for Graduate Students Only

202	Animal Fibers (2 cred.; grad.; prereq. adv. textiles; consent of instructor)				
		Ar	Ar	Ar	Miss Phelps
204	Plant and Other Cellulosic Fibers (2 cred.; grad.; prereq. botany, adv. textiles; consent of instructor)				
		Ar	Ar	Ar	Miss Phelps
208	Microanalysis of Textile Fibers (2 or 3 cred.; grad.; prereq. botany and zoology, adv. textiles; consent of instructor)				
		Ar	Ar	Ar	Miss Phelps
209*f,w,s	Seminar in Textiles and Clothing (1 cred.; grad.; consent of instructor)				
		Ar	Ar	Ar	Miss Phelps
247	Special Food Problems (3 cred.; consent of instructor)				
		Ar	Ar	Ar	Miss Noble
249*	Seminar in Foods (1-2 cred.; consent of instructor)				
		Ar	Ar	Ar	Miss Noble
270-271	Principles of Human Nutrition (3 cred. per qtr.; consent of instructor; 270 not offered in 1946-47)				
		Ar	Ar	Ar	Miss Leichsenring
279*f,w,s	Seminar in Nutrition (1 cred.; consent of instructor)				
		Ar	Ar	Ar	Miss Biester

Class meets on Minneapolis campus.

Open only to home economics students registered in the College of Agriculture, Forestry, and Economics.

No.	Title	Hour	Day	Bldg.	Instructor
295-296*f,w,s	Home Economics Problems (1-5 cred.; consent of instructor)	Ar	Ar		
299*f,w,s	Home Economics Problems (1 cred.; consent of instructor)	Ar	Ar	Ar	Miss Rose

HOME ECONOMICS EDUCATION

For list of courses in Home Economics Education see courses listed under the College of Education, page 151.

HORTICULTURE

Junior College Courses

1w	General Horticulture (3 cred.; no prereq.)	III	TThS	102Hr	Mr. Alderman, Mr. Weir
6f	Fruit Growing (3 cred.; no prereq.)	II	MWF	302Hr	Mr. Brierley
10s	Home Floriculture (3 cred.; [2 cred. only if Hort. 56 has been taken]; no prereq.)	III	MWF	8aHr	Mr. Longley
				1 extra lab. hr. ar	
11s	Garden Flowers (3 cred.; prereq. Bot. 9 cred. or equiv.) (Offered in 1946-47 and alternate years)	VI, VII, VIII	T	8Hr	Mr. Longley
		VI, VII	Th		
12f	Commercial Floriculture, Fall Crops (3 cred.; prereq. Bot. 6 cred. or equiv.)	VI, VII, VIII	T	8Hr	Mr. Longley
		VI, VII	Th		
14	Commercial Floriculture, Spring Crops (3 cred.; prereq. Bot. 6 cred. or equiv.) (Not offered in 1946-47, offered in alternate years)				
21f	Plant Materials, Fall and Winter Aspects (3 cred.; prereq. Bot. 9 cred. or equiv.)	VI, VII, VIII	MW	8aHr	Mr. Longley
22s	Plant Materials, Spring and Summer Aspects (3 cred.; prereq. Bot. 9 cred. or equiv.)	VI, VII, VIII	MW	8aHr	Mr. Longley
24f	Principles of Landscape Design (3 cred.; prereq. 21 or 22 or instructor's permission)	VI, VII, VIII	MF	107Hr	Mr. Phillips
25w	Principles of Planting Composition (3 cred.; prereq. 21 or 22 or instructor's permission)	VI, VII, VIII	MF	107Hr	Mr. Phillips
32s	Vegetable Growing (3 cred.; Bot. 6 cred.)	II	MWF	302Hr	Mr. Krantz, Mr. Hutchins
40s	Horticulture Laboratory (2 cred.; soph., jr., sr.; prereq. 6 or instructor's permission)	VI, VII, VIII, IX	Ar	8Hr	Mr. Weir

Senior College Courses

56	Plant Propagation (3 cred. [2 cred. if Course 10 has been taken]; jr., sr.; prereq. Bot. 6 cred. or equiv.) (Not offered in 1946-47—offered in alternate years)				
107	Orchard Management (3 cred.; jr., sr., grad.; prereq. 6) (Not offered in 1946-47—offered in alternate years)				
110w	Horticultural Crop Breeding (3 cred.; jr., sr., grad.; prereq. Agron. 31)	III	TThS	302Hr	Mr. Wilcox
111f	Systematic Pomology (3 cred.; jr., sr., grad.; prereq. 6, Bot. 9 cred. or equiv.) (Offered in 1946-47 and alternate years)	VI, VII, VIII	TTh	106Hr	Mr. Brierley
121w	Small Fruit Culture (3 cred.; jr., sr., grad.; prereq. 6 or 32, Bot. 9 cred. or equiv.)	II	MWF	106Hr	Mr. Brierley
135f	Potatoes (3 cred.; jr., sr., grad.; prereq. 32, Bot. 9 cred. or equiv.)	Ar	Ar	302Hr	Mr. Krantz

* Class meets on Minneapolis campus.

No.	Title	Hour	Day	Bldg.	Instructor
136f	Adaptation and Maintenance of Vegetable Varieties (3 cred.; jr., sr., grad.; prereq. 32, Bot. 9 cred. or equiv.)	Ar	Ar	302Hr	Mr. Currence
138w	Vegetable Crops I (3 cred.; jr., sr., grad.; prereq. 32, Bot. 9 cred. or equiv.)	Ar	Ar	302Hr	Mr. Nylund
139a	Vegetable Crops II (3 cred.; jr., sr., grad.; prereq. 32, Bot. 9 cred. or equiv.)	Ar	Ar	302Hr	Mr. Nylund
153w	Conservatory Plants and Florists' Flowers (3 cred.; jr., sr., grad.; prereq. Bot. 9 cred. or equiv.) (Offered in 1946-47 and alternate years)	VI, VII, VIII VI, VII	T Th	8Hr	Mr. Longley
176s	Landscape Construction and Maintenance (3 cred.; sr., grad.; prereq. 24 or 25, or instructor's permission) (Offered in 1946-47 and alternate years)	VI, VII, VIII	TTh	107Hr	Mr. Phillips
190f-191w-192s	Special Problems (2 to 4 cred. per qtr.; jr., sr., grad.; prereq. instructor's permission)	Ar	Ar	Ar	Mr. Alderman and staff
193f-194w	Horticultural Seminar (1 cred. per qtr.; sr., grad.; prereq. Hort. 9 cred.)	IX	W	106Hr	Horticultural staff

Courses for Graduate Students Only

241w	Organization of Horticultural Research (2 cred.)	Ar	Ar	106Hr	Mr. Alderman Mr. Krantz
243f§-244w§	Advanced Topics in Horticulture (3 cred. per qtr.)	Ar	Ar	106Hr	Mr. Alderman, Mr. Brierley, Mr. Krantz, Mr. Longley
247f,w,s,su§	Report on Special Horticultural Topics (9 cred. or less)				Graduate School staff in Horti- culture
248w	Truck Crop Breeding (3 cred.; prereq. 110 or Agron. 132)	Ar	Ar	211Hr	Mr. Currence
249f,w,s,su§	Research in Horticultural Crop Breeding (Cred. ar)				Mr. Krantz, Mr. Currence, Mr. Hutchins, Mr. Wilcox

MUSIC

See Music, under College of Science, Literature, and the Arts, Courses UF43f-44w-45s, University Farm Music Ensembles—Vocal and Instrumental, page 87.

For other courses, see Music, under College of Science, Literature, and the Arts, pages 85-89.

ORIENTATION

1f,w,s	College Orientation Lectures (1 cred.) (Students must register for this course in their first quarter in college)	IV	T	AndAd(UF) (f) 107AgEng(UF) (w,s)	
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PLANT PATHOLOGY AND BOTANY

Junior College Courses

1f	Plant Pathology (5 cred.; soph., jr., sr.; not open to students who have taken Course 10; prereq. 9 cred. in plant sciences of which at least 6 shall be in botany)	VII, VIII, IX	MWF	103,105PP	Mr. Moore
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§ This course meets the nine-hour requirement.

