

8/3/53

Bulletin of the

UNIVERSITY OF MINNESOTA



College of Science, Literature, and the Arts
1953-1955

How to Use This Bulletin

This bulletin gives information about the College of Science, Literature, and the Arts. Keep it at hand for ready reference.

Section I describes the purposes and programs of the college as well as the chief regulations. Read this portion carefully to insure wise and accurate program planning.

Section II describes the courses offered in the college with the instructors for each, and it also lists the departmental major requirements.

Section III describes the Junior College programs that are prerequisite for students wishing to transfer to various professional schools after two or three years.

While this bulletin gives information necessary for program planning, it will be necessary to consult the *Class Schedule* published just prior to each quarter to ascertain room numbers, hours, and days of class sessions, and any last-minute changes in offerings. For any changes in regulations that become effective after publication of this bulletin, you should consult the appropriate college office.

Do not attempt to register from the *Class Schedule* alone. This SLA Bulletin is essential for securing course descriptions and prerequisites, college rules and requirements, and the other information necessary for sound program planning. Since the *Fall Quarter Class Schedule* gives the hours and days of courses throughout the year, you should retain it for long-range program planning.

You will also wish to read the *Bulletin of General Information* telling about the University as a whole. And new students will be interested in *The Moccasin*, a handbook describing personnel services and campus activities.

Copies of all bulletins of the University can be obtained at the Information Window in the Administration Building.

COLLEGE OFFICES

Office of the Dean

Dean of the College, 215 Johnston Hall

Assistant Dean and Chairman of Scholastic Committee, 215 Johnston Hall

Senior College Offices

Assistant Dean for the Senior College, 225 Johnston Hall

Scholastic Committee Representatives, 225 Johnston Hall

Senior College Counselors, 225 Johnston Hall

Placement Consultant, 225 Johnston Hall

Junior College Offices

Assistant Dean for the Junior College, 208 Johnston Hall

Scholastic Committee Representatives, 214 Johnston Hall

Coordinator of Faculty Advising, 214 Johnston Hall

Junior College Counselors, 220 Johnston Hall

Tally Office, 210 Johnston Hall

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Section I

GENERAL INFORMATION

PURPOSE OF THE COLLEGE

The college offers a liberal education to students having the necessary ability and ambition. Through the liberal arts you can broaden your interests, develop your abilities, and prepare yourself for a life of useful service. The College of Science, Literature, and the Arts is the largest unit of the University primarily because it offers this broad, stimulating education so essential for personal development and for citizenship in a free society. In fulfillment of this function, the college can help you in four basic ways.

General Education—The purpose of general education is to help you take your place in contemporary society, whatever your occupation or major interest may be. It should contribute to your total efficiency both when employed and at leisure. More specifically, a sound general education should enable you:

1. To understand other persons' ideas through reading and listening, and, in turn, to express your own ideas effectively to others.
2. To attain a balanced social and emotional adjustment through an understanding of human behavior, the enjoyment of social relationships, and the experience of working cooperatively with others.
3. To improve and maintain your own health and to make intelligent decisions about community health problems.
4. To acquire the knowledge and attitudes basic to a satisfying family life.
5. To participate as an active, responsible, and informed citizen in the discussion and solution of the social, economic, and political problems of American and international affairs.
6. To understand the fundamental discoveries of science in their implications for human welfare and in their influence on the development of thought and institutions; to understand and appreciate the scientific method and to use it in the solution of concrete problems.
7. To understand and enjoy literature, art, music, and other cultural activities as an expression of personal and social experience; and, if possible, to participate in some form of creative activity.
8. To develop a set of principles for the direction of personal and societal behavior through the recognition and critical examination of values involved in personal and social conduct.
9. To choose a socially useful and personally satisfying vocation that will enable you to utilize fully your particular interests and abilities.
10. To develop the ability to think critically and constructively. A sound educational program will provide many opportunities for reflective thinking in a wide range of intellectual and practical activities. Recognition should therefore be given this objective in pursuing each course so that the development of this ability will become an integral and pervasive phase of learning in every field.*

Actually your general education has been developing since infancy and has already received considerable emphasis in high school. In college

* These objectives of general education are adapted from the *Minutes of the University Senate*, May, 1944.

you can round out and strengthen those qualities in which you still feel deficient and build a foundation for continued development throughout life. Both the curricular subjects and extracurricular activities should contribute to your general educational growth, especially if you plan intelligently with a definite program in mind.

Vocational Exploration—This college will also give you experiences on which to base a wise choice of vocation. Since the college offers a wide variety of courses, you may test out several occupational possibilities before making a final decision. For example, if you are contemplating medicine you may try yourself in basic science courses to discover whether you have the proper abilities and interests. If you are thinking of business you might test yourself in Principles of Economics. By thus exploring various fields you will better understand your own abilities and be helped to a vocational decision, and at the same time you will be gaining a broad, liberal education. This experience can be supplemented by vocational counseling in the Student Counseling Bureau and by the course in "Choosing a Vocation."

Professional Training—If you are planning to enter a profession you will normally begin your preparation in this college. For some professions such as journalism, social work, or library science you may receive all your training in this college. Indeed there are hundreds of vocations open to students having a four-year liberal arts education. For other professions such as law or medicine you will begin your work here and transfer to a professional school after two, three, or four years. Sections II and III of this bulletin will tell you about the various professional courses and requirements.

Special Interests—While in college you may wish to go on beyond the general education expected of all students and develop some special talent or interest. Such fields as music, art, foreign language, science, literature, and public affairs are only a few of such interests. While these courses may not lead directly to vocational preparation, they can add much zest and meaning to life and help you to become truly a liberally educated person.

ORGANIZATION OF THE COLLEGE

Upper and Lower Divisions—To help you attain the purposes outlined above, the College of Science, Literature, and the Arts is divided into a Junior and a Senior College. Each has a dean and college office as noted on page 2. In the Junior College, which embraces the freshman and sophomore classes, you will be encouraged to spread out your work in many fields to broaden your general education while at the same time taking any necessary preprofessional courses. Unless you transfer to a professional school, you will spend the last two years in the Senior College specializing in some field of interest while at the same time continuing your liberal education. The opportunities and requirements of both divisions are explained more fully in the following pages.

Departments—For purposes of instruction the college is divided into twenty-nine departments covering the three broad areas of the natural sciences, the social sciences, and the humanities. You will find the courses, instructors, and requirements of these departments listed in Section II of this bulletin.

SLA Intermediary Board—Students also have an important part in the college organization through the SLA Intermediary Board. This board is a representative group elected by College of SLA students to represent them in discussions with the faculty concerning educational problems.

Through this board the students are free to bring proposals for new courses, regulations, services, or any other matters affecting their welfare. The board sponsors SLA Day each fall and promotes many faculty-student projects. It has established three divisional councils, enabling students to consult on educational problems in the humanities, social sciences, and natural sciences. It also nominates the student members of most student-faculty committees.

The board's four standing committees deal with college improvement, student personnel, improvement of instruction, and curriculum. If you are interested in serving on a committee or wish further information about the board, apply at 215 Johnston Hall.

ADMISSION REQUIREMENTS

You will find the requirements for admission to various colleges of the University listed in the University's *Bulletin of General Information*. The following statement outlines these requirements more explicitly for the College of Science, Literature, and the Arts.

Different rules apply for high school graduates, students who did not finish high school, and those who transfer from other colleges.

High School Graduates—The basic entrance requirement is a college aptitude rating of at least 40. This rating is the average of one's percentile rank in his high school graduating class and his percentile rank among entering university freshmen achieved on the college aptitude test. High school seniors may learn their rating by consulting their principal or counselor.

In addition to this evidence of ability, your high school program should include subjects providing a sound background for college work—subjects which in fact should be of great value whether you go on to college or not. Such a program would contain at least 12 units (full-year courses) taken in senior high school (grades 10, 11, and 12). At least 9 of these units should be from among the following: English, foreign language, history and social studies, mathematics, and natural science. Among these 9 there should be:

Three units of English

Two or 3 units of mathematics (elementary algebra and plane geometry are essential for those expecting to take mathematics, or science, or business administration in college)

Two units of foreign language (the same language), or social science (history must be included), or natural science (including not more than two $\frac{1}{2}$ -unit courses)

Most students will fulfill the above pattern readily. However, the University does not wish to exclude able people who for some reason failed to meet all the above requirements. Hence you may be admitted to the College of SLA regardless of pattern if you were in the top 10 per cent of your high school class or if you were in the top half and have a college aptitude test score of 40 or better.

If you have a high school equivalent certificate and hence no rank in a high school class, you will be admitted if you have a college aptitude test score of 40 or higher.

If you are a high school graduate and cannot meet the requirements stated above, you may still be considered for admission by taking a series of tests. These tests are objective and are designed to measure aptitude for college work rather than specific information. Therefore, no special preparation for such tests is practicable. You should inquire of the Office of Admissions and Records for the testing arrangements.

Non-High School Graduates—If you do not have a high school diploma or equivalent certificate, you may be considered for admission if you can demonstrate sufficient ability and maturity to do college work.

If over nineteen years of age, you may be admitted if your aptitude test score is 50 or higher.

If you are under nineteen, your admission will be considered on the following bases:

1. Scores received on a series of examinations.
2. Character of the high school record.
3. Judgment concerning your maturity and needs as expressed by your high school principal, parents, an all-university counselor, the dean of the college, and the dean of Admissions and Records. If there is a difference of opinion among these persons, the case will be reviewed by the Board of Admissions.

If applying for admission without graduation from high school, you should come to the campus for two or three days of testing and counseling several weeks before the beginning of the quarter you plan to enter. At that time you should file your application for admission, including your high school credits and the letters of recommendation from your high school principal and parents. These arrangements should be made with the Office of Admissions and Records.

Students Transferring from Another College—If you have completed work satisfactorily in another recognized college, you may be admitted to the College of SLA with advanced standing. Procedure for such admission is described in the University's *Bulletin of General Information*.

Credits which are accepted from other institutions may be used to satisfy requirements of this college. However, in determining your honor point ratio (page 20) only the grades that you earn in this University are considered. The grades earned in other colleges of the University, except General College, will carry the appropriate honor points, provided the courses are recognized by this college. If you have any failures in recognized courses taken in other colleges of the University, these will also be transferred and you must make up any such honor point deficiency. General College grades are evaluated in the same manner as those received in other institutions.

You will be expected to maintain a C average in all the work of this college.

JUNIOR COLLEGE PROGRAMS FOR ENTERING THE SENIOR COLLEGE

While your general education should continue into the Senior College, and indeed throughout life, this phase of development is especially emphasized in the Junior College. Together with any preprofessional work this will absorb at least two years of study.

Group Requirements—In order to assure you a reasonably broad, general education adapted to your particular backgrounds and needs, the following group requirements have been established. You will note that these requirements contribute to the essential objectives of general education listed on page 5 of this bulletin. It is your job, in consultation with a faculty adviser, to determine which specific courses within these requirements will most effectively round out your development.

You should complete these group requirements during the two years in Junior College, and the Senior College years may then be devoted to fulfilling a major sequence and achieving a still stronger general and liberal education. Under some circumstances, you may be permitted to

complete one or two group requirements after entering the Senior College.†

Two plans for fulfilling group requirements are provided and you should elect the one which better serves your needs. While you may change from one plan to another without any special permission, you must eventually complete all the requirements of one of them. In choosing your plan note carefully any special requirements of the department in which you might major. Under either plan you will have considerable opportunity for free electives.

PLAN I

A. English or Communication. English A-B-C (Freshman English, 15 credits) or English 4-5-6 (Freshman Composition, 9 credits) or Communication 1-2-3 (12 credits) or exemption from the requirement. All students are required to have an English Classification Card before registering for one of these courses. (See page 68.)

B. Foreign Language. From 0 to 20 credits, according to the following schedule:§

<i>Amount Presented for Entrance</i>	<i>Amount Required in Junior College</i>
Four years of one language	None
Three years of one language	5 credits in same language
Two years of one language	10 credits in same language
One year of one language	15 credits in same language
Less than a year of one language	20 credits in one language

C. Social Science. Ten credits* in one of the social sciences: anthropology, economics, geography, history, political science, sociology; or 12 credits in Social Science 1-2-3 (Introduction to Social Science)

D. Natural Science. Ten credits* in one of the natural sciences: astronomy, botany (laboratory is required), chemistry, geology (laboratory is required), physics (laboratory is required), psychology (laboratory is required), zoology, or the general studies course in General Biology (Natural Science 7-8-9) or The Physical World (Natural Science 4-5-6); or 15 credits in Natural Science 1-2-3 (Orientation in the Natural Sciences)

E. Health. Public Health 3 (Personal Health, 2 credits) or equivalent.¶

PLAN II

A. English or Communication. English A-B-C (Freshman English, composition portion, 6 credits) or English 4-5-6 (Freshman Composition, 9 credits) or Communication 1-2-3 (12 credits) or exemption from the requirement. All students are required to have an English Classification Card before registration for one of these courses. (See page 68.)

C. Social Science. Eighteen credits selected from at least two of the following social science fields: anthropology, economics, geography, history, political science, psychology, sociology, or Social Science 1-2-3 (Introduction to Social Science)

D. Natural Science. Eighteen credits selected from at least two of the following five fields:

1. Biological science: botany, zoology, Natural Science 7-8-9 (General Biology)
2. Mathematics: any course above Math. 1
3. Natural Science 1-2-3 (Orientation in the Natural Sciences)
4. Physical science: astronomy, chemistry, geology (laboratory is required), physics (laboratory is required), Natural Science 4-5-6 (The Physical World)
5. Psychology: any course except Psy. A

* Or 9 credits in a year course or 9 credits (6 semester credits) of advanced standing.

† The group requirements for entering professional colleges are listed in Part III of this bulletin.

§ For students who enter this University with advanced standing, the number of credits required may be less than that indicated in this schedule. Any course of 9 credits (6 semester credits) may be substituted for the corresponding 10-credit course here.

¶ Public Health 3 is open for credit only to freshmen and sophomores. Public Health 50 is an acceptable substitute for juniors and seniors. Students may be excused from the requirement if they pass a special examination, covering health information, given each quarter at a time and place announced in the University's Official Daily Bulletin of the *Minnesota Daily*.

E. Health. Public Health 3 (Personal Health, 2 credits) or equivalent.†

F. Humanities. Eighteen credits selected from at least two of the following eight fields:

1. Art, music
2. Foreign language and literature: any course in Classics, German, Japanese, Linguistics, Romance Languages, Russian, Scandinavian
3. History
4. Humanities 1-2-3; Humanities 11-12-13; Humanities 21-22-23
5. Literature: English A-B-C (Freshman English, literature portion, 9 credits); American literature; English literature
6. Mathematics: any course above Math. 1
7. Philosophy
8. Speech

Any work in a department listed in two groups (history, mathematics, or psychology) may be used in satisfying one group requirement but not both.

Prerequisites for Major—In planning your program, you must also take note of the Junior College prerequisite courses which should be taken in preparation for a Senior College departmental or interdepartmental major. The requirements for the various majors in the Senior College are described in Section II of this bulletin. You should study these requirements carefully in order that you may take the necessary Junior College courses at the proper time. If you have several possible majors in mind, plan your program to cover all the possibilities.

Credits Required—For entrance into the Senior College, you must earn at least 84 credits (most students have 90) with a scholarship average of approximately C. Some of these credits may be "quality credits" as explained on page 20.

Sophomore Culture Tests—Early in the quarter before entering the Senior College you are required to take a standardized test designed to measure your general background in history, literature, science, mathematics, social science, and the arts. While the scores are not used to determine admission, they will enable you and your adviser to plan your remaining program more intelligently, and the test must be taken before you may register in the Senior College of SLA.

The Sophomore Culture Tests are given within the first three weeks of each quarter at a time and place announced in the Official Daily Bulletin.

Application for Entrance into Senior College—It is important that you enter the Senior College as soon as you are eligible in order that you may plan your further work with a major adviser and may properly fulfill the residence and other requirements of the Senior College. To encourage this transfer at the proper time, the assistant dean for the Senior College may, upon application, modify the entrance requirements with the understanding that they will be fulfilled later. You should apply for entrance at the Senior College early in the quarter in which you will complete 84 credits. It is essential that you bring a complete copy of your previous college record and that you have already taken the Sophomore Culture Test.

Transfer Students—If you are entering the Senior College with advanced standing from some other institution, you must complete the same credit and group requirements expected of other students and must earn a C average while in this University. Honor points are not assigned to credits earned in other institutions or through tests for advanced standing.

† Public Health 3 is open for credit only to freshmen and sophomores. Public Health 50 is an acceptable substitute for juniors and seniors. Students may be excused from the requirement if they pass a special examination, covering health information, given each quarter at a time and place announced in the University's Official Daily Bulletin of the *Minnesota Daily*.

THE TWO-YEAR PROGRAM FOR THE ASSOCIATE IN LIBERAL ARTS DEGREE

If you are not sure whether you can complete the four-year degree you may wish to apply for the two-year A.L.A. degree. It indicates the successful completion of a program devoted largely to general education. Students find this degree desirable as an evidence of liberal arts achievement if they are transferring to a professional school or if forced to drop out for a time.

The requirements for the degree are as follows:

1. You must earn at least 90 credits, exclusive of quality credits. Honor points are not a factor in this degree.
2. You must earn the degree in not more than seven quarters of university residence. If you enter the college with advanced standing, you must spend the last three quarters before graduation in residence and must earn at least 45 of the required credits in residence.
3. You must meet the Group A requirement in English and at least two of the three group requirements: B, Foreign Language; C, Social Science; D, Natural Science, as outlined in Plan I, page 9.

If you meet these requirements you are eligible for the degree even though you should continue in the Senior College or a professional school. To make application, inquire at the Office of Admissions and Records.

SENIOR COLLEGE PROGRAMS LEADING TO THE BACHELOR OF ARTS DEGREE

Approval of Your Program—When you apply for admission to the Senior College you will be asked to attend an orientation meeting, at which time the policies and practices of the college will be explained. You will also be given an official folder on which you will be expected to list your proposed program of courses fulfilling the requirements for a B.A. degree. You may complete your first registration in Senior College before the folder is completed since in this way you will have sufficient time to discuss your proposed program with a major adviser. You should complete this program and turn it in at the Senior College Office as soon after your first registration as possible since you will not be allowed to register for a second quarter until your program is submitted. When thus approved by your major adviser and by the Senior College Office, the program becomes an agreement between you and the college and can be changed only by filing in the Senior College Office the written permission of your adviser.

In working out your Senior College program you will have wide freedom to choose courses particularly adapted to your purposes, though a few simple requirements must be observed. These are listed below. Be sure that your program will fulfill them.

Credits in Residence—Since most students enter the Senior College with approximately 90 credits, they must earn about 90 credits while in Senior College to complete the 180 required for graduation. At least a C average must be obtained on all courses taken while in Senior College.

Whether transferring from the Junior College or from some other college, you must earn a minimum of 45 credits and spend the last two quarters before graduation in residence in Senior College. If you have only one year of residence, it must be your senior year.

Major Sequence—While in the Senior College, you will be expected to concentrate a portion of your efforts in some field of special interest.

Your purpose may be vocational or avocational; the field may be departmental or interdepartmental.

This field of concentration, known as a major sequence, must be composed of Senior College courses. Of the three types of sequences listed below, you should choose the one that best suits your purpose.

1. *A Departmental Major and Minor Sequence*—

- a. A departmental major (usually 27 to 36 credits) is offered in nearly every department of the college. The description of each major and its specific requirements are indicated for each department in Section II of this bulletin. You must maintain a C average in this major.
- b. A minor sequence (15 credits) or two half-minors (9 credits each) must be taken in some department or departments other than that which you have chosen for your major. These minor credits must also be in Senior College courses.
- c. Fifteen credit hours in Senior College courses outside the major and minor departments.

2. *An Interdepartmental or Liberal Arts Major*—If you believe your special interest cannot be satisfied in a single department you may have a major tailor-made for your particular needs. In applying for a major of this type you should submit a plan of courses to the Senior College Office whereupon you will be assigned to an appropriate interdepartmental adviser. Generally a program must include a minimum of 75 Senior College credits to be approved as an interdepartmental major.

The courses must be intelligently arranged around a central purpose and usually there will be concentrations in four or more departments. An unsystematic and purposeless scattering of courses will not be approved. You must maintain a C average in the Senior College courses.

A wide variety of study programs may be recognized on this basis. A few that have been elected so frequently that they have become standardized are those in International Relations and Area Studies, Preprofessional Curriculum for Social Work, Preparation for Theological Training, American Studies and Humanities, described in Section II of this bulletin.

If your needs are so broad that they cannot be met by an SLA interdepartmental major, you may wish to enter the University College. See Section III of this bulletin, page 160.

3. *A Major in a Combined Course*—A third type of concentration may be worked out in cooperation with a professional school. In this case, part of your work in the professional school may be applied back toward the Bachelor's degree from this college. Details of these courses are listed with the respective college professional programs in Section III of this bulletin. At least one year (45 credits) must be spent in residence in the Senior College and the usual C average must be maintained. The combinations are:

- a. Combined course in Arts and Law. Three years of work must be taken in the College of SLA and at least one additional year in the Law School.
- b. Combined course in Arts and Medicine. The first three years of work are taken in the College of SLA and the fourth year is taken in the Medical School.
- c. Combined course in Arts and Dentistry. The first three years of work are taken in the College of SLA and two additional years of work must be completed in the School of Dentistry.

- d. A course leading to the degrees of graduate dental hygienist and bachelor of arts. The first two years are spent in the School of Dentistry and at least two in the College of SLA.

Summary of Graduation Requirements—Briefly, the requirements for a Bachelor's degree, as discussed in the preceding paragraphs, are as follows:

1. Required credits, 180. These may include both course credits and quality credits (see page 20).
2. Residence in the Senior College. Ordinarily a student will complete about 90 credit hours while he is in the Senior College. In any case he must earn 45 credits and spend his last two quarters in residence in Senior College.
3. Group requirements. All students must complete the group requirements under either Plan I or Plan II, preferably before entering the Senior College.
4. Major (field of concentration) and minors. Students must complete a departmental major and minor (or two half-minors) or an inter-departmental major or a combination course with a professional school. For those with a departmental major, 15 credits in Senior College courses are required outside the major and minor departments.
5. Quality of work. Students must earn a C average in all work presented, a C average while in Senior College, and a C average in the major (Senior College courses). In calculating the over-all honor point ratio, the Scholastic Committee may, in exceptional cases, approve the omission of certain work attempted in the Junior College.

Graduation Honors—The Bachelor's degree is awarded with special honors to those who have done outstanding work. To be graduated *cum laude* you must have an honor point ratio of at least 2.0 on all work and on Senior College courses calculated separately.

For *magna cum laude* you must have an honor point ratio of 2.25 in all work and in Senior College courses calculated separately and have a score above 60 in three parts of the Sophomore Culture Test. For *summa cum laude* these honor point ratios must be 2.4 and you must write a *summa* thesis and take an oral examination in addition to meeting the requirements for *magna cum laude*.

For any of these honors you must have earned 60 credits in Senior College courses. If you seek the higher honors—*magna cum laude* or *summa cum laude*—application should be made to the Senior College Office during the third quarter before graduation, or earlier. At that time information regarding special tests, oral examinations, and other particulars will be given to you.

REGISTRATION PROCEDURES

Registration enables you to sign for the particular courses you will take for the coming quarter. It encourages you to re-examine your educational goal in light of your activities both in and outside the classroom.

If you are a new student, be sure to obtain your admission certificate from the Office of Admissions and Records in the Administration Building before seeking to register. At registration time you will also be given a health examination, a speech examination, and certain tests to assist later in educational planning.

The college will issue printed instructions with the registration materials and if you follow these carefully the process will be relatively simple.

Registration Dates—Registration for students on campus begins several weeks before the opening of the quarter and is announced in the Official Daily Bulletin of the *Minnesota Daily*. The expiration date is listed in the University Calendar which is included in the *Class Schedule* and the University's *Bulletin of General Information*. Only in exceptional circumstances may you register after that date and then you must pay a special privilege fee.

New students entering in the fall come to the University in small groups for two days of orientation and registration throughout the month of August and in mid-September. Those unable to come then and those entering the winter or spring quarters are offered a modified program for two days just before classes begin.

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

Change of Registration—If you have planned your program carefully you will seldom need to change a course after completing registration. However, if a change should occasionally become necessary the procedure is as follows: Junior College students should fill out a "Cancel-Add" form obtained in the Junior College Office, have it signed by their adviser (if assigned, otherwise by a Junior College counselor), and tally it in the Tally Office. After the sixth week, approval of the Scholastic Committee is also required. Juniors and seniors should get their cancel-add forms from the Senior College Office and have the changes approved by that office before tallying.

The addition of a new course after the first week of classes must be approved by a representative of the Scholastic Committee and normally it is not permitted.

Courses may be canceled without grade during the first six weeks of classes, although if the total load falls below 12 credits, the approval of the Scholastic Committee is required. After the six weeks, cancellation of a course in which you are failing is recorded as "cancellation with fail"; if you are passing, it is recorded "cancellation with no grade." During the last two weeks before the beginning of final examinations, cancellation is not permitted except under most unusual circumstances.

Maximum and Minimum Credits per Quarter—Most students take about 15 credits of work each quarter. To take less than 12 you must secure permission from the Scholastic Committee. (Note that the U. S. Veterans Administration will pay full compensation only to veterans taking at least 12 credits of work each quarter under the World War II G.I. Bill and at least 14 credits under the Korean Bill.)

The maximum number of credits for which you may register is ordinarily 17. After two quarters of residence you may register for 18 credits provided you have a scholarship average of 1.5 for the two quarters before registration, and no failure for the quarter immediately preceding registration. Registration for credits in excess of these limits must be approved by the Scholastic Committee.

Junior and Senior College Courses—Junior College courses (numbered 1 to 49) are intended primarily for freshmen and sophomores, and Senior College courses (numbered 50 and above) are intended primarily for juniors and seniors. However, it is possible for Junior College students to take advanced courses and for Senior College students to take elementary courses when the arrangement is clearly to the student's educational advantage, as explained on page 24.

Registration for Courses in Other Colleges of the University—All courses offered in other colleges that are regularly open to students of this college are listed in Section II of this bulletin. Other courses in those

colleges may be taken only with the approval of the college concerned and will carry credit in this college only by permission of the Scholastic Committee.

In the senior year, any student registered in the College of SLA may elect not more than 6 credits per quarter in any other college or school of this University, provided that (1) the dean of the college or school in question and the Scholastic Committee of this college approve the courses as suitable for such election; and (2) no duplication of subjects occurs. Such courses are counted toward the bachelor of arts degree on the same terms as those taken in the College of SLA. If you are a senior wishing further information about these courses, you should consult a counselor in the Senior College Office.

Courses in the General Extension Division—If you are enrolled in the College of SLA you may take courses in the General Extension Division with permission of the Scholastic Committee, and acceptable credits in those courses may be transferred to this college upon your application to the Office of Admissions and Records.

Credits in the Graduate School—If you are lacking not more than 9 credits toward graduation you may, upon petition, get graduate credit for a limited amount of work taken as an undergraduate. No graduate credit will be given unless you have made previous arrangements with the Graduate School. Courses taken for graduate credit will not carry credit toward the Bachelor's degree.

With the permission of the assistant dean for the Senior College, an undergraduate lacking not more than 6 credits toward graduation may be registered in the Graduate School while completing his requirements for the Bachelor's degree.

Courses Without Credit—Under certain circumstances you may register for a course without credit with the permission of the Scholastic Committee. This will entitle you to participate in class activities to an extent agreed upon in advance with the instructor. The usual arrangement, when permission is granted, is for full participation with a final grade recorded on the permanent record, but the credits and honor points do not count in computing honor point ratios in the college. The procedure is particularly useful for returning students who may wish to repeat a course for review. (The arrangement corresponds to the Audit Type I of the U. S. Veterans Administration.)

Audited Courses—Auditing a course differs from taking it without credit in that the student may not normally participate in the activities of the class nor take the final examination, and no grade is recorded. Moreover, you may not later take for credit a course which you have audited. If you wish to audit you must, in addition to usual registration approvals, obtain permission from the course instructor (on an auditor's card from your college office) and the approval of the Scholastic Committee.

(This arrangement corresponds to the Audit Type II of the U. S. Veterans Administration.)

Repeating a Course—You may repeat without special permission a course which you have failed and both the old and new grades will then stand on the record. You need not repeat the failed course, however, unless it is a prerequisite to other courses you wish to take or is required for graduation.

You may not repeat a course for which you have received credit without permission of the Scholastic Committee. In any case, it is not the practice of the committee to permit the second grade to replace the first when calculating honor point ratios.

Repeating a High School Course—Ordinarily a student should register in the college course in mathematics or language for which his high school units in these subjects make him eligible. If for any reason he feels that he is not equipped to take that level of college course, he should consult with the appropriate department chairman about the possibility of being assigned to a course which repeats what he had in high school. If this repetition is approved by the department chairman and the Scholastic Committee, credit will be allowed. No approval is necessary for a student who has had high school trigonometry and wishes to take trigonometry (Math. 6) in college.

Credit for Courses Prerequisite to Courses Accredited—If, by some mistake, you should take a course without fulfilling a prerequisite, you may not later take this prerequisite course for credit, except by permission of the Scholastic Committee.

Canceling Out of College—If you should wish to cancel out of college during a quarter or plan not to return in the succeeding quarter, you should report to the College of SLA window in the Administration Building (window 13) to check on your financial status, cancel courses for the current or succeeding quarter, and generally clarify your relationship with the University. This always involves referral to the college counseling office, since members of the college staff are interested in being of any assistance possible. You probably will want to discuss one or more of the following topics: academic standing in the college and possibilities of return or transfer, grades to be awarded, wisdom of the decision to cancel, financial needs, job placement, and others.

If you are likely to enter the armed services upon leaving college, you will find the discussion especially important. The college will prepare a summary of your academic and extracurricular background for your use in seeking proper placement in the services if you wish.

STUDENT PERSONNEL SERVICES

Faculty Advisers—As you go through college you may need help with such matters as getting registered, selecting courses, choosing your vocation, arranging finances, entering student activities, or solving other personal problems. Much of this assistance is provided by the college, though for some problems you may wish to take advantage also of the all-university personnel services. You will be given the services of a faculty counselor as follows:

1. When you enter the college as a freshman or sophomore, a special adviser in the Junior College Counseling Office will go over your record and test scores with you and assist in planning a program of courses. If you are a freshman without previous college work, you will be given the name of your adviser for the remainder of the year. Feel free to go to him with any problem that arises. You may reach him through the Junior College Counseling Office, 220 Johnston Hall.

If at any time you decide to enter one of the following programs, you should report to 220 Johnston Hall for referral to a special adviser: Education, Medical and X-ray Technology, Music, Nursing, Occupational Therapy, and Physical Therapy.

If you have had previous college work, you will be assigned to a faculty adviser chosen on the basis of your particular interests. Watch for a card with his name in your post-office box.

2. When you register for the fall quarter of your second year, you will have the opportunity to express a preference for your own

faculty adviser. His name is sent to your post-office box soon after the quarter begins.

3. When you are a third-quarter sophomore and almost ready to enter the Senior College or a professional school, you should seek counsel from the Senior College Office or the professional school.
4. When you enter the Senior College you will be assigned a major adviser to help plan your work for the junior and senior years. This assignment is usually made in the departmental office of your major, though occasionally it is made in the Senior College Office.

Before going to see your adviser, you should study the bulletin carefully and come with a tentative program and specific questions in mind. You should bring any records from the Office of Admissions and Records indicating credit already earned at this University or elsewhere. If you should ever wish to change your adviser, this can usually be arranged if you apply at your college office.

Scholastic Committee—Almost every student has occasion from time to time to consult the Committee on Student Scholastic Standing, usually called the Scholastic Committee. It is important, therefore, that its functions be clearly understood.

What is it? It is a committee of the faculty charged with the interpretation and enforcement of faculty regulations. It is empowered also to make exceptions to faculty regulations when those regulations work to the educational disadvantage of a particular student, provided the basic spirit of the regulation is maintained.

Why should you be interested in it? Often a student is in doubt about his obligations or some rule seems to stand in the way of his objective. The Scholastic Committee is designed to help with such problems. It has special counselors available for consultation, and often an adjustment can be worked out.

How does one use it? When help is needed, go to your college office as indicated on page 2. A representative of the committee will be glad to talk with you. To be exempted from a regulation, you must prepare a written petition which is turned in at your college office. Since this process takes time, allow a few days for the committee's decision. Your copy will be returned to your post-office box with the action indicated.

Who makes up the committee? The three assistant deans of the college. Roger B. Page is chairman. The others are Russell M. Cooper, assistant dean for the Junior College, and J. W. Buchta, assistant dean for the Senior College. Mabel Powers of the Senior College and William Stevens of the Junior College attend the meetings and Mr. Stevens serves as secretary to the committee.

Who are the advisory members? The dean appoints three faculty members and two students to meet periodically with the committee and help determine policies and procedures.

Conduct Committee—If a student is charged with academic dishonesty, such as cheating or plagiarism, his case will be referred to the Student Scholastic Conduct Committee for judgment.

Actions taken by the committee are based on its twofold responsibility for rehabilitating the student and for maintaining the college community's high standards of integrity. The committee has authority to place students on disciplinary probation, fail them in courses, suspend them from college, or take such other action as the improper behavior seems to justify.

The committee is composed of Assistant Dean Roger B. Page serving as chairman, student members appointed by the dean of the college upon

the recommendation of the SLA College Intermediary Board, and faculty members designated by the dean. Action on some cases, with the consent of the student, may be taken by the chairman alone, subject to general rules of procedure formulated by the committee.

Disciplinary matters of nonacademic nature or those involving two or more colleges are handled by the All-University Disciplinary Committee.

Orientation Programs—The College of SLA joins with other divisions of the University in helping new students, whether freshmen or those with advanced standing, to get acquainted with one another and with the college program. Usually this involves two days of testing, counseling, and group activities. Even if you are a Junior College student entering Senior College, you will profit from an hour's group discussion of the requirements and opportunities available. For questions that arise later, you can always consult your college office.

College Placement Services—The college offers aid in securing a job for you upon graduation. Many departments are aware of opportunities and you should ask their help. This departmental service is supplemented by a central placement service associated with the Senior College Office and directed by the placement consultant, Mabel Powers.

The central office attempts to help you appraise your assets and learn of job opportunities. You should register there two quarters before you expect to graduate. Placement cannot be guaranteed through these services but assistance is available to all.

Personnel Staff—Approximately 300 faculty members participate in the college advisory program. Of these, about 120 are Senior College advisers of major students and they are listed under the appropriate departmental headings in Section II of this bulletin. The remaining advisers are for the Junior College and are assigned to students on a basis of congenial interests. To find the offices of these counselors, consult *Staff Address Book* or inquire at appropriate college office.

All-University Personnel Services—In addition to faculty advising within the college, you are invited to use the several specialized personnel services provided by the University for all students. For example:

If you want professional help on a personal problem or vocational choice, go to the Student Counseling Bureau, 101 Eddy Hall.

To learn about student activities, visit the Student Activities Bureau at 114TSM or the Student Union Program consultant in 229 Coffman Memorial Union.

If you need financial help, apply at the Bureau of Student Loans and Scholarships, 211 Eddy Hall.

For a part-time job on or off campus, apply at the Student Employment Office, 153TSF.

For help in improving your reading or other study skills, use the Educational Skills Clinic, 101 Eddy Hall.

For aid with speech difficulties, consult the Speech and Hearing Clinic, 205 Shevlin Hall.

If you have any questions concerning veterans' benefits, go to the Bureau of Veterans' Affairs, 115 Shevlin Hall.

For help in finding a room or apartment, see the Student Housing Bureau, 209 Eddy Hall.

If you are a foreign student, by all means keep in contact with the Adviser for Foreign Students, 302 Eddy Hall.

If you have any health problems, go to the Students' Health Service, University Hospitals.

If you have any doubts concerning what service would be most appropriate, consult your faculty adviser or college office.

COLLEGE REGULATIONS

Petition for Exemption from College Regulations—The faculty has set up certain regulations to help students achieve a good education. These rules are believed wise for most students but occasionally they may work to the educational disadvantage of a particular person. In this event, he may ask for exemption in his case through a petition to the Scholastic Committee. The committee is empowered to make exceptions to a requirement provided the exceptions are consistent with the spirit of the rule.

Regular petition blanks are available in the Scholastic Committee offices of the Junior and Senior Colleges. An endorsement from the faculty adviser or instructor should be secured if appropriate. If desired, the student will be given an opportunity to present his case in person. When the committee has taken action, the reply will be mailed to the student's university post-office box in Coffman Memorial Union or may be picked up in the college office.

Registration Regulations—Special rules pertaining to registration procedures are discussed in the preceding part of this section.

Classification of Students—A student with less than 39 credits is a freshman. A student with 39 or more credits is a sophomore until admitted to the Senior College. A student in Senior College who has less than 135 credits is a junior; one with 135 or more credits is a senior.

Credits—Amount of work is expressed in *credits*. Each credit demands, on the average, three hours a week of a student's time; that is, one recitation with two hours of preparation, or three hours of laboratory work.

Grades—A grade is a symbol indicating the character of work done in a course. There are several types.

Passing grades—These range from A (highest) to B, C, and D (lowest). Any of these enables the course credit to be counted toward a degree, though in most curricula a C average must be maintained. The symbol X signifies that work in a continuation course is satisfactory and that a grade will be assigned when the entire course is completed.

Failing grades—The grade F is given for work which in the opinion of the instructor does not deserve college credit. A grade of Z is given when the student withdraws after the sixth week while doing failing work, and it counts as an F.

Explanatory grades—Some symbols are used simply to describe the student's registration status without implying either success or failure. W means that the student officially canceled (withdrew) either during the first six weeks or else subsequently while still doing passing work. Y indicates that the student never attended, quit attending during the first six weeks, or quit attending thereafter while doing satisfactory work but without officially canceling. Since students are expected to fulfill their course responsibilities unless properly canceled, Y's earned in subsequent quarters are usually changed to Z's.

Temporary grade: Incomplete—The grade I (incomplete) is a temporary grade indicating that a student has a satisfactory record in work done but for reasons satisfactory to the instructor in charge was unable to complete the course on time. In case of doubt about a student's eligibility to receive an I, the question should be referred to the Scholastic Committee. A student receiving this grade is required to complete the work of the course within the first thirty days of his next quarter (except summer) in residence or it will be marked canceled without grade. An extension of time may be permitted for removal of an incomplete grade

upon the recommendation of the instructor concerned and the approval of the Scholastic Committee. In such cases removal of the incomplete may be considered a special examination for which the special examination fee is charged.

Honor Points—Quality of work is indicated by *honor points*. Honor points are assigned to course grades as follows: to each credit with a grade of A, 3 honor points; to each credit with grade of B, 2 honor points; to each credit with grade of C, 1 honor point. The grades D and F carry no honor points. Thus for a 3-credit course completed with a grade of B a student would be assigned 6 honor points.

Honor Point Ratio—Honor point ratio is defined as the number of honor points earned divided by the total number of credits earned (grades A to D) and failed (grades F or Z). An honor point ratio of 1.0 (C average) is the minimum standard required for satisfactory progress toward the B.A. degree.

Quality Credits—While in the Junior College a student may earn "quality credits." These are not granted through course work but are awarded on the basis of the number of honor points earned above a C average (honor point ratio of 1.0). For every 5 honor points above those required for a C average, one quality credit is granted. Quality credits are granted on course credits earned by the end of that quarter in which 84 credits (course and quality) are accumulated.

Quality credits are used as electives. They may not be used to fulfill group requirements, major or minor or residence requirements, or specified courses. They are granted only on courses completed in this University, exclusive of General College. The acceptance of quality credits by the College of Education, the School of Business Administration, and the College of Medical Sciences is described in Section III of this bulletin.

Example: Suppose a Junior College student completed 10 course credits with grade of A, 5 credits with grade of B, 10 with grade of C, 5 with grade of D, and failed a 5-credit course. He would have accumulated 50 honor points on 35 credits as follows:

Credits	Grade	Honor Points
10	A	30
5	B	10
10	C	10
5	D	0
5	F	0
—		—
35		50

$$\text{Honor point ratio is } \frac{50}{35} = 1.42$$

$$\text{Quality credits are } \frac{50-35}{5} = 3$$

Satisfactory Progress—A student in this college is expected to make satisfactory progress in the curriculum he has selected. For those who are candidates for a Bachelor's degree, this is interpreted to mean a C average. The cases of students who are not reaching this standard are considered by the Scholastic Committee.

During the quarter, instructors are asked to report to the committee the names of students who are likely to fail. These students are invited to confer with a special counselor to discuss their situation and to see what may be done to help them. It is always best for a student to see his class instructor or his faculty adviser as soon as he feels himself in difficulty rather than to wait until he has already received a poor grade.

Scholastic Probation—When the grades at the end of a quarter indicate that a student is in serious scholastic difficulty, he is placed on probation. While on this status he is afforded special aid in discovering the reasons for his difficulty and in finding ways of overcoming it. He is usually given at least one quarter to show improvement. In any case the probation period will not be extended beyond two quarters unless the Scholastic Committee is convinced that the causes of the student's poor work are beyond his control and will soon disappear.

If a student is placed on strict probation, he may expect to be dropped at the end of the current quarter unless he fully achieves a specified quality of work.

The probationary status indicates serious doubt whether the student will succeed in college. While poor grades are a primary factor in determining this status, a record of continuous cancellations and incompletes likewise indicates scholastic weakness.

In addition to the above general regulations, a Junior College student will always be placed on probation if the following conditions arise:

1. Failing grades in at least half his work for any quarter.
2. An honor point ratio under .50 at the end of two quarters.
3. An honor point ratio under .60 at the end of three quarters.
4. An honor point ratio under .70 at the end of four quarters.
5. An honor point ratio under .75 at the end of five quarters.
6. An honor point ratio under .80 at the end of six or seven quarters.

A student in the Senior College will always be placed on probation if:

1. He is admitted from the Junior College with an average of less than one honor point per credit.
2. If at any time he is 9 or more honor points below a C average.

When the student's work improves to a point where he is again making normal progress toward a degree, he will be notified of his removal from probationary status.

Exclusion from College—Students may be excluded from the college under one of the following headings:

1. *Dropped for low scholarship*—A student who fails to meet the terms of his probation may be dropped.
2. *Hold for committee clearance*—Sometimes a student's scholastic difficulty indicates that he should not continue for the time being even though the record hardly requires official drop action. In such case his later return must be approved by the Scholastic Committee.
3. *Discontinued*—If a student is pursuing an appropriate course but is handicapped by conditions he cannot control (ill health, necessary outside work, etc.) he may be required to discontinue his registration until these conditions have improved. When discontinuance takes place at any time other than the end of the quarter, the courses for which he is registered may be recorded as canceled without grade.

Readmission to College—Students excluded from college are allowed to return only with the permission of the Scholastic Committee.

Students classified as discontinued must present evidence that the conditions which hindered their work have been remedied.

A student who has been dropped may petition for readmission after an interval of one year. The petition must present specific evidence that he is now likely to succeed with college work.

Extension courses or work in another college, taken while a student is excluded from this college, will not be recognized for eventual credit in this college unless approved by the Scholastic Committee. Such approval should be obtained prior to registration for such courses.

Students who return under the provision of the preceding paragraphs will be registered on strict probation. They may be dropped at any time that their work is unsatisfactory.

Class Attendance—Every student in the college has a responsibility for class attendance. Only absences with good reason (such as illness for which a Health Service excuse is obtained) are legitimate. The faculty delegates the handling of absences to the various departments, to be dealt with under the assumption that every student is expected to do the full work of the class. Since the departments have different ways of treating absences, the student must familiarize himself with the method of each department in which he is taking work.

To obtain an official excuse he should go to the Junior or Senior College Office, as appropriate.

Final Examinations—The all-university final examination schedule is published each quarter in the Official Daily Bulletin of the *Minnesota Daily* well in advance of the examination period. Students are required to take examinations at the scheduled time. However, if the student has a conflict in examinations or if he has three examinations in one day, he should report that fact to the Junior College Office in 208 Johnston Hall for possible adjustment. Any other examination schedule problems should be presented to the Scholastic Committee.

If a student misses a final examination without being excused, a Y symbol is assigned if he was doing passing work and a Z if he was failing. If he can show good reason for the absence, he may petition the Scholastic Committee for substitution of a grade of incomplete that can be made up. Remember that in this college Y grades are usually changed to Z if the student has a previous Y on his record.

Examination for Credit—Credit for material mastered outside of class may be obtained by special examination. A student who believes that he is as well informed in a particular subject as the students successfully completing the course should apply to the Scholastic Committee for a special examination. If approved, the committee will appoint a special faculty committee to administer the examination. The fee for such examination is \$5.

Examinations for Advanced Standing Credit—If you believe yourself sufficiently prepared in some subjects to pass examinations in them upon entrance you may, with the approval of the Scholastic Committee, take such examinations without charge. Apply to the chairman in 215 Johnston Hall within the first six weeks of residence.

Examinations to Demonstrate Proficiency in Prerequisite Courses—If a student wishes to carry a course for which he does not have the prerequisite he may apply to the Scholastic Committee for permission to take an examination to demonstrate his proficiency in the prerequisite. A satisfactory showing in the examination will admit the student to the course but will not entitle him to credit in the prerequisite course. There is no fee for this examination.

Adult Special Students—Special facilities are available for those students who wish a special and limited program and who are not candidates for a degree. If you seek admission as an adult special student you should ask for an application blank at the Office of Admissions and Records. The application must receive the approval of the dean of that office and of the Scholastic Committee of this college.

Ordinarily, to be accepted you must be twenty-four years of age or

older or a person who has received a Bachelor's degree, and you must be seeking a special and limited course of study.

As an adult special student, you will proceed under the following regulations:

1. You may take any course for which you have the necessary prerequisites.
2. You cannot become a candidate for a degree without the approval of this college. After completing one full year of work (45 credits) with a C average, you may apply to the dean of admissions and records for regular classification.
3. Credit obtained by work in other institutions or by special examination will not be recorded.
4. You may audit courses according to the procedure described on page 15 of this bulletin.
5. Your registration each quarter must be approved by a representative of the Scholastic Committee. Undergraduates go to Room 214, and graduates to Room 223, Johnston Hall.

Courses in General Extension Division—A student who takes courses in General Extension Division classes in St. Paul, Minneapolis, or Duluth and wishes to count them toward a Bachelor's degree given by the College of Science, Literature, and the Arts must meet all curricular requirements of this college as stated in this bulletin.

1. Before beginning work in the Senior College with a view to graduation, the student must apply for Senior College standing.
2. He will be assigned to a Senior College adviser for approval of his program.
3. He must complete any required work, either of major or minor sequences or of any other nature, in this college if it is not offered in the General Extension Division.

For the adjustment of irregularities in his curriculum the student may get advice from the assistant dean for the Senior College or from his major adviser.

A student who does not conform to these regulations may apply for standing in the Senior College on the same terms as a student transferred from some other institution.

Students who have not taken class work in one of the cities named must meet both curricular and residence requirements.

Work taken in correspondence may be applied toward a degree though not more than 3 credits may count toward a major in the Senior College. Correspondence credits are not regarded as credits earned in residence.

FEES

For information concerning fees and expenses, consult the *Bulletin of General Information*.

SCHOLARSHIPS AND AWARDS IN THIS COLLEGE

In addition to the all-university aids available through the Bureau of Student Loans and Scholarships, 211 Eddy Hall, there are a number of scholarships and awards given by the following departments: Art, Classics, English, German, History, Journalism, Library Science, Music, Physics, Political Science, Scandinavian Area Studies, Sociology, and Speech, as well as the SLA College Offices. Students seeking further information concerning these awards should apply directly to the department office concerned.

Section II

COURSE OFFERINGS AND MAJOR REQUIREMENTS

College of Science, Literature, and the Arts

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 above course given in the winter and spring.

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

† All parts of a course preceding the dagger must be completed before you receive credit for any part. (In 1f-2w†-3s, the first two quarters must be completed, while the third is optional.)

— A course sequence separated by hyphens (1f-2w-3s) must be taken in the order listed unless it is specifically stated that a student may enter any quarter.

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 unless so stated.

Junior and Senior College Courses—This college distinguishes between Junior College courses, intended primarily for freshmen and sophomores, and Senior College courses, intended primarily for juniors and seniors.

Senior College courses numbered between 50-99 appear in the announcement as open to "juniors and seniors" while those numbered between 100-199 are open to "juniors, seniors, and graduates."

Most Senior College courses numbered between 50-99 are open to sophomores 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 this bulletin. Senior College courses numbered between 100-199 are open to third-quarter sophomores by special permission of the Scholastic 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 special permission should be presented to the Junior College Office, 214 Johnston Hall.

AIR SCIENCE AND TACTICS

Air Force ROTC

Department Chairman—Colonel Kermit D. Stevens.

The program in Air Science and Tactics, United States Air Force, leading to a commission in the Air Force Officers Reserve Corps, is available for students in the College of Science, Literature, and the Arts as well as for those in other colleges of the University. For information concerning the requirements and the opportunities in this program, consult the *Bulletin of General Information* and the *Bulletin of the University of Minnesota ROTC*.

The College of Science, Literature, and the Arts will accept credits from basic and advanced courses in Air Science and Tactics, to fulfill a minor toward the B.A. degree.

PROGRAM OF AIR FORCE SCIENCE AND TACTICS

Basic Courses

- 31f. Air Science I (1 cred.; no prereq.)
 32w. Air Science I (1 cred.; prereq. 31)
 33s. Air Science I (1 cred.; prereq. 32)
 34f. Air Science II (1 cred.; prereq. 33)
 35w. Air Science II (1 cred.; prereq. 34)
 36s. Air Science II (1 cred.; prereq. 35)

Advanced Courses

- 131f. Air Science III (3 cred.; prereq. 36)
 132w. Air Science III (3 cred.; prereq. 131)
 133s. Air Science III (3 cred.; prereq. 132)
 134f. Air Science IV (3 cred.; prereq. 133)
 135w. Air Science IV (3 cred.; prereq. 134)
 136s. Air Science IV (3 cred.; prereq. 135)

AMERICAN STUDIES

Program Chairman—Tremaine McDowell

Major Advisers in the College of Science, Literature, and the Arts—Professor McDowell (candidates for the Ph.D.); Associate Professor Bowron (candidates for the M.A.); Assistant Professor Turpie (candidates for the B.A.).

A major in American Studies for the B.A. is offered to students under the general provisions of an interdepartmental (or liberal arts) major as stated on page 12. The Senior College courses which constitute this major will include 15 credits in courses dealing with foreign civilization and 48 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: American history; American literature; American art and philosophy; social sciences in the United States.
- B. 6 credits in American Studies 90-91-92.

(Prerequisite: Hum. 21-22-23, "American Life," or Hum. 71-72-73, "Humanities in the United States.")

Junior College Courses

- Hum.21f. American Life I (3 cred.; no prereq.) Kwiat, Noble, Turpie
 Hum.22w. American Life II (3 cred.; no prereq.) Kwiat, Noble, Turpie
 Hum.23s. American Life III (3 cred.; no prereq.) Kwiat, Noble, Turpie

Senior College Courses

- Hum.71f-72w-73s.* **Humanities in the United States.** A student may receive credit for both this course and Hum. 21-22-23, but not to exceed 9 credits altogether (9 cred.; jr., sr.; no prereq.) Marx
 90f-91w-92s. **Proseminar in American Studies.** Conferences and readings correlating the students' work in American civilization (9 cred.; sr.; prereq. permission of instructor) Bowron

* Students may enter any quarter.

For Graduate Students Only

- 200f-201w-202s. **Introduction to American Studies.** Exposition of interdisciplinary methods and of the concept of American Studies; reading of classics in American civilization; extended exploration of a selected topic. Limited to graduate students majoring or minoring in American Studies (9 cred.; grad.) McDowell and staff
- 210f-211w-212s. **Seminar in American Studies.** Selected topics in American civilization in the terms of the various departments which cooperate in the program in American Studies; for doctoral candidates (9 cred.; grad.; prereq. permission of instructor) Hornberger (f), Smith (w, s)
- 250f-251w-252s. **Readings in American Civilization.** Independent study of interdisciplinary aspects of American civilization under guidance of members of various departments (Cred. ar.; grad.; prereq. permission of program chairman) Ar.

For courses in the participating departments (History, English, Philosophy, Sociology, etc.) which are accepted for the B.A., the M.A., or the Ph.D. degree in American Studies, see the *Bulletin of the Program in American Studies*.

ANATOMY (HUMAN)

College of Medical Sciences

Department Head—Edward A. Boyden

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 or 4 (see the *Bulletin of the Medical School*) only by arrangement with the head of the Department of Anatomy and the S.L.A. Scholastic Committee.

- 3f. **Elementary Anatomy** (4 cred.; primarily for 3-yr. nurses [Extension Division] and dental hygienists*; no prereq.) Ar.
- 4s. **Elementary Anatomy** (5 cred.; primarily for 5-yr. nurses and med. techs.; prereq. Zool. 1-2-3 or 14-15) Ar.

ANTHROPOLOGY

Department Chairman—Wilson D. Wallis

Major Advisers in the College of Science, Literature, and the Arts—Professor Wallis; Associate Professor Spencer.

Major Sequence in the College of Science, Literature, and the Arts—At least 27 credits of anthropology courses numbered 80 or over, or 18 credits of anthropology courses numbered 80 or over and Zool. 83, 170, and 171. (This latter sequence suggested only for those with strong interest in physical anthropology.)

(Prerequisites: Courses 1 and 2 [or the old courses 40 and 42] with 15 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

- 1f,w. **Introduction to Anthropology.** (Formerly Anth. 40) 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. This course treats the material topically while Anth. 2 organizes it according to the principal regions and cultures of the world (5 cred.; no prereq.) Ar. (f), Wallis (w)

* Admission of other students to this course is permissible only by arrangement with the head of the department. Anat. 4s is recommended in its place.

2w,s. **Introduction to World Ethnology.** (Formerly Anth. 42) 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.) Ar. (w), Spencer (s).

Senior College Courses

Courses 54, 56, 80, 81 are open to sophomores who have a grade of at least C in courses 1 (old course 40) or 2 (old course 42). Other Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

- 54f. **Social Organization.** An analysis and survey of forms of social life (3 cred.; jr., sr.; no prereq.) Wallis
- 56s. **Primitive Science.** The beliefs and knowledge of primitive man (3 cred.; jr., sr.; no prereq.) Wallis
- 80w. **The American Indian.** A survey of native cultures of the New World. Physical and cultural characteristics (3 cred.; jr., sr.; no prereq.) Spencer
- 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.) Wilford
105. **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 Chippewa, Dakota, Finnish, and other languages (3 cred.; jr., sr., grad.; no prereq.) (Not offered 1953-54)
106. **European Prehistory.** Human evolution and the spread of cultures through the Old World during the pleistocene. The development and spread of civilization in the Near East and Europe during prehistoric times (3 cred.; jr., sr., grad.; no prereq.) (Not offered 1953-54)
- 109f. **General Linguistics.** Problems relating to phonetic patterning, morphology, syntax, and semantics of language; attention directed to the varieties of language structures found outside of our own speech family (4 cred.; jr., sr., grad.; prereq. any two courses numbered above 50 in a foreign language) Spencer
- 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.) Wilford
- 111w. **Advanced Physical Anthropology.** Sex differences; asymmetry; variability; statistical procedures; problems of race (3 cred.; jr., sr., grad.; prereq. 110, or Zool. 22 or 175, or a course in human anatomy, or permission of instructor) Wallis
- 113f. **The Character of Cultures.** Culture patterns, elements, and complexes (3 cred.; jr., sr., grad.; no prereq.) Wallis
- 116s. **Indians of the Southwest.** 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.) Ar.
- 117s. **Anthropology and Contemporary Problems.** Significance of the comparative study of human societies for understanding contemporary problems (3 cred.; jr., sr., grad.; no prereq.) Ar.
- 118w. **Indian Civilizations of Mexico and Central America.** Pre-Spanish history, mostly from archeology, of the more advanced cultures of Mexico and Central America (3 cred.; jr., sr., grad.; no prereq.) Ar.
- 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.) Wallis
- 122f-123w-124s. **Problems in Anthropology.** (Cred. ar.; jr., sr., grad.; prereq. permission of instructor) Wallis, Wilford, Spencer
- 125w. **The Peoples of Southeast Asia and Indonesia.** Cultural achievements of the peoples of Burma, Siam, French Indo-China, and the Malaysian archipelago. Influences from India on the native cultures of the area; influence of Islam on the Indonesian realm. Modern ethnic, national, and colonial problems (3 cred.; jr., sr., grad.; no prereq.) Spencer
- 126f. **Ethnology of India.** A survey of the primitive tribes, Hindu caste society, and the Mohammedan communities in India (3 cred.; jr., sr., grad.; no prereq.) Spencer

127. **Races and Cultures of China** (3 cred.; jr., sr., grad.; no prereq.) (*Not offered 1953-54*)
128. **Races and Cultures of Japan.** The growth of native civilization in Japan (3 cred.; jr., sr., grad.; no prereq.) (*Not offered 1953-54*)
- 129s. **Economic Activities in Primitive Culture.** Varied systems of making a living in pre-literate groups. Economy of hunting and fishing tribes, primitive agriculturists, and simple herders. Relations between habitat, technology, social organization, and goals and attitudes as focused in the area of economic life (3 cred.; jr., sr., grad.; no prereq.) Ar.
- 131w. **The Islamic Culture Sphere.** Mohammed and the founding of Islam, Islamic culture as an intermediary between (1) classical and the ancient oriental civilizations and (2) medieval Europe. Legal, political, and theological developments in Islam (3 cred.; jr., sr., grad.; no prereq.) Spencer
- 140.* **Field Trip in Archeology.** Excavations of prehistoric mounds and village sites in the state of Minnesota (1 to 12 cred.; jr., sr., grad.; prereq. male students only, permission of instructor required) Wilford
- 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.) Wallis
162. **Peoples of Negro Africa.** Physical types, social, political, and economic phases of cultures of Negro Africa (3 cred.; jr., sr., grad.; no prereq.) (*Not offered 1953-54*)
- 165f. **Psychological Phases of Culture.** The impact of cultural tradition on human experience. The significance of culture patterns in the structure and functioning of human experience (3 cred.; jr., sr., grad.; no prereq.) Spencer
- 166f. **History of Anthropological Theory and Method.** A review of the development of anthropology from early times to the present day. Schools of anthropological thought and various approaches to the data of anthropology (3 cred.; jr., sr., grad.; prereq. 1 or 2, or the old courses 40 or 42) Wallis
169. **Peoples of the South Seas.** A survey of the native cultures of the Pacific Islands (3 cred.; jr., sr., grad.; no prereq.) (*Not offered 1953-54*)
170. **Primitive Art.** The role of esthetics in primitive life, the spread of art styles, symbolism. Graphic and plastic arts and place of the artist. Music, drama, the dance, in primitive societies (3 cred.; jr., sr., grad.; no prereq.) (*Not offered 1953-54*)
- 171s. **Peoples of Northeastern Asia and Northwestern North America.** The ethnology of the simpler cultures of northern Asia, including the so-called paleo-Asiatic peoples of eastern and central Siberia, the Sinicized tribes, and the Turkish-speaking tribes of central Asia. Eskimo and tribes in western North America (3 cred.; jr., sr., grad.; no prereq.) Spencer
- 172f. **Indians of South America.** An ethnographic survey of South American Indians, with account of prehistory in the various areas and of recent acculturation under Spanish or Portuguese influences. Topics include: race, language, utilization of environment, tribal organization, social and religious aspects. Mention of higher civilizations of Mexico, Central America, Peru (3 cred.; jr., sr., grad.; no prereq.) Ar.

For Graduate Students Only

- 204f-205w-206s. **Seminar in Anthropology** (3 cred. per qtr.; grad.) Wallis, Wilford, Spencer
- 251f-252w-253s. **Seminar in Culture and Personality** (3 cred. per qtr.; prereq. M.D. degree) Spencer

ARABIC

See Slavic and Oriental Languages, page 143.

ARCHITECTURE

Institute of Technology

Department Chairman—To be announced

Major Adviser in Architecture in the College of Science, Literature, and the Arts—Assistant Professor Koeper.

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

(Prerequisites: High school or college equivalent of Math. 1, Higher Algebra, and Solid Geometry; Phys. 1a-2a-3a; Art 23A-24A-25A and ap-

* This course may be taken for credit only once.

proval by the School of Architecture after formal application has been made. Application forms will be furnished by the School of Architecture or the Office of Admissions and Records. They must be submitted not later than July 15 preceding the beginning of the academic year for which admission is sought.)

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.

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

A special modification of this sequence is available for students taking the six-year combined course in arts and architecture leading to both the liberal arts and professional architectural degrees. Such students should include, in addition to the courses listed above, Math. 6-7, 30; I.T.M. 91 and M.&M. 92-93; either C.E. 38-39-41 or Arch. 57-58-59; Art 60A-61A-62A, and Chem. 1-2 or 6-7 if they have had no chemistry in high school. For further information concerning the six-year combined course, see page 160 of this bulletin.

Note—Consult the *Bulletin of the Institute of Technology* for additional courses.

Junior College Courses

Arch.1s. Introduction to Architecture. Discussions and problems to inform prospective students regarding the nature of architecture as an art and a profession (1 cred.; open only to students intending to major in architecture; prereq. permission of major adviser)

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

Arch.51f-52w-53s.† History of Architecture. Significant architecture of the past, with particular reference to the geographic, social, and technical influences which produced it (12 cred.; jr., sr.; no prereq.)

Arch.101f-102w-103s. Tutorial Work in History of Architecture (6 cred.; jr., sr.; prereq. 53)

Arch.104f. City Planning. General survey of the economic, governmental, social, and technical phases of city planning and group housing (3 cred.; sr., grad.; no prereq.)

AD-II,f,w,s.‡§ Architectural Design, Grade I (18 cred., normally 6 cred. per qtr.; jr., sr.; prereq. permission of School of Architecture)

AD-III,f,w,s.‡§ Architectural Design, Grade II (18 cred., normally 6 cred. per qtr.; jr., sr.; prereq. AD-I)

ART

Department Chairman—H. Harvard Arnason

Major Advisers for All Courses in Art in the College of Science, Literature, and the Arts—Professors Arnason, Tselos; Associate Professor Rood; Assistant Professors Arnest, Collins, Downs, Eitner, Morton, Rollins, Thomas, Torbert, Tovish; Lecturer Booth.

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

§ 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.

The principal objective of the Department of Art is to contribute to the general education of all students at the University of Minnesota. With this end in view all courses in both history and practice will lay particular stress on the problems and needs of the nonprofessional student interested in acquiring some knowledge of the theory and practice of art within the framework of a liberal education.

For those students interested in acquiring a liberal education and then proceeding to advanced work in theory or studio, the Department of Art offers graduate courses leading to the degrees of M.A. and Ph.D. in history and criticism, and to the M.F.A. in the practice of art.

Note—Superior students in art may be required to leave permanently with the department one or two examples of their work. These examples will be used for exhibition purposes and as a continuing record. Such students will be compensated for materials used.

Major Sequences in the College of Science, Literature, and the Arts—In the Department of Art it is possible to major in the history and criticism or the practice of art, or in various combinations of these. The student intending to major in art should consult one of the departmental advisers as soon after entrance to college as is practicable.

A. History and Criticism of Art. Prerequisites: Art 1, 2, 3, Introduction to Art; Art 23, Drawing and Design I. Requirements: Art 50, Pictorial Design; 27 credits in history of art courses numbered above 50; reading knowledge of one foreign language. The following areas are recommended as minors for students majoring in history or criticism of art: humanities, literature, philosophy, or languages.

B. Studio Course Major. Prerequisites: Art 1, 2, Introduction to Art; Art 23, 24, Drawing and Design I; Art 40, 41, Sculpture I; Art 25, Drawing and Design, or 42, Sculpture, or one elective 3-credit studio course. Requirements: 9 Senior College credits selected from any one of the following areas: design, painting, prints, sculpture, ceramics, weaving, photography; 9 additional credits in studio courses numbered above 50; 9 credits in Senior College courses in art history.

Note—Art 10, Photography, is strongly recommended for all majors in the department.

Suggested Minor Sequences in the College of Science, Literature, and the Arts—In the Department of Art it is possible to minor in the history and criticism or the practice of art or in various combinations of these. The categories below indicate two methods of attaining a minor:

A. A minor sequence which presents a comprehensive introduction to the basic problems of art is offered by the Department of Art. The courses, Art 63, 64, 68 (plus one other 3-credit Senior College studio course) constitute the sequence and present the theory and practice of drawing, painting, design, and sculpture. Art 65 may be elected to complete this sequence or may be taken as an independent course without prerequisites. Other courses which may be elected to complete the sequence and for which Art 63 and 64 may serve as the prerequisites are 58, 60, 70, 90, or 140. Neither Art 63, 64, nor 65 is credited to art majors.

B. It is also possible to minor in art by registering for regular Senior College courses in such areas as history of art or drawing and painting. The student intending to minor in art is invited to consult one of the departmental advisers.

Junior College Courses

Art 1f,w,s-2w-3s. Introduction to Art.

Art 1f,w,s. Principles of Art. A lecture and laboratory course introducing the student to basic problems of art. Examples from the painting, sculpture, and architecture of various periods will be used to illustrate general cultural factors that influ-

ence the production of art as well as basic problems of design and of technique. The laboratory-discussion sessions will introduce the students to practical problems arising from the nature of the materials of the visual arts (This course, together with Music 10, Speech 8, and Philosophy 4, forms a sequence in the Arts*) (4 cred.; no prereq.) Torbert

Art 2w. Principles of Ancient Art. A course intended as an introduction to art criticism, based on a number of selected monuments of ancient art. A broad critical analysis of Egyptian, Mesopotamian, Greek, Hellenistic, and Roman art as separate but related expressions of the culture of antiquity (3 cred.; prereq. 1) Thomas

Art 3s. Principles of Medieval Art. The second course of a series intended as a further introduction to the principles of art criticism. A selected number of monuments will form the basis for a general study of Medieval art and culture, Early Christian, Byzantine, Romanesque, and Gothic art (3 cred.; prereq. 2) Eitner

Art 10f,w,s. Photography. (Same as Jour. 10) Fundamental principles of photography. The use of cameras, developing, printing, and other elementary techniques (3 cred.; no prereq.) Downs

Art 23f,w,s-24f,w,s-25w,s. Drawing and Design I. A foundation sequence for future work in the Art Department. Investigation through discussion and studio work of the characteristics and principles common to all visual arts.

Art 23f,w,s. Drawing and Design I. Experience in handling the tools and materials of drawing. A study of source material in nature, and problems in descriptive and imaginative drawing. Investigation of design principles through drawing, and elementary perspective (6 cred.; prereq. 1, but may be taken concurrently with 1) Collins, Downs, Rollins, Young

Art 24f,w,s. Drawing and Design I. An introduction to the basic tools of the artist, the elements, and principles of design. Line, shape, texture, value, and color are considered separately and as they relate to one another (3 cred.; prereq. 23) Collins, Downs, Young

Art 25w,s. Drawing and Design I. A development of the work in Art 24 with primary emphasis on the means of organization, through projects in such areas as: illustration, graphic design, photography, and certain printing processes (3 cred.; prereq. 24) Collins

Art 23Af. Drawing and Painting I. Section for architects only (2 cred.; no prereq.) Young

Art 24Aw. Drawing and Painting I. Section for architects only (2 cred.; prereq. 23A) Young

Art 25As. Drawing and Painting I. Section for architects only (2 cred.; prereq. 24A) Young

Art 30f,w,s. Elements of Drawing. An elementary course introducing basic problems in drawing. No previous experience required. Work in various drawing media. Subject matter: still life, figure, landscape, and nature study (2 cred.; no prereq.) Quirt

Art 31f,w,s. Elements of Drawing. Continuation of Art 30 (2 cred.; prereq. 30) Quirt

Art 32f,w,s. Elements of Printmaking. A foundation course designed to familiarize the student with the media of printmaking in general. Problems in engraving, etching, and other techniques employed in working on metal plate, as well as lithography, wood cuts, and combined processes (3 cred.; no prereq.) Myers

Art 33f,w,s. Textile Design: Weaving. Fundamental weaving with emphasis on color and texture in the development of handwoven fabrics; also, experience in draft writing and threading of simple looms (3 cred.; prereq. 24) Berglund

Art 34f,w,s. Textile Design: Weaving. An overview of hand weaving, past and present, and experience in the use of different kinds of looms to gain an understanding of their possibilities and limitations in the development of fabric design (3 cred.; prereq. 33) Berglund

Art 40f,w. Sculpture I. Beginning course. An intensive study of structure in nature. The emphasis is on accurate observation. Life drawing prepares the student for each sculpture problem. The sculpture medium is clay. Some instruction in plaster casting (3 cred.; prereq. 1, but may be taken concurrently with 1) Rood (f), Tovish (w)

Art 41w,s. Sculpture I. A free exploration of three different sculpture media: wood, metal, and ceramics. Experiment reveals limitations and possibilities of each material. Emphasis is placed on a more abstract application of structural principles. Frequent slide lectures illustrate and clarify basic problems of three-dimensional form. Drawing supplements work in each material (3 cred.; prereq. 40) Rood (w), Tovish (s)

* See under General Studies page 72.

- Art 42s. Sculpture I.** This course integrates basic principles examined in Art 40-41. Natural form is studied for its sculptural possibilities. A more imaginative approach to the study of nature is encouraged. In addition to clay, direct plaster construction is the principal medium. Drawing from life precedes each problem (3 cred.; prereq. 41) Rood.
- Art 43f. Textile Design.** Development of two-dimensional textile design in which fabrics, yarns, and other pliable materials are the media and needles, books, mesh sticks, and shuttles are the tools (3 cred.; prereq. 24) Berglund
- Art 44s. General Crafts.** The course takes up various craft problems in wood, metal, leather, and plaster. Typical problems include wood carving, metal raising, and leather tooling. Emphasis will be placed on original design and in exploring the possibilities of each material. The course is oriented toward students in art education, recreation, and occupational therapy (3 cred.; no prereq.) Ar.
- Art 45f,w. Ceramic Processes.** Aim: to provide a foundation for work in either ceramic design or ceramic sculpture through an introduction to materials, forming methods, and production processes; to provide basic experience in three-dimensional form through making models by both hand and machine methods; to provide criteria for judging good design in ceramic products, either hand or machine made (3 cred.; no prereq.) Ar.

Senior College Courses

HISTORY AND CRITICISM OF ART*

- Art 56f. Renaissance and Baroque Art: 1300-1500.** Painting, sculpture, and architecture in Europe from Duccio to Raphael. Giotto and the fourteenth century in Italy. Architecture of the early Renaissance. The Van Eycks, Masaccio, Donatello, and the fifteenth century in Italy and Flanders. Leonardo, Raphael, Dürer, and the High Renaissance (Elective credit only for majors in art history) (3 cred.; jr., sr.; prereq. 1 or permission of instructor) Thomas
- Art 57w. Renaissance and Baroque Art: 1500-1650.** Painting, sculpture, and architecture in Europe from Michelangelo to Rubens. Titian, Tintoretto, and the sixteenth century in Venice. Palladio and the academic attitude in architecture. Caravaggio, El Greco, and the early Baroque. The developed Baroque style of Bernini and Velazquez (Elective credit only for majors in art history) (3 cred.; jr., sr.; prereq. 1 or permission of instructor) Thomas
- Art 58s. Renaissance and Baroque Art: 1650-1800.** Painting, sculpture, and architecture in Europe from Rembrandt to David. Seventeenth-century art of Holland. Poussin and the classical tradition in France and England. Watteau, Boucher, and eighteenth-century decoration. The English portraitists. The rise of Neoclassicism in Italy and France (Elective credit only for majors in art history) (3 cred.; jr., sr.; prereq. 1 or permission of instructor) Thomas
- Art 66f. Modern Art: Classicism and Romanticism.** The development of painting, sculpture, and architecture from the period of the French Revolution to about 1850 in France, Germany, Spain, and England, with an introduction to parallel movements in the United States (3 cred.; jr., sr.; prereq. 1 or permission of instructor) Eitner
- Art 67w. Modern Art: Realism and Impressionism.** Painting, sculpture, and architecture during the second half of the nineteenth century with particular emphasis on the schools of Paris, their influence and parallels in England, Germany, and the United States (3 cred.; jr., sr.; prereq. 1 or permission of instructor) Eitner
- Art 68s. Modern Art: Contemporary Art in Europe and America.** Development of painting, sculpture, and architecture in Europe and the United States during the twentieth century (3 cred.; jr., sr.; prereq. 1 or 64 or permission of instructor) Eitner
- Art 76f. Art of Latin America.** A study of painting, sculpture, and architecture in Latin America, treating the pre-Columbian traditions, the development of the various colonial styles and the most significant of the national schools in the periods prior to the twentieth century (3 cred.; jr., sr.; prereq. 1 or permission of instructor; it is recommended that this course be taken in conjunction with Art 57 or Art 126) Ar.
- Art 77w. Art of Latin America.** A study of Latin-American arts in the twentieth century with particular emphasis on painting and architecture in Mexico and South America (3 cred.; jr., sr.; prereq. 1 or permission of instructor; it is recommended that this course be taken in conjunction with Art 76 or Art 57 or Art 126) Ar.

* Arch. 51-52-53, History of Architecture, and Arch. 101-102-103, Tutorial Work, may with permission of adviser be taken as part of major sequence in history of art.

- Art 78s. Art of China.** Development of painting, sculpture, and minor arts in China from earliest times to the present (3 cred.; jr., sr.; prereq. 1 or 9 credits in history or literature with permission of instructor; may be taken in conjunction with Hist. 62f-63w) Mather
- Art 96f. The History of the Graphic Arts.** The origins of the woodcut and of engraving. Renaissance and Baroque master etchers and engravers. Mantegna, Raimondi, Schongauer, Dürer, Holbein, Lucas Van Leyden, Callot, Rembrandt. The reproductive and portrait engraving of the seventeenth and the eighteenth centuries. Lithography. Gericault, Delacroix, Daumier. Twentieth-century printmaking (3 cred.; jr., sr.; prereq.*) Thomas (*Not offered 1953-54. Offered 1954-55*)
- Art 98s. Master Drawings.** Historical survey of great drawings from the Gothic period to the present, covering the work of such artists as Pisanello, Leonardo da Vinci, Dürer, Holbein, Raphael, Rembrandt, Rubens, Watteau, Tiepolo, Goya, Géricault, Daumier, Van Gogh, Matisse, Picasso. Stylistic analysis of master drawings and school copies (3 cred.; jr., sr.; grad. students may take this course by registering for Art 198 and completing special assignments; prereq.*) Thomas
- Art 106f. Art in Egypt, Mesopotamia, and Greece.** The architecture, sculpture, and painting of the pre-Hellenic civilizations in Egypt, Mesopotamia, and the Aegean. The development of Greek art from its beginnings to the Periclean age (3 cred.; prereq.*) Eitner
- Art 107w. Hellenistic Art to Christian Art.** The art of the Hellenistic kingdoms. Hellenic and Etruscan art in Italy. Art of the Roman Empire. The transformation of classical styles under the influence of oriental traditions and of Christian religion. The development of Christian Art. The art of the Byzantine Empire. Survivals of classical forms in early medieval art (3 cred.; prereq.*) Eitner
- Art 108s. Romanesque and Gothic Art.** The development of architecture, sculpture, and painting in western Europe and Italy from the tenth until the fifteenth century. The art of the cathedrals. Romanesque and Gothic monumental and manuscript painting. The development of Gothic art as manifestation of currents in medieval culture (3 cred.; prereq.*) Eitner
- Art 116f. Renaissance and Baroque Art in Italy: Origins and Early Phases, 1350-1490.** The development of Italian painting and sculpture out of the Byzantine, Gothic, and Greco-Roman traditions: the Pisani; Giotto; Duccio; and the Sienese. The late International Style in Italy and the continuing Gothic tradition. The birth of Renaissance arts in Florence; the monumental realists Masaccio, Brunelleschi, Donatello, Ghiberti. The refinements of the later fifteenth century. The spread of the new style into Umbria, Rome, Padua, Venice (3 cred.; jr., sr., grad.; prereq.*) Thomas
- Art 117w. Renaissance and Baroque Art in Italy: High Renaissance, Mannerism, Early Baroque, 1490-1625.** The Florentine-Roman synthesis around 1500: Leonardo, Raphael, Michelangelo. The development of oil painting in Venice and north Italy: Giorgione, Titian, Tintoretto, Veronese, Correggio. Trends in architecture throughout the century. The Mannerist reaction against Classicism. Proto-Baroque tendencies: Michelangelo's influence. The first phases of the Baroque: the Carracci and the Academy; Caravaggio and the new realism (3 cred.; jr., sr., grad.; prereq.*) Thomas
- Art 118s. Renaissance and Baroque Art in Italy: The Full Baroque and the Rococo, 1625-1800.** Bernini and the Baroque fusion of architecture, sculpture, and painting. New trends in architecture: town planning, civic structures, the villa and garden. Illusionistic and decorative painting in Rome. The spread of the Baroque outside of Rome: Bologna, Naples, Genoa, Milan. The development of new types of painting in Venice. Eighteenth-century prints. The growth of the Neoclassic style (3 cred.; jr., sr., grad.; prereq.*) Thomas
- Art 126f. Renaissance and Baroque Art in the North: The Renaissance in the Netherlands and Germany, 1350-1500.** Late Gothic art: the International Style; courtly art of France and Burgundy. The new Netherlandish realism around 1400: Sluter and the van Eycks. Later fifteenth-century Flemish painting. National and Italianate traits in sixteenth-century Flanders. The development of the print in fifteenth-century Germany. The German Renaissance: the contact with Italy—Dürer and Holbein; native traits—Grunewald. German sculpture (3 cred.; jr., sr., grad.; prereq.*) Thomas (*Not offered 1953-54. Offered 1954-55*)
- Art 127w. Renaissance and Baroque Art in the North: Baroque Art in Flanders, Holland, France, and Germany, 1600-1700.** Flemish painting; its connections with Italy, France, and Holland. Rubens and the Classic style in the north. The growth of Dutch painting: the emergence of new styles and types—the genre painters, the landscapists,

* Prerequisite is 9 credits in history of art, or 9 credits in literature or history with permission of instructor.

- the minor specialists. Rembrandt as painter, draughtsman, etcher. His position and his school. France and the Classic-Baroque tradition: Louis XIV and the arts. Baroque architecture and sculpture in Germany (3 cred.; jr., sr., grad.; prereq.*) Thomas (Not offered 1953-54. Offered 1954-55)
- Art 128s. Renaissance and Baroque Art in the North: Baroque England and Spain: Eighteenth-Century France and Germany.** England and Classic-Baroque architecture. Eighteenth-century English painting. Baroque painting in Spain: Velasquez; Goya and the modern world. Spanish architecture and sculpture. French Rococo architecture, sculpture, and the decorative arts. Rococo painting: Watteau, Boucher, Fragonard. New trends in the late eighteenth century; France and the emerging Neoclassic theories. The art of Rococo Germany (3 cred.; jr., sr., grad.; prereq.*) Thomas (Not offered 1953-54. Offered 1954-55)
- Art 136f. Art in the United States.** The origins. Painting, sculpture, and architecture from the beginnings through the Colonial and Revolutionary periods. Relations with England and the European continent. Copley, Stuart, West, and their followers. The influence of Jefferson (3 cred.; jr., sr., grad.; prereq.*) Torbert
- Art 137w. Art in the United States.** The nineteenth century. The rise of a national style in landscape and realistic genre. Homer, Eakins, Ryder, and their influence. Impressionism and relations with Europe after the Civil War. The beginnings of modern architecture (3 cred.; jr., sr., grad.; prereq.*) Torbert
- Art 138s. Art in the United States.** The contemporary movements. The Armory Show and development of modern realism, expressionism, and abstraction. Frank Lloyd Wright and modern American architecture (3 cred.; jr., sr., grad.; prereq.*) Torbert
- Art 146f. European and American Architecture: 1775-1850.** Revivalist and progressive movements; Neoclassic and Neogothic styles; genesis of modern style under rationalism and industrial revolution. Special emphasis on contributions of most important architects of France, England, and United States (3 cred.; jr., sr., grad.; prereq.§) Tselos
- Art 147w. European and American Architecture: 1850-1900.** Victorian Gothic eclecticism, and the rise of modern pragmatism in architecture within historical and anti-historical currents; the influence of Victorian Gothic and French academism on American architecture and the divergent reactions (3 cred.; jr., sr., grad.; prereq.§ and 146) Tselos
- Art 148s. Modern Architecture: 1900-1950.** The rise of proto-modern architecture in European and American centers; the development of the new international style in its various phases; its relation to modern sculpture and painting and its meaning in the new esthetic directions (3 cred.; jr., sr., grad.; prereq.§ and 147) Tselos
- Art 156f-157w-158s. European and American Painting: 1775-1900.** The origins of Neoclassicism and Neo-Baroque romanticism; the parallel development of modern realism in France, England, and the United States; the rise of landscape painting and its importance for the realist movement. The growth of realist painting in Courbet's time and its climax in Impressionism; the Postimpressionist reactions and their significance for modern art; the diffusion of Impressionist and Postimpressionist phases in America and the conservative lag in pre-Raphaelite England (9 cred.; sr., grad.; prereq.§) Tselos (Not offered 1953-54. Offered 1954-55)
- Art 156Af-157Aw-158As.† Twentieth-Century European and American Painting.** The growth of modern painting and of the Postimpressionist inheritance; French Fauves and German expressionists; the impact of primitive art and its assimilation in cubism; the puristic defections and rise of Dada and surrealism; the new objectivity, the new romanticism, and the new eclecticism; special attention will be given to peculiarly American assimilation of the European phases of painting (9 cred.; sr., grad.; prereq.§) Tselos
- Art 166. European and American Sculpture from Houdon to Rodin: 1750-1900.** The transition from the Rococo to Neoclassicism; the academic romantic and realistic currents culminating in impressionistic realism in Rodin. The parallel developments in Germany, England, and the United States are considered in terms of their outstanding representative sculptors (3 cred.; sr., grad.; prereq.§) Tselos (Not offered 1953-54. Offered 1954-55)

* Prerequisite is 9 credits in history of art, or 9 credits in literature or history with permission of instructor.

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

‡ Prerequisite is Art 1 and 9 credits in history of art, or 9 credits in history or literature with permission of instructor.

- Art 167. Modern Sculpture in Europe and the United States Since 1900.** The influence of Rodin and the reactions against his impressionistic romanticism; the direction toward the archaic, medieval, and primitive sculpture; the impact of abstract painting and the expansion of the limits of sculpture into symbolic primitivism, constructivism and kinetic sculpture (3 cred.; sr., grad.; prereq. §) Tselos (*Not offered 1953-54. Offered 1954-55*)
- Art 176f, 177w, 178s. Scandinavian Art.** Painting, sculpture, architecture in Denmark, Norway, Sweden, Finland, and Iceland from the beginnings to the present day. After a general survey in the fall quarter, the winter and spring quarters will be devoted largely to modern Scandinavian art with considerable emphasis on recent developments in industrial and applied arts (3 cred. per qtr.; jr., sr., grad.; prereq. 9 cred. in history of art or 9 cred. in history or literature with permission of instructor) Ar. (*Not offered 1953-54*)
- Art 186f, w. The Art of the Film.** A study of the esthetics of the film medium. Evaluation and analysis of the motion picture as an art form. Discussions of editing, montage, sound, and the use of the camera, etc. The course will be illustrated with feature-length films and short subjects (3 cred.; jr., sr., grad.; prereq. 9 credits in art, or 6 credits in English literature beyond A-B-C or foreign literature, or 6 credits in speech and theater arts, including Spch. 31) Amberg
- Art 196f-197w-198s. † Readings in Art History and Criticism** (9 cred.; sr., grad.; prereq. permission of instructor) Arnason, Tselos, and faculty

For Graduate Students Only

- Art 206f-207w-208s. † Seminar: European and American Architecture** (9 cred.; prereq. permission of instructor) Tselos, faculty
- Art 216f-217w-218s. † Seminar: European and American Painting** (9 cred.; prereq. 27 cred. in Senior College courses in art history and permission of instructor.) Arnason, Tselos
- Art 236f-237w-238s. † Seminar: Problems in Art History and Criticism** (Cred. ar.; prereq. permission of instructor) Tselos, faculty
- Art 250f-251w-252s. † Thesis Seminar.** Independent creative and critical research. Required of M.F.A. students. Also open to second year M.A. and Ph.D. students (Cred. ar.; prereq. permission of graduate adviser) Arnest, Booth

STUDIO

- Art 50f-51w-52s. Pictorial Design—Theory and Practice.** A course combining critical analysis of past and contemporary painting traditions with creative studio problems. Materials and tools of the painter; pictorial design in various media; conceptual problems related to subject, content, and form with particular attention in these studies to contemporary painting. Intended for both art history and studio majors. Sections will meet together for lectures and discussion and separately for laboratory. Grading will be on the basis of understanding of principles rather than on technical proficiency. May be taken concurrently with Art 60-61-62 or Art 70-71-72 or with any Senior College courses in art history (3 cred. per qtr.; jr., sr.; prereq. 24 or equiv. and permission of instructor) Booth
- Art 53f-54w-55s. Design Workshop.** Introductory workshop course in three-dimensional design. Fundamental tools, techniques, and design concepts are introduced, and practical experience in working with basic materials is afforded.
- Art 53f. Design Workshop.** Fundamental exploration of hand tools and basic materials: wood, metal, and plastic; and the experimental application of three-dimensional design concepts (3 cred.; jr., sr.; prereq. 1) Morton
- Art 54w. Design Workshop.** Advanced problems in three-dimensional design, including special study of structural form and fastening methods. Use of power tools introduced (3 cred.; jr., sr.; prereq. 53) Morton
- Art 55s. Design Workshop.** Special projects in three-dimensional design with emphasis upon light and motion in relation to construction (3 cred.; jr., sr.; prereq. 54) Morton

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

‡ Prerequisite is Art 1 and 9 credits in history of art, or 9 credits in history or literature with permission of instructor.