No.	Title	Hour	Day	Bldg.	Instructor
1s	Plant Pathology (Same as 1f)	VII, VIII, IX	MWF	103,105PP	Mr. Moore
3s	Weeds (3 cred.; soph., jr., sr.; prereq. Sec. 1 Lect.)	Bot. 6 cred.) III	(Each section limited to 40 students, TTh	107AgrBot	Mr. Larson
	Lab.	III, IV	S	106AgrBot	
	Rec. and quiz	IV	T	107AgrBot	
	2 Lect.	III	ThS	107AgrBot	
	Lab.	III, IV	T	106AgrBot	
	Rec. and quiz	IV	S	107AgrBot	
4f	Grasses and Sedges (3 cred.; soph., jr., sr.; prereq. 1; prereq. Bot. 6 cred.)	III	TThS	106AgrBot	Mr. Larson
		IV	TS	106AgrBot	
9w	Seed Technology and Testing (3 cred.; soph., jr., sr.; prereq. Bot. 9 cred. or equiv.)	II, III	TThS	106AgrBot	Mr. Larson
10w	Forest Pathology (5 cred.; soph., jr., sr.; not open to those who have completed Course 1; prereq. Bot. 6 cred.)	VII, VIII, IX	MWF	103,105PP	Mr. C. Christensen
10s	Forest Pathology (Same as 10w)	I	MWF	103PP	Mr. C. Christensen
		I, II	TThS	105PP	

Senior College Courses

51f,w,s	Special Problems in Forest Pathology (2 to 5 cred.; jr., sr.; prereq. 10)	Ar	Ar	PP	Mr. C. Christensen
53s	Food Plants of Game Animals (3 cred.; jr., sr.; prereq. one yr. of bot. and one yr. of zool. or equiv.)	IV	MWF	106AgrBot	Mr. Larson
56f	Introduction to the Study of Fungi (3 cred.; jr., sr.; prereq. 9 cred. in bot. or permission of instructor)	II	MW	107PP	Mr. C. Christensen
		II, III	F		
101f	Special Agricultural Botany (3 or 5 cred.; jr., sr., grad.; prereq. Bot. 9 cred. or equiv.)	Ar	Ar	Ar	Mr. Stakman, Mr. Larson
102w	Physiology of Seeds (3 cred.; jr., sr., grad.; prereq. Bot. 51, and Agr.Biochem. 4)	II	MW		Mr. Landon
		I, II	F		Mr. Larson
104w	Industrial Mycology (3 cred.; jr., sr., grad.; prereq. P.P. 56 or 1 or 10)	II	MW	107PP	Mr. C. Christensen
		II, III	F		
105f-106w-107s	Mycology (3 or 5 cred. per qtr.; jr., sr., grad.; prereq. 1 or 10 or equiv.)	VI, VII, VIII	TTh	(f,w)110PP	Miss Dosdall
		VI, VII, VIII	MW	(s)	
110w	Principles of Pathology (5 cred.; jr., sr., grad.; prereq. 1 or 10, Bact. 53)	III, IV	MWF	104PP	Mr. Stakman, Mr. Eide
111w	Diseases of Field Crops (3 cred.; jr., sr., grad.; prereq. 1 or 10)	VI, VII	MWF	107PP	Mr. J. J. Christensen
112s	Diseases of Fruit and Vegetable Crops (3 cred.; jr., sr., grad.; prereq. 1 or 10)	III, IV	MWF	104PP	Mr. Eide, Mr. Mader
114w	Advanced Forest Pathology (3 cred.; jr., sr., grad.; prereq. 1 or 10)	VI	T	104PP	Mr. C. Christensen
		VI, VII, VIII	Th		
118f	Bacterial Diseases of Plant (3 cred.; jr., sr.; grad.; prereq. 1 or 10)	III, IV	MWF	104PP	Mr. Eide

No.	Title	Hour	Day	Bldg.	Instructor
119s	Principles of Plant Disease Control (3 cred.; jr., sr., grad.; prereq. VI, VII, VIII		TTh	104PP	Mr. Mader Mr. Moore
141f-142w	Insects in Relation to Plant Disease (6 cred.; jr., sr., grad.; prereq. plant path.)	I, II	MWF	302Ad	Mr. J. J. Christensen, Mr. Granovsky
143f	Methods (3 cred.; jr., sr., grad.; prereq. 1 or 10)	Ar	Ar	104PP	Miss Hart, Mr. Moore
160f	Plant Histochemistry (3 cred.; sr., grad.; prereq. plant physiol., Bot. 51)	Ar	Ar	AgrBot	Mr. Landon
161f	Technology of Fruits and Vegetables (3 cred.; sr., grad.; prereq. Plant Physiol., Bot. 51)	Ar	Ar	AgrBot	Mr. Landon
162w	Physiological Relations of Crop Plants to Temperature (3 cred.; sr., grad.; prereq. plant physiol., Bot. 51)	Ar	Ar	AgrBot	Mr. Landon
163s	Applied Plant Physiology (3 cred.; jr., sr., grad.; prereq. plant physiol., Bot. 51)	Ar	Ar	AgrBot	Mr. Landon

Courses for Graduate Students Only

203f-204w- 205s-206su	Research in Plant Pathology				Mr. Stakman, Mr. J. J. Christensen, Mr. C. M. Christensen, Miss Dosedall, Mr. Eide, Miss Hart
207f-208w- 209s-210su	Research in Mycology				Mr. Stakman, Mr. C. M. Christensen, Miss Dosedall
211w	History of Plant Pathology				Mr. Stakman
213	Seminar				Mr. Stakman, Mr. J. J. Christensen, Mr. Eide, Miss Hart
215f	Genetics of Plant Pathogens				Mr. Stakman, Mr. J. J. Christensen
216f	Physiology of Plant Pathogens				Mr. Eide
217s	Ecology of Plant Pathogens				Mr. Tervet
250s	Research Methods in Applied Plant Physiology				Mr. Landon
251f-252w-253s	Seminar in Applied Plant Physiology				Mr. Landon
254f-255w- 256s-257su	Research Problems in Applied Plant Physiology				Mr. Landon
258f-259w	Growth Factors in Crop Plants				Mr. Landon
260f,261w, 262s,263su	Research Problems in Agricultural Botany. Special assignment of problems in agricultural botany.				Mr. Larson Mr. Stakman

RHETORIC

Freshman Courses in Communication Skills

Important note—All freshmen in the College of Agriculture, Forestry, and Home Economics are required to satisfy certain requirements in four communication skills, and should report to Green Hall Auditorium the first period each day for the first week of every quarter. After a week of diagnosis they will be sectioned according to their needs and abilities. All sections will then continue to meet during the first period, but for only three days a week.

No.	Title	Hour	Day	Bldg.	Instructor
1f‡	Communications I (3 cred.)				
	Sec. 1 (Listening)	I	Ar	Ar	Mr. Nichols
	2 (Reading)	I	Ar	Ar	Mr. Brown
	3 (Reading)	I	Ar	Ar	Mr. Brown
	4 (Speaking)	I	Ar	Ar	Mr. Drake
	5 (Writing)	I	Ar	Ar	Mr. Seidenkranz
	6 (Writing)	I	Ar	Ar	and others
	7 (Writing)	I	Ar	Ar	
1w‡	Communications I (3 cred.)				
	Sec. 1 (Listening)	I	Ar	Ar	Mr. Nichols
	2 (Reading)	I	Ar	Ar	Mr. Brown
	3 (Speaking)	I	Ar	Ar	Mr. Drake
	4 (Writing)	I	Ar	Ar	Mr. Seidenkranz
1s‡	Communications I (3 cred.)				
	Sec. 1 (Listening)	I	Ar	Ar	Mr. Nichols
	2 (Reading)	I	Ar	Ar	Mr. Brown
	3 (Speaking)	I	Ar	Ar	Mr. Drake
	4 (Writing)	I	Ar	Ar	Mr. Seidenkranz
2f	Communications II (3 cred.)				
	Sec. 1	I	Ar	Ar	Miss Thurston
	2	I	Ar	Ar	and others
	3	I	Ar	Ar	
2w	Communications II (3 cred.)				
	Sec. 1	I	Ar	Ar	Miss Thurston
	2	I	Ar	Ar	and others
	3	I	Ar	Ar	
	4	I	Ar	Ar	
	5	I	Ar	Ar	
2s	Communications II (3 cred.)				
	Sec. 1	I	Ar	Ar	Miss Thurston
	2	I	Ar	Ar	and others
	3	I	Ar	Ar	
3f	Communications III (3 cred.)				
		I	Ar	Ar	Mr. Woods
3w	Communications III (3 cred.)				
	Sec. 1	I	Ar	Ar	Mr. Woods
	2	I	Ar	Ar	and others
3s	Communications III (3 cred.)				
	Sec. 1	I	Ar	Ar	Mr. Woods
	2	I	Ar	Ar	and others
	3	I	Ar	Ar	

Other Junior College Courses

12f,w‡	<i>Debate and Discussion</i> (3 cred.; soph., jr., sr.; prereq. 3, 22 recommended) (<i>Not offered</i>)				
22f‡	<i>Public Speaking</i> (3 cred.; soph., jr.; prereq. 3) (Sections limited to 20 each)				
	Sec. 1	II	MWF	217En	Mr. Nichols
	2	III	MWF	311En	Mr. Woods
	3	III	MWF	307En	Mr. Drake
	4	IV	MWF	307En	Mr. Drake
	5	II	TThS	217En	Mr. Seidenkranz
	6	III	TThS	217En	Mr. Nichols

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

No.	Title	Hour	Day	Bldg.	Instructor
22wt	Public Speaking (Same as 22f) (Sections limited to 20 each)				
	Sec. 1	II	MWF	217En	Mr. Nichols
	2	III	MWF	311En	Mr. Woods
	3	III	MWF	307En	Mr. Drake
	4	IV	MWF	307En	Mr. Drake
	5	II	TThS	217En	Mr. Seidenkranz
	6	III	TThS	217En	Mr. Nichols
22st	Public Speaking (Same as 22f) (Sections limited to 20 each)				
	Sec. 1	II	MWF	311En	Mr. Drake
	2	III	MWF	311En	Mr. Woods
	3	IV	MWF	217En	Mr. Nichols
	4	II	TThS	307En	Mr. Seidenkranz
	5	III	TThS	217En	Mr. Nichols
28st	Play Production (3 cred.; soph., jr., sr.; prereq. 3)	III	TThS	311En	Mr. Drake
31f,s	Survey of English Literature I (5 cred.; soph., jr., sr.; prereq. 3) (Limited to 40)	III	MTWThF	308En	Miss Thurston
32w,s	Survey of English Literature II (3 cred.; soph., jr., sr.; prereq. 3) (Limited to 40)	II	TThS	310En	Mr. Brown
33f,w	American Life in American Literature (3 cred.; soph., jr., sr.; prereq. 3) (Limited to 40)	II	MWF	307En	Mr. Seidenkranz
34f,w	Books and Reading (1 cred.; no prereq.) (Sections limited to 60 each)				
	Sec. 1	III	F	217En	Mr. Brown
	2	IV	F	217En	Mr. Brown
34s	Books and Reading (Same as 34) (Limited to 60)	II	F	107En	Mr. Brown
<i>Senior College Courses</i>					
51f	Exposition (3 cred.; jr., sr.; prereq. 3) (Sections limited to 25 each)				
	Sec. 1	IV	MWF	308En	Miss Thurston
	2	II	TThS	310En	Mr. Brown
51w	Exposition (Same as 51f) (Sections limited to 25 each)				
	Sec. 1	III	MWF	308En	Miss Thurston
	2	III	TThS	310En	Mr. Brown
51s	Exposition (Same as 51f) (Sections limited to 25 each)				
	Sec. 1	IV	MWF	310En	Mr. Brown
	2	II	TThS	308En	Miss Thurston
54st	Advanced Public Speaking (3 cred.; jr., sr.; prereq. 22) (Sections limited to 20 each)				
	Sec. 1	II	MWF	217En	Mr. Nichols
	2	II	TThS	311En	Mr. Drake
59st	Advanced Play Production (3 cred.; jr., sr.; prereq. 28 or permission of instructor) (Not offered)				
60f,w,s	Contemporary Literature (3 cred.; jr., sr.; prereq. 3) (Limited to 40)	IV	MWF	311En	Mr. Woods

SOILS

Junior College Courses

4w	Soils (3 cred.; soph., jr., sr.; prereq. Inorg.Chem. 1-2 or 4-5)	II	MWF	204So	Mr. Caldwell
5s	Soil Management (3 cred.; soph., jr., sr.; prereq. Soils 4)	II	TThS	204So	Mr. Rost

Senior College Courses

51f	Field and Laboratory Studies of Soils (2 cred.; jr., sr.; prereq. Soils 4)				
	Sec. 1	VI, VII, VIII, IX	M	201So	Mr. Arneman
	2	VI, VII, VIII, IX	T	201So	
103f	Principles of Soil Erosion (3 cred.; jr., sr., grad.; prereq. Soils 4)	II	TThS	204So	Mr. Rost, Mr. MacGregor
104su*	Soil Mapping (3 cred.; jr., sr., grad.; prereq. Soils 108 and 109)	Ar	Ar	Ar	Mr. McMiller

* Arrangements must be made in advance of registration.

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

No.	Title	Hour	Day	Bldg.	Instructor
107w	Fertilizers (3 cred.; jr., sr., grad.; prereq. Soils 5)	I	TThS	204So	Mr. MacGregor
108w	Physical Properties of Soils (3 cred.; jr., sr., grad.; prereq. Soils 4)	VI	T	204So	Mr. McMiller
	Lect.	VII, VIII, IX	T	201So	Mr. McMiller
	Lab.	VI, VII, VIII	Th	201So	
109s	Soil Genesis and Classification (3 cred.; jr., sr., grad.; prereq. Soils 4 and 108)	IV	MWF	204So	Mr. McMiller

Courses for Graduate Students Only

202f,w,s,su	Research Problems in Soils§ (2 to 5 cred.)	Ar	Ar	Ar	Ar
203f,w,s	Seminar in Soils (1 cred.)	Ar	Ar	101So	Mr. Rost
205w	Soil Colloids (3 cred.; prereq. Biochem. 119)	Ar	Ar	204So	Mr. Caldwell
	Soil Physics (3 cred.; prereq. Soils 108)	Ar	Ar	204So	Mr. Caldwell
207w	Advanced Soils (3 cred.; prereq. Chem. 1 and 2 or 4 and 5)	II	MWF	204So	Mr. Caldwell
	Soil Fertility (3 cred.; prereq. Soils 4)	II	TThS	204So	Mr. Rost

VETERINARY MEDICINE

Senior College Courses

50f-51w-52s†	Anatomy, Physiology, and Hygiene of Domestic Animals (9 cred.; jr., sr.)	I	TThS	103Ve	Mr. Boyd, Mr. Kernkamp
	Advanced Anatomy of Domestic Animals (4 cred.; sr., grad.; prereq. Anat. 50f,51w,52s) (Limited to 9)	Ar	Ar	Ar	Mr. Kernkamp
109w	Anatomy, Physiology, and Hygiene of Poultry (3 cred.; jr., sr., grad.; prereq. Zool. 14-15, Poult.Husb. 1)	VI	MWF	103Ve	Mr. Fenstermacher Mr. Pomeroy

Courses for Graduate Students Only

105f-106w	Immunological Chemistry (3 cred. per qtr.)				Staff
107f-108w	Comparative Pathology. (6 cred.; prereq. Comparative Anat., Comparative Physiol., and Zool. 149-150)				Mr. Boyd, Mr. Kernkamp, Mr. Fenstermacher
201f,w,s	Advanced Animal Pathology (Cred. ar.; prereq. consent of instr.)				Mr. Boyd, Mr. Kernkamp, Mr. Fenstermacher
205f,w,s	Advanced Animal Bacteriology (Cred. ar.; prereq. consent of instr.)				Mr. Boyd, Mr. Kernkamp, Mr. Fenstermacher
209f,w,s	Advanced Clinical Technique (Cred. ar.; prereq. consent of instr.)				Mr. Boyd, Mr. Kernkamp, Mr. Fenstermacher
213f,w,s	Veterinary Obstetrics and Gynecology (Cred. ar.; prereq. consent of instr.)				Mr. Boyd

† Course must be taken in sequence 50-51-52 but entire sequence need not be completed in order to receive credit.