- Art 60-61-62f, w.s. Drawing and Painting II.** A continuation of Art 23-24, placing particular emphasis upon life drawing and the use of the human figure in pictorial design. Drawings from the model and from memory. Introduction to painting media. Related studies of past and contemporary drawing and painting employing the human figure (3 cred. per qtr.; jr., sr.; prereq. 24 or 31 or equiv. or permission of instructor; Art 60-61-62 may be taken at the same time as Art 50-51-52, and/or Art 70-71-72) Rollins, Quirt, Arnest
- Art 60A-61A-62Af, w.s. Drawing and Painting II.** Sections for architects (2 cred. per qtr.; prereq. 25A) Tovish
- Art 63f. Drawing, Painting, and Design.** A course introducing the student to the tools and materials and the basic problems of drawing, painting, and design. Studio work, discussion, and lecture. Not open to art majors. See suggested minor sequences (5 cred.; jr., sr.; no prereq.) Ar.
- Art 64w. Sculpture and Three-Dimensional Design.** A course introducing the student to the tools and materials and the basic problems of sculpture and three-dimensional design. Studio work, discussion, and lecture. Not open to art majors. See suggested minor sequences (5 cred.; jr., sr.; no prereq.) Ar.
- Art 65s. Commercial Design.** Problems in design and drawing emphasizing the application of design principles to commercial art situations. Not open to art majors. See suggested minor sequences (3 cred.; jr., sr.; no prereq.) Collins
- Art 70-71-72f, w.s. Drawing and Painting III.** A course of advanced level offering the student opportunity to work upon individual painting projects. Subject matter and media unrestricted. Individual instruction (3 cred. per qtr.; jr., sr.; prereq. 24 or 31) Arnest, Booth, Quirt
- Art 73f-74w-75s. Presentation Techniques.** A study of the visual means of communicating ideas in the fields of exhibition techniques, illustration, and advertising. An investigation of the characteristics and the creative use of various media.
- Art 73f. Presentation Techniques.** Experiments and instruction in the use of wash techniques, water-color, gouache, inks, and the use of mechanical instruments. Presentation problems using the media limitations as a starting point (3 cred.; prereq. 25; for architects there is no prerequisite) Collins
- Art 74w. Presentation Techniques.** Experiments and instruction in the use of photo-mechanical and related print processes, mechanical patterns, air-brush, scratch board, and photostat. Elementary problems in relationship between organizational means and content (3 cred.; prereq. 25; for architects there is no prerequisite) Collins
- Art 75s. Presentation Techniques.** Practice in the use of associative relationships and symbols in complete communication problems in the fields of display illustration and advertising (3 cred.; prereq. 73 or 74, both recommended) Collins
- Art 80-81-82f, w.s. Sculpture II.** Direct carving in stone and wood with attention given to possibilities of materials and sculptural design. Experimental work in metal, plastics, and combinations of sculptural materials. Some direct modeling in plaster (3 cred. per qtr.; jr., sr.; prereq. 42 or equiv.) Rood, Tovish, Morton
- Art 83f-84w-85s. Design and Photography.** For students desiring a more intensive study of photography than is offered in Art 10. Basic techniques and use of photography as a creative medium, through progressive laboratory problems.
- Art 83f. Design and Photography.** Preliminary survey of photographic equipment and materials, camera procedure, film processing and printing. Field and studio problems in the use of elements of design (3 cred.; jr., sr.; prereq. 10 or permission of instructor) Liebling
- Art 84w. Design and Photography.** Experiments in photographic controls for purposes of understanding the limitations and capacities of photography, and continued design problems (3 cred.; jr., sr.; prereq. 83) Liebling
- Art 85s. Design and Photography.** Series of problems in application of design relationships in photography with emphasis on an awareness of the visual environment. Primarily outdoor photography (3 cred.; jr., sr.; prereq. 84) Liebling
- Art 89w, s. Textile Design: Weaving.** Advanced weaving; development of further skill in weaving and exploration of its use in the home, for commercial purposes, etc. (3 cred.; jr., sr.; prereq. 34) Berglund
- Art 90-91-92f, w.s. Printmaking.** Problems in engraving, etching, and the other techniques employed in working on metal plate, as well as lithography, wood cuts, and combined processes (3 cred. per qtr.; jr., sr.; prereq. 62 or permission of instructor) Myers
- Art 94f, w, s-95f, w, s. Ceramic Design.** Aim: to solve problems of product design, such as dinnerware, suited to the ceramic medium; to gain experience in methods of forming

- processes employed industrially, such as slip casting, jiggering, and pressing; to develop a sensitivity to the relationship between three-dimensional form and function of the object (3 cred. per qtr.; jr., sr.; prereq. 45 or permission of instructor) Ar.
- Art 97w. Textile Design: Printing Processes.** Tie-dye, stenciling, block printing, silk screen printing, batik, etc., on fabrics (3 cred.; jr., sr.; prereq. 24 or equiv.) Berglund
- Art 101-102f,w,s. Ceramic Sculpture.** A course designed to provide a disciplined and permanent medium for advanced sculpture integrated with the courses offered in wood, stone, and metal; to increase the tactile experience of the student through study of a variety of ceramic materials; to study relationships of abstract form compatible with the requirements of the ceramic medium (3 cred. per qtr.; jr., sr., grad.; prereq. 45) Ar.
- Art 103f-104w-105s. Design in Industry.** The course is concerned with the analysis of products designed for industrial production, and a historical survey of design in industry, combined with practical workshop problems. The aim is to acquaint the student with the ways in which industrial processes and production techniques affect concepts of design in contemporary society.
- Art 103f. Design in Industry.** The historical development of industrial design. An evaluation, by means of research problems, of the relationship between design, function, and manufacturing processes (3 cred.; jr., sr., grad.; prereq. 53, 54, 55) Faculty
- Art 104w. Design in Industry.** Continued research and field trips investigating design in industry and the effects of mass production on the product. Practical laboratory problems in design for industry (3 cred.; jr., sr., grad.; prereq. 103) Faculty
- Art 105s. Design in Industry.** Continuation of Art 104. Leading to a final experimental problem (3 cred.; jr., sr., grad.; prereq. 104) Faculty
- Art 110-111-112f,w,s. Advanced Drawing.** Primarily for painting majors. Drawing in all media from life and from imagination. Studies of the history of drawing (3 cred. per qtr.; jr., sr., grad.; prereq. 62; may be taken at the same time as Art 70-71-72) Arnest
- Art 123f-124w-125s. Advanced Photography.** An intensive course in photographic technique and use of photography as an art medium.
- Art 123f. Advanced Photography.** Practice in use of various photographic equipment and materials, technical problems in exposure and printing, balance, lighting, and limited work in color (3 cred.; jr., sr., grad.; prereq. 85 or permission of instructor) Downs
- Art 124w. Advanced Photography.** Studio problems in experimental photography and general discussions in the field of contemporary movements in photography (3 cred.; jr., sr., grad.; prereq. 123) Downs
- Art 125s. Advanced Photography.** Assigned field problems in documentary photography treated from the standpoint of quality of design, and one major project (3 cred.; jr., sr., grad.; prereq. 124) Downs
- Art 140f,w,s. Metal Sculpture and Jewelry: Introduction to Metal Design in Jewelry.** In the creation of contemporary jewelry, the student learns the basic processes of soldering, forming, forging, engraving, chasing, and repoussé (3 cred.; jr., sr., grad.; prereq. permission of instructor) Morton
- Art 141f,w,s. Metal Sculpture and Jewelry.** Special instruction in the areas of metal sculpture, relief sculpture in repoussé, jewelry, and enameling (3 cred.; jr., sr., grad.; prereq. 140 or permission of instructor) Morton
- Art 142f,w,s. Metal Sculpture and Jewelry.** Advanced problems in metal sculpture, jewelry, or enameling (3 cred.; jr., sr., grad.; prereq. 141) Morton
- Art 150-151-152f,w,s. Problems in Painting** (Cred. ar.; jr., sr., grad.; prereq. 72 and permission of instructor) Arnest, Booth, Quirt
- Art 180-181-182f,w,s. Problems in Sculpture.** Advanced work in wood, stone, plaster, metal, and other materials of sculpture. Students work individually on projects (Cred. ar.; jr., sr., grad.; prereq. 82, 102, or 142 or permission of instructor) Rood, Tovish, Morton
- Art 190-191-192f,w,s. Problems in Printmaking.** For advanced students. Will include work in black and white and color in metal, lithographs, and wood blocks (Cred. ar.; jr., sr., grad.; prereq. 92 or permission of instructor) Myers
- Art 193f-194w-195s. Advanced Problems in Design.** A course offering the advanced student an opportunity to carry out a creative problem in design with guidance in practice and research methods. Discussions concerned with common denominators of art as they occur in commercial art, illustration, display, and museum techniques, industrial design, and also esthetic, economic, and social implications of design. (Cred. ar. up to 9; jr., sr., grad.; prereq. 9 Senior College credits in design and permission of major adviser) Faculty

For Graduate Students Only

Art 200-201-202f,w,s. Advanced Problems in Studio Work (Cred. ar.; prereq. permission of instructor) Faculty

Art 250f-251w-252s.† Thesis Seminar. Independent creative and critical research. Required of M.F.A. students. Also open to second year M.A. and Ph.D. students (Cred. ar.; prereq. permission of graduate adviser) Arnest, Booth

ASTRONOMY

Department Chairman—Willem J. Luyten

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 Math. 50, 51, 105.

(Prerequisites: Math. 6-7, or Math. 6 and at least 5 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

11f,s.* 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 nonmathematical (5 cred.; no prereq.) Luyten

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.) Luyten

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

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) Luyten

52w. Astrophysics (4 cred.; prereq. 51 or 11 and Math. 6) Luyten

53s. Stellar Astronomy (3 cred.; prereq. 51 or 11 and Math. 6) Luyten

101f. Celestial Mechanics (3 cred.; jr., sr., grad.; prereq. Math. 51) Luyten

140f.§ Least Squares (3 cred.; prereq. 51 or 11 and at least Math. 51) 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.

BACTERIOLOGY

College of Medical Sciences

Department Chairman—Jerome T. Syverton

Major Advisers in the College of Science, Literature, and the Arts—Drs. Syverton, Watson, Lichstein, Johansson, Schmidt.

Major Sequence in the College of Science, Literature, and the Arts—Bact. 53, 102, 121, and 12 additional Senior College credits in bacteriology. Zool. 51 may count as bacteriology.

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

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

‡ No student should register for this course without first consulting the instructor.

(Prerequisites: Math. 15-16; Phys. 4-5-6 [these subjects may be taken concurrently with bacteriology courses]; 10 credits in botany or zoology, 15 credits in inorganic chemistry and analytical chemistry, and 8 credits in organic chemistry; a foreign language is strongly recommended.)

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

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 Scholastic Committee. See a statement on page 24.

D.H.50w. Dairy Bacteriology (3 or 5 cred.; 3 cred. for lect., 2 cred. for lab.; soph., jr., sr.; prereq. Bact. 53; lecture may be taken separately only by permission of instructor) Olson

53f,w,s.*‡ General Bacteriology. Lectures, demonstrations, and laboratory exercises are employed for instruction in the morphology, physiology, taxonomy, and ecology of bacteria. The practical applications of these fundamental principles in other phases of science and industry are emphasized (5 cred.; soph. with a C average in the prerequisite courses, jr., sr.; prereq. 10 cred. in chemistry and 4 cred. in biological sciences or permission of instructor) Staff

102s.‡ Medical Bacteriology. The pathogenic bacteria, especially in their relationship to disease; principles of infection and immunity. For students other than medical students (5 cred.; prereq. 116) Staff

103s.§ Soil Microbiology. Studies of the bacteria, fungi, and actinomycetes of the soil, with emphasis on the biochemical activities of the soil microflora (4 cred.; jr., sr., grad.; prereq. 53, 8 cred. in organic chemistry and permission of instructor) Schmidt

104f.§ Sanitary Bacteriology. Microbiology of sewage, water, dairy, and certain other food products; analytical studies and evaluation of results. Primarily for majors and minors in bacteriology (4 cred.; jr., sr., grad.; prereq. 53 and 15 cred. in chemistry) Johansson

112f. General Mycology. (Formerly Bact. 113) A survey of the fungi with emphasis on life cycles, physiology, morphology, ecology, and economic significance (3 cred.; jr., sr., grad.; prereq. 53 and 15 cred. in chemistry) Roth

113w.¶ Actinomycetes and Yeasts. (Formerly Bact. 114) A study of the taxonomy, morphology, genetics, and ecology of the actinomycetes and yeasts; detailed consideration is given to the physiology and economic importance of these microorganisms (3 cred.; jr., sr., grad.; prereq. 112 or equiv.) Roth (Not offered 1953-54)

114s.¶ Medical Mycology. A study of the pathogenic fungi and of the mycotic infections in man and animals; special emphasis is placed on diagnostic procedures (3 cred.; jr., sr., grad.; prereq. 102) Roth (Not offered 1953-54)

115s.¶ The Fungi Imperfecti. A study of the ecology, biochemistry, nutrition, metabolism, genetics and economic role of the more important genera of the asexual fungi (3 cred.; jr., sr., grad.; prereq. 112) Roth (Offered 1953-54. Not offered 1954-55)

D.H.115s. Advanced Dairy Bacteriology (3 cred.; sr., grad.; prereq. D.H. 50, 111, or 112) Jezeski

116w. Immunology. A study of the mechanisms of the interactions between the host and the parasite. The techniques and theories of serologic procedures; laws of hemolysis, quantitative relationship between antigen and antibody; opsonins, serums, vaccines, toxin, antitoxin, complement fixation, neutralization, precipitative and agglutinative reactions, blood grouping, atopy, anaphylaxis (3 cred.; jr., sr., grad.; prereq. 53 or 105) Watson

* A course in Bact. 1, Elementary Bacteriology, is available in the Extension Division (winter quarter) for occupational therapy and dental hygiene students receiving special permission from the Department of Bacteriology.

‡ Microscope required. Students may obtain use of microscope by purchasing \$3 microscope cards from the bursar.

§ No student should register for this course without first consulting the instructor.

¶ This course is offered in alternate years.

- Pl.Path.117f. Virus Diseases of Plants.** The nature of plant viruses and types of diseases they cause; particular emphasis on methods for studying virus diseases (3 cred.; jr., sr., grad.; prereq. Pl.Path. 1 or 10) Eide
- 121f. Physiology of Bacteria.** A detailed study covering the following topics: chemical and physical structure; staining; growth; influence of environment on growth; nutrition; enzymes; metabolism. Required of all graduate students in bacteriology and open to others by permission of instructor (3 cred.; jr., sr., grad.; prereq. 53 [minimal grade of C] and 8 cred. in organic chemistry or biochemistry) Lichstein
- 122w. Physiology of Bacteria Laboratory.** Special techniques employed in the study of bacterial physiology and metabolism. Required of all graduate students in bacteriology and open to others by permission of the instructor (3 cred.; prereq. 121) Lichstein
- 123s. Bacterial Metabolism.** An advanced treatment of several broad aspects of metabolism including: enzymes; biological energy; fermentation; respiration; nitrogen metabolism; photosynthesis. Required of all graduate students in bacteriology and open to others by permission of instructor (3 cred.; prereq. 121, 122 or equiv. and introductory biochemistry) Lichstein
- 124f. Viruses and Rickettsia.** Character, nature, and transmission of viruses and rickettsia; important virus and rickettsial diseases; methods for identification and laboratory diagnosis (4 cred.; jr., sr., grad.; prereq. 102 or 105, 116) Syverton

BIOLOGY

See Natural Science, page 73.

BIOSTATISTICS

See Public Health, page 135.

BOTANY

Department Chairman—A. Orville Dahl

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

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

- One course from each of 5 of the following 6 groups:
 - Group A. Bot. 50 or 130
 - Group B. Bot. 51 or 140
 - Group C. Bot. 52
 - Group D. Bot. 53 or 121 or 119
 - Group E. Bot. 54
 - Group F. Agron.& Pl.Gen. 31 or Zool. 83
- Two quarters of organic chemistry (Chem. 61-62) or agricultural biochemistry (Ag.Biochem. 1, 3).
- One course in biological science at the Forestry and Biological Station at Itasca Park.

(Prerequisites: Bot. 1, 2, 3 [or 4, 5] and Zool. 1, 2, 3 [or 14-15] or Nat. Sci. 7, 8, 9; two quarters of inorganic chemistry [e.g., Chem. 1, 2]; Math. 15, 16 [or preferably 50]; German through Ger. 3.)

Recommended electives for botany majors: Bot. 10, 12; Pl.Path. 56; Bact. 112; Phys. 1a, 2a, 3a or 4, 5, 6 or 7, 8, 9; French through Fr. 3; P.H. 110, 111; Zool. 82; Bact. 53; Geol. 1, 2, and A, B; courses in social science or humanities.

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 the College of Science, Literature, and the Arts—Bot. 1, 2, 3, or 4, 5 or Nat. Sci. 7, 8, 9 plus 15 credits in Senior College botany courses.

† This course is offered in alternate years.

Major Adviser in the College of Education—Professor Abbe

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

For a course in General Biology, Nat.Sci. 7-8-9, see Department of General Studies, page 73.

Junior College Courses

Gen.Bot. 1-2-3, and 4-5 are not open to students who have taken General Biology (Nat.Sci. 7-8-9).

- 1f-2w-3s.* **General Botany.** A survey lecture and laboratory course on the form, structure, and functions of plants; reproduction in plants and the principles of inheritance and variation; relations of plants to environment; the principal groups of plants; and organic evolution (10 cred.; no prereq.) Hall
- 10s.‡ **Minnesota Plant Life.** A nontechnical survey of all the groups of plants native to Minnesota with special reference to identification and distribution. A course suitable for nonmajors (3 cred.; no prereq.) Staff
- 12w.‡ **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 nonmajors (3 cred.; no prereq.) Staff

Senior College Courses

Courses 50, 51, 52, 53, 54 are open to sophomores who have an average grade of at least C in Bot. 1-2-3 or 4-5 or in Nat.Sci. 7-8-9. Other Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

- 50f.s. **General Plant Ecology.** An introduction to the study of the interrelations of plants and environment, to provide a foundation for further ecological work in pure or applied fields and to provide a basis for understanding the relationships of man to biotic resources (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5 or Nat.Sci. 7-8-9) Hulbert
- 51s. **General Plant Physiology.** Introductory study of plant physiology. Emphasis on fundamental principles requisite to understanding physiological phenomena encountered in higher land plants. Cellular physiology, enzymes, respiration, fermentation, photosynthesis, mineral nutrition, water and solute metabolism, hormones, tropisms (4 cred.; jr., sr.; prereq. 1-2-3 or 4-5 or Nat.Sci. 7-8-9 and two quarters of inorganic chemistry) Frenkel
- 52f.s. **Elementary Taxonomy.** Introduction to the taxonomy of ferns and flowering plants, with representative material drawn largely from the Minnesota spring flora. The families of plants and their relationships; floral structure; taxonomic terms; nomenclature; literature; methods of collection and identification; three or four field trips (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5 or Nat.Sci. 7-8-9) Morley
- 53w. **Introductory Plant Anatomy.** The structure and development of plants with especial reference to the vascular plants (3 cred.; jr., sr.; prereq. 1-2-3 or 4-5 or Nat.Sci. 7-8-9) Abbe
- 54s. **Survey of the Plant Kingdom.** A brief consideration of evolutionary relationships throughout the plant kingdom, especially as illustrated by life histories (5 cred.; jr., sr.; prereq. 1-2-3 or 4-5 or Nat.Sci. 7-8-9) Abbe
- Pl.Path.56f. **Introduction to the Study of Fungi.** Structure, development, and identification of fungi, especially those of economic importance (3 cred.; jr., sr.; prereq. 9 cred. in botany or permission of instructor) Christensen

* 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.

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

- 106w. **A Survey of Angiosperm Families I—Lower Angiosperms.** A detailed study of the characteristics of the orders and families of flowering plants on a world-wide basis (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor; it is strongly recommended that students electing this course also elect 107s) Morley (*Offered 1953-54. Not offered 1954-55*)
- 107s. **A Survey of Angiosperm Families II—Higher Angiosperms.** (See 106w) (3 cred.; jr., sr., grad.; prereq. 106) Morley (*Offered 1953-54. Not offered 1954-55*)
- 108f. **Pteridophytes.** The classification of living ferns and fern allies with special attention to temperate North America; terminology; keys; geographic distribution; distinguishing characters of families, genera, and species (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Ownbey (*Offered 1953-54. Not offered 1954-55*)
- 110f. **Gymnosperms.** A survey of the taxonomy and phylogeny of the gymnosperms with special emphasis on living representatives (3 cred.; jr., sr., grad.; prereq. 52 or 54 or permission of instructor) Ownbey (*Not offered 1953-54. Offered 1954-55*)
- Bact.112f. **General Mycology** (Formerly Bact. 113) (3 cred.; jr., sr., grad.; prereq. Bact. 53 and 15 cred. in chemistry) Roth
- 112w. **Aquatic Flowering Plants.** A study of the higher plants of aquatic and marsh habitats. Identification; adaptive morphology and food value to wildlife (3 cred.; jr., sr., grad.; prereq. 10 cred. in botany, zoology, or biology, or permission of instructor) Ownbey
- 113f. **Fall Flora of Minnesota.** A survey of the flowering plants of the state with particular reference to the fall flora of the local area. Collection and identification of species and their distribution in Minnesota; three field trips (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Morley
- 114w. **Principles of Angiosperm Phylogeny.** A study of evolutionary relationships and the various means of judging them within the Angiosperms. Laboratory investigation of representative and critical groups (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Morley (*Not offered 1953-54. Offered 1954-55*)
- 115s. **Spring Flora of Minnesota.** A survey of the flowering plants of Minnesota. The use of keys and taxonomic descriptions; collection, preparation, and identification of the spring flora of the local area. Three field trips (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Ownbey
- 116su. **Summer Flora of Minnesota.** Offered only at Itasca Forestry and Biological Station (4 cred.; jr., sr., grad.; prereq. 10 cred. in botany or zoology or permission of instructor) Ar
117. **Floristic Plant Geography** (5 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) (*Not offered*)
- 113w. **Extranuclear Cytology.** A detailed study of the structure of protoplasm, cytoplasmic constituents, and the cell wall in the light of their chemical and physical properties (3 cred.; jr., sr., grad.; prereq. 10 cred. in botany, zoology, or biology or permission of instructor) Dahl
- 119f. **Nuclear Cytology.** The nonmitotic nucleus, mitosis, meiosis, and the bearing of chromosome behavior on genetics, taxonomy, sex, and the life cycles of plants (3 cred.; jr., sr., grad.; prereq. 10 cred. in botany, zoology, or biology and an elementary course in genetics or permission of instructor) Dahl
- 120s. **Research Methods in Cytology.** Principles and practice in preparing materials for cytological investigation; methods of investigating such preparations and presenting the results (3 to 5 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5 or Nat.Sci. 7-8-9, 118 or 119, and permission of instructor) Dahl, Hansen (*Not offered 1953-54. Offered 1954-55*)
- 121f. **Developmental Anatomy.** The microscopic structure of vascular plants with particular attention to development in the root, stem, and leaf (5 cred.; jr., sr., grad.; prereq. 10 cred. in botany or biology) Abbe
- 123s. **Research Methods in Histology.** Principles and practice of preparing materials for histological investigation; methods of investigating such preparations and presenting the results (3 to 5 cred.; jr., sr., grad.; prereq. 1-2-3 or 4-5 or Nat.Sci. 7-8-9, 121 or 125 and permission of instructor) Abbe, Hansen (*Offered 1953-54. Not offered 1954-55*)
- 125w. **Morphogenesis.** A consideration of the development of form and structure in ontogeny and phylogeny, with especial attention to the phenomena and genetical factors involved (5 cred.; jr., sr., grad.; prereq. 10 cred. in botany or biology) Abbe (*Not offered 1953-54. Offered 1954-55*)
- 127w. **Morphology of Vascular Plants.** A detailed consideration of the evolutionary interrelationships of the vascular plants (5 cred.; jr., sr., grad.; prereq. 10 cred. in botany or biology) Abbe (*Offered 1953-54. Not offered 1954-55*)

- 128s. Introduction to Paleobotany.** The identification and structure of fossil plants. Emphasis on stratigraphic correlation of plant remains and on the relationship of fossil plants to modern groups (3 cred.; jr., sr., grad.; prereq. 54 or permission of instructor) Hall
- 130f.s. General Plant Ecology.** An introduction to the study of the interrelations of plants and environment, to provide a foundation for further ecological work in pure or applied fields, and to provide a basis for understanding the relationships of man to biotic resources (3 cred.; sr., grad.; prereq. 10 cred. in botany or biology) Hulbert
- 131f. Field Ecology.** A survey of the local plant communities and their development, and a study of the general principles of plant association and succession; 12 field trips (5 cred.; jr., sr., grad.; prereq. 50 or 130 or For. 3, 4) Lawrence
- 132. Morphological Ecology.** The vegetative body of the plant in relation to environment. A survey of evolutionary adaptation in the plant kingdom (5 cred.; jr., sr., grad.; prereq. 50 or 130 or For. 3, 4) (*Not offered*)
- 133s. Ecological Plant Geography.** Preliminary discussion of ecological principles in plant distribution followed by a detailed study of the vegetation regions of North America (5 cred.; jr., sr., grad.; prereq. 50 or 130 or For. 3, 4) Lawrence
- 134f. Research Methods in Ecology.** Theory and practice of instrumental study of the habitat and of precise investigation of community and succession; 8 field trips (5 cred.; jr., sr., grad.; prereq. 18 cred. in plant science including 50 or 130 and permission of instructor) Lawrence
- 136su. Organism, Microclimate and Weather.** Offered only at Itasca Forestry and Biological Station (4 cred.; jr., sr., grad.; prereq. 10 cred. in biology, botany, or zoology; a course in physics is recommended) Ar.
- 137s. Experimental Ecology.** Ecological life histories, field manipulation of plants and communities, measurement and presentation of results (5 cred.; jr., sr., grad.; prereq. 18 cred. in plant science including 50 or 130, 51 and permission of instructor) Hulbert
- 140f. Advanced Survey of Plant Physiology.** Advanced study of major topics in plant physiology. Cell physiology including: membrane phenomena, enzyme catalysis, respiration, fermentation, and photosynthesis; mineral nutrition; water metabolism; translocation of solutes; growth; hormones; tropisms. Students registering for 5 credits will take laboratory work in the use of modern methods and apparatus for physiological research. Students who have had Bot. 51 should not enroll in 140 (3 or 5 cred.; jr., sr., grad.; prereq. an elementary course in botany, zoology, or biology, or permission of instructor; a course in organic chemistry or biochemistry) Brown
- 154. Spectroscopy and Photochemistry Applied to Biology** (3 to 5 cred.; jr., sr., grad.) (*Not offered*)
- 155su. Fresh-water Algae.** Offered only at Itasca Forestry and Biological Station (4 cred.; jr., sr., grad.; prereq. 10 cred. of biology or permission of instructor) Ar.
- 157su. Bryophytes and Pteridophytes.** Offered only at Itasca Forestry and Biological Station (4 cred.; jr., sr., grad.; prereq. 10 cred. of biology or permission of instructor) Ar.
- 165s. Introduction to Pollen Analysis.** The ontogeny, comparative morphology, and identification of pollen grains; preparation of reference collections, applications of pollen analysis to allergy, ecology, and phylogeny; practice in atmospheric analysis (3 cred.; jr., sr., grad.; prereq. permission of instructor) Dahl (*Offered 1953-54. Not offered 1954-55*)
- 170f. Water Relations of Plants.** Study of colloidal phenomena, diffusion, osmosis, and characteristics of living membranes. Cell water relations. Phenomena of absorption, transport, and transpiration of water and translocation of solutes in higher plants (3 cred.; sr., grad.; prereq. 51 or 140, 20 cred. in chemistry or agricultural biochemistry, and Phys.Chem. 101, 102, 103 or 107-108, or permission of instructor; for laboratory see course 173) Brown, Frenkel (*Not offered 1953-54. Offered 1954-55*)
- 171w. Mineral Nutrition of Plants.** A study of the chemical elements necessary for plant nutrition and of their role in normal metabolism. Relationship of nutritional factors to other physiological processes. Deficiency and toxicity of mineral elements (3 cred.; sr., grad.; prereq. 51 or 140, 20 cred. in chemistry or agricultural biochemistry, and permission of instructor; for laboratory see course 174) Brown, Frenkel (*Not offered 1953-54. Offered 1954-55*)

- 172s. **Plant Growth.** Study of hormonal physiology. Consideration of external factors influencing growth. Study of dormancy, germination, growth periodicities, movement of plants, and physiology of reproduction (3 cred.; sr., grad.; prereq. 51 or 140, 20 cred. in chemistry or agricultural biochemistry or permission of instructor; for laboratory see course 175) Brown, Frenkel (*Not offered 1953-54. Offered 1954-55*)
- 173f-174w-175s. **Advanced Physiology Laboratory** (2 cred. per qtr.; sr., grad.; to be taken with or after 170, 171, 172 respectively) Brown, Frenkel (*Not offered 1953-54. Offered 1954-55*)
- 176f. **Plant Respiration.** A study of the biochemical mechanism of carbohydrates degradation in plants with emphasis on fundamental aspects of biological oxidation (3 cred.; sr., grad.; prereq. 51 or 140, 20 cred. in chemistry or agricultural biochemistry, Phys. Chem. 101, 102, 103 or 107-108, or permission of instructor; for laboratory see course 179) Brown, Frenkel (*Offered 1953-54. Not offered 1954-55*)
- 177w. **Photosynthesis.** A detailed survey of the present state of knowledge of the photosynthesis of organic matter by plants (3 cred.; sr., grad.; prereq. 51 or 140, 20 cred. in chemistry or agricultural biochemistry, Phys. Chem. 101, 102, 103 or 107-108, or permission of instructor; for laboratory see course 180) Brown, Frenkel (*Offered 1953-54. Not offered 1954-55*)
- 178s. **Nitrogen Metabolism of Plants.** Conversion of inorganic nitrogen compounds into organic compounds. Nitrogen fixation. Interrelation with other metabolic processes of plants (3 cred.; sr., grad.; prereq. 51 or 140, 20 cred. in chemistry or agricultural biochemistry or permission of instructor; for laboratory see course 181) Brown, Frenkel (*Offered 1953-54. Not offered 1954-55*)
- 179f-180w-181s. **Advanced Physiology Laboratory** (2 cred. per qtr.; sr., grad.; to be taken with or after 176, 177, 178 respectively) Brown, Frenkel (*Offered 1953-54. Not offered 1954-55*)
- 185w. **Physiology of Algae.** The isolation and culture of algae. Emphasis on the use of pure cultures of algae for studies in the fields of respiration, intermediary metabolism, and photosynthesis (2-5 cred.; jr., sr., grad.; prereq. 51 or 140 or permission of instructor) Frenkel (*Not offered 1953-54. Offered 1954-55*)
- 197f-198w-199s. **Problems.** Advanced work in a specialized field (1 to 5 cred. per qtr.; jr., sr., grad.; prereq. 20 cred. in natural science and permission of instructor) Ar.

For Graduate Students Only

- 201f-202w-203s. **Research Problems in the Morphology of Vascular Plants.** Abbe
- 205f-206w-207s. **Research Problems in Taxonomy and Floristic Plant Geography.** Ownbey, Morley
- 209f-210w-211s. **Research Problems in Paleobotany.** Hall
- 221f-222w-223s. **Research Problems in Ecology.** Lawrence, Hulbert
- 225f-226w-227s. **Research Problems in Plant Physiology.** Brown, Frenkel
- 229f-230w-231s. **Research Problems in Cytology.** Dahl
- 240f-241w-242s. **Seminar in Morphology.** Abbe
- 243f-244w-245s. **Seminar in Taxonomy.** Ownbey, Morley
- 246f-247w-248s. **Seminar in Paleobotany.** Hall
- Agron. & Pl. Gen. 247w. **Cytogenetics** (3 cred.; prereq. Bot. 119) Burnham
- 249f-250w-251s. **Seminar in Ecology.** Lawrence, Hulbert
- 252f-253w-254s. **Seminar in Plant Physiology.** Brown, Frenkel
- 255f-256w-257s. **Seminar in Cytology.** Dahl

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:

- Agron. and Pl. Gen. 31, Principles of Genetics
 Pl. Path. and Ag. Bot. 1, Plant Pathology
 Pl. Path. and Ag. Bot. 56, Introduction to the Study of Fungi

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 *Bulletin of the College of Agriculture, Forestry, and Home Economics*.

CHEMISTRY

Institute of Technology

Department Chairman—Lloyd H. Reyerson

Major Advisers in the College of Science, Literature, and the Arts—Associate Professors Heisig, Herr.

Major Sequence in the College of Science, Literature, and the Arts—Anal.Chem. 1-2; Org.Chem. 61, 62, 63 and 64; Phys.Chem. 101-102-103 with appropriate amount of laboratory in Phys.Chem. 104-105-106.

(Prerequisites: Inorg.Chem. 13 with its prerequisites Inorg.Chem. 9, 10, and 12 or their equivalent; Phys. 7-8-9; mathematics through differential and integral calculus.)

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

In addition to the courses required for the major sequence, Arts students majoring in chemistry are advised to take 8 credits in advanced courses in chemistry, 2 credits of which are to be in laboratory work. These additional courses will enable the student to meet the minimum requirements set for the Bachelor's degree by the American Chemical Society. Two full years of chemistry are required for admission to these courses.

Students majoring in chemistry are advised to arrange their work so that they can take physical chemistry in the junior year and they must take sufficient courses in German to give a reading knowledge of the chemical literature.

Major Adviser in the College of Education—Professor P. O. Johnson.

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

Note—Anal.Chem. 1-2, 7 and all courses numbered above 50 count as Senior College courses.

INORGANIC CHEMISTRY

1f,w-2w,s,† General Inorganic Chemistry. Study of the general laws of chemistry and of the nonmetals and metals and their compounds (4 cred. per qtr.; no prereq.)

1f-2w. Sec. 1 (Primarily for premedical, pre dental, and medical technology students)

Pervier; **Sec. 2** (For S.L.A., agriculture, mines, and education students) Pray

1w-2s. (Primarily for agriculture, engineering, and S.L.A. students) Pray

4f-5w,† General Inorganic Chemistry. Study of the general laws of chemistry and of the nonmetals and metals and their compounds. More intensive than course 1-2 (4 cred. per qtr.; prereq. entrance cred. in chemistry) **Sec. 1** (For premedical, medical technology, S.L.A., and education students) Maynard; **Sec. 2** (For pre dental, nursing education, public health nursing, and education students) Brasted; **Sec. 3** (For agriculture and mines students) Johnson

6f,w-7w,s,† General Inorganic Chemistry. Study of the general laws of chemistry and of the nonmetals, metals, and their compounds (5 cred. per qtr.; no prereq.)

6f-7w. (Primarily for chemistry, pharmacy, and S.L.A. students) O'Brien

6w-7s. (Primarily for chemistry, pharmacy, and S.L.A. students) Johnson

9f-10w,† General Inorganic Chemistry. Study of general laws of chemistry and of nonmetals, metals, and their compounds (5 cred. per qtr.; prereq. entrance cred. in chemistry) (Primarily for chemistry and S.L.A. chemistry majors) Sneed

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

- 11f. **Semimicro Qualitative Analysis.** Laboratory work in systematic qualitative analysis of the cations with lectures on solutions, ionization, chemical and physical equilibria, oxidation and reduction, etc. (4 cred.; prereq. 2, 5, 7, or 10) Hugus
- 11s. **Semimicro Qualitative Analysis** (See 11f) Sec. 1 (For premedical, pre dental, medical technology, and education students) Pervier; Sec. 2 (For S.L.A., mines, and education students) Heisig; Sec. 3 (For premedical, medical technology, S.L.A., and education students) Maynard; Sec. 4 (For pre dental, nursing education, and public health nursing students) Brasted
- 12f. **Semimicro Qualitative Analysis.** Laboratory work in systematic qualitative analysis of the cations with lectures on solutions, ionization, chemical and physical equilibria, oxidation and reduction, etc. (5 cred.; prereq. 2, 5, 7, or 10; for chemistry and S.L.A. chemistry majors) Brasted
- 12s. **Semimicro Qualitative Analysis** (See 12f) (For chemistry, pharmacy, and S.L.A. chemistry majors) Sneed, O'Brien
- 13f. **Semimicro Qualitative Analysis.** Laboratory work in systematic qualitative analysis of the anions with lectures on solutions, ionization, chemical and physical equilibria, oxidation and reduction, etc. (5 cred.; prereq. 12; for chemistry and S.L.A. chemistry majors) Heisig
- 53f-53w-54s. **Seminar: Modern Problems in Inorganic Chemistry** (1 cred. per qtr.; sr.; prereq. permission of instructor) Staff
- 96f-97w-98s. **Senior Thesis** (5 cred. per qtr.) Staff
- 102s. **Semimicro Qualitative Analysis.** A course designed to acquaint the student with the universally applicable method and underlying principles in the identification of the more common cations by use of drop reactions on spot plate and filter paper, and separation by use of the centrifuge (3 cred.; jr., sr., grad.; prereq. Anal.Chem. 1-2) Heisig
- 103f-104w-105s. **Advanced Inorganic Chemistry.** 103: Atomic structure and the properties of elements based thereon. 104: Chemistry of the more representative elements. 105: Coordination compounds (3 cred. per qtr.; jr., sr., grad.; prereq. Anal.Chem. 1-2 and Org.Chem. 62) O'Brien, Brasted, Maynard
- 106w-107s. **Chemistry of the Less Familiar Elements** (3 cred.; jr., sr., grad.; prereq. Anal. Chem. 1-2 and Org.Chem. 62) O'Brien, Hugus (106 not offered 1953-54. Offered 1954-55)
- 108s. **Nonaqueous Systems.** A study of principal nonaqueous systems—both protonic and aprotic systems. Theories of Bronsted, Lewis, and Usanovich are considered in detail (3 cred.; jr., sr., grad.; prereq. Anal.Chem. 1-2 and Org.Chem. 62) Pray
- 109w. **Synthetic Inorganic Chemistry.** Methods of preparation and purification of inorganic compounds of special interest. Current literature (3 to 5 cred. per qtr.; jr., sr., grad.; prereq. Org.Chem. 63) Heisig
- 111f. **Silicon and Related Elements.** Review of current studies on boron, silicon, germanium, tin, and lead, with emphasis on recent silicon chemistry (3 cred.; jr., sr., grad.; prereq. Anal.Chem. 1, 2, Org.Chem. 62) Johnson
- 161f. **Nuclear Chemistry and Radioactivity.** The properties of nuclei, disintegration, properties of radiations; natural and artificial radioactivity; modern views of nuclear structure (3 cred.; jr., sr., grad.; prereq. 103) O'Connor

For Graduate Students Only

- 134f-135w-136s. **Seminar.** Modern problems in inorganic chemistry (1 cred. per qtr.) Staff
- 231f,w,s. **Radioactivity Laboratory.** Use and standardization of electroscopes and Geiger-Muller tubes; radioactive measurements; chemistry of trace quantities (1 or 2 cred.; must be preceded or accompanied by 161) O'Connor
- 260f. **Survey of Inorganic Chemistry.** A course of independent reading required of all candidates for the Ph.D. degree in chemistry. Examination by the end of the fall quarter of the second year in residence (1 cred.; prereq. permission of division) Staff
- 262w. **Radioactivity Seminar** (3 cred.) O'Connor
- 301f-302w-303s. **Research in Inorganic Chemistry.** (Cred. ar.) O'Connor, Sneed, Heisig, Maynard, O'Brien, Brasted, Johnson, Pray

ANALYTICAL CHEMISTRY

- 1w-2s.* **Quantitative Analysis.** Introductory courses covering the general principles and methods of quantitative analysis. Typical problems are assigned and attention is given to proper laboratory practice. 1: Gravimetric analysis. 2: Volumetric analysis (5 cred. per qtr.; soph., jr., sr.; prereq. Inorg.Chem. 13) Meehan

* Course 2s may precede 1w, if necessary.

- 7f. Quantitative Analysis.** Introductory course covering the general principles and methods of quantitative analysis, both gravimetric and volumetric. Typical problems are assigned and attention is given to proper laboratory practice (4 cred.; primarily for premedical students; prereq. Inorg.Chem. 11 or 12) Meehan and ar.
- 7s. Quantitative Analysis.** (See 7f) (Primarily for premedical students) Ar.
- 9w. Quantitative Analysis.** A short introductory course covering general principles of quantitative analysis, both gravimetric and volumetric. Typical problems are assigned and attention is given to proper laboratory practice (3 cred.; primarily for dentists, engineers, and miners; prereq. Inorg.Chem. 11 or 12) Ar.
- 96f-97w-98s. Senior Thesis** (5 cred. per qtr.) Kolthoff, Sandell, Meehan
- 101w-102s. Quantitative Analysis.** General principles, methods, and procedure of quantitative analysis, both gravimetric and volumetric. Typical problems are assigned and attention is given to proper laboratory practice (5 cred. per qtr.; jr., sr., grad.; prereq. Inorg.Chem. 13) Meehan
- 103s. Quantitative Inorganic Microanalysis.** Representative methods of micro- and semi-microgravimetric, volumetric, and colorimetric analysis (3 cred.; jr., sr., grad.; prereq. 1-2) 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. 1-2) Sandell
- 105w. Polarizing Microscope.** Its use and application to chemistry. Identification of substances (3 cred.; jr., sr., grad.; prereq. Phys.Chem. 101) Sandell
- 106f-107w-108s. General Technical Analysis.** Analysis of commercially important materials such as iron, steel, nonferrous alloys, ores, and glass; use of microscope in technical problems, quantitative analysis of heterogeneous mixtures, particle size determinations (2 or 3 cred.; jr., sr., grad.; prereq. 1-2) Sandell
- 109f,w,s. § Rock Analysis.** Laboratory course covering the technique of rock analysis (3 cred.; jr., sr., grad.; prereq. 1-2) Goldich
- 122s. Advanced Analytical Chemistry.** A condensed review of modern fundamentals of gravimetric and volumetric analysis (2 cred.; jr., sr., grad.; prereq. 1-2) Meehan
- 123f. Advanced Analytical Chemistry.** Analysis of complex materials by modern methods (3 cred.; jr., sr., grad.; prereq. 1-2 or permission of instructor) Meehan
- 127f. Optical Methods in Analytical Chemistry** (2 cred.; prereq. Phys.Chem. 103) Meehan
- 131f. Application of Indicators in Neutralization Reactions and pH Determinations** (3 cred. with lab., 2 cred. without lab.; jr., sr., grad.; prereq. 1-2 and Phys.Chem. 103) Kolthoff
- 132w. Electrometric Measurements and Titrations.** Application of potentiometric and conductometric methods in analytical work (3 cred. with lab., 2 cred. without lab.; jr., sr., grad.; prereq. 1-2 and Phys.Chem. 103) Kolthoff
- 133s. Voltammetry and Amperometric Titrations—Lecture course.** A discussion of the use of the dropping mercury electrode (polarograph) and the platinum microelectrode in pure and applied chemistry (2 cred.; jr., sr., grad.; prereq. 1-2 and Phys.Chem. 103) Kolthoff
- 134f,w,s. Voltammetry and Amperometric Titrations—Laboratory course** (2 cred.; jr., sr., grad.; prereq. credit in or registration in 133) Kolthoff
- 135f-136w-137s. Seminar: Modern Problems in Analytical Chemistry** (1 cred. per qtr.; sr., grad.; prereq. 1-2, and Phys.Chem. 103) Kolthoff
- 138s. Advanced Volumetric Analysis** (3 cred.; jr., sr., grad.; prereq. 131) Kolthoff
- 140w. Water Analysis.** Analysis of potable water with interpretation of results (2 cred.; jr., sr., grad.; prereq. 1-2) Sandell

For Graduate Students Only

- 201f-202w-203s. Selected Topics in Analytical Chemistry** (3 cred. per qtr.; prereq. 1-2 and 123) Kolthoff
- 262f. General Survey of Analytical Chemistry.** A course of independent reading under the guidance of the staff. This course is prerequisite to candidacy for the Ph.D. degree in any field of chemistry and must be completed by the end of the fall quarter of the second year of residence (1 cred.; prereq. permission of instructor) Kolthoff
- 301f-302w-303s. Research in Quantitative Analysis** (Cred. ar.) Kolthoff, Sandell, Meehan

§ Registration limited. Permission of instructor must be obtained.

ORGANIC CHEMISTRY

- 61f-62w.† Elementary Organic Chemistry.** Discussion of important classes of organic compounds, both aliphatic and aromatic together with some heterocyclic compounds. Laboratory work includes the preparation of typical substances (4 cred. per qtr.; for chemistry, chemical engineering, premedical, pre dental, and pharmacy students; prereq. 12-15 cred. in chemistry) Fenton, Noland
- 61w-62s.† Elementary Organic Chemistry** (See 61f-62w) Koelsch
- 63f,s. Elementary Organic Chemistry**—Lecture course. Continuation of 61-62 (3 cred.; open to all except premedical, pre dental, and pharmacy students; 63 is prerequisite to all other advanced courses in organic chemistry; prereq. 62) Parham
- 64f,s. Elementary Organic Chemistry**—Laboratory course. Preparation of typical substances (3 cred.; must be accompanied or preceded by 63; 64 is prerequisite to all other advanced courses in organic chemistry) Parham
- 96f-97w-98s. Senior Thesis.** This course may be taken with any member of the Organic Chemistry Division staff (5 cred. per qtr.; sr.; prereq. 63-64 or equiv.) Staff
- 101w. Intermediate Organic Chemistry.** A survey course in which are considered important modern topics such as unusual types of aliphatic, aromatic and heterocyclic compounds, natural products, and industrial processes (3 cred.; jr., sr., grad.; prereq. 14 cred. in organic chemistry) Lauer
- 102f. Organic Chemistry.** Characterization of organic compounds (elementary course). An introduction to the methods of organic qualitative analysis (4 cred.; jr., sr., grad.; prereq. one year of organic chemistry; registration limited, permission of instructor must be obtained) Fenton
- 105f-106w-107s. Advanced Organic Chemistry.** Advanced descriptive course covering the field of organic chemistry, together with an introduction to the literature of organic chemistry. Lectures and outside reading. Ability to read German is assumed (3 cred. per qtr.; jr., sr., grad.; prereq. 63 and 64 or equiv.) Smith
- 108su. Physical Techniques in Organic Chemistry.** Discussion of physical methods as applied to the identification and structural analysis of organic compounds (3 cred.; jr., sr., grad.; prereq. 63 or equiv.) Fenton
- 110f. Advanced Organic Qualitative Analysis** (4 cred.; prereq. 102 or equiv.; registration limited, permission of instructor must be obtained) Koelsch
- 116w. Heterocyclic Compounds.** Discussion of typical classes of heterocyclic compounds, their chemical and physical properties and uses, and the ring closures leading to heterocycles (3 cred.; prereq. 63 and 64) Parham (*Offered 1953-54. Not offered 1954-55*)
- 130s. Organic Quantitative Analysis.** Methods of proximate and ultimate analysis of organic compounds, with special attention to semimicro methods (3 cred.; prereq. 63 and 64 and Anal.Chem. 1 and 2; registration limited, permission of instructor must be obtained) Lauer
- 139f,w,s. Advanced Organic Chemistry Laboratory Work.** Selected laboratory problems of an advanced nature, including some original work (2 to 5 cred.; prereq. 63 and 64; 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) Noland
- 140f,w. Aromatic Compounds.** Discussion of the chemistry of typical aromatic compounds including derivatives of benzene, naphthalene, anthracene, phenanthrene, and other polynuclear hydrocarbons, together with the 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. 63 and 64) Koelsch, Parham (*140f offered 1953-54. 140w offered 1954-55*)
- 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. 63 and 64) Koelsch (*Not offered 1953-54. Offered 1954-55*)
- 142s. The Chemistry of Natural Products.** Discussion of the organic chemistry of important classes of natural products (3 cred.; prereq. 63 and 64) Fenton (*Offered 1953-54. Not offered 1954-55*)
- 151f-152w-153s. Organic Chemistry Seminar** (1 cred. per qtr.; sr.; prereq. permission of instructor) Staff

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

For Graduate Students Only

- 201f-202w-203s. Organic Chemistry Seminar** (1 cred. per qtr.; required of all graduate students taking major work in organic chemistry) Staff
- 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) Lauer
- 212s. 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) Arnold, Fenton
- 261f. General Survey of Organic Chemistry.** A course of independent reading under the guidance of the staff. This course is a prerequisite to candidacy for the Ph.D. degree in any field of chemistry and must be completed by the end of the fall quarter of the second year in residence (1 cred.; prereq. permission of instructor) Smith
- 301f-302w-303s. Research in Organic Chemistry.** (Cred. ar.; prereq. 102 or 110 and permission of division) Staff

PHYSICAL CHEMISTRY

- 96f-97w-98s. Senior Thesis** (5 cred. per qtr.) Staff
- 101f-102w-103s. Physical Chemistry.** A general survey of the subject (3 cred. per qtr.; jr., sr., grad.; prereq. Anal.Chem. 1 and 2, Phys. 7-8-9 and mathematics through differential and integral calculus; 101 is prereq. to 102 and 102 is prereq. to 103) Crawford, Prager
- 104f-105w-106s. Physical Chemistry Laboratory** (To accompany or follow 101-102-103) (1 or 2 cred. per qtr.) Lumry
- 107f-108w. Elementary Physical Chemistry** (3 cred. per qtr.; for premedical students only; prereq. two years college chemistry, one year college physics and Math. 15-16 or 6-7) Lipscomb, Wertz
- 110f. Experimental Research Techniques I.** Physical manipulations, including use of tools and machines as well as a course in glass blowing with demonstrations and practice (2 or 3 cred.; jr., sr., grad.; prereq. 103 and permission of instructor) Wertz (*Offered 1953-54. Not offered 1954-55*)
- 111w. Experimental Research Techniques II.** Materials of research, high vacuum technique, characteristics of thermionic tubes, rectifiers, amplifiers, oscillators, photocells (2 or 3 cred.; jr., sr., grad.; prereq. 110 and permission of instructor) Wertz (*Offered 1953-54. Not offered 1954-55*)
- 112s. Advanced Physicochemical Experiments.** Precise measurements in various fields such as thermochemistry, conductance, surface tension, magnetic susceptibility, dielectric constant, characteristics of the photographic plate, and ionization potentials of a gas (2 or 3 cred.; jr., sr., grad.; prereq. 111 and permission of instructor) Wertz (*Offered 1953-54. Not offered 1954-55*)
- 116f. Thermodynamics and Chemistry.** A detailed study of the principles of thermodynamics and their application to physical and chemical phenomena (4 cred.; prereq. 103 and calculus) Wertz, Lumry
- 117w,s. Fundamentals of Reaction Kinetics.** Empirical analysis of rate measurements, collision theory, transition state theory, chain reactions (3 cred.; jr., sr., grad.; prereq. 103) Livingston (*117w offered 1954-55. 117s offered 1953-54*)
- 118w,s. Advanced Physical Chemistry.** Methods of determining molecular structure with simple applications. Chemical and physical properties in terms of the nature of chemical bonds (3 cred.; jr., sr., grad.; prereq. 103) Crawford (*118w offered 1953-54. 118s offered 1954-55*)
- 120s. Photochemistry.** General survey, including a discussion of spectroscopy, with particular reference to the visible and ultraviolet absorption spectra of molecular gases (3 cred.; jr., sr., grad.; prereq. 103 and Phys. 9) Livingston (*Not offered 1953-54. Offered 1954-55*)
- 128f. Colloid Chemistry.** The fundamental principles of colloid chemistry, surface chemistry, electrokinetic phenomena, lyophobic and lyophilic colloids (3 cred.; jr., sr., grad.; prereq. Phys.Chem. 103) Reyerson

- 129w. **Adsorption and Catalysis.** The fundamental principles of adsorption at the different interfaces and the application of these principles to heterogeneous catalysis (3 cred.; jr., sr., grad.; prereq. 128) Reyerson
- 130s. **Colloids in Industry.** The important applications of colloid chemistry to many of the fields of chemical industry (3 cred.; jr., sr., grad.; prereq. 128) Reyerson (*Not offered 1953-54. Offered 1954-55*)
- 131s. **Colloidal Processes.** A survey of the important colloidal processes; coagulation, sol-gel transformation, thixotropy and dilatancy (3 cred.; jr., sr., grad.; prereq. 128) Reyerson (*Offered 1953-54. Not offered 1954-55*)
- 132f-133w-134s. **Colloid Chemistry Laboratory** (1 or 2 cred.; jr., sr., grad.; prereq. 128) Reyerson
- 150f-151w-152s. **Physical Chemistry Seminar** (1 cred. per qtr.; sr.; prereq. permission of instructor) Livingston
- 180f-181w. **Experimental Techniques in Physical Chemistry.** This course is primarily designed for physical chemistry minors and others interested in the properties of molecules related to optical and infrared spectra, refractive index, polarimetry, diffraction analysis, and other related experimental techniques (1 cred. per qtr.; prereq. permission of instructor) Livingston (*Not offered 1953-54. Offered 1954-55*)

For other courses in physical chemistry see the *Bulletin of the Institute of Technology*.

AGRICULTURAL BIOCHEMISTRY

Students in this college may elect courses in agricultural biochemistry by arrangement with the department. See the *Bulletin of the College of Agriculture, Forestry, and Home Economics*. Particular attention is called to the special sequence in food technology.

CHILD WELFARE

Institute of Child Welfare

Department Chairman—John E. Anderson

Advisers in the College of Science, Literature, and the Arts—Professors Anderson, Harris, Roff; Associate Professor Templin.

Major Advisers in the College of Education—Professor Anderson and Associate Professor Fuller.

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

Junior College Courses

- 10s. **Introduction to Child Study.** Orientation in child development through a survey of the preschool, parent education, and mental health approaches (2 cred.; 3rd qtr. fr., soph.; no prereq.) Cummings
- 40f.* **Child Training.** Development and training of young children. Observations in the demonstration schools (3 cred.; soph., jr., sr.; prereq. Psy. 1-2) Fuller
- 40w.* **Child Training** (See 40f) Fuller, Peterson
- 40s.* **Child Training** (See 40f) Fuller

Note—See also Family Life 25f,w,s (Child Development and Adjustment) under General Studies, page 71.

Senior College Courses

Course 80 is open to sophomores who have an average grade of at least C in Psy. 1-2. Other Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

* Not open to Home Economics students, who should take H.E.Ed. 90, which is offered fall and spring on the St. Paul Campus. See program of the College of Education.

- 80f,w,s. **Child Psychology.** A science of child development and its applications (3 cred.; jr., sr.; prereq. Psy. 1-2) Harris (f,w), Templin (s)
- 130f. **Motor, Linguistic, and Intellectual Development of the Child.** Interpretation of the scientific literature (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.) Anderson and staff
- 131w. **Personality, Emotional, and Social Development of the Child.** Interpretation of the scientific literature (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.) Anderson and staff
- 132s. **Later Childhood and Adolescence.** Growth; mental, social, emotional, and personality development (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.) Harris
- 140f,w. **Behavior Problems in Younger Children.** Types, origin, development and treatment (2 cred.; sr., grad.; prereq. 12 cred. in psychology, educational psychology, or sociology) Blodgett
- 141w,s. **Behavior Problems in Older Children and Adolescents.** Types, origin, development, and treatment (2 cred.; sr., grad.; prereq. 12 cred. in psychology, educational psychology, or sociology) Blodgett
- 142s. **Psychology of Atypical Children.** Physical and mental deviations and handicaps; personal, social, and vocational adjustment (3 cred.; sr., grad.; prereq. 12 cred. in psychology) Blodgett
- 143f. **Problems of Mental Deficiency.** Diagnosis, care, training; social and vocational problems; legal aspects (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.) Blodgett
- 150f-151w-152s. **Childhood Education.** 150: History and philosophy. 151: Organization and administration. 152: Methods and materials (2 cred. per qtr.; sr., grad.; prereq. 12 cred. in psychology or equiv.) Fuller
- 160w. **Physical Growth and Development.** From early fetal life to maturity (3 cred.; sr., grad.; prereq. 12 cred. in psychology or equiv.) Roff
- 166f. **Maturity and Aging.** Developmental changes in the aging and aged; adjustment and care (2 cred.; sr., grad.; prereq. 15 cred. in psychology, education, or sociology) Anderson
- 170w. **Parent Education.** Programs, materials, methods, organization, and administration. Demonstrations of group procedures (3 cred.; sr., grad.; prereq. 15 cred. in child welfare or home economics or education or psychology or sociology or public health) Cummings
- 185s. **Children in a Changing World.** Effects of social change, depressions, wars, and catastrophes upon children (3 cred.; sr., grad.; prereq. 12 cred. in psychology, educational psychology, or sociology) Templin
- 190s. **Use and Interpretation of Tests for Children.** Survey of mental tests for social worker, teacher, etc. (2 cred.; sr., grad.; prereq. 12 cred. in psychology, educational psychology, or sociology) Roff

For Graduate Students Only

- 200f,w. **Observation and Study of Children** (1 cred.) Harris and staff
- 210s. **Advanced Developmental Psychology** (3 cred.; prereq. 130-131 or equiv. and permission of instructor) Anderson
- 220f-221w-222s. **Seminar in Current Research** (1 cred. per qtr.) Roff
- 223f-224w-225s. **Seminar in Developmental Theory** (1 cred. per qtr.; prereq. permission of instructor) Anderson
- 226s. **Seminar in Projective Methods with Children and Adolescents** (2 cred.; prereq. permission of instructor) Harris
- 227s. **Multiple Factor Analysis** (2 cred.; prereq. permission of instructor) Roff
- 230f-231w-232s. **Seminar in Recent Literature** (1 cred. per qtr.) Anderson, Templin
- 233w-234s. **Research Methods** (2 cred. per qtr.) Roff
- 240f-241w-242s. **Practicum in Behavior Problems** (Cred. ar.; prereq. permission of instructor) Harris, Blodgett
- 250f,w,s. **Internship in Professional Work with Children.** Experience under qualified supervision (Cred. ar.; prereq. permission of instructor) Anderson
- 260f-261w-262s. **Seminar Developmental Research and Practice** (1 cred. per qtr.; open to majors with one year of graduate study; required of Ph.D. candidates) Staff
- 270f-271w-272s. **Readings and Research in Child Development** (Cred. ar.) Anderson and others
- 274w-275s. **Technique and Field Work in Parent Education** (Cred. ar.; prereq. permission of instructor) Cummings

290w-291s. **Mental Examination of Preschool Children** (4 cred. per qtr.; prereq permission of instructor) Blodgett

Note—See also courses Ed.T. 55-59, 76, 77-78-79, offered by the Institute of Child Welfare and listed under Methods and Directed Teaching in the program of the College of Education.

CHINESE

See Slavic and Oriental Languages, page 143.

CLASSICS

Department Chairman—Norman J. DeWitt

Major Advisers in the College of Science, Literature, and the Arts—Professor DeWitt; Associate Professor McDonald.

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

GREEK

Twenty-seven credits in Greek courses numbered above 50; or 18 credits in such courses with (a) 9 credits in Latin courses numbered above 50 or (b) 9 credits chosen from Classics 106-107-108, 122-123, 191-192-193, and 9 in Greek and Roman history.

A suggested minor sequence in Greek is as follows: 18 credits in Greek courses numbered above 50; or 12 credits in such courses with 6 credits in Greek and Roman history.

LATIN

Twenty-seven credits in Latin courses numbered above 50; or 18 credits in such courses with (a) 9 credits in Greek courses numbered above 50 or (b) 9 credits chosen from Classics 106-107-108, 122-123, 191-192-193, and 9 in Greek and Roman history.

A suggested minor sequence in Latin is as follows: 18 credits in Latin courses numbered above 50; or 12 credits in such courses with 6 credits in Greek and Roman 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 DeWitt

Requirements for a Teacher's Certificate in Latin (applicable only to students in the College of Education)—Major recommendation: Courses 73, 81-82-83, 6 credits from 171-172-173, and 10 credits in Greek and Roman history.

Minor recommendation: Courses 73, 81 and 10 credits in Greek and Roman history.

GREEK

Junior College Courses

Greek 1f-2w.† Beginning Greek. This course is planned to bring students face to face with the "real" language from the start. Grammar is not avoided, but the structure of the language is gradually brought out in the context of grading reading materials. Before the end of one quarter, students are reading sizable selections from the New Testament, Aesop, Xenophon, and Plato. Considerable stress is placed on aural-oral techniques (10 cred.; no prereq.) McDonald

Greek 3s. Selections from Attic Prose (5 cred.; prereq. 1-2) McDonald

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

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 Scholastic Committee. See a statement on page 24. Students who continue Greek in the Senior College will enroll in Greek 171, 172, 173, "Independent Reading." The subject matter of this course will be varied to meet the needs of the individual student.

- Greek 51f. Plato: Apology and Selections** (Formerly Greek 53) (3 cred.; jr., sr.; prereq. 1-2-3 or equiv.) Corrigan
- Greek 52w. Introduction to Greek Drama** (3 cred.; jr., sr.; prereq. 1-2-3 or equiv.) McDonald
- Greek 53s. Homer** (Formerly Greek 52) (3 cred.; jr., sr.; prereq. 1-2-3 or equiv.) Ar.
- Greek 73s. New Testament** (3 cred.; jr., sr.; prereq. permission of department) Ar.
- Greek 121f-122w-123s.† Advanced Prose Composition** (9 cred.; jr., sr., grad.; prereq. 24 cred. in Greek) Ar.
- Greek 171f,*172w,*173s.* Independent Reading in** (e.g., Aeschylus, Sophocles, Pindar, Herodotus, Thucydides, Hellenistic prose) (3 cred. per qtr.; prereq. 53 or permission of department) Staff

For Graduate Students Only

- Greek 221f-222w-223s. Graduate Seminar: Thucydides** (9 cred.) McDonald (*Offered 1953-54. Not offered 1954-55*)

Courses for Which No Knowledge of Greek Is Required

(See page 54.)

LATIN

Junior College Courses

- Lat.1f-2w.† Beginning Latin.** This course is based on the "descriptive" or "linguistic" approach to a new language, i.e., the development of basic language skills through laboratory techniques with systematic pattern practice using film strips and tape and disc recordings. Reading material is introduced gradually, as the student's proficiency in basic patterns of speech develops. Classes are held in the Folwell Phonetics Center. No formal text or "grammar" is used (10 cred.; no prereq.) Forbes
- Lat.3s. Intermediate Latin** (5 cred.; prereq. 1-2, or 1 yr. of high school Latin) Forbes
- Lat.1bf-2bw-3bs.†‡ Roman Language and Culture.** The objectives of the course are to impart a broad view and an appreciation of Roman culture and its contributions to Western civilization, with special emphasis upon language, law, and government, and ideals expressed in literature; to encourage an understanding of the nature of language by drawing attention to semantic problems (with systematic contrasts and comparisons between Latin and English patterns of expression); and to provide the foundation of a reading knowledge. The course will stress direct experience with a variety of reading materials in Latin without emphasis on formal grammar (15 cred.; no prereq.) DeWitt
- Lat.2lf. Introduction to Latin Reading.** A review of basic grammar with graded reading (5 cred.; prereq. 1 or 2 yrs. of high school Latin, or permission of department) Forbes, McDonald

Senior College Courses

Courses 73, 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 Scholastic Committee. See a state-

* 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.

‡ Students may not receive credit for both Lat. 1-2, 3 and Lat. 1b-2b-3b.

ment on page 24. Students who continue Latin in the Senior College will enroll in Lat. 171, 172, 173, "Independent Reading." The subject matter of this course will be varied to meet the needs of the individual student.

- Lat.73s. Prose Composition** (3 cred.; prereq. 3 or 4 yrs. of high school Latin or permission of department) Forbes
- Lat.81f-82w-83s. § Survey of Latin Literature** (9 cred.; jr., sr.; prereq. 3 or 3b or 21 or permission of department) Staff
- Lat.111f-112w-113s. † Advanced Prose Composition** (2 cred. per qtr.; jr., sr., grad.; prereq. 73) Staff
- Lat.133s. Vulgar Latin** (Development of Latin into Romance) (3 cred.; jr., sr., grad.; open to advanced students of Latin or a Romance language with permission of instructor) Ar.
- Lat.171f,*172w,*173s.* Independent Reading in**.....(e.g., **Plautus, Horace, Lucretius, Juvenal, Cicero, Livy, Tacitus, Suetonius**) (3 cred. per qtr.; prereq. 83 or permission of department) Staff

For Graduate Students Only

- Lat.221f-222w-223s. Graduate Seminar: Lyric Poetry** (9 cred.) Ar. (Not offered 1953-54. Offered 1954-55)

Courses for Which No Knowledge of Greek or Latin Is Required

- Hist.14Af-15Aw-16As. Ancient Civilization with Basic Readings** (15 cred.; no prereq.) Jones
- Classics 24f,s. Technical Terms of Science, Medicine, and the Humanities.** Presentation in English contexts of Greek and Latin prefixes, suffixes, and root words basic in modern technical vocabularies (3 cred.; soph., jr., sr.; no prereq.) Swanson
- Classics 42f,s. Greek Mythology.** The origin and development of myths (2 cred.; soph., jr., sr.; no prereq.) Corrigan
- Classics 43w. Ancient Mythology in Relation to Literature and Art** (2 cred.; soph., jr., sr.; no prereq.) Forbes
- Classics 81f. Greek Tragedy in Translation.** A study of the major plays of Aeschylus, Sophocles, and Euripides in translation. In addition to a close textual analysis in terms of the anthropological, social, thematic, and theatrical backgrounds, the plays will be related to the main traditions of modern drama (3 cred.; jr., sr.; prereq. 9 cred. in literature, English beyond A-B-C, or foreign literature, or permission of department) Corrigan
- Classics 82w. Aristophanes and Roman Drama in Translation.** A study of the classical tradition in comedy through close textual analysis of the plays of Aristophanes, Plautus, and Terence. In addition to a study of the origins of comedy and the comic spirit, the comic tradition will be traced through to the twentieth century. The plays and influence of Seneca will also be examined (3 cred.; jr., sr.; prereq. same as 81) Corrigan
- Classics 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) Ar.
- Classics 108s. Cultural Aspects of Language** (3 cred.; jr., sr., grad.; prereq. any two courses numbered above 50 in a foreign language) Ar.
- Classics 122w. Introduction to Greek Archeology.** The methods and techniques of modern field archeology; the history of major excavations at sites dating from the neolithic period down to the Roman conquest of the eastern Mediterranean; the chronological development and the regional peculiarities of architecture, sculpture, painting, and other special fields. Illustrated lectures, readings, and student reports (3 cred.; jr., sr., grad.; no prereq.) McDonald
- Classics 123s. Introduction to Roman Archeology.** Continuation of 122, covering pre-Roman Italy and following the expansion of Roman power in the entire Mediterranean and adjacent areas (3 cred.; jr., sr., grad.; no prereq.) McDonald

* 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.

‡ Students may enter any quarter.

Classics 124f,s. Technical Terminology. An intensive study of the semantics and derivation of modern technical vocabularies, with presentation in English of Greek and Latin prefixes, suffixes, and root words (Not open to students who have had Classics 24) (3 cred.; jr., sr., grad.; no prereq.) McDonald, Corrigan

Classics 191f,192w,193s. Classical Literary Traditions. Readings from classical literature, with lectures on the origin of literary forms and their traditions in European literature. Topics include: (fall) epic, didactic, choral and personal poetry; (winter) drama and dramatic prose (dialog); (spring) expository and narrative prose including the novel, literary criticism (3 cred. per qtr.; jr., sr., grad.; prereq 9 cred. in literature, English beyond A-B-C or foreign literature) DeWitt

COMMUNICATION

See General Studies, page 71.

COMPOSITION

See English, page 68.

DRAWING AND DESCRIPTIVE GEOMETRY

Department Head—Henry C. T. Eggers

Junior College Courses

44f,w,s. Lettering. A practical course in plain lettering (1 cred.; no prereq.) Ar.

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) Ar.

Many of the art courses which were previously listed under Drawing and Descriptive Geometry are now included in the Department of Art. (See page 29.) Other courses offered by this department and listed in the *Bulletin of the Institute of Technology* are open to students of this college only by special permission of the Scholastic Committee.

ECONOMICS

School of Business Administration

Courses in economics are available to Science, Literature, and the Arts students and may be applied toward an economics major or minor for a degree from this college. Students contemplating graduate work in the field and those desiring a four-year liberal arts program may prefer this arrangement.

Those wishing to specialize in business administration or earn the degree of B.S. in Economics will transfer after two years to the School of Business Administration. For the prerequisites for entrance into the latter school, see page 161 of this bulletin and for the B.A. course offerings, see the *Bulletin of the School of Business Administration*.

Department Chairman—Richard L. Kozelka

Major Advisers in the College of Science, Literature, and the Arts—Professors Brownlee, Heller; Assistant Professor Smith.

Major Sequence in the College of Science, Literature, and the Arts—A student majoring in economics is required to earn at least 30 credits in Senior College courses as follows: (1) required courses: Econ. 73 (or 161), 80 (or 143), 81, 85 (or 175); (2) at least 9 credits from Econ. 64 (or 142), 75 (or 155), 105, 106, 149, 176, 191-192; and (3) 9 additional credits from any Senior College economics courses listed in this bulletin. Students who expect to take postgraduate work in business or economics in this or another university

are advised to include in their program the following courses: Econ. 5 and 121-122-123 in statistics; and Econ. 24, 25, 26 in accounting.

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

(Prerequisites: Econ. 3 and 6-7. In addition the student is urged to earn at least 9 credits in history, political science, or sociology.)

Honors Course—Students whose records show that they are capable of doing better than average work, and who wish to study for graduation honors or to pursue a special interest should consult a major adviser for modification of the sequential requirements.

Junior College Courses

1f-2w. Business History. A historical examination of the development of the chief kinds of business activity; organization of production, transportation, and marketing; changes in technique; and government policies affecting business enterprise. The course will be mostly European and American in scope, but significant developments in other continents will be surveyed (10 cred.; fr., soph.; no prereq.) Heaton and others

3f.s. Elements of Money and Banking. The basic principles of money and a description of the various types of financial institutions, their functions and relations to the whole economic organization (5 cred.; *B.A. 57; 2nd and 3rd qtr. fr., soph.; no prereq.) Stehman and others

5f,w.s. Elements of Statistics. Elementary concepts in statistical method; averages, ratios, errors, sampling, index numbers, graphic representation, collection of material (5 cred.; *Soc. 45, B.A. 70; soph.; no prereq.) Kozelka and others

6f-7w. Principles of Economics. A course in the fundamental principles of economics intended to serve as a foundation for advanced courses in business administration and economics (10 cred.; *8-9, 62-63; soph., jr., sr.; no prereq.; Econ. 3 advised for 7) McKenna, Smith, and others

6w-7s. Principles of Economics (See 6f-7w) Ar.

6s. Principles of Economics (1st qtr. of 6-7. See 6f-7w) Ar.

7f. Principles of Economics (2nd qtr. of 6-7. See 6f-7w) Ar.

24f-25w§-26s. Principles of Accounting. The balance sheet, profit and loss statement, the recording process, special journals and ledgers, adjustments, work sheets, closing entries, the voucher system, partnership, corporation accounting (stock surplus, dividends, reserves, funds and bonds, departmental accounting, branch accounting, manufacturing statement analysis and interpretation (9 cred.; *B.A. 54-55; 3rd qtr. fr., soph.; no prereq.) Heilman and others

24w-25s.§ Principles of Accounting (1st and 2nd qtrs. of 24-25-26. See 24f-25w-26s. Heilman and others

24s. Principles of Accounting (1st qtr. of 24-25-26. See 24f-25w-26s) Ar.

25f. Principles of Accounting (2nd qtr. of 24-25-26. See 24f-25w-26s) Ar.

26f,w. Principles of Accounting (3rd qtr. of 24-25-26. See 24f-25w-26s) Ar.

27s. Accounting Survey. A course designed for prelaw and law students. Special emphasis on accounting for corporations and for income (5 cred.; *24-25, B.A. 54; soph.; no prereq.; open to prelaw and law students only) Ar.

32f,w,s. Beginning Typewriting. Proper techniques for operating a typewriter by the touch method; brief survey of letter forms, and practice in arrangement of letters; points to be observed in manuscript typing; care of typewriter (1 cred.; fr., soph., jr., sr.; no prereq.) Donaldson and others

33f,w,s. Intermediate Typewriting. Practice in letter arrangement and envelope addressing; use of carbons; problems in setting up and typing tabulations; experience in manuscript typing (1 cred.; fr., soph., jr., sr.; prereq. speed of 30 words a minute) Donaldson and others

34w,s. Typewriting Procedures. Machine transcription; operation of electric typewriters and duplicating machines; use of footnotes, bibliographies, proofreading, and arrangement in manuscript typing; legal documents and office forms; tabulations (2 cred.; soph., jr., sr.; prereq. 33 or equiv. and speed of 45 words a minute) Peterson

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

§ Students who have had a high school course or experience in bookkeeping may be admitted to Econ. 25 by passing a placement test which is normally given the first day of the quarter.

- 37f-38w-39s.†† Shorthand.** An elementary course in Gregg shorthand simplified. A large vocabulary of high-frequency words is developed. Emphasis is placed on transcription of mailable letters (9 cred.; soph., jr.; prereq. 33 or permission of instructor) Donaldson and others
- 40f-41w.† Advanced Shorthand and Secretarial Procedure.** A vocabulary of frequently used words and technical terms is developed for use in dictation and transcription at rates characteristic of modern office situations. Students are trained in secretarial problems in communicating, banking, editing, traveling, and using reference books (6 cred.; soph., jr., sr.; prereq. 34 and 39 or permission of instructor) Peterson
- 42s. Advanced Secretarial Procedure.** Vocabulary building of technical terms; dictation based on letters for special industries, and Gregg dictation tests at 110 to 140 words a minute; readings and problems in secretarial procedures (3 cred.; soph., jr., sr.; prereq. 34 and 41 or permission of instructor) Peterson
- 43f. Shorthand Theory.** A study of Gregg shorthand principles, both simplified and anniversary editions. Experience in the techniques of dictating and blackboard writing. This course is designed for majors in business education (2 cred.; soph., jr., sr.; prereq. 34 and 39 and permission of instructor) Donaldson

Senior College Courses

Senior College courses with numbers less than 100 are open to third quarter sophomores who have an average grade of at least C in the prerequisite courses.

- 50f,w,s. Insurance Principles.** The nature and measurement of risk and the development and uses of personal, property, and liability insurance. Forms of protection; policy contracts; social insurance and government regulation (3 cred.; jr., sr.; prereq. 7 or equiv.) Williams
- 62f.†* Competition and Monopoly in Modern Industry.** 62 and 63 are nontechnical analytical courses for Senior College students, with special emphasis on questions of economic policy. It is devoted to national income, the pattern of consumption, the effects of competition and monopoly on prices and the allocation of resources, and labor unions (3 cred.; §6, 8; jr., sr.; no prereq.) Ar.
- 63w.†* Money, Cycles, and Taxation.** The money and banking system, fluctuations in business, and proposed remedies; government expenditures and revenues (3 cred.; §7, 9; jr., sr.; prereq. 62) Ar.
- 64f,w,s. Economics of Money and Banking.** A second course in money and banking. Banking policy viewed from the social standpoint with primary reference to the problems of the Federal Reserve system. Selected problems in monetary policy; monetary reconstruction and monetary reform (3 cred.; §142; jr., sr.; prereq. 3 and 80 or equiv.) Smith and others
- 73f,w,s. Manpower Economics and Labor Problems.** This course deals with: (1) the marketing of manpower resources; (2) the institutional structure of labor markets; (3) economic and social problems arising out of labor marketing processes; (4) methods, procedures, and proposals for solving these problems (3 cred.; §161; jr., sr.; prereq. 7 or equiv.) Yoder and others
- 75f,w,s. Corporation Finance.** The corporation in comparison with other types of business units. Attention is given to organization and capital structure, raising fixed and circulating capital, treatment of corporate earnings, incentives to and forms of combination, and trusteeship and reorganization (3 cred.; §155; jr., sr.; prereq. 3 and 7 or equiv.) Stehman and others
- 80f,w,s. Intermediate Economic Analysis: Income and Employment.** The determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment (3 cred.; §143; jr., sr.; prereq. 20 cred. in social science including 7 or equiv.) McKenna and others

* Econ. 62 and 63 are not accepted as substitutes for Econ. 6-7 in meeting prerequisite requirements for Senior College courses.

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

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

¶ This course may not be included as a part of the Senior College work required for a minor in economics in the College of Science, Literature, and the Arts.

** Students who have had one year of high school shorthand are admitted to Econ. 38; those who have had two years of high school shorthand are admitted to Econ. 39.

- 81f,w,s. Intermediate Economic Analysis: Firms and Households.** The analysis of individual decision-making, by firms and households, under conditions of monopoly, competition, and monopolistic competition (3 cred.; §103-104; jr., sr.; prereq. 20 cred. in social science including 7 or equiv.) Brownlee and others
- 84w. Comparative Economic Systems.** The modified system of individualism; state socialism; communism; fascism; freedom and the economic order. Emphasis is placed not upon historical development, but upon the vital economic functions to be achieved under any economic system and a critical analysis of the ability of the various systems to perform these functions (3 cred.; jr., sr.; prereq. 7 or equiv.) Boddy
- 85f,w,s. Government Regulation of Business.** The economic aspects of legislation affecting the market processes. Topics studied include the economic origins of business limitations on free competition, the regulation of public utilities, the purposes and effect of anti-trust laws and laws relating to "unfair business practices," and government assistance to economic groups (3 cred.; §175; jr., sr.; prereq. 81 for majors, for others suitable background in law or political science or permission of instructor) Boddy and others
- 97f-98w-99s. Honors Course in Economics.** Offered to specially qualified students who are majors in economics and who wish to pursue a course of specialized reading and research (Cred. ar.; jr., sr.; prereq. permission of major adviser) Ar.
- 100f. Foundations of Mathematics for Social Scientists.** Sets. Relations. Partially ordered systems. Functional relations. Elements of logical calculus. Groups. Matrices. Applications mostly in economics, decision and game theory, some in statistics (3 cred.; jr., sr., grad.; prereq. Math. 7 and 30 or permission of instructor) Hurwicz
- 101w. Econometrics I.** Elements of probability. General theory of statistical decisions. Specification. Models underlying statistical analysis in economics and certain other fields (simultaneous equation models, factor analysis models). Maximum likelihood method. Elementary regression theory. Least squares method. Identification. Structural estimation in economic and other models. Examples: production functions, demand functions, factor analysis (3 cred.; jr., sr., grad.; prereq. 5, 100, Math. 50-51 advised or permission of instructor) Hurwicz
- 102s. Econometrics II.** Properties of multivariate distribution. Regression. Specification error. Identification. Techniques of estimation in simultaneous equation systems. Time series problems. Aggregation. This course covers some of the same ground as 101, but on a more advanced level (3 cred.; jr., sr., grad.; prereq. Math. 50-51, 101 and/or a course in mathematical statistics, Math. 121-122-123 advised or permission of instructor) Hurwicz
- 103f-104w,† Advanced Economic Theory.** An advanced course in general economic theory with special emphasis on the systematic development of the tools of modern economic analysis (6 cred.; § 81; jr., and sr. with honor point ratio of 2 or better, grad.; prereq. 20 cred. in social science including 7 or equiv.) Boddy
- 105f. The Development of Economic Thought: Classical Theory.** A study of the writings of the precursors and the later developers of classical economic theory, roughly from Adam Smith to John Stuart Mill. The materials used in the course will require a wide reading in the important original works of the men studied (3 cred.; jr., sr., grad.; prereq. 81 or equiv.) Boddy
- 106w. The Development of Economic Thought: Socialistic Critics and Neoclassical Theory.** This course will begin with Karl Marx and includes a study of the Austrians, Marshall, Edgeworth, and Pigou (3 cred.; jr., sr., grad.; prereq. 81 or equiv.) Papandreou
- 107s. The Development of Economic Thought: Theories of Effective Demand.** A discussion of underconsumptionists and twentieth-century business cycle theories, beginning with Malthus and Say and continuing through Hobson, Mitchell, Hawtrey, and Keynes (3 cred.; sr., grad.; prereq. 81 or equiv.) McKenna
- 108f. City Planning** (See Arch. 104)
- 110s. Industrial Price Control.** Methods by which the prices of industrial products are determined under actual competitive conditions. Price policies, combinations, international cartels, administered prices, price leadership, price associations, and government intervention (3 cred.; jr., sr., grad.; prereq. 7 or equiv. and 15 additional cred. in economics and/or business administration; Econ. 75 or 155 is a desirable preceding course) Ar.