	Title	Hour	Day	Bldg.	Instructor
7w†	Principles of Economics (10 cred.; soph., jr., sr.; no prereq.)				
	Lect.	II	F	BuAud	Mr. Brozen and others
	Sec. 1	I	MTWTh	115VH	
	2	I	MTWTh	6VH	
	3	II	MTWTh	115VH	
	4	III	MTWTh	115VH	
	5	IV	MTWTh	115VH	
	6	IV	MTWTh	112VH	
	7	V	MTWTh	112VH	
	8 (fall only)	V	MTWTh	113VH	
	9	VI	MTWTh	113VH	
	10	VI	MTWTh	112VH	
	11	VII	MTWTh	112VH	
	12	VIII	MTWTh	112VH	
6w-7st	Principles of Economics (See 6f-7w)				
	Lect.	IV	T	BuAud	Mr. Brozen and others
	Sec. 1	I	MWThF	105VH	
	2	I	MWThF	207VH	
	3 (winter only)	II	MWThF	306VH	
	4	II	MWThF	210VH	
	5	III	MWThF	210VH	
	6	IV	MWThF	113VH	
	7	V	MWThF	113VH	
	8	VI	MWThF	115VH	
	9	VI	MWThF	210VH	
	10	VII	MWThF	115VH	
	11	VII	MWThF	113VH	
	12	VIII	MWThF	113VH	
6st	Principles of Economics (1st qtr. of 6-7. See 6f-7w)				
	Lect.	VI	Th	BuAud	Mr. Brozen and others
	Sec. 1	I	MTWF	112VH	
	2	II	MTWF	112VH	
	3	III	MTWF	113VH	
	4	III	MTWF	115VH	
	5	IV	MTWF	115VH	
	6	V	MTWF	115VH	
	7	VI	MTWF	112VH	
	8	VI	MTWF	113VH	
	9	VII	MTWF	112VH	
	10	VIII	MTWF	112VH	
7ft	Principles of Economics (2nd qtr. of 6-7. See 6f-7w)				
	Lect.	VI	Th	BuAud	Mr. Brozen and others
	Sec. 1	I	MTWF	113VH	
	2	II	MTWF	113VH	
	3	IV	MTWF	113VH	
	4	V	MTWF	115VH	
	5	VI	MTWF	115VH	
	6	VIII	MTWF	115VH	
8f-9w	General Economics (6 cred.; soph., jr., sr., open to Institute of Technology students only; no prereq.)				
	Sec. 1	I	MWF	2VH	Mr. Filipetti and others
	2	II	TThS	6VH	
	3 (fall only)	III	MWF	306VH	
	4	VI	MWF	221VH	
8w-9s	General Economics (See 8f-9w)				
	Sec. 1	II	MWF	113VH	Mr. Filipetti and others
	2 (winter only)	IV	MWF	210VH	
10f	An Introduction to Economic Analysis (3 cred.; open to College of Pharmacy students only; no prereq.)				
		II	MWF	205VH	Ar

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

‡ The final examination in this course will conflict with that of any course having lectures the same hour MW. Therefore, students must not register for two such courses.

No.	Title	Hour	Day	Bldg.	Instructor
20f¶	Elements of Accounting (3 cred.; 3rd qtr. fr., soph.; no prereq.)				
	Sec. 1	I	MWF	210VH	Mr. Heilman and others
	2	I	TThS	307VH	
	3	II	MWF	112VH	
	4	II	TThS	306VH	
	5	III	MWF	307VH	
	6	III	TThS	306VH	
	7	IV	MWF	210VH	
	8	IV	TThS	210VH	
	9	V	MWF	307VH	
	10	VII	MWF	221VH	
	11	VII	MWF	115VH	
	12	VIII	MWF	205VH	
20w¶	Elements of Accounting (See 20f)				
	Sec. 1	I	MWF	112VH	Mr. Heilman and others
	2	II	TThS	4VH	
	3	III	MWF	307VH	
	4	IV	MWF	6VH	
	5	IV	TThS	6VH	
	6	VIII	MWF	6VH	
20s¶	Elements of Accounting (See 20f)				
	Sec. 1	II	MWF	307VH	Mr. Heilman and others
	2	III	TThS	221VH	
	3	VI	MWF	2VH	
	4	VIII	MWF	210VH	
25f-26w	Principles of Accounting (6 cred.; soph., jr., sr.; prereq. Econ. 20)				
	Sec. 1	I	MWF	307VH	Mr. Heilman and others
	2	III	TThS	307VH	
	3 (fall only)	IV	MWF	221VH	
	4	VII	MWF	205VH	
25w-26s	Principles of Accounting (See 25f-26w)				
	Sec. 1	I	MWF	4VH	Mr. Heilman and others
	2	I	TThS	301VH	
	3	II	MWF	301VH	
	4	III	MWF	112VH	
	5	IV	MWF	307VH	
	6 (winter only)	IV	TThS	307VH	
	7	V	MWF	221VH	
	8	VII	MWF	105VH	
	9	VIII	MWF	105VH	
25s	Principles of Accounting (1st qtr. of 25-26. See 25f-26w)				
	Sec. 1	I	MWF	307VH	Mr. Heilman and others
	2	IV	MWF	105VH	
	3	IV	TThS	205VH	
	4	VI	MWF	307VH	
26f	Principles of Accounting (2nd qtr. of 25-26. See 25f-26w)				
	Sec. 1	II	MWF	306VH	Mr. Heilman and others
	2	IV	TThS	105VH	
	3	VI	MWF	307VH	
27s§	Accounting Survey (5 cred.; open to prelaw and law students only; no prereq.)				
		II	MTWThF	306VH	Mr. Lund
28f	Business Law (3 cred.; soph., jr., sr., with 6 cred. in econ. or sr. without econ. cred., open to Institute of Technology and College of Agriculture students only)				
		I	MWF	135E	Mr. Palmer
28s	Business Law (See 28f)				
		I	MWF	335EE	Mr. Palmer
29s	Principles of Accounting (3 cred.; soph., jr., sr.; open to Institute of Technology students only; no prereq.)				
		I	MWF	113VH	Mr. Lund

¶ Students who have had high school training or other experience in bookkeeping and who pass a placement test may be exempt from this course and admitted to Econ. 25. This placement test will be given on the first day of each quarter. For further information consult the office of the dean of the School of Business Administration.

§ Not open to students who have received credit in 20, 25-26.