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

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

- 121f-122w-123s. Theory of Statistics.** A systematic exposition of the basic concepts and techniques of statistical analysis (9 cred.; jr., sr., grad.; prereq. 5 or equiv., Math. 50 or equiv. desirable for 122 and 123) Allen
- 126s. Economic Problems of Latin America.** The development of economic resources; influence of foreign economies; organization for production; state of the industrial arts; domestic markets and transportation; government finance; present tendencies in respect to economic progress, economic security, and social control (3 cred.; jr., sr., grad.; prereq. 7 or equiv.) Ar.
- 127. Economics of the U.S.S.R.** This course will deal with the economic structure of the U.S.S.R., with main emphasis upon the administrative problems of such a centrally planned and controlled economy, and the development of the economy (in its various branches) since the revolution of 1917. It will also include a survey of the internal resources and the foreign trade of the U.S.S.R. Russian language is not required (3 cred.; jr., sr., grad.; prereq. 20 cred. in social science including 6-7 or equiv.) (*Offered occasionally. See Class Schedule*)
- 128. Economics of Western Europe.** This course will ordinarily center mainly on one country as illustrative of the Western European economic complex. Subjects covered will include: (1) resource patterns and national product; (2) economic organization and the distribution of power; (3) income and wealth distribution; (4) relationship of individual economics to the Western European economy and the world economy; (5) national economic policy goals and their implementation (3 cred.; jr., sr., grad.; prereq. 20 cred. in social science including 6-7 or equiv.) (*Offered occasionally. See Class Schedule*)
- 140s. The Cooperative Movement.** The history and philosophy of various cooperative developments. Similarities and contrasts between agricultural marketing cooperatives, consumer cooperatives, trade unions, and others. Consumer cooperatives as a medium for economic control (3 cred.; jr., sr., grad.; prereq. 7 or equiv.) Canoyer
- 142f,w,s. Monetary and Banking Policy.** An advanced course in money and banking policy viewed from the social standpoint with primary reference to the problems of the Federal Reserve system. Selected problems in monetary policy; monetary reconstruction and monetary reform (3 cred.; §64; jr. and sr. with permission of instructor, grad.; prereq. 3 and 80 or equiv.) Smith
- 143f,w,s. Economic Analysis: Income and Employment.** A study of the interrelationships among income, employment, wage levels, money supply, interest rates, and the price level in the economic system as a whole. The course will include a survey of some of the principal theories and systems of aggregative analysis as applied to a market economy (3 cred.; §80; jr., sr., with permission of instructor, grad.; prereq. 7 or equiv.) Brownlee and others
- 149f,w,s. Business Cycles.** Analysis of factors involved in business fluctuations. Comparison of theories of their causes. Examination of proposals for the stabilization of employment, production, and capital formation. Introduction to the statistical data and methods of business forecasting (3 cred.; sr., grad.; prereq. 64 or 142 or permission of instructor) Smith and others
- 155f,w,s. The Modern Corporation.** Incorporation. The various types of corporate securities and their uses. Financial plans for industrial, utility, and other types of corporations. Financial affairs of an established business. General financial problems of the holding company, consolidations, mergers, and reorganizations (3 cred.; §75; jr. and sr. with permission of instructor, grad.; prereq. 3 and 7 or equiv.) Stehman
- 160f,w,s. Readings in Economics.** A course of special readings to be arranged with the student to cover areas in economics especially useful to the student's program and objectives but not available in the regular course offerings (Cred. ar.; jr., sr., grad.; prereq. permission of the adviser and the instructor in the field covered) Ar.
- 161f,w,s. General Manpower Economics and Labor Problems.** Includes: (1) marketing of manpower resources; (2) institutional structure of labor markets; (3) economic and social problems arising out of labor marketing processes; (4) methods, procedures, and proposals for solving these problems. This course covers the basic materials of 73 plus advanced discussion and special assignments (3 cred.; §73; jr. and sr. with permission of instructor, grad.; prereq. 7 or equiv.) Yoder and others

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

- 162f. Labor Movements.** An analysis of the development of labor movements in Europe and the United States. An examination of the origins of labor movements, their growth, the problems faced under various forms of governments, and an analysis of the economic and social consequences of these developments (3 cred.; jr., sr., grad.; prereq. 73 or 161) Ulman
- 163w. Union Organization and Administration.** An analysis of: (1) the structural nature and (2) the operation of contemporary American unions, the nature of the internal administration and government of unions, and the economic and social issues arising out of relationships with managements as found in matters of hours, wages, and other conditions of employment (3 cred.; jr., sr., grad.; prereq. 73 or 161) Ulman
- 164f. Labor Legislation: Collective Bargaining.** An analysis of: (1) the interrelationships between the development of labor organizations and the techniques they use to further their interests, and the actions and decisions of the executive, legislative, and judicial branches of the government, and (2) the economic and social implications of issues arising in this area (3 cred.; jr., sr., grad.; prereq. 73 or 161) Turnbull
- 166s. Settlement of Industrial Disputes.** Major consideration of the economic impact and implications of principal methods of settling labor disputes, including mediation, conciliation, fact-finding and voluntary and compulsory arbitration (3 cred.; jr., sr., grad.; prereq. 73 or 161) Turnbull
- 169w. Labor Legislation: Economic Security.** An analysis of: (1) the origins and development of economic and social problems of the individual worker, (2) executive, legislative, and judicial attempts to deal with these problems, and (3) economic and social consequences of the developments. Treatment of "protective labor legislation," involving child labor, hours and wages, industrial accidents and illness, old age, and unemployment (3 cred.; jr., sr., grad.; prereq. 73 or 161) Turnbull
- 172f. Economics of Transportation.** The economics of the agencies of modern transportation, including rail, water, highway, air, and pipe line. Relative advantage of each agency, national transportation policy, regulation, rate-making, taxation, coordination of services (3 cred.; §B.A. 71; jr., sr., grad.; prereq. 20 cred. in social science including 7 or equiv.) Nightingale
- 175. Government Regulation of Market Behavior.** A study of the administrative and legislative controls in the United States in the following areas: general restraints of trade and monopoly, regulation of the standards of fair competition, licensing and regulation of entry into trade and professions, and the regulation of public utility rates and services. The emphasis will be on the economic and legal analysis of federal regulation, but state and local regulation will be studied (3 cred.; §85; jr., sr., grad.; prereq. 103-104 or equiv.) (*Offered occasionally. See Class Schedule*)
- 176f,s. Introduction to International Economics.** The techniques of international economic analysis. The approach, while primarily theoretical, will indicate the relevance of the theory to current problems. The balance of payments; the foreign exchanges; free trade versus protection; techniques of trade control; international commercial policies; contemporary international economic problems and institutions (3 cred.; jr., sr., grad.; prereq. 7 or equiv.) Smith and others
- 178w. Economics of Consumption.** The nature of human wants; the origins and the personal distribution of money income and purchasing power; demand and price; standards and levels of living; relationship of consumption to the population problem and possibilities for improvement in the plane of consumption (3 cred.; jr., sr., grad.; prereq. 7 or equiv.) Canoyer
- 179s. Economic Problems of the Far East.** A survey of recent economic developments in the Far East, especially in China and Japan. The ways in which these developments illustrate and are governed by economic principles are examined. Economic regionalism, problems of population and migration, the control of raw materials, industrial efficiency, internal economic institutions, and international commercial policies, as they occur in the Far East, are among the topics discussed (3 cred.; jr., sr., grad.; prereq. 7 or equiv.) Vaile
- 185w. Economics of Marketing.** Covers: (1) the role of market distribution in our total economy; (2) the costs of market distribution; (3) regional specialization and market distribution; (4) public, quasi-public, and corporate control of market distribution; (5) the role of the consumer in market distribution (3 cred.; §B.A. 77; jr., sr., grad.; prereq. 7 or equiv.) Vaile

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- 186w. **International Economic Relations.** Survey of foreign economic interests of the United States, policies to promote world recovery, and study of the processes of dynamic development and adaptation of a nation's foreign trade to changing world markets. Requirements for freedom of selection of international economic policies and for their successful operation. Short laboratory problems required (3 cred.; jr., sr., grad.; prereq. 176) Ar.
189. **Principles of Public Finance.** Public expenditures, revenues, debts, fiscal policy, and financial administration. Special attention is given to tax principles, practices, and policies (3 cred.; §B.A. 58, Econ. 191-192; jr., sr., grad.; prereq. 7 or equiv.) Heller (*Offered occasionally. See Class Schedule*)
- 190w. **National Income.** The conceptual framework for the study of income flows, the use of statistical materials within this framework, and the use of the results for measurement and welfare (3 cred.; jr., sr., grad.; prereq. 80 or equiv.) McKenna
- 191f-192w.† **Public Finance.** Taxation, debt management, and public expenditures and budgeting in terms of economic effects, fiscal process, and social policy. Topics include expenditure theory; alternative budgetary policies; debt burden; the taxing process; taxation, incentives, and markets; tax incidence; technical problems of income, profits, and sales taxation; war finance (6 cred.; §189, B.A. 58; jr., sr., grad.; prereq. 7 or equiv.) Heller
- 193s. **State and Local Taxation.** Main problems of state and local finance and proposed solutions, including coordination of national, state, and local fiscal policy and administration (3 cred.; jr., sr., grad.; prereq. 189, 192, or B.A. 58) Borak
- 195s. **Fiscal Policy.** (1) Theoretical framework and goals of fiscal policy; (2) the potential contribution of taxation, government expenditures, and debt transactions as instruments for achieving full employment, price stability, and economic growth; and (3) institutional limitations to the use of fiscal policy (3 cred.; sr. with permission, grad.; prereq. 20 cred. in social science, including a course in public finance and 64 or 142) Heller
196. **Advanced International Economics.** Recent developments in international price theory, and in the application of employment and cycle theory in the international field. Topics include the analysis of the gains from trade, the foreign trade multiplier, balance of payments disequilibrium, and the theory of fluctuating exchange rates (3 cred.; jr., sr., grad.; prereq. 176) (*Offered occasionally. Consult Class Schedule*)
197. **Business Cycles and the Structure of Production.** Accepted interpretation of business cycle theory and its setting in the structure of production of the United States. The application of business cycle theory to specific problems in the maintenance of high productive employment and facilitating economic adjustments. Laboratory work, using the source materials in general use by economists today when concerned with business cycle effects upon industries and upon the problem of maintaining high general levels of production in the economy as a whole to fulfill today's objective of "full employment" (3 cred.; jr., sr., grad.; prereq. 149) (*Offered occasionally. Consult Class Schedule*)

For Graduate Students Only

- 200f-201w.† **Theory of Employment and Income** (6 cred.) Brownlee
- 202w. **Methodology in Economics** (3 cred.) Papandreou
205. **Seminar in Economic Structure and Behavior** (3 cred.) Papandreou (*Offered occasionally. Consult Class Schedule*)
- 206s. **Seminar in Market Prices** (3 cred.) Vaile
210. **Seminar in Business Cycles and Employment Theory** (3 cred.) Ar. (*Offered occasionally. Consult Class Schedule*)
- 213f. **General Equilibrium Theory** (3 cred.; prereq. 104 and 142) Papandreou
- 214s. **Theory of Monopolistic Competition** (3 cred.; prereq. 213) Boddy
- 215s. **Welfare Economics** (3 cred.; prereq. 213) Brownlee
- 216s. **Topics in Mathematical Economics** (3 cred.; graduate students in economics with adequate background in the elements of economic theory; prereq. Math. 50-51, Econ. 100, or permission of instructor) Hurwicz
- 233w-234s.† **Seminar in Public Finance** (6 cred.) Heller
- 243f-244w.† **Seminar in Money and Banking** (6 cred.) Ar.

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

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

- 251w-252s. **Seminar in Industrial Relations** (6 cred.) Yoder
 253. **Seminar in Labor Marketing** (3 cred.) Ar. (*Offered occasionally. Consult Class Schedule*)
 254. **Seminar in Trade Unionism** (3 cred.) Ar. (*Offered occasionally. Consult Class Schedule*)
 255. **Seminar in Economic Security** (3 cred.) Ar. (*Offered occasionally. Consult Class Schedule*)
 299. **Graduate Research** (Cred. ar.) Members of the graduate faculty (*Offered occasionally. Consult Class Schedule*)

EDUCATIONAL PSYCHOLOGY

Department Chairman—Willis E. Dugan

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

- 120f,w,s. **Basic Principles of Measurement.** Principles of measurement applied to the construction and evaluation of tests and to the interpretation of scores (3 cred.; jr., sr., grad.; prereq. 60 or equiv.) Ar.
 140w. **Instruments and Techniques of Measurement.** An intensive study of selected instruments for measuring intelligence, achievement, interests, attitudes, and personality traits with emphasis upon their use in educational guidance, personnel work, administration, and supervision (3 cred.; sr., grad.; prereq. 120 or equiv.) Edson
 142f. **Individual Mental Testing.** Revised Stanford-Binet and Wechsler Intelligence Scale for Children. Student supplies materials for at least one test. Full day or two mornings per week required for practice administration of tests (3 cred.; sr., grad.; prereq. 120 or equiv.) Reynolds

ENGLISH

For courses in writing, see page 68.

Department Chairman—Theodore Hornberger; **Associate Chairman**—James T. Hillhouse

Major Advisers in the College of Science, Literature, and the Arts—Associate Professors Bowron, Clark, Jackson, Marx, Moore, Unger; Assistant Professors Atkins, Buckley, Del Plaine, Montgomery.

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

A. Courses 75, Chaucer; 55-56, Shakespeare; 162, Milton.

B. Eighteen additional credits in Senior College courses, of which at least 12 must be from courses numbered 100 or above. A student who takes 9 credits of 97-98-99 may count 6 of these credits as part of this last requirement.

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

Prerequisites: (1) Courses 21-22 or 22-23. (2) *Either* (a) three units in one foreign language, or (b) two units in *each* of two foreign languages, a unit being either one year in high school or 5 credits in college.

All English majors shall write three papers of a minimum of 3,000 words in Senior College literature courses chosen by themselves. One of these should be written in the junior year and two in the senior year. Transfer students here for the senior year only should submit two papers.

The department regards the knowledge of foreign languages, and especially of Latin, French, and German (in that order), as of particularly high value to students of the English language and English literature, and especially urges students planning to major in English to include as

much foreign language study in their programs as possible and to begin such study as early as possible. Students who look forward to graduate study should consider this especially and should take into account the need for Latin in connection with English studies in certain fields. See page 9.

Major Advisers in the College of Education—Professor Dora Smith; Assistant Professor Allen.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: Eng. 22-23 (10 cred.); Eng. 55-56 (6 cred.); Eng. 73-74 (6 cred.); Eng. 165 (3 cred.); Comp. 27-28 (6 cred.); 6 cred. in speech; 3 additional cred. in English courses numbered 100 or above.

Minor recommendation: Eng. 22-23 (10 cred.); Eng. 55-56 (6 cred.); Eng. 73-74 (6 cred.); Comp. 27-28 (6 cred.).

Students interested in taking English as a major or minor subject in the College of Education should see also the bulletin of that college for the requirements for the language arts curriculum.

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

Junior College Courses

A-B-C. Freshman English. A combined course in literature and composition. The composition is equivalent to that in Comp. 4-5-6 and meets the requirements for graduation. The literature read consists of novels, short stories, plays, and poetry—both English and American, and mostly modern—and is intended to interest not only the student who expects to major in English, but also the one who would enjoy, and profit from, the study of literature but who wants to major in some other subject. See English Composition, page 68.

19f-20w. § Classics of English Literature. A chronological study of some of the classics of English literature for students not majoring in English and not taking 21-22-23. 19: Such writers as Marlowe, Donne, Milton, Pope, or Swift. 20: Such writers as Johnson and Boswell, Goldsmith, Wordsworth, Byron, Shelley, Keats, Tennyson, Browning, or Arnold (6 cred.; soph., jr., sr.; prereq. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or exemption from requirement; a student may not receive credit for either quarter of this course if he receives credit for any quarter of 21-22-23, two quarters of which are required for English majors) Montgomery

21f-22w-23s.* Introduction to Literature. A chronological study of English literature with its historical background. An introduction to types of literature and literary ideas. 21: The Renaissance and the rise of Puritanism. Marlowe, Spenser, Bacon, Browne, Milton, and Bunyan. 22: The Restoration and the Eighteenth Century. Pope, Swift, Addison and Steele, Johnson, Boswell, Fielding, and Sheridan. 23: The Romantic Movement and the Victorians. Wordsworth, Byron, Shelley, Keats, Carlyle, Tennyson, Browning, and Arnold (15 cred.; prereq. †) Buckley, Coxe, Monk, Moore

22w-23s.* Introduction to Literature (2nd and 3rd qtrs. of 21-22-23. See 21f-22w-23s) Montgomery

Classics 24f,s. Technical Terms of Science, Medicine, and the Humanities (3 cred.; soph., jr., sr.; no prereq.) Swanson

37f-38w-39s. § Modern Literature. Intended for students in all departments and colleges, not particularly for English majors. Readings in twentieth-century British and American fiction, drama, and poetry. Selected, arranged, and discussed—not to give a full historical survey—but to enhance the student's pleasure in, and understanding of, imaginative literature generally. 37: Short fiction. 38: Poetry and drama. 39: The novel since Thomas Hardy (9 cred.; soph., jr., sr.; prereq. †) Montgomery (f), O'Connor (w,s)

*Students may enter any quarter. Two quarters are required for English majors in the College of Science, Literature, and the Arts; the second and the third quarters, for English and language arts majors, and for English minors, in the College of Education; and the third quarter, for language arts minors in the latter college. Three quarters are recommended for all students.

† Students may enter any quarter.

‡ Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or exemption from requirement.

Classics 42f.s. **Greek Mythology.** (2 cred.; soph., jr., sr.; no prereq.) Corrigan
 Classics 43w. **Ancient Mythology in Relation to Literature and Art.** (2 cred.; soph., jr., sr.; no prereq.) Forbes

Attention of students is called to Hum. 1-2-3, 11-12-13, and 21-22-23 (page 71).

Senior College Courses

Courses 52-53, 54, 55-56, 57, 66-67, 73-74, and 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 Scholastic Committee. See a statement on page 24.

52f-53w. § **The English Novel.** 52: The reading of novels by Defoe, Fielding, Smollett, Jane Austen, Scott, and the Brontës. 53: The reading of novels by Thackeray, Dickens, Trollope, George Eliot, Meredith, and Hardy (6 cred.; jr., sr.; prereq.**). Moore

55f-56w. **Shakespeare.** 55: The reading of plays from Shakespeare's early and middle periods, following G. B. Harrison's chronological arrangement. All sections will read *Richard II*, *A Midsummer Night's Dream*, *The Merchant of Venice*, *Much Ado About Nothing*, and two or three other plays selected by the instructor from the following list: *Henry IV*, 1 and 2, *Henry V*, *As You Like It*, and *Julius Caesar*. 56: The reading of plays from Shakespeare's middle and later periods. All sections will read *Twelfth Night*, *Hamlet*, *Macbeth*, *The Tempest*, and two other plays selected by the instructor from the following list: *Troilus and Cressida*, *Othello*, *Measure for Measure*, and *Anthony and Cleopatra* (6 cred.; jr., sr.; prereq. Comp. 4-5-6 or Com. 1-2-3 and 6 additional cred. in English; or A-B-C; or 10 cred. in 21-22-23; students may not start with 56 except by permission of instructor and may not receive cred. for both 55 [or 56] and 57) Ar.

55w-56s. **Shakespeare** (See 55f-56w) Ar.

55s. **Shakespeare** (1st qtr. of 55-56. See 55f-56w) Ar.

56f. **Shakespeare** (2nd qtr. 55-56. See 55f-56w) Ar.

57s. **Shakespeare for Language Arts Minors in Education.** The reading of the plays commonly taught in high schools—*Julius Caesar*, *Hamlet*, *Macbeth*, *A Midsummer Night's Dream*, *The Merchant of Venice*, *As You Like It*, *The Tempest* (3 cred.; jr., sr.; prereq.**; open only to students minoring in language arts in the College of Education, to those not majoring in language arts in that college, and to those not majoring or minoring in English in any college; students may not take 57 and also 55 and/or 56) Ar.

66f-67w. § **The Literature of the Bible.** (Formerly 40-41, *The Bible as Literature*) Readings in the Old and New Testaments from the literary point of view. Old Testament: Selections from the historical narratives, the prophets, psalms, tales, wisdom literature. New Testament: Selections from the Gospels and Epistles (6 cred.; jr., sr.; prereq.**). Jackson

73f-74w. § **American Literature.** Notable American authors from the seventeenth century to the present (6 cred.; jr., sr.; prereq.**). Hornberger, Turpie, Marx

73w-74s. § **American Literature** (See 73f-74w) McDowell

75f,w,s. **Chaucer.** The reading of selections from *The Canterbury Tales* with introduction dealing with the grammar and literary forms of fourteenth-century English (4 cred.; jr., sr.; prereq.**). Clark (f), Atkins (w), Stange (s)

Classics 81f. **Greek Tragedy in Translation** (3 cred.; jr., sr.; prereq. 9 cred. in literature, English beyond A-B-C, or foreign literature; or permission of department) Corrigan

Classics 82w. **Aristophanes and Roman Drama in Translation** (3 cred.; prereq. same as 81) Corrigan

97f-98w-99s. † **Advanced Selected Survey for Seniors.** Intensive study of two authors each quarter (for example—97: Spenser and Shakespeare's nondramatic poetry. 98: Pope and Johnson. 99: Wordsworth and Arnold). A long paper, devoted to a seventh author, will be required of all students, including any who may be permitted to enroll for fewer than three quarters, and may count as one of the three long papers

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

§ Students may enter any quarter.

** Comp. 4-5-6 or Com. 1-2-3, and 6 additional credits; or Eng. A-B-C; or 10 credits in 21-22-23.

required of majors (see page 62). Six of the credits earned in this course may be substituted for 6 of the credits required of majors in courses numbered above 99. A student may not receive credit for any quarter of this course without taking all three quarters, and may not take the quarters out of sequence, unless he has the written permission of the instructor (9 cred.; sr.; prereq. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or exemption from requirement, and recommendation of major adviser and permission of instructor) Krieger

- 100f. **Old English** (Anglo-Saxon). An introduction to the sounds and grammar with some prose reading. The relation to Modern English is stressed (4 cred.; jr., sr., grad.; prereq.§§) Allen
- 102w. **Readings in Old English Prose and Verse**. Critical reading of texts, and introduction to versification (3 cred.; jr., sr., grad.; prereq. 100) Brown
- 103s. **Beowulf**. An introduction to the Old English poem, with reading of considerable portions of the text (3 cred.; jr., sr., grad.; prereq. 100) Brown
- 104f. **Emerson and Thoreau** (3 cred.; jr., sr., grad.; prereq.§§) Turpie
- 105w. **Hawthorne and Melville** (3 cred.; jr., sr., grad.; prereq.§§) Ar. (*Not offered 1953-54. Offered 1954-55*)
- 106w. **Whitman and Mark Twain** (3 cred.; jr., sr., grad.; prereq.§§) Marx (*Offered 1953-54. Not offered 1954-55*)
- 109f-110w.§ **Romantic Poets of the Early Nineteenth Century**. 109: Wordsworth, Coleridge, Scott, etc. 110: Byron, Shelley, Keats, etc. (6 cred.; jr., sr., grad.; prereq.§§) Jackson
- 111s. **Henry Adams and Theodore Dreiser** (3 cred.; jr., sr., grad.; prereq.§§) Marx
- 113s. **American Short Story**. A historical examination of the American short story from the eighteenth century to the present (3 cred.; jr., sr., grad.; prereq.§§) Turpie
- 114f. **The Midwest in Literature** (3 cred.; jr., sr., grad.; prereq.§§) Buckley
- 115w. **The Development of English Prose Style**. Definition of six broad types of prose style on historical principles (3 cred.; jr., sr., grad.; prereq.§§) Brown (*Not offered 1953-54. Offered 1954-55*)
116. **The Development of English Prose Style**. Studies in the styles of selected writers since 1700 (3 cred.; jr., sr., grad.; prereq.§§) (*Not offered*)
- 120f-121w-122s. **The Interpretation of Poetry**. A study of certain technical aspects of poetry in relation to poetic meaning. 120: Analysis of a number of short poems. 121: Emphasis on Coleridge, Housman, Frost, and Eliot. 122: Intensive study of six longer poems (9 cred.; jr., sr., grad.; prereq.§§) Tate
- 123f-124w-125s.§ **The Technique of the Novel**. Special studies in novels of the late nineteenth and twentieth centuries, with particular regard to structure. See also Composition 101-102-103 for the writing of fiction (9 cred.; sr., grad.; prereq.§§ and permission of instructor) Gray
- 126f-127w.§ **Drama, 1660-1870**. The history of English drama from the opening of the theaters in 1660. 126: The Restoration and early eighteenth century. The heroic play, tragedy, comedy of manners, beginnings of sentimental comedy. 127: The development of sentimentalism in the eighteenth century. The reaction: Goldsmith and Sheridan. Early nineteenth-century drama (6 cred.; jr., sr., grad.; prereq.§§) Hillhouse
- 129s. **Modern Drama, 1880 to the Present**. A survey of the chief dramatists, English, American, and Continental, from the time of Ibsen (3 cred.; jr., sr., grad.; prereq. 55-56 or 126-127) Hillhouse
- 130w-131s.§ **English Poetry, 1832 to 1901**. 130: The Early and Mid-Victorians: Tennyson, the Brownings, Clough, Fitzgerald, Arnold, and others. 131: The Pre-Raphaelites and after: The Rossettis, Swinburne, Morris, Wilde, and the poets of the 1890's (6 cred.; jr., sr., grad.; prereq.§§) Montgomery
- 134s. **The Origins of American Naturalism** (3 cred.; jr., sr., grad.; prereq.§§) Bowron
- 136f. **Advanced Shakespeare**. The work of the poet's maturity. Special attention to *Othello*, *King Lear*, *Antony and Cleopatra*, *Cymbeline*, *The Winter's Tale* (4 cred.; jr., sr., grad.; prereq. 55-56) Brown
- 137f-138w-139s.§ **The Nineteenth Century in English Literature**. Napoleonic wars, Industrial Revolution, Darwinism, imperialism and democracy, estheticism; prose of social criticism from Hazlitt to Morris; problem of the poet's responsibility from Shelley to Yeats (9 cred.; jr., sr., grad.; prereq.§§) Erdman, Stange

§ Students may enter any quarter.

§§ Six credits in literature in this department, exclusive of classics and A-B-C.

- 142f-143w. § **Twentieth-Century Literature.** Survey of British and American literature from 1890 to 1950, studied for theme and technique and as part of literary and intellectual history. The emphasis in 142 will be on British authors; in 143, on American authors (6 cred.; jr., sr., grad.; prereq.§§) O'Connor
- 147f-148w-149s. **The Literature of England in the Middle Ages Exclusive of Chaucer.** 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. 75 and 100 or concurrent registration in 100) Clark
- 151s. **Recent Poetry.** The development of twentieth-century poetry in England and America. Yeats, Hardy, Housman, Robinson. Movements in the second decade—Georgians, Imagists, etc. Lawrence, Sandburg, Frost, Eliot, Jeffers, younger poets (4 cred.; jr., sr., grad.; prereq.§§) Jackson
- 154f-155w. § **American Novel.** The history of the American novel from the beginning to the present (6 cred.; jr., sr., grad.; prereq.§§) Bowron
- 156s. **American Drama** (3 cred.; jr., sr., grad.; prereq.§§) Hornberger
- 159f-160w. § **Colonial Literature in America** (6 cred.; jr., sr., grad.; prereq.§§) Ar. (Not offered 1953-54. Offered 1954-55)
- 162f,w,s. **Milton.** The minor poems, *Areopagitica*, *Paradise Lost*, and *Samson Agonistes* (3 cred.; jr., sr., grad.; prereq. 21-22 or 55-56) Steinmann (f), Unger (w), Ar. (s)
- 165f,w. **Introduction to Modern English** (formerly *The Historical Study of Modern English*). A scientific approach to the sounds and grammar of present-day English, with some attention to syntax; implications for a reasonable attitude toward English usage in America (3 cred.; jr., sr., grad.; prereq.§§) Allen
- 166s. **Historical Backgrounds of Modern English.** A study of those distinctive aspects of the sounds and grammar of Early Modern, Middle, and Old English which are significant for the language of the present day (3 cred.; jr., sr., grad.; prereq. 165) Allen (Not offered 1953-54. Offered 1954-55)
- 170w. **Shakespeare's Later Contemporaries.** Selected plays of Chapman, Jonson, Dekker, Marston, Webster, Heywood, Beaumont and Fletcher, Middleton, Ford, and Shirley (3 cred.; jr., sr., grad.; prereq. 55-56) Jackson
- 174s. **American English.** The developing distinctiveness of the English language in America; its relationships to American cultural patterns; significant regional variations in vocabulary, pronunciation, and grammar, with an introduction to the field methods of American dialect geography and with access to the unpublished collections of the Linguistic Atlas of the Upper Midwest (3 cred.; jr., sr., grad.; prereq. 6 cred. in English literature, including language above A-B-C, or permission of instructor) Allen
- 175s. **Chaucer.** The reading of *The Canterbury Tales* with introduction dealing with the grammar and literary forms of fourteenth-century English (4 cred.; jr., sr., grad.; prereq. 100; not open to students who have had 75 or equiv.) Jackson
- 176f-177w. § **Study of Meter and Rhyme.** Standard verse forms—ballad stanza, heroic couplet, blank verse, sonnet, etc. Varieties of line and foot—trochaic, dactylic, anapaestic, etc. (6 cred.; jr., sr., grad.; prereq.§§) Jackson (Not offered 1953-54. Offered 1954-55)
- 178w. **The South in Literature** (3 cred.; jr., sr., grad.; prereq.§§) Tate (Not offered 1953-54. Offered 1954-55)
- 180s. **The Influence of Poe.** A study of the influence of Poe on the French "Symboliste" school and the influence of this school on modern literature, chiefly poetry, in English (3 cred.; jr., sr., grad.; prereq.§§) Tate (Not offered 1953-54. Offered 1954-55)
- 181s. **Recent Trends in Literary Criticism.** Criticism and scholarship; structure and form; science and literature; imagination and myth; isolation of the artist; political emphasis; experiments with language (3 cred.; jr., sr., grad.; prereq.§§) O'Connor
- 182w. **The Far West in Literature.** Expansion beyond the Mississippi as a force in American thought and letters: the literature of exploration and travel; the Pacific Coast regional movement; Mark Twain (3 cred.; jr., sr., grad.; prereq.§§) Ar.
- 183f. **The Poetry of T. S. Eliot** (3 cred.; jr., sr., grad.; prereq.§§) Unger
- 184f-185w-186s. **The Interpretation of Drama.** Critical analysis of plays: Modern, Renaissance, and ancient (9 cred.; jr., sr., grad.; prereq.§§; 55-56 recommended) Reisman (f), Coxe (w,s)
- 187f-188w-189s. § **Eighteenth-Century Literature.** Survey of English literature from 1700 to 1790. Parallel readings and critical essays. Graduate students will submit a term paper each quarter (9 cred.; jr., sr., grad.; prereq.§§) Monk

§ Students may enter any quarter.

§§ Six credits in literature in this department, exclusive of classics and A-B-C.

- 191f. Imagery and Symbolism in English and American Literature.** A study of manifold literary influences, from the seventeenth century onward, upon T. S. Eliot and other twentieth-century writers (3 cred.; jr., sr., grad.; prereq.§§) Atkins
- 193w. The Poetry of W. B. Yeats** (3 cred.; jr., sr., grad.; prereq.§§) Unger (*Not offered 1953-54. Offered 1954-55*)
- 194f-195w-196s. § Elizabethan Literature: Prose, Poetry, Drama.** 194: From the beginning of the Tudor period to about 1590, with attention to the Medieval origins of the drama. 195: From the early work of Spenser and Sidney to the mid-nineties. 196: The decade centering in the last year or two of the Queen's reign (9 cred.; jr., sr., grad.; prereq.§§) Brown
- 197f-198w-199s. § Seventeenth-Century Literature.** 197-198: A survey of the prose and nondramatic poetry of the century down to 1660, with some consideration of the metaphysical and cavalier poets. 199: Dryden and his contemporaries (9 cred.; jr., sr., grad.; prereq.§§) Unger (f,w), Monk (s)
- 200w-201s. Advanced Chaucer.** The more important poems apart from *The Canterbury Tales*. The treatment will be primarily literary and historical, linguistic proficiency being presumed (6 cred.; sr. with permission of department, grad.; prereq. 75 or equiv.) Clark
- 202f-203w. § Elizabethan Nondramatic Literature.** 202: Tudor prose: "courtesy books" (Eliot, Ascham), voyages (Drake, Raleigh), criticism (Gascoigne, Sidney, and others), fiction (Lyly, Sidney, Nashe), history (More, Fox, Holinshed, and others), tracts and essays (Nashe, Bacon, and others). 203: Tudor lyric and narrative poetry (6 cred.; sr. with permission of department, grad.) Brown (*Not offered 1953-54. Offered 1954-55*)
- 204f-205w-206s. The Rise and Development of Standard English.** An inductive study of the development of the English vocabulary and lexicography (204), historical phonology (205), and historical morphology and syntax (206), with attention to the history of attitudes toward usage (9 cred.; sr. with permission of department, grad.; prereq. 100 or equiv., but 100 may be taken concurrently with 204; students may enter 205, but not 206) Allen
- 207s. Dr. Johnson and His Circle.** Particular attention to Boswell and to Johnson's influence on his contemporaries (3 cred.; jr., sr., grad.; prereq.§§) Moore

Attention is called to the following courses, in which foreign languages or literatures are studied but for which no specific foreign language courses are prerequisites: Classics 106-107, 108, 191-192-193; Ger. 73-74-75; Hum. 51-52-53, 61-62-63, 71-72-73; Ital. 164; Scand. 161, 162, 171, 172, 173. Students are urged to examine the course offerings of the foreign language departments for other courses which are pertinent to English studies.

For Graduate Students Only

- 210f-211w-212s. Studies in Seventeenth-Century Literature.** Selected authors to 1660 exclusive of Milton and the dramatists; emphasis on style and on ideological questions (9 cred.) Unger (*Offered 1953-54. Not offered 1954-55*)
- 213f,s. Bibliography and Methods of Literary Research.** Examination of basic library reference works, scholarly and critical journals, bibliographies of periods and prominent literary figures; exercises and problems in methods and exposition of research (2 cred.) O'Connor
- 231f-232w-233s. Shakespeare's Tragic and Comic Art** (9 cred.) Brown (*Not offered 1953-54. Offered 1954-55*)
- 234f-235w-236s. Studies in Medieval English Culture** (9 cred.; prereq. 75 or 175) Clark (*Not offered 1953-54. Offered 1954-55*)
- 240f-241w-242s. The Canterbury Tales** (9 cred.) Clark (*Offered 1953-54. Not offered 1954-55*)
- 246f-247w. § English Literary Criticism.** A study of the basic historical texts, also an examination of those principles and issues which have special relevance for modern criticism (6 cred.; sr. with permission of instructor, grad.) O'Connor (*Not offered 1953-54. Offered 1954-55*)
- 253f-254w-255s. American Romanticism I: New England.** Hawthorne, Emerson, Thoreau, and their contemporaries (9 cred.; prereq. permission of instructor) McDowell (*Offered 1953-54. Not offered 1954-55*)

§ Students may enter any quarter.

§§ Six credits in literature in this department, exclusive of classics and A-B-C.

- 256f-257w-258s. **Spenser and Milton** (3 cred.; prereq. 3 cred. above 50 in medieval or Elizabethan literature and 3 cred. in literature of the period 1600-1660) Brown (*Offered 1953-54. Not offered 1954-55*)
- 259f-260w-261s. **Nineteenth-Century Novel I. The Gothic romances and the Revolutionary novel**; Jane Austen and Sir Walter Scott; Dickens (9 cred.) Hillhouse (*Offered 1953-54. Not offered 1954-55*)
- 262f-263w-264s. **Nineteenth-Century Novel II. Thackeray and the Brontës; George Eliot and Trollope; Hardy and Meredith** (9 cred.) Hillhouse (*Not offered 1953-54. Offered 1954-55*)
- 265f-266w-267s. **American Romanticism II. Cooper, Poe, Whitman, Melville** (9 cred.; prereq. permission of instructor) McDowell (*Not offered 1953-54. Offered 1954-55*)
- 274f-275w-276s. **The Age of Queen Anne** (9 cred.) Monk (*Not offered 1953-54. Offered 1954-55*)
- 277f-278w-279s. **American Realism** (9 cred.; prereq. permission of instructor) Ar. (f,s), Hornberger (w)
- 281f-282w-283s. **Studies in the English Romantic Movement** (9 cred.) Erdman (*Offered 1953-54. Not offered 1954-55*)
- 284f-285w-286s. **Dryden and His Age** (9 cred.) Monk (*Offered 1953-54. Not offered 1954-55*)
- 287f-288w-289s. **Studies in Victorian Literature** (9 cred.) Ar. (*Not offered 1953-54. Offered 1954-55*)
- 290f-291w-292s. **Studies in Critical Theory. An intensive study, from the point of view of the philosophy of criticism, of the works of certain great critics** (9 cred.) Tate
- 297f-298w-299s. **Independent Reading** (9 cred.; prereq. M.A. degree or equiv.) Ar.

ENGLISH COMPOSITION

Major and Minor Sequences—There is no major sequence in composition. The minor sequence is subject only to the usual college rules (see page 12); and a major in English with a minor in composition is permissible.

Concurrent Registration in Composition Courses—Students may not register for more than one composition course at a time.

Important Note—No student may register for any freshman course in composition or communication without presenting an "English Classification Card (Part II)" as evidence of his assignment. On the basis of (a) the student's rank in his high school graduating class, (b) his score in the American Council on Education Examination, (c) his score on the Co-operative English Test, and (d) his grade on an impromptu theme on an assigned subject, the student is assigned to one of four categories. If he is assigned to Category (1), he is not required to take any courses in composition or communication—though he may, if he wishes to, take Eng. A-B-C, Comp. 4-5-6, or Com. 1-2-3. If assigned to Category (2), he must take Eng. A-B-C, Comp. 4-5-6, or Com. 1-2-3. If assigned to Category (3), he must take Comp. 4-5-6 or Com. 1-2-3. If assigned to Category (4), he must take Preparatory English; and he must, after passing it, take Comp. 4-5-6 or Com. 1-2-3.

Eng. A-B-C is a 15-credit course consisting of 9 credits of literature and 6 of composition; Comp. 4-5-6, a 9-credit course in composition; and Com. 1-2-3 (offered in the Department of General Studies [see page 71]), a 12-credit course in composition and speech. The student may satisfy the requirement in English for graduation, or for admission to the Senior College, by passing any of these courses or by being assigned to Category (1). Preparatory English offered in the General Extension Division (see the bulletin of that division) is a no-credit course in composition.

Any student who has already completed one or more quarters of composition in another college or university should consult Mr. Steinmann, in 222 Folwell Hall, before registering.

Any student who receives a grade of A in the composition part of Eng. A or B or in Comp. 4 or 5 may, upon recommendation of his instructor, be exempted from any further requirement in English. Any student

who receives a grade of A or B in Comp. 4 or 5 may, upon recommendation of his instructor, elect the following quarter of Eng. A-B-C.

Junior College Courses

- Af-Bw-Cs. Freshman English.** A combined course in literature and composition. The composition is equivalent to that in Comp. 4-5-6 and meets the requirement for graduation. The literature read consists of novels, short stories, plays, and poetry—both English and American, and mostly modern—and is intended to interest the student who would enjoy, and profit from, the study of literature but who wants to major in some other subject (15 cred.; prereq. assignment to Category [1] or [2] [see "Important note," page 68]) Ar.
- Aw-Bs. Freshman English** (1st two qtrs. of A-B-C. See Af-Bw-Cs) Ar.
- As. Freshman English** (1st qtr. of A-B-C. See Af-Bw-Cs) Ar.
- Bf-Cw. Freshman English** (2nd and 3rd qtrs. of A-B-C. See Af-Bw-Cs) Ar.
- Cf. Freshman English** (3rd qtr. of A-B-C. See Af-Bw-Cs) Ar.
- 4f-5w-6s. Freshman Composition.** Practical training in reading and writing (9 cred.; prereq. assignment to Category [1], [2], or [3] [see "Important note," page 68]) Ar.
- 4w-5s. Freshman Composition** (1st two qtrs. of 4-5-6. See 4f-5w-6s) Ar.
- 4s. Freshman Composition** (1st qtr. of 4-5-6. See 4f-5w-6s) Ar.
- 5f-6w. Freshman Composition** (2nd and 3rd qtrs. of 4-5-6. See 4f-5w-6s) Ar.
- 6f. Freshman Composition** (3rd qtr. of 4-5-6. See 4f-5w-6s) Ar.

Attention is called to Com. 1-2-3 (page 71).

- 7f. Composition Review.** A refresher course, including the reading of current magazines and the writing of themes; designed to review basic principles of analysis and organization necessary to the writing of clear and logical exposition. Not to be confused with Comp. 27 (3 cred.; prereq. 4-5-6 or Com. 1-2-3; students who have taken Eng. A-B-C admitted only by permission of instructor) Ar.
- 27f-28w.* Advanced Writing. 27:** A course in formal exposition, stressing adequate content, logical development, and organization of material. (Not to be confused with Comp. 7.) **28:** A course in the writing of description and narration, stressing methods and technique, particularly in simple narratives of general or technical interest: biography, travel, expanded incident, process, sketch (6 cred.; prereq. Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or exemption from requirement) Ar.
- 27w-28s.* Advanced Writing** (See 27f-28w) Ar.
- 27w.* Advanced Writing** (1st qtr. of 27-28. See 27f-28w) Ar.
- 27s.* Advanced Writing** (1st qtr. of 27-28. See 27f-28w) Ar.
- 28f.* Advanced Writing** (2nd qtr. of 27-28. See 27f-28w) Ar.
- 29s.* Advanced Writing.** A continuation of 27 and 28, for students who wish further opportunity to write. Readings from current writers with special attention to technique (3 cred.; prereq. 27) Ar.

Senior College Courses

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

Course 67-68 is 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 Scholastic Committee. See a statement on page 24.

* For prelegal students, 27 is required. For journalism majors and for English and language arts majors and minors in the College of Education, both 27 and 28 are required. They may be taken in either order, but it is preferable to take 27 first. Students not required to take 28 may take 29 instead; and all students are at liberty to take all three quarters. Students not required to take 28 should take it if they wish a first course in description and narration; they should take 29 if they wish either a second course in description and narration (following 28) or further training in exposition.

§ A special section of 4-5-6 will be established for two groups of foreign students; (1) with credit, to undergraduate students who need to fulfill the freshman English requirement for entrance to Senior College and for graduation; and (2) without credit, to other students, undergraduate and graduate, who do not need to fulfill the freshman English requirement but do desire to improve their English. It will be so conducted as to meet the foreign student's special problems in English and, in that and other ways, to help him adapt himself to American life on and off the campus.

- 58f,w,s. **Business Reports and Letters.** Style, forms, and methods in business writing (3 cred.; jr., sr.; prereq. Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3 or exemption from requirement; open to students in business administration and, with permission of instructor, to others) Guthrie and others
- 65w. **The Writing of Research Papers and Articles** (3 cred.; jr., sr.; prereq. Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3 and 6 additional cred. in English or composition, or 10 cred. in Eng. 21-22-23, and average of B in prerequisite courses) Buckley
- 67f-68w. **Problems of Style.** Studies in James Joyce, Thomas Mann, Willa Cather, and Marcel Proust (6 cred.; jr., sr.; prereq. average of B in two quarters of 27, 28, 29, 65) Atkins
- 101f-102w-103s.8 **The Writing of Fiction and Poetry.** A study of the principles of composition in these arts. Class meetings are devoted to the analysis of examples drawn from standard sources, meetings in the first two quarters to fiction, those in the third to poetry; but the student's compositions may be in either form in any quarter (9 cred.; jr., sr., grad., others with permission of instructor; prereq. for undergraduates 6 cred. above 50 in composition or literature or permission of instructor) Blum, Ross (f,w), Unger (s)
- 117s. **Playwriting** (3 cred.; jr., sr., grad.; prereq. Spch. 115-116 or permission of instructor) Cox

For Graduate Students Only

- 200f-201w-202s. **Graduate Seminar in Writing** (9 cred.; open to graduates and to special students not candidates for degrees with permission 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) Tate

FAMILY LIFE

See General Studies, page 71.

FINE ARTS

See Art, page 29.

FRENCH

See Romance Languages, page 136.

GENERAL STUDIES

Department Chairman—Russell M. Cooper

The Department of General Studies includes interdepartmental 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 that follow.

§ Attention is called to an arrangement combining work in composition and work in literature. A student may get (with the permission of the instructor, Mr. Gray) a further training in the writing of fiction by registering for Eng. 123-124-125, *The Technique of the Novel*. Similarly, a student may get (with the permission of the instructor, Mr. Tate) additional training in the writing of poetry by registering for Eng. 120-121, *Interpretation of Poetry*.

COMMUNICATION

- Com.1f-2w-3s. Communication.** A course to help students use the English language more effectively, with constant practice in speaking and writing, in listening and reading. 1: How words convey meaning, and social attitudes toward various language practices. 2: Logical and psychological means of persuasion. 3: The mass communication mediums of press, radio, and film, with special attention to the causes of blocked, distorted, and inadequate communicating. Nine regular conferences with the instructor, use of speech equipment, and special conferences with the speech or writing consultants. The course is accepted as equivalent to Comp. 4-5-6 in satisfying any requirements of the University (12 cred.; prereq. assignment to Category 1, 2, or 3 [see "Important note," page 68])
- Com.1w-2s. Communication** (Two qtrs. of 1-2-3. See 1f-2w-3s) Ar.
- Com.1s. Communication** (1st qtr. of 1-2-3. See 1f-2w-3s) Ar.
- Com.2f-3w. Communication** (2nd and 3rd qtrs. of 1-2-3. See 1f-2w-3s) Ar.
- Com.3f. Communication** (3rd qtr. of 1-2-3. See 1f-2w-3s) Ar.

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 credits 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 (3 cred.; no prereq.) Dyer, Hansen, Neubeck, and others
- F.L.1Af,w,s. Preparation for Marriage** (Designed for Senior College and older students) (See 1f,w,s) Dyer
- F.L.14s. Nutrition and Food Management.** Scientific principles of nutrition; food purchasing; food preparation and service. The class is limited to 24 students, and will afford practical laboratory experience (5 cred.; no prereq.; not open to students who have completed H.E. 30) Ar.
- F.L.15f,w,s. The Home and Its Furnishing.** Present-day housing problems; choice of location; house plans as they affect family living; exterior and interior design; choice of appropriate furnishings and accessories; building furnishing costs (3 cred.; no prereq.) Ludwig
- F.L.20f,w,s. 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.) Price
- F.L.25f,w,s.* Child Development and Adjustment.** The child as a growing person in the home and in society; development of habits, skills, attitudes, and adjustment; the development of self-direction; the provision of good environment for child growth. (For the general student; not for those interested in professional work with children. Majors in the nursery-kindergarten-primary program as well as majors in psychology may not register for this course) (3 cred.; no prereq.) Brieland

HUMANITIES

The humanities are concerned with man—his values, his purposes, his aspirations. The subject reveals itself in the great works of the human spirit, as expressed in the arts, literature, and philosophy. While a distinctive field of study, they are related to the social sciences, which deal with relations between men, and the natural sciences, which deal with the world outside of man. The first three courses that follow emphasize great human issues as depicted by fictional, dramatic, philosophical, and artistic materials, while the Arts sequence is concerned more explicitly with the development of esthetic appreciation.

* Students may not receive credit for this course if they have had C.W. 40 or C.W. 80.

Junior College Courses

- Hum.1f,w,s.* Humanities in the Modern World I.** The old regime, the revolution, neo-classicism, and romanticism. Period: from about 1740 to about 1820. Authors: Voltaire, Rousseau, Burke, Paine, Goethe, and the poets. One historical novel, Tolstoy's *War and Peace* (5 cred.; no prereq.) Blum, Bowditch, Bryan, Gray, Krieger, Kwiat, Ramsland, Rosenfeld, Siegelman, D. K. Smith, Wood
- Hum.2f,w,s.* Humanities in the Modern World II.** The industrial revolution; liberalism and socialism; the psychology of the individual. Period: from about 1776 to 1890. Authors: Carlyle, Mill, Marx, Smith, Malthus, Ibsen, Flaubert, Dostoyevsky, and the poets (5 cred.; prereq. 1) Blum, Bryan, Gray, Krieger, Kwiat, Ramsland, Rosenfeld, Siegelman, D. K. Smith, Wood
- Hum.3f,w,s.* Humanities in the Modern World III.** The impact of science and evolution; religion and morals in a changing world. Period: from about 1840 to about 1914. Authors: Huxley, Arnold, Turgeneff, Nietzsche, Shaw, Mann, and the poets (5 cred.; prereq. 2) Bryan, Gray, Krieger, Kwiat, Ramsland, D. K. Smith
- Hum.4f. Humanities in the Modern World IV.** An introduction to the study of the humanities since World War I. The authors studied include Freud, Lenin, Koestler, T. S. Eliot, Kafka, Ortega, and others. The background topics include civilization between two wars, the impact of psychoanalysis, communism versus fascism, etc. (5 cred.; prereq. 1 or 2 or 3) Ames, Bowditch
- Hum.11f-12w-13s. The European Heritage.** 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 use in present-day civilization.
- Hum.11f. The Greek Heritage.** 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.) Ames
- Hum.12w. Roman and Medieval Heritage.** Roman jurisprudence and organization; epicureanism and stoicism. Selections from Lucretius, Epictetus, Marcus Aurelius. Medieval faith, theocracy. Selections from St. Augustine, Dante, Chaucer. Ecclesiastical and feudal architecture (5 cred.; no prereq.) Ames
- Hum.13s. The Renaissance and Reformation.** Humanism; magnificence and individualism; secularism, skepticism, political realism; the Protestant strain; modern science and scientific method. Selected readings in Machiavelli, More, Montaigne, Swift, Shakespeare, Calvin, Luther, Rabelais, Cervantes. Renaissance architecture, sculpture, and painting (5 cred.; no prereq.) Ames
- Hum.21f. American Life I.** (Formerly Hum. 22) The growth of individualism and democracy (with particular attention to minorities) as recorded in American history, social thought, literature, and the arts (3 cred.; no prereq.) Kwiat, Noble, Turpie
- Hum.22w. American Life II.** (Formerly Hum. 23) The place in American civilization of the land, the city, and the good life; their implications and interrelations (3 cred.; no prereq.) Kwiat, Noble, Turpie
- Hum.23s. American Life III.** (Formerly Hum. 21) The growth and interrelation of nationalism, regionalism, and internationalism in American culture and thought (3 cred.; no prereq.) Kwiat, Noble, Turpie

The Arts—The following four courses comprise a sequence for students seeking an elementary understanding of art, music, poetry, theater arts, and esthetics. The student may elect any number of the offerings and in any order except that either Art 1 or Mu. 10 must precede Phil. 4.

Art 1f,w,s. Principles of Art (4 cred.; no prereq.) Torbert

Mu.10f,w,s. Introduction to Music (4 cred.; no prereq.) McConkie

Spch.8s. Introduction to the Theater Arts (4 cred.; no prereq.) Amberg

Phil.4s. Introduction to Philosophy of Art (4 cred.; prereq. Art 1 or Mu. 10) Hospers
(Not offered 1953-54. Offered 1954-55)

* Students in Hum. 1, 2, 3 will attend, in addition to the regular class sessions, concerts and exhibitions with hours to be arranged.

Senior College Courses

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

- Hum.51f-52w-53s.*§ Humanities in the Modern World.** This course is similar to Hum. 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 Hum. 1-2-3 (15 cred.; jr., sr.; no prereq.) Amberg, Ames, Rosenfeld
- Hum.54f. Humanities in the Modern World.** This course is similar to Hum. 4 except that it is confined to juniors and seniors. A student may not receive credit for this course if he has completed Hum. 4 (3 cred.; jr., sr.; no prereq.) Rosenfeld
- Hum.61f-62w-63s.* The European Heritage: from Homer to Mollère.** This course is similar to Hum. 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 Hum. 11-12-13 (15 cred.; jr., sr.; no prereq.) Nelson, Ross
- Hum.71f-72w-73s.* Humanities in the United States.** An interdisciplinary study of three things in the history of American civilization (the Puritan tradition; Jacksonian democracy; modern industrialism) conducted on a more advanced level than Hum. 21-22-23. A student may receive credit for both this course and Hum. 21-22-23, but not to exceed 9 credits altogether (9 cred.; jr., sr.; no prereq.) Marx
- Hum.131f-132w-133s. Humanities Proseminar.** Topic for course: The Place of the Humanities in an Age of Science (3 cred. per qtr.; sr., grad.) Ross

For information concerning a major in the humanities, see page 90.

NATURAL SCIENCE

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

Any of these Junior College courses may be applied toward the group "D" requirement in the natural sciences for admission to the Senior College of the College of Science, Literature, and the Arts, the School of Business Administration, and the College of Education. Under Plan I, the course must be taken in its entirety. 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. Students who have taken the elementary course of any science department may not register for the corresponding portion of these natural science courses.

Junior College Courses

- Nat.Sci.1f-2w†-3s. Orientation in the Natural Sciences.** An integrated survey course in which the student is introduced to basic principles and subject matter of science and the meaning of the scientific method in physical and biological sciences. 1: Astronomy and physics. 2: Chemistry and geology. 3: Man and the biological world; heredity, race evolution, physiology, ecology and health (15 cred.; fr., soph.) Graubard
- 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 physical universe around him (10 cred.; fr., soph.; no prereq.) Kruglak (f,w), Ar. (s)
- 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.) Ar. (f,w), Merrell (w,s)

* Students may enter any quarter.

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

§ Students in Hum. 51-52-53 will attend, in addition to the regular class sessions, concerts and exhibitions with hours to be arranged.

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

Phil.81f-82w-83s.* Science and Civilization. (Formerly Phil. 80-81-82) (9 cred.; designed primarily as a sr. integrative course, but open to jrs. with permission of instructor; no prereq.) Scriven

Nat.Sci.171f-172w-173s. The Development of the Sciences. The aim of this course is to provide a first-hand acquaintance with the manner in which man evolved science, as we know it today, through a study of his past approaches, errors and achievements. Stress is laid on original works (in English translation) rather than summaries; on roles of culture, values, techniques, goals, and social and emotional intrusions. 171: Deals with science of antiquity and Middle Ages. 172: Period from 1543 to 1800. 173: Selected high spots in modern science of nineteenth and twentieth centuries (9 cred.; jr., sr., grad.; prereq. one year of biological and of physical science in high school or college or permission of instructor) Graubard

PERSONAL ORIENTATION

The successful person cannot be content with a knowledge of only such fields as humanities and 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 methods of study and concentration, organizing material, preparing for examinations, and improving reading ability. Attention to the orientation of students in their attitudes and motivation, and the relation of these to satisfactory performance (2 cred.; no prereq.) Farquhar, Premack

Per.Or.1f,w,s. Choosing a Vocation. Assistance to students in understanding themselves as the best basis for vocational-educational planning. Consideration of occupational trends, descriptions, and adjustment problems. Active student participation through discussion and individual projects (2 cred.; fr., soph.; no prereq.) Hewer

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 the other courses help the student to integrate further his own social philosophy.

Junior College Courses

- Soc.Sci.1f-2w-3s. Introduction to Social Science.** An integrated study of the factors—historical, political, economic, social, psychological, and cultural—that influence man's behavior. The course is organized around three basic themes: (1) development of personality, (2) work as a central aspect of modern life, and (3) the quest for community. The course may satisfy the social science requirement for admission to the Senior College of the College of Science, Literature, and the Arts, the College of Education, and the School of Business Administration. Credit is given for each portion of the sequence completed, but to satisfy Group C under Plan I, though not under Plan II, it must be taken in its entirety (12 cred.; no prereq.) Cooperman, Jost, Miller, Mouratides, Nelson, Olson, Page, Potter, Rozental, Sibley, Walter, and others
- Soc.Sci.1w-2s. Introduction to Social Science** (1st two qtrs. of 1-2-3. See 1f-2w-3s) Ar.
- Soc.Sci.1s. Introduction to Social Science** (1st qtr. of 1-2-3. See 1f-2w-3s) Ar.
- Soc.Sci.2f-3w. Introduction to Social Science** (2nd and 3rd qtrs. of 1-2-3. See 1f-2w-3s) Ar.
- Soc.Sci.3f. Introduction to Social Science** (3rd qtr. of 1-2-3. See 1f-2w-3s) Ar.
- Soc.Sci.11f-12w-13s.* International Relations.** A survey of the world's critical areas and an examination of international forces in war and peace. This course offers a basis for informed evaluation of future as well as present international situations (9 cred.; fr., soph.; no prereq.) Turner, Cooper

* 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 Scholastic Committee. See a statement on page 24.

Soc.Sci.51f-52w-53s. Introduction to Social Science. This course is similar to 1-2-3 except that it is confined to juniors and seniors and is conducted on a more advanced level. It is designed for students with little background in social science and hence is not open to majors in a social science department or to anyone who has taken several social science courses. A student may not receive credit for any quarter of this course if he has completed the corresponding quarter of 1-2-3 (12 cred.; jr., sr.; no prereq.) Nelson

Soc.Sci.81f-82w-83s.* Public Affairs Forum. Introduction to contemporary American and world problems. Lectures, study, and forum discussion concerning selected issues (9 cred.; jr., sr.; no prereq.) Ziebarth (f,w), Ar. (s)

GEOGRAPHY

Department Chairman—Jan O. M. Broek

Major Advisers in the College of Science, Literature, and the Arts—Professor Weaver, Associate Professor Borchert; Instructor Sopher

Major Sequence in the College of Science, Literature, and the Arts—Thirty credits in Senior College courses in geography, including Geog. 70, 138, 160, 165, 170. Prerequisites: Geog. 1, 4, 41, and Geol. 1-2 and A. In addition, the student is strongly urged to earn (a) 6 Senior College credits in geology, preferably in geomorphology; (b) at least 9 Senior College credits in other social sciences; (c) a course in statistics, preferably P.H. 140.

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

Major Adviser in the College of Education—Associate Professor Borchert
Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: a minimum of 28 credits in geography, including 1, 4 or 41, 112, 113, and 143, and 5 additional credits from Geol. 1-2 or 8.

Minor recommendation: a minimum of 18 credits in geography, including 1, and 4 or 41.

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

Junior College Courses

1f,w,s. Geography of Physical Resources. The character, causes, and significance of regional differences in the world's physical resources (5 cred.; no prereq.; not open to students who have taken the old course 11) Borchert

4f,w,s. Human Geography. The geography of population and principal ways of life; the capacity of the earth for future population (5 cred.; no prereq.; not open to students who have taken the old course 45) Broek (f,s), Sopher (w)

41f,w,s. Geography of Commercial Production. An introductory course in economic geography with special emphasis on commodities of commercial significance. Particular attention is given to the world patterns of raw material occurrence and production, as well as to the associated centers of industrial fabrication (5 cred.; no prereq.) Weaver

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

* Students may enter any quarter.

60. **Major Relief Patterns of the Continents.** Major regional differences in relief of the earth's land surface. Emphasis on map study, distribution patterns, surface characteristics of regions and regional boundaries (2 cred.; jr., sr.; prereq. 1) (*Not offered 1953-54*)
- 67s. **Geography of Minnesota.** A geographical survey of the physical resources, population, and commercial production of Minnesota. Field trips in eastern Minnesota (3 cred.; jr., sr.; prereq. 5 cred. in geography or permission of instructor) Borchert
- 70s. **Introduction to Cartography.** The principles of map projections, their construction and properties. Types of maps. Problems and practice in the construction of specialty maps (3 cred.; soph. with C average, jr., sr.; prereq. 10 cred. in geography; not open to students who have taken the old course 111) Sopher
- 90f,w,s. **Readings** (Cred. ar.; jr., sr.; prereq. 12 cred. in geography and permission of instructor) Staff
- 101s. **Western and Central Europe.** An introduction to the major physical and cultural regions of Europe as a whole, followed by a more intensive discussion of the population patterns, resources, and industries in the individual countries of western and central Europe (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor) Ar.
105. **Mediterranean Region.** A regional survey of the lands adjacent to the Mediterranean Sea in southern Europe, western Asia, and northern Africa (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor) (*Not offered 1953-54*)
- 106s. **Scandinavia.** The physical and human geography of Denmark, Finland, Iceland, Norway, and Sweden, and adjacent waters considered both by individual countries and as a region (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor) Ar.
- 107f. **Soviet Union.** The character of and bases for the regional diversity of physical resources, population, agriculture, manufacturing, and transportation in the U.S.S.R. (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor) Morrison (1953-54), Borchert (1954-55)
109. **Middle America.** Physical and human geography of the West Indies and of the mainland from Mexico to Panama (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor) (*Not offered 1953-54*)
110. **South America.** A regional survey of the physical resources, population, agriculture, manufacturing, and transportation in the countries of South America (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor) (*Not offered 1953-54*)
- 112f. **Western Anglo-America.** A regional examination of the physical and human geographic patterns of the western portions of the United States and Canada (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor; not open to students who have taken the old course 71) Weaver
- 113w. **Eastern Anglo-America.** A regional examination of the physical and human geographic patterns of southeastern Canada and the eastern, southeastern, and middle-western United States (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor; not open to students who have taken the old course 71) Weaver
114. **Historical Geography of North America** (3 cred.; jr., sr., grad.; prereq. 1, and 10 additional cred. in either geography or history; not open to students who have taken the old course 53) (*Not offered 1953-54*)
- 117s. **The Middle East.** Environment and human occupation in their relationship to present regional differentiation within Southwestern Asia. Natural resources of the area and their development. Problems of international relations (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor) Sopher
118. **Africa.** The physical resources and their use, in the light of the competing cultures and economic forces which have helped shape the human geography of the continent (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor; not open to students who have taken the old course 103) (*Not offered 1953-54*)
- 121w. **India and Southeast Asia.** The course deals with India and Pakistan, Farther India, Indonesia, and the Philippine Islands; the areal differentiation of the social-economic structure within the framework of physiographic regions; geographic aspects of the problems of population pressure, development of resources, and international relations (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor; not open to students who have had the old course 120) Broek

- 122f. East Asia.** The physiographic features of China, Korea, and Japan, together with the forms of resource utilization in their regional diversity. Geographic aspects of the problems of population pressure, development of resources, and international relations (3 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor; not open to students who have taken the old course 120) Sopher
- 126. Australia and New Zealand.** A geographic survey of the physical and human resources of Australia and New Zealand (2 cred.; jr., sr., grad.; prereq. 5 cred. in geography or permission of instructor; not open to students who have taken the old course 104) (*Not offered 1953-54*)
- 128. Polar Regions.** An at first systematic and then regional examination of the physical environment, and of man and his way of life in the Arctic, Subarctic, and Antarctic realms. A survey is made of the principal eras of geographic discovery in these parts of the world (3 cred.; jr., sr., grad.; prereq. 1 or permission of instructor; not open to students who have taken the old course 125) (*Not offered 1953-54*)
- 133f. Introduction to Climatology.** The content and uses of our climatic record; world patterns of temperature, atmospheric circulation, moisture, and related elements; the world regional pattern of climate and its basis; uses and limitations of climatic classifications (3 cred.; jr., sr., grad.; prereq. 1 or permission of instructor) Borchert
- 134w. Advanced Climatology.** The major climatic regions of the U.S., Canada, and Central America; regional types of weather, their synthesis into climatic patterns; problems of long-term changes in the climatic pattern; introduction to the literature on regional climatic problems; analogous regions on the other continents (3 cred.; jr., sr., grad.; prereq. 133 or Aero.E. 173 or permission of instructor) Borchert
- 138f-139w-140s. Advanced Cartography and Map Reading.** Analysis of maps. Compilation of maps from statistical, descriptive, and cartographic sources. Interpretation of topographic maps and aerial photographs, and the compilation of maps from them. Exercises in the representation of relief. Map projections. Outline of historical cartography and the bibliography of maps (9 cred.; jr., sr., grad.; prereq. 70 or permission of instructor) Sopher
- 143f-144s. Political Geography.** Scope and content of political geography as exemplified by various writers, followed by an analysis of politically important areas (6 cred.; jr., sr., grad.; prereq. 12 cred. in geography, history, or political science, or permission of instructor; not open to students who have taken the old course 43) Morrison (1953-54), Broek (1954-55)
- 150. Agricultural Geography.** An analysis of the geographic patterns of the world's principal commercial and subsistence crops and the more broadly inclusive agricultural systems of which they are a part. Special emphasis will be placed on the ecologic, economic, and human factors which have been operative in creating the defined distributions (3 cred.; jr., sr., grad.; prereq. 1 or 41 and 10 additional cred. in geography or economics, or permission of instructor) (*Not offered 1953-54*)
- 160f. Development of Geographic Thought.** Objectives, subdivisions, concepts, and methods of geography, with special reference to different schools of geographic thought as expressed in literature of the last century (3 cred.; sr., grad.; prereq. 15 cred. in geography; not open to students who have taken the old course 155) Broek
- 165w. Source Materials for Geographic Research.** A survey of bibliographic aids and archival sources of geographic material at the international, national, and local levels. Particular attention will be given to methods of handling data and the preparation of written reports (3 cred.; sr., grad.; prereq. 15 cred. in geography) Weaver
- 170s. Field Course.** Field trips in the vicinity of the Twin Cities. Reports on selected topics (3 cred.; sr., grad.; prereq. 15 cred. in geography) Borchert

For Graduate Students Only

- 251w. Seminar in Human Geography.** Broek
- 252f. Seminar in Economic Geography.** Weaver
- 253f. Seminar.** Subject to be announced. Morrison
- 254w. Seminar in Physical Geography.** Borchert
- 255s. Seminar.** Subject to be announced. Ar.
- 301f,w,s. Research Problems.** Staff

GEOLOGY AND MINERALOGY

Department Chairman—George A. Thiel

Major Advisers in the College of Science, Literature, and the Arts—Professor Goldich; Associate Professors Swain, Wright.

Major Sequences in the College of Science, Literature, and the Arts—A major sequence in geology should include: (1) Geol. 1-2, A-B, or equivalents; (2) Geol. 23-24, 25 which should be taken as early as possible; (3) Math. 50; (4) Phys. 7-8-9 (Phys. 8 and 9 are Senior College courses recommended as part of a minor); (5) a year of college chemistry; (6) a course in surveying, preferably C.E. 17 (see the *Bulletin of the Institute of Technology*); (7) courses in drawing or cartography are desirable, and a course in geophysics is recommended.

The following Senior College courses are required of all majors: 100 or 115, 101, 106, 107, 118, 125, 131, 144, 150, 151, plus one of the following: 110, 112, 153.

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 Thiel

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

For courses in geophysics see page 123.

Junior College Courses

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

1f-2w.* General Geology (Physical and Historical). A study of geologic processes and of the materials on which they operate. A résumé of the history of the earth and its inhabitants as recorded in the rocks (6 cred.; no prereq.) Ar.

Af-Bw.* General Geology Laboratory (Physical and Historical). The physical properties of common minerals and rocks; interpretation of topographic maps. Identification of fossils; interpretation of geologic maps (4 cred.; with or after 1-2) Ar.

1w-2s.* General Geology. (Physical and Historical) (See 1f-2w) Ar.

Aw-Bs.* General Geology Laboratory (Physical and Historical) (See Af-Bw) Ar.

1s. General Geology (Physical and Historical) (1st qtr. of 1-2. See 1f-2w) Ar.

As.* General Geology Laboratory (Physical and Historical) (1st qtr. of A-B. See Af-Bw) Ar.

2f. General Geology (Historical) (2nd qtr. of 1-2. See 1f-2w) Ar.

Bf.* General Geology Laboratory (Historical) (2nd qtr. of A-B. See Af-Bw) Ar.

8f,w,s.§ Earth Features and Their Meaning—An Introductory Course. A general education elective. 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.) Thiel

23f-24w. Mineralogy. The crystal systems; morphological, physical, and chemical characters of minerals; classification and description of common minerals. Determinative work in laboratory, blowpipe analysis, sight identification (8 cred.; soph., jr., sr.; prereq. a term of college chemistry) Gruner

25s. Rock Study. The occurrence and origin of rocks; their mineral and chemical composition and classification (2 cred.; soph., jr., sr.; prereq. 24) Goldich

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

§ Not open to students who have had course 1 or Nat.Sci. 6 in General Studies. Cannot be followed by Geol. 1 for credit. May be followed by Geol. 2 or Geol. A with instructor's permission. Does not count toward the Junior College requirement for science unless accompanied or followed by course A.

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

- 63s. **Mineralogy of Precious Stones.** Characteristic physical and chemical properties of gems and precious stones. The natural geological settings and occurrences. Synthetic gemstones and imitations. The fashioning of stones. The history of precious stones as related to man (3 cred.; jr., sr.; no prereq.) Gruner
- 70s. **Geologic Field Methods.** Application of the plane table, altimeter, hand level, and Brunton compass to actual problems in the field (2 cred.; prereq. 25 and trigonometry) Ar.
- 100.¶ **Field Work in Northern Minnesota**—July 15 to 30, approximately. Selected areas in the iron district of Minnesota (3 cred.; jr., sr.; prereq. 25) Ar.
- 101f. **Sedimentation.** Environments of sedimentation. The origin of sedimentary rocks and their primary structures; lithologic associations (3 cred.; jr. sr., grad.; prereq. 24) Thiel
- 102w. **Methods of Study of Sediments.** Methods used in the study of sediments and sedimentary rocks. Textural and mineralogical analysis of clastic and nonclastic materials (3 cred.; jr., sr., grad.; prereq. 101, 106) Thiel
- 103w-104s. **Micropaleontology.** The study and classification of Foraminifera, Ostracoda, and other small fossils, and their use in stratigraphy (6 cred.; jr., sr., grad.; prereq. 107) Swain
- 106f. **Petrography.** Optical methods for identification of minerals in thin sections and immersion media; introduction to microscopic work on rocks (3 cred.; jr., sr., grad.; prereq. 25) Goldich
- 107f. **Invertebrate Paleontology.** Morphology and classification of important fossil groups other than Foraminifera and Ostracoda (3 cred.; jr., sr., grad.; prereq. 25 or permission of instructor) Ar.
- 108w-109s. **Advanced Invertebrate Paleontology.** Procedures in taxonomy; international rules of zoological nomenclature; techniques and elements involved in preparation of a paleontologic report (6 cred.; jr., sr., grad.; prereq. 107) Ar.
- 110w-111s. **Economic Geology.** The nature, genesis, and distribution of mineral deposits; relation of mineral deposits to structure and surficial alteration (6 cred.; jr., sr., grad.; prereq. 25) Ar.
- 112s. **Petroleum Geology.** The composition and origin of petroleum, methods of exploration, and the geology of the important oil producing regions (3 cred.; sr., grad.; prereq. 125 and 151) Swain
- 114s.* **Geology of Minnesota and Adjoining Areas.** The structure, stratigraphy, and lithology of the rocks and their associated mineral resources with emphasis on the Precambrian (3 cred.; jr., sr., grad.; prereq. 25) Thiel (*Offered 1953-54. Not offered 1954-55*)
115. **Field Work in Southeastern Minnesota**—July 15 to 30, approximately. Stratigraphic methods and principles as illustrated by study of Cambrian and Ordovician rocks (3 cred.; jr., sr., grad.; prereq. 25) Ar.
- 118f. **Geomorphology.** Origin and evolution of landforms in temperate, arctic, desert, and tropical regions in different geologic settings. Effects of structural history and climatic change on landform development. Relations of geomorphic processes to soil formation and engineering problems. Field trips; term paper or field project (3 cred.; jr., sr., grad.; prereq. A and 2) Wright
- 119Aw.* **Geomorphology of Eastern United States.** General geology of the physiographic provinces east of the Great Plains, with emphasis on the landforms and the Cenozoic history. Map study (3 cred.; jr., sr., grad.; prereq. 118 or 125) Wright (*Offered 1953-54. Not offered 1954-55*)
- 119Bw.* **Geomorphology of Western United States.** General geology of the physiographic provinces from the Great Plains westward, with emphasis on the landforms and the Cenozoic history. Complementary to Geol. 119A. Map study (3 cred.; jr., sr., grad.; prereq. 118 or 125) Wright (*Not offered 1953-54. Offered 1954-55*)
- 120s. **Glacial Geology.** Physics of modern glaciers. Glacial erosion and deposition. Stratigraphy and chronology of the Pleistocene in glaciated and nonglaciated areas. Causes of Pleistocene climatic changes (3 cred.; jr., sr., grad.; prereq. A and 2) Wright

* Courses offered in alternate years.

¶ A comprehensive report will be required for Graduate School credit.

- 121f. Crystallography.** The symmetry relations in the thirty-two crystal classes. Crystal drawings and measurements. Projections and mathematical calculations (3 cred.; jr., sr., grad.; prereq. trigonometry and a year of college chemistry) Gruner
- 124. Metamorphic Geology.** Conditions, processes, and results of metamorphism (3 cred.; jr., sr., grad.; prereq. 131) (*Not offered*)
- 125f. Structural Geology.** Primary and secondary structures of sedimentary, igneous, and metamorphic rocks; mechanics of rock deformation; use in field mapping and in interpretation of geologic history (3 cred.; jr., sr., grad.; prereq. 25) Wright
- 131w-132s. Petrology.** Petrographic description of igneous, metamorphic, and sedimentary rocks; their mineral and chemical composition, classification, origin, and alteration. Laboratory methods; preparation of samples (8 cred.; jr., sr., grad.; prereq. 106) Goldich
- 137s. Principles of Chemical Geology.** A study of geochemical literature. Methods in geochemical research and application of chemical and physical chemical principles to geologic problems (3 cred.; jr., sr., grad.; prereq. 25) Gruner
- 140w-141s. Applied Petrography.** Application of petrographic techniques to problems in mining and petroleum geology (6 cred.; jr., sr., grad.; prereq. 131) Goldich
- 144w. Geologic Maps.** Laboratory problems on construction and interpretation of geologic maps, cross-sections, structure contour maps, and mine maps. Fault problems and other three-dimensional analyses of geologic structures (3 cred.; jr., sr., grad.; prereq. 125) Wright
- 145s. Aerial Photographs.** Elements of photogrammetry, construction of mosaics and of planimetric and topographic maps, stereovision, geologic and geomorphic interpretation, field use (3 cred.; jr., sr., grad.; prereq. A and 2) Wright
- 146f-147w. Soil Mineralogy.** The crystal systems; morphological, physical, and chemical characters of minerals; classification and description of common minerals. Determinative work in laboratory, blowpipe analysis, sight identification. For students in soil science and agriculture and civil engineering (6 cred.; jr., sr., grad.; prereq. a term of college chemistry) Gruner
- 150.* Field Geology**—June 15 to July 15. Detailed systematic field work. Preparation of geologic maps, structure sections, reports; genesis of ores and their relations to geologic structures. Field, Black Hills, South Dakota (6 cred.; jr., sr., grad.; prereq. 125) Ar.
- 151w-153s. Stratigraphy.** Principles and methods illustrated by selected stratigraphic reports; stratigraphic history of United States; index fossils of each geologic period; term paper in 152 (6 cred.; jr., sr., grad.; prereq. 107) Ar.
- 153f. Subsurface Stratigraphy.** The application of sample logs, electrical logs, and other methods to the detailed stratigraphy of the subsurface in selected areas (3 cred.; jr., sr., grad.; prereq. 151) Swain
- 161w. Advanced Mineralogy.** Systematic study of mineral groups including some of the less common ones. Laboratory study of select specimens. Special physical and chemical tests including blowpipe analysis (3 cred.; sr., grad.; prereq. 24) Gruner
- 166w-167s. Mineralography.** Methods of studying opaque minerals and applications to problems in ore genesis and history (6 cred.; sr., grad.; prereq. 111, 131) Schwartz
- 170f,w,s. Geologic Problems.** Individual research in laboratory, or field problems at Senior College and graduate levels (1-3 cred. per qtr.; jr., sr., grad.; prereq. permission of major adviser) Staff
- 175s. Field Work in Glacial Geology and Geomorphology.** Mapping of surficial deposits and landforms of a selected area in Minnesota. One day of field work each week (3 cred.; jr. sr., grad.; prereq. 118, 120) Wright

For Graduate Students Only

- 211-212-213. Stratigraphic Paleontology.** Swain
- 214. Seminar in Economic Geology.** Goldich, Gruner, Schwartz
- 215. Advanced Course in Principles of Economic Geology.** Schwartz
- 216. Mining Geology.** Schwartz
- 217. Research Course in Petroleum Geology.** Swain
- 218. Advanced Structural Geology.** Schwartz
- 241. Field Course in Geology.** Staff
- 243-244. Research Course in Geology.** Staff
- 245-246. Research Course in Sedimentation.** Thiel

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

247. **Research in Geomorphology and Pleistocene Geology.** Wright
 248. **Seminar in Geomorphology and Pleistocene Geology.** Wright
 251-252. **Mineralogical Problems.** Gruner
 253-254. **Research Course in Economic Geology.** Goldich, Gruner, Schwartz
 260. **Rock Analysis.** Goldich
 261. **Theoretical Mineralogy.** Gruner
 262. **Advanced Optical Mineralogy.** Goldich
 263-264. **Research Course in Petrology.** Goldich
 265. **Seminar in Special Research Fields.** Ar.

GERMAN

Department Chairman—Lynwood G. Downs, acting chairman

Major Advisers in the College of Science, Literature, and the Arts—Associate Professors Downs, Wood.

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, 66, 67, 68, 70, 80.

B. Courses 60, 61, 62, 63, 64, 65, 70, 71, 72, 77, 90, 91, 92.

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

Major Adviser in the College of Education—Associate Professor Downs.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: Courses 50, 51, 52, 53, 54, 55, 56, 57, 58, 71 or 72, and 15 additional credits in German courses, other than 73-74-75, numbered 50 or above.

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.

Course 33 is recommended for premedical students.

Junior College Courses

1f-2w-3s.* Beginning Course—Standard Section. Five class meetings a week. Using the oral approach, the course aims to give a knowledge of the elements of grammar and the facility to read and write easy German (15 cred.; no prereq.; students submitting one year of high school German for entrance take course 2; those offering two years take course 3) Ar.

1w-2s. Beginning Course—Standard Section (1st two qtrs. of 1-2-3. See 1f-2w-3s) Ar.

1s. Beginning Course—Standard Section (1st qtr. of 1-2-3. See 1f-2w-3s) Ar.

1af-2aw-3as.* Beginning Course—Conversational Section. Ten class meetings a week: five hours of demonstration (introduction to texts dealing with real-life situations; necessary grammar) plus five hours of intensive conversational drill in sections small enough to assure each student individual attention. Less home study required than in standard or reading courses (15 cred.; no prereq.) Menze

1bf-2bw-3bs.* German Language and Culture. The objectives of the course are to provide, without emphasis on formal grammar, the foundation of a reading knowledge adequate for cultural or professional purposes; to impart a broad view of German culture and its contributions to Western civilization; and to encourage an understanding

* The sequence of courses that must be followed is 1-2-3, or 1a-2a-3a, or 1b-2b-3b, and a student may not receive credit for more than one of these sequences.

- of the nature of language by systematic comparison between German and English. The course will stress direct experience with a variety of reading material in German and English (15 cred.; no prereq.) Ramras
- 2f-3w. **Beginning Course—Standard Section** (2nd and 3rd qtrs. of 1-2-3. See 1f-2w-3s) Ar.
- 3f. **Beginning Course—Standard Section** (3rd qtr. of 1-2-3. See 1f-2w-3s.) Ar.
- 4f,w,s. § **Intermediate German** (5 cred.; prereq. 3 or 3a or 3b, or three years of high school German) Ar.
- 20s. **Reading and Speaking German.** Short stories and plays are read to develop reading fluency with oral practice (5 cred.; prereq. 4, four years of high school German, or equiv.) Ar.
- 24f-25w-26s. **Chemical German** (9 cred.; chemists, miners; no prereq.) Ar.
- 27f-28w-29s. **Chemical Prose** (9 cred.; chemists; prereq. two years of high school German or one year of college German) Ar.
- 33s. § **Medical German** (5 cred.; premed.; prereq. 3 or 3a or 3b) Ar.
- 41f-42w-43s. **Readings from German Chemical Periodicals** (6 cred.; sr.; prereq. 26 or equiv.) 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 Scholastic Committee. See a statement on page 24.

- 50f-51w-52s.* **Composition.** Review of German grammar, with emphasis upon colloquial usage, and original compositions (6 cred.; jr., sr.; prereq. 4) Downs
- 53f-54w-55s.* **Conversation.** Systematic development of vocabulary in areas relating to every day life and practice in the use of spoken German (6 cred.; jr., sr.; prereq. 4) Menze
- 56f-57w. **Essay Writing.** Short German essays are written at home on topics developed orally in class; corrections are discussed with the students (6 cred.; jr., sr.; prereq. 52) Pfeiffer
- 58s. **German Pronunciation.** Study of the "Hochsprache" as the established standard of correct pronunciation with practical exercises in phonetic transcription. Critical evaluation of individual pronunciation, utilizing modern recording instruments (2 cred.; jr., sr.; prereq. 4) Downs
- 59w,s. **German Pronunciation and Diction** (Open only to candidates for the German play) (1 or 2 cred.; jr., sr.; prereq. 3) Ramras
- 60w. **Modern Writers.** Writers and literary movements of the twentieth century are represented in selected works of Mann, Schnitzler, Kafka, Rilke, and others (3 cred.; prereq. 4 or four years of high school German) Menze
- 61s. **Lyrics and Ballads.** Representative poets including Goethe, Heine, George, and Rilke are read and discussed; poems set to music by Schubert, Schumann, Brahms, and others are presented in recordings (3 cred.; jr., sr.; prereq. 3 cred. above 59) Pfeiffer
62. **Nineteenth-Century Prose** (3 cred.; jr., sr.; prereq. 3 cred. above 59) (Not offered)
- 63f. **Classical Drama.** Reading and discussion of classical dramas chosen from the works of Lessing, Goethe, Schiller (3 cred.; jr., sr.; prereq. 60 or 4 with a grade of B) Ramras
- 64w. **Nineteenth-Century Drama.** Reading and discussion of selected works of the outstanding dramatists of the nineteenth century, Kleist, Grillparzer, Hebbel (3 cred.; jr., sr.; prereq. 3 cred. above 59) Ramras
- 65s. **Modern Drama.** Reading and discussion of selected dramas representing the more recent movements in German literature, naturalism, impressionism, expressionism (3 cred.; jr., sr.; prereq. 3 cred. above 59) Ramras
- 66f-67w-68s.* **Advanced German Conversation.** An accelerated course in the oral language for students advanced beyond Ger. 55 or Ger. 3a (6 cred.; jr., sr.; prereq. 3a or 55) Wood (Not offered 1953-54. Offered 1954-55)
- 70f-71w-72s.* **Survey of Literature.** 70: Early German literature. Reading and discussion of Old High German and Middle High German classics in modern German translation. 71: From the Renaissance through Goethe and Schiller. 72: From Romanticism to the twentieth century (9 cred.; jr., sr.; prereq. 3 cred. above 59) Downs (f), Pfeiffer (w,s)

* Students may enter any quarter.

§ For premedical students 33 is recommended instead of 4.

- 73f-74w-75s.* **German Classics in English Translation.** (This course requires no knowledge of the German language.) German literature from medieval to modern times is discussed in its relation to other literatures; representative works are read in translation. Topics include *Parzival*, *Tristan and Isolde*, *Nibelungenlied*, *Minnesinger* and *Meistersinger*; Humanism, Reformation and Counter-Reformation; Goethe, Schiller, and the new Humanism; Romanticism; Heine, Wagner, Nietzsche; Hauptmann, Mann, Werfel (6 cred.; jr., sr.; no prereq.) Wood (*Not offered 1953-54. Offered 1954-55*)
- 77s. **Faust I** (3 cred.; jr., sr.; prereq. 63 and 3 additional cred. above 59) Wood
80. **History of the German Language** (3 cred.; jr., sr.; prereq. 6 cred. above 60) (*Not offered*)
- 90f-91w-92s.* **German Civilization and Culture.** Review of movements in history, literature, art, philosophy, etc. Class discussions and lectures supplemented with demonstration materials (9 cred.; jr., sr.; prereq. 3 cred. above 59) Prottinger (*Not offered 1953-54. Offered 1954-55*)

For a complete list of graduate offerings see the *Bulletin of the Graduate School*.

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

GERMAN LITERATURE

- 103f-104w-105s. **German Syntax and Composition.** Required of all graduate majors (3 cred.; prereq. 57 or equiv.) Ramras, Pfeiffer (*Not offered 1953-54. Offered 1954-55*)
- 130-131-132. **The Age of Luther** (9 cred.; prereq. 70 and 11 cred. above 59 or equiv.) (*Not offered*)
- 143f-144w-145s. **The Classical Period.** (a) Lessing, Wieland, Herder; (b) Goethe (1953-54); (c) Schiller; (d) Goethe and his literary relations to France, England, and the United States (9 cred.; prereq. 71 and 11 cred. above 59 or equiv.) Ramras
- 150f-151w-152s. **Studies in German Literature of the Nineteenth Century.** (a) Die Novelle; (b) Austrian Drama; (c) Romanticism (9 cred.; prereq. 72 and 11 cred. above 59 or equiv.) Pfeiffer (*Not offered 1953-54. Offered 1954-55*)
- 153f-154w-155s. **Studies in the Literature of the Twentieth Century.** (a) Literary Movements (1953-54); (b) the Drama; (c) Die Novelle; (d) Essays and Criticism (9 cred.; prereq. 72 and 11 cred. above 59 or equiv.) Wood (*Not offered 1953-54*)
- 156-157-158. **Problems in German Literary Criticism.** History, methods, bibliography (9 cred.; prereq. 70-71-72 and 6 cred. above 59 or equiv.) (*Not offered*)
- 160-161-162. **Lyric Poetry.** 160: From the Renaissance through Sturm und Drang. 161: From Goethe through Romanticism. 162: From Heine to Rilke (9 cred.; prereq. 70-71-72 or equiv. and 11 cred. above 59) (*Not offered*)
- 163-164-165. **The German Novel.** (a) Development of the Novel; (b) The Nineteenth-Century Novel; (c) the Twentieth Century (9 cred.; prereq. 70-71-72 and 6 cred. above 59 or equiv.) (*Not offered*)
- 166f-167w-168s. **History of German Literature.** Required of all graduate majors and minors (3 cred.; prereq. 70 or equiv. or 11 cred. above 59) Staff (*Offered 1953-54. Not offered 1954-55*)
- 173f-174w-175s. **European Literary Relations.** (a) English-German Literary Relations (1953-54); (b) French-German Literary Relations (9 cred.; prereq. 70-71-72 and 6 cred. above 59 or equiv.) Pfeiffer
- 180f-181w-182s. **Drama in Translation** (9 cred.; sr., grad.; prereq. 72 and 11 cred. above 59 or equiv.) Wood

For Graduate Students Only

- 253f-254w-255s. **Seminar: Literary Problems.** (a) Goethe and Schiller; (b) Romanticism; (c) Nineteenth- and Twentieth-Century Drama: Kleist, Grillparzer, Heibel, and Hauptmann (9 cred.; prereq. 70-71-72) Wood, Pfeiffer, Ramras (*Not offered 1953-54*)

GERMANIC LINGUISTICS AND PHILOLOGY

- 110f-111w-112s. **Middle High German** (9 cred.; prereq. 70 and 11 cred. above 59 or equiv.) Downs (*Offered 1953-54. Not offered 1954-55*)
- 113f-114w. **Gothic** (6 cred.; prereq. 80 and 11 cred. above 59 or equiv.) Downs (*Not offered 1953-54. Offered 1954-55*)
- 118-119-120. **Old High German** (9 cred.; prereq. 70 and 11 cred. above 59 or equiv.) (*Not offered*)

* Students may enter any quarter.

125. **History of the German Language** (3 cred.; prereq. 80 and 11 cred. above 59) Downs (*Not offered*)
126. **Historical German Grammar** (3 cred.; prereq. 110-111-112 or 113-114) Downs (*Not offered*)
- 176-177-178. **Problems and Research Trends in Germanic Philology.** 176: The Germanic Languages. 177: The Germanic Literary Traditions. 178: Linguistic Geography (3 cred. per qtr.; prereq. two Germanic dialects) (*Not offered*)
- 194s. **Old Saxon. The Heliand** (3 cred.) Downs (*Not offered 1953-54. Offered 1954-55*)

GREEK

See Classics, page 52.

HEBREW

See Slavic and Oriental Languages, page 143.

HISTORY

Department Chairman—August C. Krey

Major Advisers in the College of Science, Literature, and the Arts—Professors Burt, Deutsch, Heaton, Jones, Jordan, Krey, Osgood, Steefel, Willson, Wolf; Associate Professors Anderson, Beatty, Bowditch, Loehr, Thompson, Tyler; Assistant Professor Chambers.

Major Sequence in the College of Science, Literature, and the Arts—Students will take the equivalent of at least two 9-credit courses in history numbered from 65 to 170. 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, may take at least one course numbered 170 or above; all other majors in history will take an additional number of courses with numbers 65 to 170 in the senior year, but will not take courses numbered 170 or above. Normally a history major will consist of Senior College courses aggregating at least 27 credits. Credits in Pol.Sci. 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.

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

Major Advisers in the College of Education—Professor Krey; Associate Professor Bowditch.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: a minimum of 45 credits; at least 18 credits must be in Senior College courses. See the *Bulletin of the College of Education*.

Minor recommendation: a minimum of 27 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, Hist. 20-21-22, or equivalent. For other history courses the same provisions apply as for S.L.A. majors in history, noted above.