No.	Title	Hour	Day	Bldg.	Instructor
30w	Elements of Retail Accounting (3 cred.; open to College of Pharmacy students only; prereq. Econ. 10)	II	MWF	112VH	Mr. Ostlund
32f,w*††	Beginning Typewriting (1 cred.; fr., soph., jr., sr.; no prereq.)	I	MTWThF	209VH	Miss Donaldson and others
	Sec. 1	I	MTWThF	209VH	Miss Donaldson and others
	2	VI	MTWThF	209VH	
32s*††	Beginning Typewriting (See 32f-33w)	VI	MTWThF	211VH	Miss Donaldson and others
33f-34w*††	Intermediate and Advanced Typewriting (2 cred.; soph., jr., sr.; prereq. 32 or consent of instructor)	IV	MTWThF	209VH	Miss Donaldson and others
	Sec. 1 Dental hygiene students, fall only	IV	MTWThF	209VH	Miss Donaldson and others
	2	VII	MTWThF	209VH	
33w-34s*††	Intermediate and Advanced Typewriting (See 33f-34w)	IV	MTWThF	211VH(w)	Miss Donaldson and others
	Sec. 1	IV	MTWThF	211VH(s)	Miss Donaldson and others
	2 (winter only)	VII	MTWThF	211VH	
33s*††	Intermediate Typewriting (See 33f-34w)	IV	MTWThF	211VH	Miss Donaldson and others
34f*††	Advanced Typewriting (See 33f-34w)	III	MTWThF	211VH	Miss Donaldson and others
35w†	Office Practice for Dental Hygienists (3 cred.; dent. hyg. only; prereq. Econ. 32-33 or equiv.)	IV	MWF	209VH	Miss Donaldson and others
37f-38w-39s†††	Beginning and Intermediate Shorthand (9 cred.; soph., jr., sr.; prereq. Econ. 33 or consent of instructor)	I	MTWThF	211VH	Miss Donaldson and others
	Sec. 1	I	MTWThF	211VH	Miss Donaldson and others
	2	II	MTWThF	211VH	Miss Donaldson and others
40f†-41w††	Secretarial Procedure (6 cred.; soph., jr., sr.; prereq. Econ. 34 and 39 or consent of instructor)	III	MTWThF	209VH	Miss Donaldson and others
42s†	Advanced Secretarial Procedure (3 cred.; jr., sr.; prereq. Econ. 41)	I	MWF	209VH	Miss Donaldson and others
		VII-VIII	Th		Miss Donaldson and others
43f†	Advanced Shorthand Theory (2 cred.; soph., jr., sr.; prereq. Econ. 34 and 39; not open to students in the College of Science, Literature, and the Arts)	VI-VII	Th	211VH	Miss Donaldson

Senior College Courses

50f	Insurance Principles (3 cred.; jr., sr.; prereq. Econ. 6-7 or 83)	III	TThS	205VH	Mr. Graves
50w	Insurance Principles (See 50f)	VII	MWF	2VH	Mr. Graves
82f**†	Competition and Monopoly in Modern Industry (3 cred.; jr., sr.; no prereq.)	II	TThS	205VH	Ar
83w**†	The Inequality of Incomes (3 cred.; jr., sr.; prereq. Econ. 82)	II	TThS	205VH	Ar

* Students who have had one year of high school typewriting are admitted to Econ. 33; those who have had two years of high school typewriting may be admitted to Econ. 34 by passing a placement test.
† To receive credit for any part of this course a student must complete the parts preceding the dagger.

‡ A fee of \$2.50 a quarter is charged students registering for one or more of these courses.

§ To receive credit for any part of this course a student must complete 32, 33, and 34.

¶ This course may not be included as a part of the Senior College work required for a minor in economics in the College of Science, Literature, and the Arts.

** Not open to students who have received credit in Econ. 6-7.

†† Students who have had one year of high school shorthand are admitted to Econ. 38; those who have had two years of high school shorthand are admitted to Econ. 39.

SCHOOL OF BUSINESS ADMINISTRATION

No.	Title	Hour	Day	Bldg.	Instructor
84s	Comparative Economic Systems (3 cred.; jr., sr.; prereq. Econ. 6-7 or 83)	I		TThS 205VH	Mr. Garver
97f,98w,99s	Honors Course in Economics (Cred. ar.; jr., sr.; prereq. consent of major advisers)	Ar	Ar	Ar	Ar
103f-104w†	Advanced Economics (6 cred.; jr., sr., grad.; not open to School of Business Administration students; prereq. 20 cred. in soc. sci. including Econ. 6-7 or 83)	VI	MWF	105VH	Mr. Garver
105s	History of Economic Ideas: The Classical Economists (3 cred.; jr., sr., grad.; prereq. B.A. 101-102 or Econ. 103-104 or consent of instructor)	VI	MWF	205VH	Mr. Garver
106	<i>History of Economic Ideas: The Critics of the Classical Economists</i> (3 cred.; jr., sr., grad.; prereq. B.A. 101-102 or Econ. 103-104 or consent of instructor) (<i>Not offered</i>)				
108	<i>Applications of Economic Theory</i> (3 cred.; jr., sr., grad.; prereq. B.A. 101-102 or Econ. 103-104) (<i>Not offered</i>)				
110	<i>Cartels: Origins, Structures, and Price Policies</i> (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83 and 15 additional credits in economics and/or business administration. Econ. 155 is a desirable preceding course) (<i>Not offered</i>)				
111f	City Planning. Same as Architecture 104, Political Science 123, and Sociology 104. General survey of the economic, governmental, social, and technical phases of city planning and group housing. (3 cred.; prereq. senior or graduate standing)	III	MWF	320E	Mr. Jones, Mr. Anderson, Mr. Filipetti, Miss Canoyer Mr. Sletto
121f-122w†- 123s	Theory of Statistics (9 cred.; jr., sr., grad.; prereq. Econ. 5)	I	MWF	221VH	Mr. Mudgett
124	<i>Comparative Banking: British Systems</i> (3 cred.; jr., sr., grad.; prereq. Econ. 141 or B.A. 142) (<i>Not offered</i>)				
126s	Economic Problems of Latin America (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	II	MWF	205VH	Mr. Myers
127	<i>Comparative Banking: South American Systems</i> (3 cred.; jr., sr., grad.; prereq. Econ. 141 or B.A. 142) (<i>Not offered</i>)				
129	<i>Statistical Economics</i> (3 cred.; sr. with consent of instructor, grad.; prereq. Econ. 103-104 and B.A. 112) (<i>Not offered</i>)				
140w	The Co-operative Movement (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	VI	MWF	205VH	Miss Canoyer
141	<i>Monetary and Banking Policy</i> (3 cred.; jr., sr., grad.; not open to School of Business Administration students; prereq. Econ. 3 and either Econ. 6-7 or 83) (<i>Not offered</i> . For the current year B.A. 142 may be substituted for Econ. 141)				
149f	Business Cycles (3 cred.; sr., grad.; prereq. Econ. 141 or B.A. 142 or consent of instructor)	III	TThS	2VH	Mr. Myers
149w	Business Cycles (See 149f)	VII	MWF	207VH	Mr. Myers
149s	Business Cycles (See 149f)	III	TThS	105VH	Mr. Marget
155f	Corporation Finance (3 cred.; jr., sr., grad.; prereq. Econ. 3 and 6-7)	III	MWF	1VH	Mr. Stehman
	Sec. 1	III	MWF	1VH	Mr. Stehman
	2	VII	MWF	1VH	Mr. Borak
155w	Corporation Finance (See 155f)				
	Sec. 1	III	TThS	1VH	Mr. Stehman
	2	VII	MWF	1VH	Mr. Borak
155s	Corporation Finance (See 155f)				
	Sec. 1	II	MWF	1VH	Mr. Stehman
	2	VI	MWF	4VH	Mr. Borak
161f	Labor Problems and Trade Unionism (3 cred.; jr., sr.; grad.; prereq. Econ. 6-7 or 83)	I	TThS	1VH	Ar
	Sec. 1	I	TThS	1VH	Ar
	2	VIII	MWF	1VH	Ar

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

No.	Title	Hour	Day	Bldg.	Instructor
161w	Labor Problems and Trade Unionism (See 161f)				
	Sec. 1	III	MWF	4VH	Ar
	2	VIII	MWF	4VH	Ar
161s	Labor Problems and Trade Unionism (See 161f)				
	Sec. 1	II	TThS	4VH	Ar
	2	VII	MWF	4VH	Ar
162w	Labor and Socialist Movements (3 cred.; jr., sr., grad.; prereq. Econ. 161)	VII	MWF	6VH	Ar
164s	Labor Legislation and Social Insurance (3 cred.; jr., sr., grad.; prereq. Econ. 161)	III	TThS	2VH	Ar
172f	Economics of Transportation (3 cred.; jr., sr., grad.; prereq. 20 cred. in soc. sci. including Econ. 6-7 or 83)	II	MWF	6VH	Mr. Nightingale
175f	Government Regulation of Business (3 cred.; jr., sr., grad.; prereq. 20 cred. in soc. sci. including Econ. 6-7 or 83)				
	Sec. 1	III	MWF	4VH	Mr. Garver
	2	VI	MWF	4VH	Mr. Boddy
175w	Government Regulation of Business (See 175f)				
	Sec. 1	III	MWF	1VH	Mr. Garver
	2	VII	MWF	4VH	Mr. Boddy
175s	Government Regulation of Business (See 175f)				
	Sec. 1	II	TThS	1VH	Mr. Garver
	2	III	MWF	1VH	Mr. Boddy
176f,s	International Commercial Policies (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	I	MWF	205VH	Mr. Blakey
178s	Economics of Consumption (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83; not open to majors in economics or business administration)	II	MWF	6VH	Miss Canoyer
179	<i>Economic Problems of the Far East</i> (3 cred.; jr., sr.; prereq. Econ. 6-7 or equiv.) (Not offered)				
185w	Economics of Marketing (3 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	III	TThS	2VH	Miss Canoyer
191f-192w†§	Public Finance (6 cred.; jr., sr., grad.; prereq. Econ. 6-7 or 83)	III	MWF	221VH	Mr. Blakey
193s	State and Local Taxation (3 cred.; jr., sr., grad.; prereq. Econ 191-192 or B.A. 58)	III	MWF	221VH	Mr. Blakey

Courses Open to Graduate Students Only

203f-204w	Seminar in Economic Theory (6 cred.; grad.)	VIII½-IX	MW	307VH	Mr. Garver
206	<i>Seminar in Market Prices</i> (3 cred.; grad.) (Not offered)				
207	<i>Theory of Demand</i> (3 cred.; grad.) (Not offered)				
208	<i>Production and Distribution</i> (3 cred.; grad.) (Not offered)				
233f-234w	Seminar in Public Finance (6 cred.; grad.)	VII	W	307VH	Mr. Blakey
		VII-VIII	F		
243s	Seminar in Money and Banking (3 cred.; grad.)	VIII½-IX	MW	307VH	Mr. Marget
251s	Seminar in Industrial Relations (3 cred.; grad.)	VII-VIII½	MW	307VH	Mr. Yoder
257w	Seminar in Accounting Theory (3 cred.; grad.)	VIII-IX½	TTh	306VH	Mr. Heilman

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

§ Credit may not be received for both Economics 191-192 and B. A. 58.

SCHOOL OF BUSINESS ADMINISTRATION

BUSINESS ADMINISTRATION

For advisers see the Bulletin of the School of Business Administration.

Courses Open to Business Administration Students Only

No.	Title	Hour	Day	Bldg.	Instructor
51f*	Business Law: Contracts (3 cred.; jr., sr.; prereq. Econ. 6-7)				
	Lect.	IV	Th	BuAud	Mr. Neville
	Sec. 1	I	TS	221VH	and others
	2	I	TS	112VH	
	3	II	TS	4VH	
	4	II	TS	112VH	
	5	III	TS	4VH	
	6	III	TS	112VH	
51w*	Business Law: Contracts (See 51f)				
	Lect.	VI	T	206Pt	Mr. Neville
	Sec. 1	I	ThS	112VH	and others
	2	III	ThS	112VH	
52w*	Business Law: Agency, Partnership, and Corporations (3 cred.; jr., sr.; prereq. B.A. 51)				
	Lect.	IV	Th	BuAud	Mr. Neville
	Sec. 1	I	TS	113VH	and others
	2	II	TS	113VH	
	3	II	TS	112VH	
	4	III	TS	113VH	
53s*	Business Law: Sales and Negotiable Instruments (3 cred.; jr., sr.; prereq. B.A. 51)				
	Lect.	IV	Th	BuAud	Mr. Neville
	Sec. 1	I	TS	113VH	and others
	2	I	TS	4VH	
	3	II	TS	113VH	
	4	II	TS	221VH	
54f-55w	Elementary Accounting—Combined course (8 cred.; jr., sr.; no prereq.)				
	Sec. 1	II	MWFS	307VH	Ar
	2 (fall only)	IV	MWFS	307VH	
	3	VI	MWThF	306VH	
54w-55s	Elementary Accounting—Combined course (See 54f-55w)				
	Sec. 1	I	MWFS	306VH	Ar
	2	III	MWFS	306VH	
56s	Property Rights and Obligations (3 cred.; jr., sr.; prereq. B.A. 52 or 53)				
		III	TThS	112VH	Mr. Neville
57f	Money and Banking (3 cred.; jr., sr.; no prereq.)				
	Sec. 1	II	MWF	105VH	Mr. Graves
	2	VII	MWF	207VH	and others
57w	Money and Banking (See 57f)				
	Sec. 1	IV	TThS	207VH	Mr. Graves
	2	VI	MWF	207VH	and others
57s	Money and Banking (See 57f)				
		II	TThS	207VH	Mr. Graves and others
58f§††	Elements of Public Finance (3 cred.; jr., sr.; prereq. Econ. 6-7)				
	Sec. 1	II	TThS	1VH	Mr. Blakey
	2	IV	MWF	4VH	and others
58w§††	Elements of Public Finance (See 58f)				
	Sec. 1	II	TThS	1VH	Mr. Blakey
	2	IV	MWF	1VH	and others

* To receive credit for this course a student must complete 51 and either 52 or 53.

§ Credit may not be received for both Economics 191-192 and B. A. 58.

|| Credit may not be received for both Economics 3 and B. A. 57.

|| A combination of Economics 20, 25, and 26.

†† Economics 191-192 (6 cred.) may be substituted for B. A. 58 as a core group requirement.

No.	Title	Hour	Day	Bldg.	Instructor
58s*†	Elements of Public Finance (See 58f)				
	Sec. 1	IV	MWF	1VH	Mr. Blakey
	2	VII	MWF	1VH	and others
59w	Life Insurance (3 cred.; jr., sr.; prereq. Econ. 50)	III	TThS	221VH	Mr. Graves
60f	Fire and Marine Insurance (3 cred.; jr., sr.; prereq. Econ. 50)	III	MWF	205VH	Mr. Graves
61s	Casualty Insurance (3 cred.; jr., sr.; prereq. Econ. 50)	III	TThS	205VH	Mr. Graves
64w	Graphic Arts I: Elementary Principles of Design—Identical with Drawing and Descriptive Geometry 64 (3 cred.; jr., sr.; prereq. permission of adviser in School of Business Administration or in School of Journalism)	IV	MWF	206E	Mr. Doseff
65f‡	Graphic Arts II: Processes—Identical with Drawing and Descriptive Geometry 65 and Journalism 65 (3 cred.; jr., sr.; prereq. permission of adviser in School of Business Administration or in School of Journalism)	IV	MWF	105MurH	Mr. Barnhart
67s	Retail Store Management for Pharmacy Students (3 cred.; open to College of Pharmacy students only; prereq. Econ. 10 and 30)	I	MWF	6VH	Ar
68f	Sales Management (3 cred.; jr., sr.; prereq. B.A. 77)	II	TThS	2VH	Ar
69s	Retail Store Management (3 cred.; jr., sr.; prereq. B.A. 77)	II	TThS	2VH	Miss Canoyer
70f‡	Statistics Survey (3 cred.; jr., sr.; prereq. Econ. 6-7)	I	MWF	105VH	Ar
	Sec. 1	III	MWF	105VH	
	2	VII	MWF	105VH	
70w‡	Statistics Survey (See 70f)	II	TThS	105VH	Ar
	Sec. 1	VI	MWF	2VH	
70s‡	Statistics Survey (See 70f)	III	MWF	207VH	Ar
71w	Transportation: Services and Charges I (3 cred.; jr., sr.; prereq. Econ. 6-7)	I	MWF	6VH	Mr. Nightingale
	Sec. 1	IV	MWF	2VH	Mr. Nightingale
71s	Transportation: Services and Charges I (See 71w)	III	MWF	2VH	Mr. Nightingale
72s	Transportation: Services and Charges II (3 cred.; jr., sr.; prereq. B.A. 71)	I	MWF	2VH	Mr. Nightingale
76f	Credits and Collections (3 cred.; jr., sr.; prereq. B.A. 77)	III	TThS	6VH	Ar
77f	Survey in Marketing (3 cred.; jr., sr.; prereq. Econ. 6-7)	III	T	206Pt	Miss Canoyer
	Lect.	I	ThS	2VH	and others
	Sec. 1	II	WF	2VH	
	2	IV	ThS	2VH	
	3	VII	WF	2VH	
77w	Survey in Marketing (See 77f)	III	M	206Pt	Miss Canoyer
	Lect.	II	ThS	2VH	and others
	Sec. 1	III	TTh	6VH	
	2	VIII	WF	221VH	
77s	Survey in Marketing (See 77f)	III	M	206Pt	Miss Canoyer
	Lect.	I	ThS	2VH	and others
	Sec. 1	IV	WF	6VH	
	2	VI	WF	6VH	
86s	Office Management (3 cred.; jr., sr.; prereq. Econ. 6-7)	III	MWF	209VH	Miss Donaldson

* Credit may not be received for both Economics 191-192 and B.A.58.