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

Junior College Courses

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

- 1f-2w-3s. Civilization of the Modern World.** 1: The rise of the European state system as framework within which Western civilization developed, and the economic, cultural, political, intellectual, and religious implications of the emerging system. 2: The struggle for control over the Western states system, and the emergence of liberal democracy in the modern world. 3: The impact of industrialism upon Western and world civilization, the origins and backgrounds of the twentieth-century world (9 cred.; no prereq.) Wolf
- 1w-2s. Civilization of the Modern World** (2 qtrs. of 1-2-3. See 1f-12w-3s) Bowditch
- 3f. Civilization of the Modern World** (3rd qtr. of 1-2-3. See 1f-2w-3s) Bowditch
- 4f-5w-6s. English History.** 4: Conquest and settlement, the feudal age, foreshadowings of limited monarchy and popular government. 5: Tudors, Stuarts, and Hanoverians, parliament versus king, colonization and American Revolution. 6: The coming of democracy, Britain and Europe, Empire and Commonwealth (9 cred.; no prereq.) Burt
- 11f-12w-13s. Medieval and Renaissance History.** 11: The Roman heritage, the "age of faith," the feudal age. 12: The crusades, towns and trade, learning and literature, Gothic. 13: Renaissance and Reformation, the rise of national states, exploration and discovery (9 cred.; for music and art students; others by permission of instructor; no prereq.) Thompson
- 14f-15w-16s. Ancient Civilization** (9 cred.; no prereq.) Jones
- 14Af-15Aw-16As. Ancient Civilization with Basic Readings** (15 cred.; no prereq.) Jones
- 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.) Heaton
- 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. 20: Colonial and Early National Period. 21: Sectionalism and National Development. 22: Modern America (9 cred.; soph., jr., sr.; no prereq.) Osgood, Chambers, Noble

Senior College Courses

Except where otherwise stated, there are no prerequisites for the courses numbered 50 to 169. Most of these courses are announced for f-w-s or w-s, but students may enter any quarter.

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 Scholastic Committee. See a statement on page 24.

The first four courses listed below are survey courses designed for students who do not intend to major in history.

- 50f-51w-52s. Ancient Civilization** (9 cred.; jr., sr.; not open to those who have credit for 14-15-16) Jones
- 53f-54w-55s. Civilization of the Modern World** (9 cred.; jr., sr.; not open to those who have credit for 1-2-3) Wolf
- 56f-57w-58s. History of England** (9 cred.; jr., sr.; not open to those who have credit for 4-5-6) Burt
- 59f-60w-61s. American History** (9 cred.; jr., sr.; not open to those who have credit for 20-21-22) Osgood, Chambers, Noble
- 62f-63w. Cultural History of China.** 62: Prehistoric times to A.D. 600. 63: 600 A.D. to the present (6 cred.; jr., sr.; may be taken in conjunction with Art 178s) Mather (Offered 1953-54. Not offered 1954-55)
- 62af-63aw. Cultural History of Japan.** 62a: Prehistoric times to A.D. 1600. 63a: A.D. 1600 to the present (6 cred.; jr., sr.) Brower (Not offered 1953-54. Offered 1954-55)

- 65f-66w-67s. **Medieval European History.** 65: Decline of the Roman Empire. 66: The Feudal Age. 67: The Crusades, Gothic Architecture, Thomas Aquinas (9 cred.; jr., sr.) Krey (*Not offered 1953-54. Offered 1954-55*)
- 65af-66aw-67as. **Renaissance and Reformation.** 65a: The Age of Dante and Petrarch. 66a: Italian Renaissance. 67a: The European Renaissance and Reformation (9 cred.; jr., sr.) Krey (*Offered 1953-54. Not offered 1954-55*)
- 70f-71w-72s. **English Constitutional History.** 70: The medieval period. 71: Early modern times. 72: 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.) Thompson, Willson
- 76f-77w-78s. **Canadian History and Canadian-American Relations.** 76: Rise and fall of the French Empire in America. 77: From British conquest to federation. 78: The Dominion of Canada from its formation (9 cred.; jr., sr.) Burt
- 79f-80w-81s. **The United States in the Twentieth Century.** A discussion of the political, economic, diplomatic, and social history of the U.S. from the Spanish-American War to the present. 79: 1896-1912. 80: 1912-1929. 81: 1929- (9 cred.; jr., sr.) Chambers
- 83as. **American Agricultural History.** Development of American agriculture from the Colonial Period to the present (3 cred.; soph., jr., sr.) Loehr (*Not offered 1953-54*)
- 86f-87w-88s. **American Colonies.** 86: In the seventeenth century. 87: In the eighteenth century. 88: The Revolutionary crisis (9 cred.; jr., sr.) Tyler
- 89s. **Economic History of Modern War.** Economic aspects of the French Revolution and Napoleonic Wars, and of World War I and World War II (3 cred.; jr., sr.) Bowditch
- 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. 90: The Colonial frontier. 91: Mid-America. 92: The Far West (9 cred.; jr., sr.) Osgood
- 93f-94w-95s. **American Diplomatic History.** 93: American diplomacy, 1776-1846. 94: The period of national development. 95: The United States as a world power (9 cred.; jr., sr.) Beatty
- 97f-98w-99s. **Minnesota and the Northwest** (9 cred.; jr., sr.) Jordan
- 97af-98aw-99as. **History of the South.** 97a: 1607-1840. 98a: 1840-1890. 99a: 1890- (9 cred.; jr., sr.) Noble
- 100f-101w-102s. **History of the Ancient Near East** (9 cred.; jr., sr., grad.) Jones (*Not offered 1953-54. Offered 1954-55*)
- 100a-101a-102a. **History of Greece to 200 B.C.** (9 cred.; jr., sr., grad.) (*Not offered 1953-54 or 1954-55. Offered 1955-56*)
- 100bf-101bw-102bs. **History of Rome** (9 cred.; jr., sr., grad.) Jones (*Offered 1953-54. Not offered 1954-55*)
- 103f-104w-105s. **Medieval European History.** 103: Decline of the Roman Empire. 104: The Feudal Age. 105: The Crusades, Gothic Architecture, Thomas Aquinas (9 cred.; jr., sr., grad.) Krey (*Not offered 1953-54. Offered 1954-55*)
- 103af-104aw-105as. **Renaissance and Reformation.** 103a: The Age of Dante and Petrarch. 104a: Italian Renaissance. 105a: The European Renaissance and Reformation (9 cred.; jr., sr., grad.) Krey (*Offered 1953-54. Not offered 1954-55*)
- 106f-107w-108s. **Continental Europe.** 106: 1559-1661, the era of the Thirty Years' War. 107: 1661-1774, the age of Louis XIV, the "Age of Reason," and the "Enlightened Despots." 108: 1774-1815, the French Revolution and the Napoleonic Empire (9 cred.; jr., sr., grad.) Wolf
- 106af-107aw-108as. **Continental Europe.** 106a: Reconstruction after the Napoleonic wars, Liberalism and Nationalism, the Revolutions of 1820, 1830, 1848. 107a: Napoleon III, the first "Modern" dictator; making the kingdom of Italy and the 2nd German Reich. 108a: 1871-1914, forty years of peace and preparation for war (9 cred.; jr., sr., grad.) Steefel (*Not offered 1953-54. Offered 1954-55*)
- 109f-110w-111s. **Europe in the Twentieth Century** (9 cred.; jr., sr., grad.) Deutsch
- 112f-113w-114s. **Economic History of Europe.** 112: Economic life in ancient and medieval times. 113: Economic developments in the early modern world. 114: Economic developments since 1750 (9 cred.; jr., sr., grad.) Heaton
- 115f-116w-117s. **European Overseas Expansion.** 115: Voyages of discovery and overseas expansion, 1400-1600. 116: Colonial rivalries in the West Indies, East Indies, and India, 1600-1815. 117: Imperialism since 1850 (9 cred.; jr., sr., grad.) Willson (*Offered 1953-54. Not offered 1954-55*)

- 118as. **Scandinavia During World War II** (3 cred.; jr., sr., grad.; prereq. 106a-107a-108a or 122-123-124 or permission of instructor) Ar.
- 120f-121w. **Modern France.** 120: Political, social, and economic history of France from Vienna settlement to the establishment of the Third Republic. 121: The struggle of the Third and Fourth Republics to meet the challenge of the twentieth century (6 cred.; jr., sr., grad.; prereq. 9 cred. in history or 15 cred. in social science, or major in French) Bowditch
- 122f-123w-124s. **History of the Scandinavian Countries** (9 cred.; jr., sr., grad.) Ar.
- 125f-126w-127s. **Russia.** 125: The origins of the Slavs, the eastward movement and the rise of the principality of Moscow. 126: The Empire from Peter the Great through the Great Reforms of Alexander II. 127: From Alexander II to the present (9 cred.; jr., sr., grad.) Anderson
- 125af-126aw-127as. **Eastern Europe and the Middle East in the 19th and 20th Centuries.** The Balkan countries, Poland, Hungary, Czechoslovakia, Turkey, Persia, Afghanistan, the Arabic People. 125a: The Balkan countries, Poland, and Hungary up to World War I. 126a: The post-World War I states in this area including Czechoslovakia and Albania up to World War II. 127a: The Islamic Middle East, 1800 to the present (9 cred.; jr., sr., grad.; prereq. 1-2-3) Anderson
- 128f-129w-130s. **Modern England.** Tudor and Stuart periods. 128: 1485-1588, from Henry VII to the defeat of the Spanish Armada. 129: 1588-1642, from the Spanish Armada to the English Civil Wars. 130: 1642-1714, from the civil wars to the death of Queen Anne (9 cred.; jr., sr., grad.) Willson (*Not offered 1953-54. Offered 1954-55*)
- 128a-129a-130a. **Modern England, 1714 to the Present.** 128a: 1714-1783, the eighteenth century. 129a: 1783-1867, the coming of democracy. 130a: 1867-1945, democracy, socialism, empire, and war (9 cred.; jr., sr., grad.) (*Not offered*)
- 131f. **Economic Developments in the Scandinavian Countries in the Last Half-Century** (3 cred.; jr., sr., grad.; prereq. a course in economic theory, modern economic history or permission of instructor) Ar.
- 134f-135w-136s. **World War II** (9 cred.; jr., sr., grad.) Deutsch
- 137f-138w-139s. **The Early National Period in U.S. History.** 137: 1785-1815. 138: 1815-1835. 139: 1835-1850 (9 cred.; jr., sr., grad.) Jordan (*Not offered 1953-54. Offered 1954-55*)
- 137af-138aw-139as. **American History 1850-1900** (9 cred.; jr., sr., grad.) Loehr (*Offered 1953-54. Not offered 1954-55*)
- 140f-141w-142s. **History of Germany.** 140: Germany to 1648. 141: Germany, 1648 to 1871. 142: Germany since 1871 (9 cred.; jr., sr., grad.; prereq. Hist. 1-2-3 or major in German or permission of instructor) Steefel
- 143f-144w-145s. **American Folklore** (9 cred.; jr., sr., grad.) Jordan (*Offered 1953-54. Not offered 1954-55*)
- 146f-147w-148s. **American Economic and Social History.** 146: Colonial life. 147: From the Revolution to 1860. 148: Developments since 1860 (9 cred.; jr., sr., grad.) Loehr
- 149f-150w-151s. **Social and Intellectual History of the United States** (9 cred.; jr., sr., grad.) Tyler
- 152-153. **The Immigrant in American History and Life.** A chapter in social, religious, cultural, and political history (6 cred.; jr., sr., grad.) (*Not offered*)
- 154f-155w-156s. **Canadian History and Canadian-American Relations.** 154: Rise and fall of the French Empire in America. 155: From British conquest to federation. 156: The Dominion of Canada from its formation (9 cred.; grad.) Burt
- 157f-158w-159s. **Survey of Latin-American History.** 157: The colonial period. 158: The Latin-American republics. 159: Recent Latin-American history (9 cred.; jr., sr., grad.) Beatty
- 168w-169s. **Readings in the Works of Great Historians** (6 cred.; sr., grad.; this course required of all candidates for Ph.D. degree) Steefel

Courses numbered 170 to 200 are open to seniors and to graduate students upon recommendation of advisers; prerequisites are appropriate lecture courses and consent of the department.

170f-171w-172s.† **Selected Readings in Ancient History** (9 cred.; sr., grad.) Jones

173f-174w-175s.† **Selected Readings in Medieval and Renaissance History** (9 cred.; sr., grad.) Krey

173af-174aw-175as. **Selected Readings in Medieval English History** (9 cred.; sr., grad.) Thompson

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

SELECTED READINGS IN EUROPEAN HISTORY

- 176f-177w-178s.† Selected Readings in Seventeenth-Century France (9 cred.; sr., grad.; prereq. reading knowledge of French) Wolf
- 176af-177aw-178as.† Russian History (9 cred.; sr., grad.; prereq. 125-126-127 and a reading knowledge of Russian, German, or French, or permission of instructor) Anderson
- 176bf-177bw-178bs.† Scandinavian History (9 cred.; sr., grad.) Ar.
- 176cf-177cw-178cs.† Recent European History (9 cred.; sr., grad.; prereq. lect. course in twentieth-century Europe or World War II, or permission of instructor) Deutsch
- 176df-177dw-178ds.† Readings in Nineteenth-Century European History (9 cred.; sr., grad.; prereq. reading knowledge of French or German and course 106a-107a-108a or permission of instructor) Steefel (*Offered 1953-54. Not offered 1954-55*)
- 179f-180w-181s.† European Economic History Since 1700 (9 cred.; sr., grad.) Heaton
- 182f-183w-184s.† Selected Readings in English History, Tudor and Stuart Periods (9 cred.; sr., grad.) Willson

SELECTED READINGS IN AMERICAN HISTORY

- 185f-186w-187s.† Readings in the Problem of Slavery in American History with Emphasis on the South (9 cred.; sr., grad.) Tyler (*Not offered 1953-54. Offered 1954-55*)
- 185af-186aw-187as.† The West in American History (9 cred.; sr., grad.) Osgood
- 185bf-186bw-187bs.† American Diplomatic History (9 cred.; sr., grad.) Beatty
- 185cf-186cw-187cs.† Twentieth-Century American History (9 cred.; sr., grad.) Chambers
- 185df-186dw-187ds.† Nineteenth-Century American History (9 cred.; sr., grad.) Jordan
- 185ef-186ew-187es.† Problems of the Eighteenth Century; Some Phases of Early American Social and Intellectual History (9 cred.; sr., grad.) Tyler (*Offered 1953-54. Not offered 1954-55*)
- 188f-189w-190s.† American Economic History (9 cred.; sr., grad.) Loehr
- 191f-192w-193s.† Selected Readings in Relations of the United States, Great Britain, and British North America (9 cred.; sr., grad.) Burt
- 194-195-196.† Selected Readings in Latin-American History (9 cred.; sr., grad.; prereq. reading knowledge of Spanish) Beatty (*Not offered 1953-54.*)

For Graduate Students Only

- 200f. Historical Bibliography and Criticism (3 cred.; required of candidates for advanced degrees in history who do not present evidence of similar training elsewhere) Steefel
- 208f-209w-210s.† Seminar in American History (9 cred.) Loehr
- 208af-209aw-210as.† Seminar in American History (9 cred.) Osgood
- 208bf-209bw-210bs.† Seminar in American History (9 cred.) Ar.
- 221f-222w-223s.† Seminar in Modern European Economic History, 1300-1700 (9 cred.) Heaton
- 224f-225w-226s.† Seminar in Modern European History (9 cred.; prereq. reading knowledge of French and German or permission of instructor) Steefel (*Not offered 1953-54. Offered 1954-55*)
- 230f-231w-232s.† Seminar in Ancient History (9 cred.) Jones
- 240f-241w-242s.† Seminar in Latin-American History (9 cred.) Beatty (*Not offered 1953-54. Offered 1954-55*)

HOME ECONOMICS

School of Home Economics

Director—Louise A. Stedman

The courses in home economics listed on pages 89 and 90, are open to students from the College of Science, Literature, and the Arts, as well as to students from other colleges.

Students registered in colleges other than Agriculture, Forestry, and Home Economics who wish to take courses not listed on following pages must have the written approval of the director of the School of Home Economics.

Students from colleges other than Agriculture, Forestry, and Home Economics who wish to take courses in related art should choose their

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

courses, to avoid duplication of content, according to the following sequences which have been planned to accommodate nonmajors:

1. H.E. 56 and 57; H.E. 120 or
2. H.E. 20; H.E. 57; H.E. 120 or
3. F.L. 15; H.E. 120.

Junior College Courses

- 1f,w,s. Choice and Care of Clothing.** Guidance in planning, selecting, and caring for the wardrobe. Principles of design and color as they relate to dress and personal appearance, and basic textile knowledge which should help the consumer (4 cred.; fr.; not open to H.E. seniors, men, or students who have had G.C. 15; no prereq.) Wolff (f), Ar. (w,s)
- 20f,w,s. Introduction to Related Art.** The development of an appreciation of the art involved in the everyday life of the student. Experiences in making selections in varied fields such as dress, house furnishings, etc., are directed toward a discriminating taste. The arts and crafts of various countries are studied briefly for their contribution toward breadth of view, enjoyment and understanding of other cultures (4 cred.; fr.; not open to H.E. seniors or to those who have had 56; no prereq.) Myren
- 30f.* Introduction to Nutrition.** A course designed for students wishing a discussion of the application of the principles of nutrition to the selection of food (2 cred.; not open to H.E. students or to those who have had F.L. 14 or H.E. 31; no prereq.) Biester, Ar.
- 31f,w,s. Introduction to Nutrition.** The application of nutrition principles to food selection of college students. Includes information on the relation of food to the promotion and maintenance of health (3 cred.; fr.; not open to seniors or to students having credit for 30; no prereq.) Gormican (f,w), Ar. (s)
- 34s. Nutrition Problems.** A consideration of the nutrition problems most commonly met by adults and children in typical families (4 cred.; 3rd qtr. soph., jr., sr.; prereq. 31, 40, physiology or human biology; not open to students having credit for 76 or 170 and 171) Ar.
- 40f,w,s. Food Preparation.** The development of technique and the application of fundamental science principles to cookery processes and preservation. The establishment of good standards for food products (5 cred.; no prereq. for S.L.A. students) Ar.

Senior College Courses

- 52f. Introduction to Textiles.** A study of the factors which influence the quality and value of fabrics used in men's and women's wearing apparel and household furnishings. Designed primarily to meet the needs of those interested in merchandising (3 cred.; for S.L.A., Bus.Ad., U.C., and ArtEd. students; no prereq.) Gorham
- 56w. Applications of Color and Design I.** The needs of individual students determine largely the specific content of the course. It is devoted to a general study of color and design applications in various areas, including problems relating to dress and a brief study of some of the arts and crafts of other countries. Arrangement of display cases studied through actual experience (3 cred.; not open to H.E. students or to those who have had 20; no prereq.) Everson
- 57s. Applications of Color and Design II.** A continuation of 56 with the emphasis upon house planning and furnishing problems. Rooms are arranged. Field trips (3 cred.; not open to H.E. students or to those who have had 24, or 180; prereq. 56 or 20, or permission of instructor) Ludwig
- 70w. Advanced Food Preparation.** A continuation of 40, emphasizing particularly the scientific principles that underlie cookery processes and food preservation (3 cred.; jr., sr.; prereq. 40 and permission of instructor) Gordon
- 76f. Nutrition.** The application of the principles of nutrition to the problems of food selection most commonly met in everyday living (4 cred.; jr., sr.; prereq. 30 or 31, and 40; not open to students having credit for 34) Gormican
- 85f,w,s. Home Management Principles.** Managerial aspects of homemaking; work simplification of household activities; financial records and budget-making for individual and family (3 cred.; jr., sr.; prereq. 40, 41 advised) Jeary

* Offered on the Minneapolis Campus. Intended for students in College of Science, Literature, and the Arts. Open to home economics students only by special permission of director of School of Home Economics.

120f, w.s. **Art History.** A general view of the history of art from the Egyptian period to the present. The development of painting, sculpture, architecture, furniture, and costume is studied in order to understand the influences and the contributions of the past and their significance to contemporary houses, their furnishings, and to dress. Field trips (3 cred.; Senior College and grad. students only) Esteros

HOW TO STUDY

See General Studies, page 74.

HUMANITIES

Program Chairman—Ralph G. Ross

Major Advisers in the College of Science, Literature, and the Arts—Professor Ross; Associate Professor Kwiat; Assistant Professors Ames, Bryan, Rosenfeld.

Major Sequence in the College of Science, Literature, and the Arts—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. There must be a minimum of 60 credits in Senior College Courses. Specifically, these requirements are as follows:

1. Four quarters of Humanities in the Modern World and three quarters of European Heritage, taken either in Junior or Senior College. Any honor points earned in Junior College sections are not computed in determining the honor points of the major.
2. Nine Senior College credits in social science (history included).
3. Nine Senior College credits in History of Art (see page 32) or History of Music.
4. Nine Senior College credits in philosophy.
5. Eighteen Senior College credits in literature (English or foreign).
6. Nine Senior College credits in Humanities Proseminar.

For courses labeled "Humanities," see the Department of General Studies page 71. For all other courses in the division, see the separate departments mentioned in the above lists of requirements.

INTERNATIONAL RELATIONS AND AREA STUDIES

Committee Chairman—Professor Harold C. Deutsch; **Director**—Associate Professor Charles H. McLaughlin

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

(a) **General International Relations Major**—Professors Jan O. M. Broek, Harold C. Deutsch, Werner Levi, Harold S. Quigley; Associate Professor Charles H. McLaughlin.

(b) **Area Studies**—Northwest Europe: Scandinavia—Professor Alik Gustafson; British Isles, France, Germany—Professor Lawrence W. Steefel; Russia: Associate Professor George W. Anderson; East and South Asia: Professor Jan O. M. Broek; Latin America: Professor Raymond L. Grismer.

In addition to these advisers, who are the chairmen of the several area committees, students may consult any other member of a committee whose field of specialization corresponds with the student's field of interest within the program. For committee lists see the special bulletin, *Programs in International Relations and Area Studies*.

(c) **Preparation for the Foreign Service**—Professors Harold S. Quigley, Asher N. Christensen; Associate Professor Charles H. McLaughlin.

Purpose of the Programs—In response to increasing student interest in world affairs, several programs in international relations and area studies have been developed which permit students to cross departmental lines. These include:

(a) A general international relations major without particular area emphasis for students who wish to specialize in the governmental and legal as well as the more general aspects of international relations study.

(b) A group of area study majors designed to develop a comprehensive understanding and appreciation of the civilization of the peoples of given areas. Areas are demarcated on the basis of the culture or civilization of their peoples rather than upon a political basis. Programs may now be arranged for the following areas: Northwest Europe (with concentration in a sub-area, either Scandinavia, British Isles, France, or Germany), Russia, East and South Asia, Latin America. In each case the major program is an integrated study of the social, political, economic, and esthetic ideas and institutions of the area, comprising courses drawn from the social sciences, language and literature, fine arts, humanities, and philosophy.

(c) A program of training in preparation for careers in the Foreign Service or in agencies having related functions. This ordinarily combines some elements of the general international relations major and one of the area study majors, with the emphasis determined by the student's interests.

For full information about these programs at either the undergraduate or the graduate level consult the special bulletin *Programs in International Relations and Area Studies*. Some of the essential features are indicated below.

Courses in the Junior College—Students may satisfy the group requirements under either Plan I or Plan II, but in either case should complete four quarters, or the equivalent, of a foreign language in college. In the case of area study majors such preparation should be in a foreign language appropriate to the area to be studied. Foreign service candidates should choose either French, German, Spanish, Portuguese, or Russian. Since Senior College training in foreign language is ordinarily required in international relations majors, and always required in area study majors, students should lay a proper foundation for this in the Junior College.

Since the Senior College majors include courses selected from several social sciences care should be exercised to complete any Junior College courses which are prerequisite to the advanced courses in these departments. Selection can ordinarily be made from the following list, but advisers should be consulted as to variations and special recommendations peculiar to the several majors.

Course No.	Title	Credits
Anth. 1	Introduction to Anthropology	5
Anth. 2	Introduction to World Ethnology	5
Econ. 1-2	Business History	10
Econ. 5	Elements of Statistics	5
Econ. 6-7	Principles of Economics	10
Geog. 1	Geography of Physical Resources	5
Geog. 4	Human Geography	5
Geog. 41	Geography of Commercial Production	5
Hist. 1-2-3	Civilization of the Modern World	9
Hist. 17	Modern Ecogomic and Social Problems	5
Hist. 20-21-22	American History	9
Pol.Sci. 1-2-3	American Government and Politics	9
Pol.Sci. A-B-C	The State and the Modern World	9

Pol.Sci. 25	World Politics	3
Soc.Sci. 1-2-3	Introduction to Social Science	12
Soc.Sci. 11-12-13	International Relations	9
Soc. 1	Introduction to Sociology	3
Soc. 49	Social Problems	3

The Junior College curriculum may be completed with courses which satisfy special interests or needs of the student. He should devote some time whenever possible to basic cultural training in the fine arts, humanities, literature, and philosophy, for which the following courses may be considered:

Course No.	Title	Credits
Art. 1-2-3	Introduction to Art	10
Eng. 21-22-23	Introduction to Literature	15
Eng. 37-38-39	Twentieth-Century Literature	9
Hum. 1-2-3-4	Humanities in the Modern World	20
Mu. 31-32-33	Music Literature	6
Phil. 1	Problems of Philosophy	5
Phil. 20	Social Philosophy	3
Phil. 107	Philosophy in Modern Literature	3

Students planning to elect an international relations or area study major should consult a major adviser as early as possible, preferably upon entrance into the University.

Courses in the Senior College—In consultation with a major adviser, the student will select courses totaling 45 credits, equivalent to a major and a minor. A minimum of 60 credits in Senior College courses must be earned in all.

In the general international relations major these courses must be chosen from approved offerings distributed among at least three social science departments and must form an integrated plan of study relevant to the student's interests and vocational objectives. Foreign language study is to be continued through at least the basic composition and conversation courses at the Senior College level. Additional courses contributing to the international relations program, or courses suited to other cultural interests of the student, may be elected.

The area study majors must include at least 18 credits in the social sciences and, whenever available, 6 credits in an honors or reading course or proseminar designed to integrate the program. Such integrating courses now include the following: Scandinavian Area—Scand. 22-23, Scandinavian Life Today and Yesterday; Scand. 199, Scandinavian Area Proseminar; Northwest Europe—Hist. 140-141-142, History of Germany, and Econ. 128, Economics of Western Europe. East and South Asia—Geog. 253 or Pol.Sci. 241, Interdepartmental Seminar on East and South Asia. Russia—Econ. 127, Economics of the U.S.S.R. A proposed course on Land-People Relations in Latin America awaits administrative approval. The remainder of the 45 credits will be distributed among courses in foreign language and literature and in fine arts, humanities, and philosophy. The rest of the 60 Senior College credits may be elected by the student to complete his program in accordance with his cultural or vocational interests.

Detailed requirements and listing of courses for each major appear in the special bulletin, *Programs in International Relations and Area Studies*.

JAPANESE

See Slavic and Oriental Languages, page 143.

JOURNALISM

School of Journalism

Director—Ralph D. Casey

Major Advisers in the College of Science, Literature, and the Arts—Professors Barnhart, Casey, Charnley, Gerald, Nixon; Associate Professors Emery, Ford, Jones, Kildow, Wilson; Assistant Professor Park; Instructors Hage, Perry.

Adviser for Students in Other Colleges—Professor Casey.

Young men and women planning on careers in the various fields of mass communications enter the School of Journalism to earn a B.A. in journalism degree. Those showing superior performance and desiring superior preparation in journalism and supporting social sciences will be recommended during the third quarter of their fourth year for Graduate School admission and may then earn both the M.A. and B.A. degrees in five years. The fifth year will permit such students to meet the M.A. requirements, Plan A or Plan B, on pages 7-13 of the *Bulletin of the Graduate School*. B.A. degree requirements are on page 11, this bulletin.

The principal fields of journalism, some of which overlap or require substantially similar preparation, are: daily and weekly newspaper reporting, editing, and other editorial work; daily and weekly newspaper circulation, editorial administration, and business management; advertising and promotion; radio and television news work, script and continuity writing, and advertising; press association work; magazine writing, editing, and administration; book editing and publishing; agricultural or home economics journalism; public relations and public opinion; media analysis and mass communications research; journalism teaching.

Preparation for journalism involves this emphasis: A sound cultural education, a study of the social implications and professional responsibilities of a free press, and a fundamental knowledge of journalistic techniques and procedures. The journalism major student, to obtain the basic background of the historic, social, economic, and cultural cross-currents in society, is asked to meet the Arts College freshman and sophomore requirements, and to plan a Senior College program, in conference with his adviser, which supports and extends his professional training. Emphasis in this supporting work, though it is always designed to meet individual needs, is largely upon the social studies, the humanities, and literature. About three-fourths of the student's total university courses is devoted to work of this kind.

The journalism major begins his journalism work with a course in basic journalistic writing in his sophomore year. To prepare himself both with knowledge of communications as social institutions and with the specialized techniques of the forms of journalism in which he is interested, he takes a major sequence "core group" in junior and senior years, together with a number of elective courses. These journalism courses take about half the student's time in the Senior College.

Freshmen who are interested in journalism and communications and who plan to enter the school at a later time are urged to discuss their course programs and vocational desires with members of the journalism staff. Students who plan the five-year program should consult a journalism adviser in their freshman year.

All prejournalism students must meet the freshman English and public health requirements as described on page 9. All must include Comp. 27-28, Jour. 13, Pol.Sci. 1-2 or 5, and Hist. 21-22 in their Junior College programs. (Hist. 79-80-81 may be substituted for 21-22 in the Senior College.) All except those planning to enter the journalism major

for students specializing in advertising must include also Jour. 14-15. Preadvertising specialists must include Jour. 18-19.

It is recommended that the prejournalism student meet Junior College requirements (see page 8) whether he elects Plan I or II, so as to include substantial basic work in the following fields:

Social Studies—The required history and political science courses may be supplemented by economics, sociology, and Soc.Sci. 1-2-3

Natural Science—Nat.Sci. 1-2-3 or 4-5-6 or either psychology, chemistry, physics, biology, or a combination of courses in these fields

Humanities—French, Spanish, or German; humanities; philosophy; speech; English or American literature

Electives to make the required Junior College total of 84 to 90 credits should include courses from the areas listed above, or other areas chosen in consultation with the journalism adviser. An especially recommended course is Econ. 6-7, which is required for the five-year program. Other electives recommended as providing, in most cases, a sound foundation for major work in journalism are: Pol.Sci. A-B, 25; Soc. 1, 2; Psy. 1-2; Hist. 1-2-3, 17; Soc.Sci. 1-2-3; Nat.Sci. 1-2-3, 4-5-6; two or more quarters of Humanities; Geog. 1, 4, 41; Eng. 37-38-39.

No student whose average is lower than C will be permitted to enroll in any journalism course, either Junior College or Senior College.

The fourth hour Tuesday is free of journalism classes, to make it easier for journalism major students to attend vocational counseling and other professional meetings occasionally scheduled at this hour by the School of Journalism. Journalism majors are urged to keep these hours free of other classes insofar as possible.

Major Sequence Leading to the Joint Degrees of Bachelor of Arts in the College of Science, Literature, and the Arts, and of Master of Arts in the Graduate School—Courses 51-52, 55, 73, 101, 109-110, 113, 121, 130, 140-141, 142, 200 and one additional course in the 200 series. Total credit requirement for M.A. under Plan A, 207 credits, under Plan B, 225 credits. Modifications of the five-year program requirements may be approved in terms of a student's special professional interests. Language optional except where needed to support specialization. For the M.A., specialization is provided in one of the social sciences related to journalism and in one or more of the graduate journalism fields: (1) communications and public affairs; (2) public opinion and propaganda; (3) international communications; (4) freedom of press and communications law; (5) economics of communications; (6) quantitative communications research; and (7) history of communications.

Major Sequence in the College of Science, Literature, and the Arts—Courses 51-52, 55, 73, 101, 109-110, 140-141, 142, and 9 additional credits in journalism chosen in conference with the adviser. (*Modified major sequences for students in advertising or management and in agricultural or home economics journalism are 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.

Major Sequence for Journalism Students with Advertising Specialization—Courses 51, 55, 65, 86, 151, 152, Psy. 156, B.A. 77 and 87, and 9 hours of electives in journalism, or related social sciences, or other approved areas. Additional Junior College requirements are: Econ. 6-7 and Psy. 1-2.

Minor Sequence for Such Students—A student may meet the minor requirement by a minor sequence of 15 credits or two minors of 9 credits

each in Senior College courses in the College of Science, Literature, and the Arts, or by a special 15-credit sequence to be chosen from the following courses: B.A. 51, 53, 112, 113, 114, 180 (C, Marketing), 194, Econ. 84, 85, 110, Psy. 140.

Students wishing special training in commercial design are advised to elect from among Art 63, 64, 65.

Major Sequence for Journalism Students with Newspaper Management Specialization—Courses 51, 55, 65, 73, 86, 93, 95, 101, 151, and 12 additional credits chosen in conference with the adviser from among 78, 109-110, 113, 115, 118, 121, 130-131, 140-141, 142, 152, and 177.

Minor Sequence for Such Students—Courses B.A. 77 and 87 and Psy. 156, and 6 additional credits selected from among Art 65, B.A. 114 and 194, Jour. 130 and Psy. 140. Junior College prerequisites are Econ. 6-7 and Psy. 1-2. Prerequisite for B.A. 194 is Econ. 5 or B.A. 70.

Radio-Journalism Specialization—Journalism majors with professional interest in radio and television news work, script and continuity writing, advertising, or station administration may elect courses in journalism and speech, in conference with their advisers, to meet elective requirements and minor requirements. Such students usually elect from among Jour. 67, 68, 87, 88, 113, 120, and 130-131, and Spch. 65, 66.

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 the office of the assistant dean of the College of Agriculture, Forestry, and Home Economics.

Combined Curriculum in Journalism and Home Economics—This curriculum prepares students for professional work in areas of newspaper, magazine, advertising, radio, public relations, and other journalistic activity in which proficiency in home economics subject matter is necessary. The curriculum offers a major journalism sequence combined with general home economics background and specialization in selected home economics fields. Its flexibility makes it possible to suit its requirements to the individual needs of each student. Students electing the curriculum register in the College of Science, Literature, and the Arts. They design their programs in consultation with major advisers in both the School of Journalism and the School of 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 11, 41, 69, and 6 additional credits in Senior College journalism courses, to be chosen in conference with the adviser. Courses 78, 90, 110, 111, 121, and 130 are recommended.

Minor Sequence in the College of Education—Courses 11, 41, 69, 82, and 9 additional credits chosen from among Jour. 55, 90, 103, 111, 120, 121, and 130. Course Ed.T. 74 (see *Bulletin of the College of Education*), offered by the School of Journalism, is a required education elective for students in this sequence.

General Education Courses in Mass Communications—A group of courses dealing primarily with the social aspects of mass communications is open to students majoring in other departments and may be used for a non-professional minor by undergraduates and graduates: 103, Literary Aspects of Journalism; 109-110, History of Journalism; 111, International Communications and Foreign Affairs; 112, Comparative Foreign Journalism; 113, Mass Communications; 115, Communication Media Analysis;

120, Development of Radio Communications; 121, The Press in a Dynamic Society; 130-131, Communication Agencies, Propaganda, and Public Opinion; 177, Freedom of the Press and Communications Law.

Fees—Students registering for any journalism course are required to pay a general fee of \$1 per quarter, regardless of the number of courses pursued. Courses 10, 41, 51, 52, 55, 58, 59, 66, 67, and 68 require laboratory fees in addition.

Junior College Courses

- 10f,w,s. Photography.** (Same as Art 10) Fundamentals of photography: the use of cameras, developing, printing and other elementary techniques. Lecture and laboratory (3 cred.; soph., jr., sr.; no prereq.) Liebling
- 11f,w. Reporting for Nonmajors.** (For journalism minors in the College of Agriculture, Forestry, and Home Economics, College of Education, Institute of Technology, and the 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 Rhet. 1-2-3 or exemption from English requirement) Ford, Park, Perry (f); Ford (w)
- 13f,w. Introduction to Journalistic Writing** (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 English exemption, and proof of typewriting skill of 35 net words a minute or concurrent enrolment in Econ. 33 or 32) Charnley, Hage, Kildow, Nixon (f); Emery, Kildow (w)
- 14w,s-15f,s. Newspaper Reporting** (for majors) (6 cred.; soph., jr., sr.; prereq. for 14, C average in 13 and in all work, or permission of instructor, and Comp. 27-28,* and proof of typewriting skill of 35 net words a minute or concurrent enrolment in Econ. 33; for 15, C average in 13-14 and in all work, or permission of instructor, and Comp. 27-28,* and satisfaction of typewriting requirement) Charnley, Hage (14w); Park (14s); Gerald (15f); Charnley, Hage (15s)
- 18w,s. Principles of Advertising.** Theory, principles, and functions of advertising; its role in the economic, social and marketing structure. Newspapers, magazines, and radio and television as advertising media (3 cred.; soph., jr., sr.; prereq. 13, C average, and Comp. 27-28*) Perry
- 19f,s. Business News and Feature Writing.** A course for journalism majors planning to specialize in advertising. Gathering material for and writing news stories, feature articles, and other types of copy in the business-advertising field. The audiences in this field; the media (3 cred.; soph., jr., sr.; prereq. 18) Perry
- 41w. Editing for Nonmajors** (not open to S.L.A. students without permission of director of School of Journalism) Lecture and laboratory (3 cred.; jr., sr.; prereq. 11 or 13) Ford

Senior College Courses

Senior College courses in the School of Journalism are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

- 51f,s. News Editing.** Lecture and laboratory (3 cred.; jr., sr.; prereq. 15, or 19, or B average in 13-14) Emery, Jones
- 52s. News Editing.** Lecture and laboratory with press association teletype service (3 cred.; jr., sr.; prereq. 51 and 55) Emery
- 55f,w,s. Advertising and Newspaper Typography.** Lecture and laboratory (3 cred.; prereq. for journalism majors, Senior College standing; for others, 11 or 13 and 41) Barnhart, Wilson
- 58w. Newspaper and Periodical Design and Typography.** Principles underlying contemporary printing developments. Technological influence and social demands affecting the design and typography of printed media with analysis of major trends in format, makeup, layout, and typography. Lecture and supervised laboratory projects (3 cred.; jr., sr.; prereq. 51 for advertising sequence students, 52 for editorial sequence students, and 55 and permission of instructor) Barnhart
- 59f. Advanced Advertising Typography and Layout.** Practice and experimentation with display typography; individual laboratory projects in retail advertising display, point of purchase display, posters, direct mail brochures, labels, etc. (3 cred.; jr., sr.; prereq. 55) Wilson

* May be taken at the same time.

- 65f,s. Graphic Arts: Processes.** Letterpress, offset, and gravure printing processes; engravings and copy preparation; significant graphic arts developments (3 cred.; jr., sr.; prereq. permission of major adviser in School of Journalism or in School of Business Administration) Wilson
- 66f,w,s. Pictorial Journalism.** The analysis, use, and influence of the news picture; technique of the "picture-story"; the picture magazine; picture editing; advertising photography; use of the news camera. Lecture and laboratory (3 cred.; jr., sr.; prereq. 10, 13, or permission of instructor) Kildow
- 67f,w,s. Radio and Television News Writing.** The gathering, writing, and editing of news for broadcast; television news; use of recorders; special events; "backgrounding" and commentary in radio and television news practice. In laboratory, students edit news programs from press association teletype service for KUOM (3 cred.; jr., sr.; prereq. 15) Charnley (w) Ar. (f,s)
- 68s. Problems in Radio and Television Writing.** The audience and its responses; planning and writing scripts in dramatics, public affairs, and other radio and television fields; fundamental broadcasting production problems; program-planning (3 cred.; jr., sr.; prereq. for journalism majors, 51 and permission of instructor; for speech-radio majors, 13 and permission of instructor) Charnley
- 69s. Newspaper and Magazine Articles (for minors only).** 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. 41) Ford
- 73f,s. Magazine Writing.** Planning and writing feature articles for general, class, and trade publications; marketing; problems of magazine editing; employe publication and industrial journal problems (3 cred.; jr., sr.; prereq. 15 or 19) Charnley, Hage (f), Kildow (s)
- 74w. Magazine Editing.** Problems of magazine layout and make-up; book publishing problems. Individual projects in magazine editing and in advanced magazine writing (3 cred.; jr., sr.; prereq. 55, 73 and permission of instructor) Charnley
- 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.; sr.; prereq. 51, 55, and 19 or 73, or 41, 55, and 69) 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, make-up and business management of such publications (3 cred.; jr., sr.; prereq. 41 or 51) Kildow
- 86f,w,s. Advertising Copy Writing.** Advertising media; advertising appeals; techniques of writing advertising copy for newspapers, magazines, direct mail, posters, brochures; planning advertising campaigns (3 cred.; jr., sr.; prereq. 51 or 41, and 55 and 65) Perry (f,s), Wilson (w)
- 87w. Radio and Television Advertising.** The relation of radio and television advertising to the sponsor, the station, the network, and the station representative; program selection, time buying, program ratings. Preparation and presentation of radio and television advertising copy (3 cred.; sr.; prereq. 19, 120, and permission of instructor or 69, B.A. 188 and permission of instructor) Perry
- 88w. Radio and Television Station Administration.** The broadcasting station in community life. Administrative problems in programming, traffic, time sales, management. FCC and other regulations affecting station operation. Problems in license application, public service programming, etc. (3 cred.; jr., sr.; prereq. 120 or permission of instructor) Paulu
- 90s. Mass Communications and the News.** How the news gets to, and affects, the public—in print, on the air, by film. Evaluation of news gathering and presentation methods. Contemporary influences on communications media. Studies of individual newspapers, columnists, commentators (3 cred.; jr., sr.; not open to journalism majors) Charnley
- 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. News and editorial responsibility (3 cred.; jr., sr.; prereq. 51 or concurrent registration in 51) Barnhart
- 95s. Circulation and Newspaper Management.** The over-all management problem, including advertising, circulation, and commercial printing as sources of income; book-keeping and cost accounting; plant layout and inventories; operating expenses; business policies (3 cred.; jr., sr.; prereq. 51) Barnhart

- 101w,s. The Reporting of Public Affairs.** 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.; sr., grad.; prereq. 51) Hage
- 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. permission of instructor) Ford
- 106f,s. 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., grad.; prereq. a Senior College writing course and permission of instructor) Ford (f), Gray (s)
- 109w-110s. History of Journalism.** 109: Development of newspapers and periodicals from early beginnings in Europe through the 1860's in the United States. 110: The emergence of modern journalism in the post-Civil War period (6 cred.; jr., sr., grad.) Emery, Ford
- 111f. International Communications and Foreign Affairs.** The channels of international communications and the news gathering agencies. Factors affecting flow of news throughout the world. The role of the foreign correspondent. The relation of communications to foreign affairs and international understanding (3 cred.; jr., sr., grad.; prereq. 15 cred. in the social sciences, with inclusion of a Senior College history or political science course in international relations recommended) Park
- 112w. Comparative Foreign Journalism.** The press in the principal foreign countries. Cultural, political, economic, and technological influences that have shaped the foreign press systems. The free press and the government-controlled press (3 cred.; jr., sr., grad.; prereq. 15 cred. in the social sciences, with inclusion of a Senior College history or political science course in international relations recommended) Nixon, Park
- 113f. Mass Communications.** The problems of communicating information and ideas to group and mass audiences by newspaper, radio, television, film, books, and other media. Comparative studies of content comprehension and influence (3 cred.; sr., grad.; prereq. journalism major or permission of instructor) Nixon
- 115w,s. Communication Media Analysis.** Methods for analyzing the content and audiences of newspapers, periodicals, radio, television, and motion pictures. Attitude studies and reading tests involving these media (3 cred.; jr., sr., grad.; prereq. 51 and permission of instructor, or Econ. 5 or Psy. 70 or equivalent and permission of instructor) Jones
- 118. Selected Topics in Journalism** (3 cred.; sr., grad.)
 As. Advanced Reporting of Public Affairs (Prereq. 101 and permission of instructor) Hage
 Bs. Projects in Media Analysis (Prereq. 115 and permission of instructor) Jones
 Cf,w,s. Selected Readings in Journalism (Prereq. journalism majors with B average and permission of instructor) Nixon
- 120f. Development of Radio and Television Communications.** Historical and economic development of aural broadcasting, television and facsimile; government regulation; radio and the press; radio and television as social factors; broadcasting in other countries (3 cred.; jr., sr., grad.; prereq. 15 for journalism majors, 13 or permission of instructor for speech-radio majors) Charnley
- 121w. The Press in a Dynamic Society.** Economic, political, and social determinants of the character and content of mass communications. Patterns of operations, their effect on content, and their relative social utility. Government and mass communications (3 cred.; jr., sr., grad.; prereq. for journalism majors, 15 or 18; for others, permission of instructor) Gerald
- 130f-131w. Communication Agencies, Propaganda, and Public Opinion.** Theories of public opinion formation and propaganda; propaganda techniques of governments, political parties, pressure groups, etc. Democratic and authoritarian methods of opinion control. Ideological campaigns and psychological warfare (6 cred.; jr., sr., grad.; prereq. 15 cred. in the social sciences for 130, 130 for 131) Casey
- 140f-141w. Interpretation of Contemporary Affairs.** Analysis of major political, economic, and social developments and their interpretation in the editorial, interpretative article, and commentary (6 cred.; sr., grad.; prereq. 51 and 15 cred. in the social sciences for 140, 140 for 141) Gerald, Nixon, Emery, Park

- 142s. Current Communications Problems.** The individual project method is used for analyses of communications problems of current importance in the light of their social, economic, and technological environment. The course is conducted in small seminar-like groups (3 cred.; sr., grad.; prereq. 51) Casey, Nixon, Emery, Park
- 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.; sr., grad.; prereq. permission of major adviser and instructor; not open to those who have had Jour. 78, nor ordinarily to journalism majors) Emery
- 151w,s. Newspaper Advertising.** The role of newspaper advertising; the newspaper's relations with the retail advertiser, national representative, and advertising agency; organization of newspaper advertising departments; rate structures, services. Retail advertising (3 cred.; jr., sr., grad.; prereq. 51, 55, and 86 or permission of instructor, or 41, 55 and permission of instructor) Barnhart (w), Gerald (s)
- 152f,s. Advanced Newspaper Advertising.** Policy problems of advertising departments; sales programs and newspaper sales promotion; advertising salesmanship (3 cred.; jr., sr., grad.; prereq. 51, 151 and permission of instructor) Barnhart
- 177s. Freedom of the Press and Communications Law.** The Anglo-American concept of freedom of speech and press, its development under the Constitution of the United States, and the present areas of tension. Statutes and administrative regulations affecting freedom of information, publishing, and broadcasting (3 cred.; jr., sr., grad.; prereq. 51 or permission of instructor) Gerald

For Graduate Students Only

- 200f. Research in Mass Communications Problems.** Introduction to research areas, methods, and techniques. Basic seminar for M.A. and Ph.D. candidates in journalism (3 cred.; grad.; prereq. permission of adviser) Jones and others
- 205s. Topics in International News Communication.** Discussion and reports on the rise and development of international news communication and the news gathering agencies (3 cred.; grad.; prereq. permission of adviser) Casey, Park
- 208s. Communications Agencies as Social Institutions.** Influence of political, social, and economic forces upon the national character and performance of press, radio, and motion picture (3 cred.; grad.; prereq. permission of adviser) Gerald
- 212f,w. Topics in the History of Communications.** Research in the history and development of the mass media (3 cred.; grad.; prereq. 109-110 and permission of instructor) Emery
- 218s. Seminar in Media Analysis.** Consideration of research designs and of procedures for quantitative studies of media control, content, audiences, and effects; relationships between research and decision-making (3 cred.; grad.; prereq. 113 or 115, 200, and a course in statistics, or permission of instructor) Jones
- 230w. Seminar in Public Opinion and Propaganda.** The theoretical bases of public opinion and propaganda. Studies of the developing literature in this field of specialization. Topics in the opinion-making processes of governments, political parties, pressure groups, and other organized groups (3 cred.; grad.; prereq. 130-131 and permission of adviser) Casey, Nixon
- 277f,w. Government and Mass Communications.** Reconciliation of the social and individual interest through government actions affecting the mass media (3 cred.; grad.; prereq. 12 cred. in journalism, including 177, and permission of instructor) Gerald

LATIN

See Classics, page 52.