‡ Journalism course. A fee of \$1 per quarter is charged students taking courses in Journalism.

§ Not open to students who have received credit in Econ. 5.

¶ Economics 191-192 (6 cred.) may be substituted for B.A. 58 as a core group requirement.

SCHOOL OF BUSINESS ADMINISTRATION

No.	Title	Hour	Day	Bldg.	Instructor
88w	Advertising (3 cred.; jr., sr.; prereq. B.A. 77 and Psy. 56)	II	MWF	105VH	Ar
88s	Advertising (See 88w)	VII	MWF	2VH	Ar
89f	Production Management (3 cred.; jr., sr.; prereq. Econ. 6-7 or equiv.)	II	MWF	207VH	Mr. Filipetti and others
	Sec. 1	II	MWF	207VH	Mr. Filipetti and others
	2	III	TThS	207VH	
89w	Production Management (See 89f)	II	MWF	207VH	Mr. Filipetti and others
	Sec. 1	II	MWF	207VH	Mr. Filipetti and others
	2	III	TThS	207VH	
89s	Production Management (See 89f)	II	MWF	207VH	Mr. Filipetti and others
	Sec. 1	II	MWF	207VH	Mr. Filipetti and others
	2	III	TThS	207VH	
91f,w,s	Tabulating Equipment Laboratory (1 cred.; jr., sr.; prereq. Econ. 26 and either 5 or B.A. 70)	VII-VIII	T	6VH(f,w)	
				113VH(s)	Mr. Lund
93f	Accounting Laboratory (1 cred.; jr., sr., open to accounting and commercial education majors only; prereq. Econ. 26)	VI-VII	T	307VH	Mr. Lund
	Sec. 1	VI-VII	T	307VH	Mr. Lund
	2	VI-VII	Th	307VH	Mr. Lund
93w	Accounting Laboratory (See 93f)	VI-VII	T	307VH	Mr. Lund
	Sec. 1	VI-VII	T	307VH	Mr. Lund
	2	VI-VII	Th	307VH	Mr. Lund
94w	Cost Accounting Laboratory (1 cred.; jr., sr.; prereq. B.A. 152 or concurrent)	V-VI	M	307VH	Ar
	Sec. 1	V-VI	M	307VH	Ar
	2	VI-VII	T	306VH	Ar
96s	Business Equipment Laboratory (1 cred.; jr., sr.; prereq. Econ. 26. Open to commercial education majors only)	VII-VIII	F	307VH	Ar
97f,98w,99s	Honors Course in Business Administration (Cred. ar.; jr., sr.; prereq. permission of the dean)	Ar	Ar	Ar	Ar
101f-102wf	Advanced General Economics (6 cred.; jr., sr., grad.; prereq. Econ. 6-7)	III	MWF	207VH	Mr. Boddy
	Sec. 1	III	MWF	207VH	Mr. Boddy
	2	III	TThS	105VH	and others
	3	IV	MWF	207VH	
101w-102s†	Advanced General Economics (See 101f-102w)	II	MWF	4VH	Mr. Boddy
	Sec. 1	II	MWF	4VH	Mr. Boddy
	2	VI	MWF	1VH	and others
109s	Business Policy (3 cred.; sr., grad.; prereq. B.A. 101-102)	II	TThS	6VH	Mr. Reighard
112f‡	Business Statistics (3 cred.; jr., sr., grad.; prereq. Econ. 5 or B.A. 70)	IV	MWF	1VH	Mr. Mudgett
	Sec. 1	IV	MWF	1VH	Mr. Mudgett
	2	VI	MWF	1VH	and others
112w‡	Business Statistics (See 112f)	II	MWF	1VH	Mr. Mudgett
	Sec. 1	II	MWF	1VH	Mr. Mudgett
	2	III	TThS	4VH	and others
112s‡	Business Statistics (See 112f)	III	TThS	1VH	Mr. Mudgett
	Sec. 1	III	TThS	1VH	Mr. Mudgett
	2	IV	MWF	4VH	and others
118f	Auditing Procedure (3 cred.; jr., sr., grad.; prereq. B.A. 139 or B.A. 151 or consent of instructor)	III	T	221VH	Ar
		VII-VIII	TTh	306VH	
118s	Auditing Procedure (See 118f)	IV	M	221VH	Mr. Lund
		VI-VII	TTh	307VH	
119	Correlation (3 cred.; jr., sr., grad.; prereq. Econ. 5 or B.A. 70) (Not offered)				
120	Index Numbers (3 cred.; jr., sr., grad.; prereq. Econ. 5 or B.A. 70) (Not offered)				

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

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

No.	Title	Hour	Day	Bldg.	Instructor
130f†	Cost Accounting Survey (3 cred.; jr., sr., grad.; prereq. Econ. 25-26)	I	TThS	105VH	Mr. Ostlund
130w‡	Cost Accounting Survey (See 130f)	III	MWF	105VH	Mr. Ostlund
130s‡	Cost Accounting Survey (See 130f)	III	MWF	105VH	Mr. Ostlund
133s	Standard Costs (3 cred.; jr., sr., grad.; prereq. B.A. 130 or 153)	II	TThS	205VH	Mr. Ostlund
134f	Income Tax Accounting (3 cred.; jr., sr., grad.; prereq. B.A. 139 or 151)	I	MWF	112VH	Mr. Reighard
135w	Auditing and Public Accounting (3 cred.; jr., sr., grad.; prereq. B.A. 118)	III	MWF	6VH	Mr. Reighard
135s	Auditing and Public Accounting (See 135w)	III	MWF	6VH	Mr. Reighard
136s	Internal Auditing and Accounting Control (3 cred.; jr., sr., grad.; prereq. B.A. 139 or 151)	III	TThS	6VH	Mr. Reighard
139f‡‡	Advanced General Accounting (3 cred.; jr., sr., grad.; prereq. Econ. 25-26)	IV	MWF	105VH	Mr. Heilman
139w‡‡	Advanced General Accounting (See 139f)	IV	MWF	105VH	Ar
139s‡‡	Advanced General Accounting (See 139f)	II	TThS	105VH	Mr. Heilman
142f	Advanced Money and Banking (3 cred.; jr., sr., grad.; prereq. Econ. 3 and 6-7)	II	MWF	4VH	Mr. Myers
	2	VII	MWF	4VH	Mr. Myers
142w	Advanced Money and Banking (See 142f)	I	MWF	1VH	Mr. Myers
	2	VI	MWF	4VH	Mr. Myers
142s	Advanced Money and Banking (See 142f)	I	MWF	1VH	Mr. Marget
	2	VII	MWF	207VH	Mr. Myers
145s	Foreign Exchange (3 cred.; jr., sr., grad.; prereq. B.A. 142)	IV	MWF	112VH	Mr. Myers
146w	Investments (3 cred.; jr., sr., grad.; prereq. Econ. 155)	II	MWF	221VH	Mr. Stehman
147	<i>Bank Administration</i> (3 cred.; jr., sr., grad.; prereq. B.A. 142) (<i>Not offered</i>)				
148	<i>The Securities Market</i> (3 cred.; sr., grad.; prereq. B.A. 146 and Econ. 149) (<i>Not offered</i>)				
150f‡‡-151w‡	Intermediate Accounting (6 cred.; jr., sr., grad.; prereq. Econ. 25-26)	III	MWF	2VH	Mr. Heilman
150w‡‡-151s‡	Intermediate Accounting (See 150f-151w)	II	MWF	2VH	Mr. Heilman
152f-153w†	Cost Accounting (6 cred.; jr., sr., grad.; prereq. Econ. 25-26)	II	TThS	207VH	Mr. Ostlund
155	Corporation Finance (This course has been reclassified as Econ. 155)	II	MWF	221VH	Mr. Stehman
156f	Finance Management (3 cred.; jr., sr., grad.; prereq. Econ. 155)	II	MWF	221VH	Mr. Stehman
157s	C.P.A. Problems (4 cred.; sr., grad.; prereq. B.A. 135 and B.A. 151 or consent of instructor)	VIII-IX-X½	TF	306VH	Ar
158s	Governmental Railroad and Utility Accounting (3 cred.; sr., grad.; prereq. B.A. 139 or 151)	I	TThS	221VH	Mr. Heilman
165	<i>Economics of Public Utilities</i> (3 cred.; jr., sr., grad.; prereq. Econ. 3 and 6-7) (<i>Not offered</i>)				

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

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

§ Credit may not be received for both B. A. 139 and B. A. 150.

SCHOOL OF BUSINESS ADMINISTRATION

No.	Title	Hour	Day	Bldg.	Instructor
167f	Introduction to Industrial Relations (3 cred.; jr., sr., grad.; prereq. Econ. 161)	II	MWF	1VH	Mr. Yoder and others
	Sec. 1				
	2	III	TThS	1VH	
167w	Introduction to Industrial Relations (See 167f)	I	TThS	1VH	Mr. Yoder and others
	Sec. 1				
	2	IV	MWF	4VH	
167s	Introduction to Industrial Relations (See 167f)	III	TThS	4VH	Mr. Yoder and others
170w‡	Motion Economy (3 cred.; jr., sr., grad.; prereq. B.A. 184)	II	TTh	301VH	Ar
	Lect.	II	TTh	301VH	
	Lab.	II-III	S	301VH	
171s‡	Production Standards (3 cred.; jr., sr., grad.; prereq. B.A. 170)	VI	MW	301VH	Ar
	Lect.	VI	MW	301VH	
	Lab.	VI-VII	F	301VH	
177w	Foreign Trade (3 cred.; jr., sr., grad.; prereq. Econ. 176)	I	MWF	205VH	Mr. Blakey
180f-181w-182s	Senior Topics Courses (School of Business Administration seniors)				
	A. Accounting (6 cred.; fall and winter)				
		VI½-VII(f)	MW	6VH	Mr. Rotzel
		I(w)	TThS	307VH	Mr. Reighard
	B. Business Finance (6 cred.; winter and spring)				
		VII	MWF	221VH	Mr. Stehman
	C. Marketing (9 cred.)				
		VI-VII½	TTh	105VH	Miss Canoyer and others
	D. Industrial Relations¶ (9 cred.)				
		VII½-VIII	TTh	221VH	Mr. Yoder
	E. Office Management (9 cred.)				
		IV	MWF	211VH(f) 208VH(w)	Miss Donaldson
	F. Statistics (9 cred.)				
		VI-VII½	MW	208VH(s)	
	G. Production Management§ (9 cred.)				
		VII	MWF(f)	301VH	Mr. Filipetti
		VI	TTh	301VH	
		and 1 hr. ar (w)			
		III	MWF(s)	301VH	
	H. Insurance (3 cred.; spring)				
		IV	MWF	205VH	Mr. Graves
	I. Public Utilities and Transportation (9 cred.)				
		VI½-VII	TTh	2VH	Mr. Nightingale
183f,w,s	Practice Course (Cred. ar.; jr., sr., grad.; prereq. consent of adviser)	Ar	Ar	Ar	Members of the staff
184f§	Scientific Management in Industry (3 cred.; sr., grad.; prereq. B.A. 89 or equiv.)	VI	MWF	205VH	Mr. Filipetti
194s	Advanced Advertising Procedures (3 cred.; jr., sr., grad.; prereq. Econ. 5 and B.A. 88)	IV	MWF	2VH	Mr. Longstaff

¶ 180-181-182D must be taken in sequential order.

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

§ Credit may not be received for both B. A. 180G and B. A. 184.

SCHOOL OF NURSING

No.	Title	Hour	Day	Bldg.	Instructor
1f,s	History of Nursing (1 cred.; no prereq.)				
	Fall	IX		W Ar*	Miss Densford
	Spring Sec. A	VII		T Ar*	
	B	IX		W	
10f,s	Introduction to Nutrition (1 cred.; prereq. registration in the School of Nursing)				
	Fall	VIII		W Ar*	Miss Thomas
	Spring	VIII		W Ar*	Miss Thomas
12f,s	Introduction to Nursing (3 cred.; prereq. registration in the School of Nursing)				
	Fall Sec. A	III		TTh Ar*	
	B	VII		MW Ar*	
	C	IV		MW Ar*	
	Spring Sec. A	III		TTh Ar*	
	B	V		TTh Ar*	

Note: For information regarding the classes that accompany the clinical experiences the student is having in the hospital, please see the School of Nursing Bulletin or the bulletin board at 125 Medical Sciences Building.

* For room schedule see the bulletin board at 125 Medical Sciences Building at the beginning of the quarter.

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If, at any time, such student desires credit for this course towards the degree offered by the second college, he shall pay such additional tuition as is required by the second college, charged in accordance with the schedule indicated on page 30.

This is not to be interpreted as applying to students in such combination courses as Arts and Medicine, Arts and Dentistry, Arts and Business, etc., provided such students pay regular quarter fees for the full period of residence in the higher fee college.

REFUNDS

Tuition—Students who cancel their registration before the close of any quarter are entitled to refunds of the tuition fee on the following basis:

After Quarter Opens	Percentage of Refund
No attendance	100
One day to one week	90
One week to two weeks	80
Two weeks to three weeks	70
Three weeks to four weeks	60
Four weeks to five weeks	50
Five weeks to six weeks	40

No student who has been in attendance more than six weeks shall receive any refund of tuition.

Locker rental—Full rental fee for lockers may be refunded during the first two weeks of a quarter. After that time no reduction is made.

Incidental fee—Students in any college of the University, with the exception of the Institute of Technology, who cancel their registration before the end of the quarter, are entitled to a refund of the incidental fee on the same basis as the refund for tuition, except that in no case will more than \$8.15 of the incidental fee be refunded. Students in the Institute of Technology will receive refunds of the incidental fee on the same basis, except that the extra forty cents of the incidental fee in this institute will be entirely refunded during the first two weeks of the quarter, and none of this extra forty cents will be refunded after the second week of the quarter.

Students who are called, or volunteer, for active duty with the armed forces of the United States as evidenced by presentation of order to report for induction before the end of the current quarter are entitled to refund of tuition on the following basis:

- a. Full refund for cancellation through the fifth week.
- b. One-half refund for cancellation during the sixth week and to the beginning of the last week of classes.
- c. No refund for cancellation during or after the last week of classes.

The refund of the incidental fee representing service charges will be on the normal basis.

NONRESIDENT STUDENTS

The following rules regarding fees of nonresident students applicable to both men and women, have been approved by the University:

1. No student shall be admitted to the University on a resident tuition basis unless he has been a bona fide domiciliary of the state for at least a year prior to admission. This requirement shall not prejudice the right of a student admitted on a nonresident basis to be placed thereafter on a resident basis provided he acquired a bona fide domicile of a year's duration within the state in the meantime. The fact alone of attendance at the University neither constitutes nor necessarily precludes the acquisition of such a domicile.

2. The responsibility of registering under proper residence is placed upon the student and it is the duty of each student at registration if there be any possible question of his right to residence fees, under the rules of the Board of Regents, to raise the question with the dean of admissions.