LIBRARY SCHOOL

Director—David K. Berninghausen.

Major Advisers—Professor Stanford; for college and university library work, Associate Professor Shove; for library work with children and young people, Associate Professor Hayner; for public library work, Instructor Fulmer.

The only terminal course of study designed to prepare students for career service in the field of librarianship is the Master's degree program offered by the Library School through the Graduate School. Detailed course offerings, as well as admission prerequisites and requirements for the degree, may be found in the bulletin of the Library School and the announcement of the Graduate School.

Students who wish to prepare for school library work should register as undergraduates in the College of Education, since a teacher's certificate plus prerequisite courses in school librarianship are required for admission to the Master's degree program for training school librarians.

A special sequence of courses for a minor in library science is offered by the College of Education to prepare students for "teacher-librarian" positions (part-time teaching and part-time library work).

The College of Science, Literature, and the Arts offers undergraduate library science courses prerequisite to admission to the graduate program. Approval of a library school faculty adviser is required before students may register for any Senior College course in library science.

Junior College Courses

1f,w,s. Use of Books and Libraries. Study of reference material for personal study and research (3 cred.; fr., soph. only; no prereq.) Moen

Senior College Courses

- 50f. Libraries and Society.** History and types of libraries, agencies and services; libraries in the modern world; librarianship as a profession (3 cred.; no prereq.) Shove
- 60f. Sources of Information About Library Materials.** Reviewing media, "best" lists, trade bibliographies, etc. (3 cred.; no prereq.) Fulmer
- 61f,w,s. Library Practice** (3 cred.; prereq. 18 cred. in library science or satisfactory library experience) Hayner, Shove
- 62f. Reference I.** General reference tools and other sources of information in reference work; theory and practice of reference work (2 cred.; no prereq.) Fulmer, Clausen
- 63w. Reference II.** Reference work in subject fields; the reference department; practical bibliography (3 cred.; prereq. 62) Shove
- 70w. Reading Guidance.** The library user, his personality and background; the matching of book and user and the improvement of reading habits; principles of book selection (3 cred.; no prereq.) Fulmer
- 81f. Bibliographical Description of Library Materials.** The description of books and other materials in bibliographies and library catalogs (3 cred.; no prereq.) Simonton
- 82w. Subject Organization of Library Materials.** The structure of subject bibliographies, library classification, and subject headings (3 cred.; prereq. 81) Simonton
- 151f. Invention and Spread of Printing.** History of the development of printing and its spread to the end of the fifteenth century (2 cred.; no prereq.) Shove
- 152w. History of Printing to Modern Times.** The development and spread of printing and the publishing industry, 1500 to the present (2 cred.; no prereq.) Shove
- 154s. Principles of Public Library Administration.** Theories and principles of administration of the public library (3 cred.; prereq. permission of instructor) Fulmer
- 155s. Administrative Problems in the College and University Library.** Educational functions of the college and university library and administrative organization to perform these functions (3 cred.; prereq. permission of instructor) Shove
- 157s. School Library Problems.** Service in large units, relationships with public libraries, planning library quarters, budgets, standards, and evaluation (3 cred.; prereq. permission of instructor) Hayner
- 164s. Reference III.** Specialized reference tools; government publications; administration of the reference department; special problems in large libraries (2 cred.; prereq. 62, 63) Russell
- 165w. Advanced Bibliography.** Specialized trade and national bibliographies, domestic and foreign (2 cred.; no prereq.) Shove
- 171w. Principles and Problems in Reading Guidance for Children.** Factors affecting the reading interests and needs of children, and principles of guidance in children's literature (3 cred.; prereq. 70 or concurrent registration) Hayner

- 173s. **Principles and Problems in Adult Reading Guidance.** Adult reading interests and factors affecting adult use of library material (3 cred.; prereq. 70) Fulmer
- 184s. **Advanced Cataloging.** Special problems of cataloging and classification, particularly in college, university, and other large libraries (3 cred.; prereq. 81, 82) Simonton
- 185f,w,s. **Special Problems.** Individual study on library problems for advanced students in library science (1 to 3 cred.; prereq. permission of adviser in Library School) Shove, Hayner

LINGUISTICS AND COMPARATIVE PHILOLOGY

Committee Chairman—Lynwood G. Downs, acting chairman

Major Adviser in the College of Science, Literature, and the Arts—Associate Professor Downs.

Major Sequence in the College of Science, Literature, and the Arts—Courses Clas. 106-107, Anth. 105 or Clas. 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.

GENERAL COURSES

- Anth.105. **Elements of Language** (3 cred.; jr., sr., grad.; no prereq.) (*Not offered*)
- Clas.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) Ar.
- Clas.108s. **Cultural Aspects of Language** (3 cred.; jr., sr., grad.; prereq. any two courses numbered above 50 in a foreign language) Ar.
- Anth.109f. **General Linguistics** (4 cred.; jr., sr., grad.; prereq. any two courses numbered above 50 in a foreign language) Spencer
- Ling.151f-152w-153s. **Honors Course** (1-3 cred. per qtr.) Staff
- Ling.201f-202w-203s. **Directive Readings** (1-3 cred. per qtr.) Staff

CELTIC

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

CLASSICS

- Lat.133s. **Vulgar Latin** (3 cred.; jr., sr., grad.; open to advanced students of Latin or a Romance language with permission of instructor) Ar.

ENGLISH

- Eng.100f. **Old English (Anglo Saxon)** (4 cred.; jr., sr., grad.; prereq. 6 cred. in English literature exclusive of A-B-C and classics) Allen
- Eng.102w. **Readings in Old English Prose and Verse** (3 cred.; jr., sr., grad.; prereq. 100) Brown
- Eng.103s. **Beowulf** (3 cred.; jr., sr., grad.; prereq. 100) Brown
- Eng.147f-148w-149s. **The Literature of England in the Middle Ages Exclusive of Chaucer** (9 cred.; jr., sr., grad.; prereq. 75 and 100 or concurrent registration in 100) Clark
- Eng.165f,w. **Introduction to Modern English** (3 cred.; jr., sr., grad.; prereq. 6 cred. in English literature exclusive of A-B-C and classics) Allen
- Eng.166s. **Historical Backgrounds of Modern English** (3 cred.; jr., sr., grad.; prereq. 165) Allen (*Not offered 1953-54. Offered 1954-55*)
- Eng.174s. **American English** (3 cred.; jr., sr., grad.; prereq. 6 cred. in English literature, including language, above A-B-C) Allen
- Eng.204f-205w-206s. **The Rise and Development of Standard English** (9 cred.; sr. with permission of department, grad.; prereq. 100 or equiv. but 100 may be taken concurrently with 204; students may enter 205 but not 206) Allen

FRENCH

- Fr.171f-172w-173s.† History of French Language** (3 cred.; jr., sr., grad.; prereq. one year of Latin or permission of instructor) Brackney
Fr.201f-202w-203s. Old French Phonology and Morphology (6 cred.; grad.) Brackney
Fr.204f-205w-206s. Reading in Old French Literature (6 cred.; grad.) Brackney
Fr.207f-208w-209s. Old Provençal (6 cred.; grad.) Brackney

GERMAN

- Ger.110f-111w-112s. Middle High German** (9 cred.; sr., grad.; prereq. 70 and 11 cred. above 59 or equiv.) Downs (*Offered 1953-54. Not offered 1954-55*)
Ger.113f-114w. Gothic (6 cred.; sr. with completed major sequence, grad.; prereq. 80 and 11 cred. above 59 or equiv.) Downs (*Not offered 1953-54. Offered 1954-55*)
Ger.125. History of the German Language (3 cred.; sr., grad.; prereq. 80 and 11 cred. above 59) (*Not offered*)
Ger.126. Historical German Grammar (3 cred.; sr., grad.; prereq. 110-111-112 or 113-114) (*Not offered*)
Ger.176-177-178. Problems and Research Trends in Germanic Philology (9 cred.; sr., grad.; prereq. at least two medieval Germanic dialects) (*Not offered*)
Ger.194s. Old Saxon (3 cred.; sr., grad.) Downs (*Not offered 1953-54. Offered 1954-55*)

SANSKRIT

- Ling.128f-129w-130s. Readings in Sanskrit.** Descriptive grammar; interpretation of Vedic and classical Sanskrit texts (9 cred.; sr. with permission of instructor, grad.; prereq. at least two Senior College courses in early European languages) (*Not offered 1953-54*)
Ling.131-132. Introduction to Sanskrit. Phonology and morphology from comparative viewpoint (6 cred.; sr. with permission of instructor, grad.; prereq. at least two Senior College courses in early Indo-European languages, preferably Greek, Gothic, or Latin) (*Not offered*)

SCANDINAVIAN

- Scand.185. History of the Scandinavian Languages** (3 cred.; sr., grad.; prereq. 4-5-6 or 10-11-12 or permission of instructor) (*Not offered*)
Scand.195. Introduction to Old Norse (4 cred.; sr., grad.; prereq. Ger. 113 or permission of instructor) (*Not offered*)

SEMITIC

- Sem.121f-122w-123s. Introduction to Arabic Grammar and Reading** (9 cred.; jr., sr., grad.; prereq. two courses above 50 in any foreign language) Irving
Sem.124-125-126. Introduction to Biblical Hebrew (9 cred.; jr., sr., grad.; no prereq. but this course cannot be used to satisfy language requirements) (*Not offered*)

SLAVIC

- Ling.113f-114w-115s. Old Church Slavic (Old Bulgarian).** An introduction to Slavic linguistics (9 cred.; prereq. Ling. 131-132-133 or equiv.) Magner
Russ.125f-126w-127s. History of the Russian Language (9 cred.; prereq. Russ. 51-52-53 or equiv.) Magner (*Not offered 1953-54. Offered 1954-55*)

SPANISH

- Span.241f-242w-243s. Old Spanish Philology** (6 cred.; grad.) Grismer (*Not offered 1953-54. Offered 1954-55*)
Span.244f-245w-246s. Readings in Old Spanish Literature (6 cred.) Irving

MARRIAGE

See General Studies, page 71.

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

MATHEMATICS

Department Chairman—Raymond W. Brink

Major Advisers in the College of Science, Literature, and the Arts—Professors Brink, Hart, Cameron; Associate Professors Gibbens, Kalisch, Olmsted; Assistant Professor Loud.

Major Sequence in the College of Science, Literature, and the Arts—Courses 50, 51 (or 50a, 51a), 52, 62; and either 15 additional credits in Senior College courses in mathematics, other than 70, or 6 additional credits in Senior College courses in mathematics, other than 70, together with 10 credits of Phys. 101-103-105.

(Prerequisites: Math. 6, 7, 30 or 15, 16, 30)

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

All students majoring in mathematics who have not studied a foreign language are urged to study French or German. Students who plan to pursue graduate study in mathematics should refer to the section on "language requirements" in the *Bulletin of the Graduate School*.

Major Adviser in the College of Education—Professor Hart.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: entrance credit in solid geometry or its equivalent; courses 50, 51 (or 50a, 51a) 60, and 5 additional credits in courses numbered above 51.

Minor recommendation: entrance credit in solid geometry or its equivalent; course 50 (or 50a), 60, and 3 additional credits in courses numbered above 50.

Math. 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, 7, 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 elementary mathematics before taking college mathematics. Any student who offers 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 substantial course in higher algebra in high school should be able to pass the placement test in course 6, 8, or 15. Any student who offers high school trigonometry as a substitute for course 6 and who fails the placement test on analytical trigonometry given in course 7 will be required to take course 6 before taking course 7.

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

1f,w,s.* Higher Algebra. Essentially the equivalent of the second year of high school algebra; included are: factoring, fractions, linear equations and systems in one or more unknowns, graphing, exponents, radicals, quadratic equations (5 cred.; prereq. one year of elementary algebra); open for credit to any student offering not more than one-half year of high school higher algebra for entrance and to other students who obtain permission from the department) Ar.

In choosing a section of the above course the student should be guided by the sched-

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

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

ule 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 V hour, 1f-15w; at VI hour, 1f-6w (See fall quarter *Class Schedule*)

- 6f,w,s. § Trigonometry.** Includes: definitions and properties of trigonometric and inverse trigonometric functions, logarithms, solution of triangles with applications, radian measure, functions of two angles, double angles, etc., identities, trigonometric equations (5 cred.; prereq. plane geometry and either course 1 or high school higher algebra§; open for credit even to students offering high school trigonometry for entrance) Ar.
- 7f,w,s. § College Algebra.** The standard course emphasizing logical aspects. Includes: Systems of quadratic equations, ratio, proportion, variation, progressions, permutations, combinations, probability, binomial theorem, mathematical induction, inequalities, complex numbers, theory of equations, determinants and applications (5 cred.; prereq. 6, or high school trigonometry if approved by the department chairman following the placement test§) Ar.
- 8f,w,s.* § Commerce Algebra.** College algebra including logarithms. College algebra for business students. Differs from 7 in its lower prerequisite and in including logarithms and other computational topics and in omitting determinants and certain other topics of logical interest (5 cred.; primarily for prebusiness students* but open also to others; prereq. 1, or high school higher algebra§) 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 either course 1 or high school higher algebra§) Ar.
- 15w-16s. § Elementary Mathematical Analysis** (See 15f-16w) Ar.
- 20w,s.* Mathematics of Investment.** Simple interest and simple discount, interest, annuities with simple data, extinction of debts by periodic installments, bonds, depreciation, perpetuities, capitalization, general annuity formulas (5 cred.; prereq. 8, or 6 and 7, or 15 and 16) Ar.
- 21s. Introduction to the Mathematics of Life Insurance.** Probability, mortality tables; actuarial notation and computation of net premiums for pure endowments, various types of contingent annuities and life insurance policies; policy reserves (3 cred.; prereq. 20) Ar.
- 30f,w,s. Analytic Geometry.** A study of geometry by means of algebra. Topics included: Cartesian and polar coordinates, straight lines, circles, conic sections, loci of given equations, equations of given loci, solid analytic geometry (5 cred.; prereq. 6 and 7 or 6 and 8, or 15 and 16) Ar.
- 49. Analytic Geometry and Calculus I.** This course 50a and 51a constitute a year's sequence including in more integrated form essentially the same topics as 30, 50, and 51. No student may receive credit in both 49, 50a, 51a and 30, 40, 51 except by permission of department. Students who have taken 49 and wish to take more mathematics should continue with 50a-51a. As prerequisites for other courses in mathematics, 49-50a-51a may be substituted for 30, 50, 51 (5 cred.; prereq. 6 and 7, or 6 and 8, or 15 and 16) (Not offered 1953-54)
- G.E.70f,w,s. The Slide Rule** (1 cred.; prereq. 6 or 8, or 15 and 16) (For the schedule of hours and days see Gen.Eng. 70 in the *Bulletin of the Institute of Technology*)

Senior College Courses

Courses 50, 51 (or 50a, 51a), 52 are open to Junior College students who have an average grade of at least C in the prerequisite courses. Course 107 is open to Junior College students who have met the prerequisites as listed on page 105. Other Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

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

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

¶ No student may receive credit for more than one of the three courses 7, 8, and 15. 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.

- 50f,w,s. **Calculus I: Differential Calculus.** Included: derivatives and differentials of elementary functions; curve tracing; definitions of velocity, acceleration, curvature, etc.; maxima and minima; related rates; mean value theorems; indeterminate forms; infinite series, expansions of functions (5 cred.; jr., sr.; prereq. 30) Ar.
- 50a. **Analytic Geometry and Calculus II** (See 49) (5 cred.; jr., sr.; prereq. 49) (Not offered 1953-54)
- 51f,w,s. **Calculus II. Integral Calculus.** Includes: formal integrations; geometrical and physical meaning of constants of integration; definite integrals; fundamental theorem of integral calculus; approximate integration; geometrical and physical applications; improper integrals; multiple integrals (5 cred.; jr., sr.; prereq. 50) Ar.
- 51a. **Analytic Geometry and Calculus III** (See 49) (5 cred.; jr., sr.; prereq. 50a) (Not offered 1953-54)
- 52f,w,s. **Intermediate Calculus.** Topics in calculus not adequately treated in 50 and 51. Includes an increased emphasis on theoretical aspects, an introduction to ordinary differential equations, and to partial differentiation and multiple integration (5 cred.; jr., sr.; prereq. 51) Ar.
- 60f. **Synthetic Metric Geometry.** A course in Euclidean geometry including ruler and compass constructions and theorems on the triangle and circle not studied in a high school course in plane geometry (3 cred.; jr., sr.; prereq. 30) Gibbens
- 62w. **Introduction to the Theory of Equations.** A study of complex numbers, solution of algebraic equations, properties of polynomials; isolation of the real zeros of a real polynomial; determinants and linear equations (3 cred.; jr., sr.; prereq. 50 or registration in 50 and permission of instructor) Gibbens
70. **History of Elementary Mathematics** (3 cred.; jr., sr.; prereq. 30) (Not offered 1953-54)
- 102-103. **Advanced Analytical Geometry** (6 cred.; jr., sr., grad.; prereq. 51) (Not offered 1953-54)
- 106f,s. **Differential Equations.** A problem course; methods for solving ordinary differential equations of various types with the necessary theory for developing these methods (3 cred.; jr., sr., grad.; prereq. 51) Carlson (f), Ar.(s)
- 107w-108s. **Advanced Calculus.** A study in detail of some topics in calculus; partial differentiation; multiple integrals and change of variable; basic ideas and applications of vectors. Line and surface integrals; Stokes' and Green's theorems; exact differentials; Beta and Gamma functions (6 cred.; jr., sr., grad.; prereq. 52) Carlson
109. **Theory of Numbers.** Elementary properties of integers; prime and composite numbers; Euclid's algorithm; congruences; the theorems of Fermat and Wilson; primitive roots; indices; Galois imaginaries; finite algebras; Pythagorean and Heronian triangles; Diophantine equations (3 cred.; jr., sr., grad.; prereq. 51) (Not offered 1953-54)
- 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.
- 111s. **The Development of the Number System.** A systematic construction of the real number system by extension from the natural numbers via rational numbers to irrational numbers; negative numbers; properties of the system; operations with numbers and laws governing the operations (3 cred.; jr., sr., grad.; prereq. 51) Gibbens
- 115-116. **Differential Geometry** (6 cred.; jr., sr., grad.; prereq. 136) (Not offered 1953-54)
118. **Vector Analysis.** The algebra of vectors; scalar product; vector product; triple products. Elements of the differential and integral calculus of vectors; space curves; gradient; divergence; curl; Stokes' and the divergence theorems (3 cred.; jr., sr., grad.; prereq. 51) (Not offered 1953-54)
- 119-120. **Matrices and Groups.** 119: Matrices as linear transformations. Rank of a matrix. Orthogonal and symmetric, unitary, and hermitian matrices. Equivalence relations between matrices, canonical forms; characteristic values and characteristic vectors. 120: Elementary theory of finite groups and of infinite abelian groups with some application to permutation and crystallographic groups; representation by matrices, characters (6 cred.; jr., sr., grad.; prereq. 51) (Not offered 1953-54)
- 121f-122w-123s. **Mathematical Theory of Statistics.** The method of least squares; simple, multiple, and partial correlation; normal, binomial, and Bernoulli distributions, and related parts of theory of probability; introduction to sampling theory, tests of significance (9 cred.; jr., sr., grad.; prereq. 51) Gelbaum
125. **Theory of Geometrical Constructions.** Constructions with and without classical restrictions to rulers and compasses; famous geometrical problems of antiquity, with ancient and modern solutions; constructions by graded rulers, parallel rulers, squares, compasses alone, etc. (3 cred.; jr., sr., grad.; prereq. 30) (Not offered 1953-54)

- 127f-128w-129s. Applied Mathematics for the Social and Biological Sciences.** A course designed to give students of these fields a mastery of the mathematical tools and concepts, other than statistics, that are most useful to them. Examples and problems will be taken from the fields concerned. In addition to other fundamental material, topics include matrices, functions of several variables, probability, difference equations, two-person games (9 cred.; jr., sr., grad.; prereq. 15-16 or 51) Donsker
- 136f. Solid Analytic Geometry.** Algebraic treatment of planes and lines; direction cosines; systems of planes. Cylinders; surfaces of revolution. Quadric surfaces; tangent planes, ruled surfaces. Coordinate transformations, invariants. General equation of the second degree (3 cred.; jr., sr., grad.; prereq. 50 or registration in 50) Kalisch
- 137. Advanced Theory of Equations.** Symmetric functions, resultants, indeterminate equations, reciprocal equations and the construction of regular polygons (3 cred.; jr., sr., grad.; prereq. 51, 62) (*Not offered 1953-54*)
- 140. Projective Geometry.** A study of the geometry of points, straight lines, and conics by methods mostly synthetic and nonmetric, based on central projection; theorems of Desargues, Pascal, and Brianchon, with applications (3 cred.; jr., sr., grad.; prereq. 51 or permission of instructor) (*Not offered 1953-54*)
- 142. Theory of Invariants** (3 cred.; jr., sr., grad.; prereq. 131 or 137) (*Not offered 1953-54*)
- 144f-145w-146s. Fourier Series and Orthogonal Functions.** The general theory of orthonormal functions is developed and applied to Fourier, Legendre, Bessel, Hermite, and other series. Convergence and summability theorems are proved, and the Fourier integral is considered (9 cred.; jr., sr., grad.; prereq. 51) Hatfield
- 157f-158w-159s. Methods of Applied Mathematics.** An integrated study of analytic tools commonly used in applications of mathematics, with many problems and an emphasis on developing the student's technique. Material will include topics from complex variables, matrices, ordinary and partial differential equations, calculus of variations, asymptotic expansions, etc. (9 cred.; jr., sr., grad.; prereq. intermediate calculus or permission of instructor) Loud
- 170f. Algebraic Theory of Linear Spaces and Matrices.** Finite dimensional linear spaces over the real and complex number fields; linear transformations and matrices in such spaces; introduction to the group and field concepts (3 cred.; jr., sr., grad.; prereq. 51, and 8 additional credits in mathematics) Nering
- 171w-172s. Introduction to Modern Algebra.** Elementary theory of groups, rings and fields; factorization in integral domains; polynomial domains; finite and infinite field extensions; real fields (6 cred.; jr., sr., grad.; prereq. 170 or permission of instructor) Nering
- 176. Intermediate Differential Equations.** Topics in differential equations not contained in a first course but not requiring a broad background of analysis. Emphasis on linear equations of second order of interest in physics. Normal form, adjoint equations, series solutions, equations of Fuchsian type, hypergeometric, Bessel and Legendre equations (3 cred.; jr., sr., grad.; prereq. 106) (*Not offered 1953-54*)
- 187. Non-Euclidean Geometry.** The foundation of Euclidean geometry. Euclid's fifth postulate and its implications. Hyperbolic plane geometry and trigonometry. Elliptic plane geometry and trigonometry. The consistency of the non-Euclidean geometry. The elements of inversion (3 cred.; jr., sr., grad.; prereq. 51) (*Not offered 1953-54*)
- 199Af-199Bw-199Cs. Problem Course.** The course is intended to develop problem-solving techniques in many areas of mathematics. Problems are proposed at each meeting, to be discussed at subsequent meetings. Topics considered range from elementary to advanced levels. The course will be adapted to students of varied backgrounds (9 cred.; jr., sr., grad.; prereq. 52, and 9 additional credits in mathematics) Loud

For Graduate Students Only

- 200. Galois Theory.** Transcendental and algebraic field extensions. Automorphism groups of fields. Solvability of algebraic equations by radicals (3 cred.; grad.; prereq. 119-120 or 170-171-172) (*Not offered*)
- 201. Valuation Theory.** Definition of valuations; valuations of rational numbers; complete fields; Hensel's Lemma; valuation of field extensions (3 cred.; grad.; prereq. 200 or permission of instructor) (*Not offered*)

202. **Linear Algebras.** The structure of finite dimensional linear algebras over arbitrary fields; the radical, semi-simplicity, simplicity, division algebras, Wedderburn's structure theorems (3 cred.; grad.; prereq. 201 or permission of instructor) (*Not offered*)
- 203f-204w-205s. **Advanced Topics in Mathematical Statistics.** The mathematics involved in such fields of statistics as theories of statistical estimation, stratified sampling, sequential analysis, variance analysis and factorial experiments, and linear discriminant functions (9 cred.; grad.; prereq. 121-122-123 and either 5 cred. of 107-108 or permission of instructor) Hart
- 206f-207w-208s. **Theory of Functions.** Theory of limits for sequences and functions of a continuous variable; infinite series; foundations of theory of functions of real variables, and of a single complex variable (9 cred.; grad.; prereq. 108 or 159 or permission of instructor) Olmsted
209. **Advanced Modern Algebra.** Topics of modern algebra, such as the theory of rings, division algebras, valuations, algebraic number fields (3 cred.; grad.; prereq. 137 or permission of instructor) (*Not offered*)
- 212-213. **Point Set Topology.** Abstract spaces based on notions of neighborhoods, open sets, closure. Subspaces. Properties invariant under homeomorphisms; compactness; connectedness. Separation axioms. Metric spaces; Urysohn's metrization theorem. Transfinite numbers. Jordan curve theorem (6 cred.; grad.; prereq. 206) (*Not offered 1953-54*)
- 214Aw-214Bs. **Topological Algebra.** Elementary theory of topological groups, rings, and fields. The theory of normed rings and its application to the study of topological groups. Recent developments in the study of topological rings (6 cred.; grad.; prereq. 213 and either 120 or 170) Kalisch
- 215-216. **Topological Groups.** Elementary theory and definitions; integration in locally compact groups; representation of topological groups; density (6 cred.; grad.; prereq. 120 or 170 or equiv., and 213) (*Not offered 1953-54*)
220. **Algebraic Topology.** Homology groups of abstract complexes; topological invariance of homology groups of topological spaces (3 cred.; grad.; prereq. 120 or 170 or equiv., and 213) (*Not offered 1953-54*)
221. **Calculus of Variations** (3 cred.; grad.; prereq. 106 and 108) (*Not offered*)
- 239-240. **The Fourier Transform.** The discussion of the theoretical and practical aspects of the Fourier Transform. Its applications to differential and integral equations. Tauberian theorems (6 cred.; grad.; prereq. 245) (*Not offered*)
- 245s. **Introduction to Lebesgue Integrals** (4 cred.; grad.; prereq. 207) Gelbaum
246. **Introduction to Wiener Integrals** (3 cred.; grad.; prereq. 208 and permission of instructor) (*Not offered 1953-54*)
247. **Integration in Function Space** (3 cred.; grad.; prereq. 245 and permission of instructor) (*Not offered 1953-54*)
- 252-253. **Linear Spaces** (6 cred.; grad.; prereq. 245) (*Not offered 1953-54*)
257. **Seminar in Integration in Function Space** (3 cred.; grad.; prereq. 247) (*Not offered 1953-54*)
- 258-259-260. **Theory of Probability.** An integrated development of selected topics in modern probability theory, including recent advances in limit theorems and an introduction to stochastic processes (9 cred.; grad.; prereq. 245 or equiv.) (*Not offered 1953-54*)
- 271-272-273. **Theory of Linear Differential and Integral Equations** (9 cred.; grad.; prereq. 208) (*Not offered 1953-54*)
- 284f-285w-286s. **Stochastic Processes.** General theory of random functions and processes. Emphasis on Markov processes and their connections with functional equations, semi-groups, and limit theorems (9 cred.; grad.; prereq. 245) Donsker
- 291f-292w. **Banach Spaces.** The axiomatic development of the theory of complete, normed, linear spaces. Illustrations from many fields of analysis. A thorough treatment of expansion problems in Banach spaces, the various kinds of weak topologies, convexities, etc., and their mutual relations (6 cred.; grad.; prereq. 245) Gelbaum

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

MILITARY SCIENCE AND TACTICS

Department Chairman—Robert T. Connor, Col. Artillery

The programs in military science and tactics leading to commissions in the U. S. Army Reserve are available for students in the College of Science, Literature, and the Arts as well as for those in other colleges of the University. For information concerning the requirements and the opportunities in these programs, consult the *Bulletin of General Information*, the *Bulletin of Army, Navy, Air ROTC* of the University of Minnesota or call at the Military Science and Tactics office, Room 108 Armory.

The College of Science, Literature, and the Arts will accept credits from basic and advanced courses in military science and tactics to fulfill a minor toward the B.A. degree.

Basic Courses

1f-2w-3s. First Year Basic Course ROTC. Military organization, leadership, first aid, maps and aerial photographs, individual weapons and marksmanship. National Defense Act (1 cred. per qtr.; no prereq.) Ar.

4f-5w-6s. Second Year Basic Course ROTC. Tactics and technique of one of the following Army branches: Antiaircraft Artillery, Corps of Engineers, Ordnance Corps, Quartermaster Corps, Signal Corps, Transportation Corps (1 cred. per qtr.; prereq. 1-2-3 or 6 months of military service)* Ar.

Advanced Courses

151f-152w-153s. First Year Advanced Course ROTC. Continued study of tactics and technique of one of the branches listed for the Second Year Basic Course ROTC (3 cred. per qtr.; prereq. 4-5-6 or one year of military service)*

154f-155w-156s. Second Year Advanced Course ROTC. Continued study of tactics and technique of one of the branches listed above, and subject matter common to all branches such as: military administration, military law, military teaching methods, leadership, psychological warfare (3 cred. per qtr.; prereq. 151-152-153)

MUSIC

Department Chairman—Paul M. Oberg

Major Advisers in the College of Science, Literature, and the Arts—Professor Oberg; Associate Professors Hull, Kendall, Schuessler, Stephens; Assistant Professor Malcolm.

The Music Department is a liberal arts college member of the National Association of Schools of Music. The requirements for graduation with degrees carrying credit for courses in music, as set forth in this bulletin, are in accordance with the published regulations of the NASM.

The department offers courses in applied music, theory, and music literature to students wishing to obtain a broad cultural background as well as those majoring in music.

Students majoring in music must fulfill the requirements of both the Junior and Senior Colleges as stated on pages 8-13 of this bulletin. The department recommends that students follow Plan I, especially if they contemplate working for an advanced degree. A total of 144 credits in courses other than applied music (piano, voice, etc., courses 11 through 27) must be obtained in order to be eligible for the bachelor of arts degree.

* Students who have completed six months of prior service in the armed forces (Army, Navy, Marine Corps, or Coast Guard) may receive credit for the First Year Basic Course. Students who have completed one year of prior service in the armed forces (Army, Navy, Marine Corps, or Coast Guard) may receive credit for both years' Basic Course. Such credit for basic training will be determined jointly by the professor of military science and tactics and the designated representative of the University, and will be given only where it is determined that the previous service is substantially equivalent to that part of the basic course for which credit is being sought.

Requirements for music majors are as follows:

Junior College

Freshman year

Music Theory: Mu. 1T-2T-3T, 3 credits per quarter.

Applied Music: Mu. 11 through 27, 2 or 4 credits per quarter. A placement test must be taken in applied music by all prospective music majors.

Sophomore year

Music Theory: Mu. 4T-5T-6T, 4 credits per quarter.

Applied Music: Mu. 11 through 27, 2 to 4 credits per quarter.

History of Music: Mu. 34-35-36, 2 credits per quarter.

Senior College

During junior and senior years, a student must complete one or two academic minors (see page 12) and complete one of the following major sequences:

A. History and Literature of Music: Courses 53-54-55, 60-61-62 or 63-64-65, 76, 97-98-99, 144-145-146, and 18 Senior College credits in applied music.

B. Theory and Composition: Courses 60-61-62 or 63-64-65, 97-98-99, 121-122-123, 127-128-129, 141-142-143, 144-145-146, 197-198-199, and 18 Senior College credits in applied music.

C. Normal Piano: Courses 60-61-62 or 63-64-65, 70-71-72, 76, 80-81-82, 97-98-99, 144-145-146, and 18 Senior College credits in applied music.

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

Piano and organ majors are required to take Mu. 137-138-139, Keyboard Harmony. During the four years a student is required to earn 30 credits in applied music and may count a maximum of 36 credits toward graduation.*

For a special curriculum in music education see the *Bulletin of the College of Education*. For courses in music education which are open to students in the College of Science, Literature, and the Arts, see page 113.

Applied Music Entrance Requirements

Music and Music Education Majors and Minors

Piano: A student should be able to play: (1) major and minor scales in a moderate tempo; (2) three pieces in different styles, such as (a) a Bach invention or dance from one of the suites, (b) one of the less difficult sonatas by Haydn, Mozart, or Beethoven, and (c) one of the shorter pieces by a nineteenth- or twentieth-century composer.

Organ: Same as for piano; sight reading of hymns.

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. A knowledge of piano is also 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. A knowledge of piano is also recommended.

Other orchestral instruments: A student should be able to play, with good tone, phrasing and style, two solo numbers of good musical quality.

* Students may not take special examinations in applied music for work done elsewhere while in residence at the University.

He will be examined in sight reading as well as in the playing of scales. A knowledge of piano is also recommended.

Nonmusic Majors

Students who wish to take applied music as an elective should be able to play or sing at least two pieces of medium difficulty.

Junior College Courses

- 1f,w,s. Fundamentals of Music.** Knowledge of the piano keyboard; major and minor scales; triads; elementary ear training; rhythmic dictation (2 cred.; for nonmusic majors; no prereq.) Ar.
- 1Tf-2Tw-3Ts. Music Theory.** An intensive course in the development of musicianship through both auditory and visual perception. The student will participate in extensive ear training, sight singing, and keyboard drills (9 cred.; primarily for music majors and minors) Fetler, George
- 1Tw-2Ts. Music Theory** (1st two qtrs. of 1T-2T-3T. See 1Tf-2Tw-3Ts) George
- 3Tf. Music Theory** (3rd qtr. of 1T-2T-3T. See 1Tf-2Tw-3Ts) George
- 4Tf-5Tw-6Ts. Music Theory.** A continuation of 1T-2T-3T with greater emphasis on harmonic analysis, part-writing and clef reading (12 cred.; prereq. 3T) George, Malcolm
- 4Tw-5Ts. Music Theory** (1st two qtrs. of 4T-5T-6T. See 4Tf-5Tw-6Ts) Malcolm
- 6Tf. Music Theory** (3rd qtr. of 4T-5T-6T. See 4Tf-5Tw-6Ts) Malcolm
- 10f,w,s. Introduction to Music.** A lecture and laboratory course introducing the student to the basic elements of music, such as notation and the characteristics of musical tone, together with a study of fundamental musical concepts of rhythm, melody, harmony, polyphony, and form. These musical concepts will be demonstrated by recordings and performance of music of all types in western civilization. This course together with Art 1 and Phil. 4 forms a sequence in Fine Arts (4 cred.; no prereq.) McConkie
- 31f-32w-33s.¶ Music Literature.** Primarily for students not majoring in music. Study of various styles, forms, and types of music, including symphony, opera, chamber music, and solo pieces. 31: Baroque and classical periods. 32: Romantic period. 33: Romantic and modern (6 cred.; no prereq.) Ivory
- 34f-35w-36s. History of Music.** A survey of musical styles and forms from the ninth to twentieth centuries (6 cred.; prereq. 3T) Downes
- 40f-41w-42s.¶¶ Orchestra.** A study of orchestral literature through actual performance. Orchestral players from all colleges are invited to participate (3 cred.; prereq. permission of director) Oberg
- 43f-44w-45s.¶¶** University Chorus.** The objectives of the University Chorus will be to prepare for performance with the Minneapolis Symphony Orchestra and the University Symphony Orchestra at least two of the major symphonic-choral works. Sequence of quarters is expected and entrance is by audition with the director (3 cred.; prereq. permission of director) Aliferis
- 43Af-44Aw-45As.¶ Church Music Choir.** Attention will be paid to church music in the hopes of appearing at Vesper services in some of the Twin Cities churches (3 cred.; prereq. permission of director) Ar.
- 43StPf-44StPw-45St.Ps.¶ St. Paul Campus Chorus.** The purpose of this group is to prepare for at least one public appearance each quarter as well as for special events connected with the St. Paul Campus (3 cred.; prereq. permission of director) Rymer
- 46f-47w-48s.¶ Concert Band.** Open to men and women of all colleges. Rehearsals and appearances of the University Concert Band covering standard band literature. The band makes a number of appearances each quarter (3 cred.; prereq. permission of director) Prescott

COURSES IN APPLIED MUSIC

A student may not register for a course in applied music for credit until he has passed the required entrance examination (see page 109).

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

‡ Students may enter any quarter.

** Students may receive credit for two years or six quarters of work.

†† Students majoring in music may earn 12 credits in orchestra.

Courses numbered from 11 through 27§ carry either 2 credits (a minimum of ten private half-hour lessons) or 4 credits (a minimum of ten private hour lessons) per quarter. The first 12 credits in any of these courses count as Junior College credits; additional credits count as Senior College credits. A maximum of 36 credits in applied music may count toward a baccalaureate degree.

- Af,w,s. Piano** (No cred.; for students without entrance requirements in piano; no prereq.; private lesson) Kendall, McConkie, Rymer, Stephens
Df,w,s. Voice (No cred.; for students without entrance requirements in voice; no prereq.; private lesson) Hull, Schuessler
11f,w,s. Piano—Individual Lessons (2-4 cred. per qtr.) Kendall, McConkie, Rymer, Stephens
11Cf,w,s. Piano—Class Lessons (2 cred. per qtr., only for music education students whose chief performing medium is not piano)* Ar.
12f,w,s. Voice—Individual Lessons (2-4 cred. per qtr.) Hull, Schuessler
12Cf,w,s. Voice—Class Lessons (2 cred. per qtr.)* Ar.
13f,w,s. Violin (2-4 cred. per qtr.) Cullen, Druian
14f,w,s. Viola (2-4 cred. per qtr.) Ar.
15f,w,s. Cello (2-4 cred. per qtr.) Jamieson, Meltzer
16f,w,s. Double Bass (2-4 cred. per qtr.) Fitch
17f,w,s. Flute (2-4 cred. per qtr.) Arnegard
18f,w,s. Oboe (2-4 cred. per qtr.) Angelucci
19f,w,s. Clarinet or Saxophone (2-4 cred. per qtr.) Fitch, Handlon
20f,w,s. Bassoon (2-4 cred. per qtr.) Santucci
21f,w,s. Trumpet (2-4 cred. per qtr.) Adelstein, MacKay
22f,w,s. French Horn (2-4 cred. per qtr.) Linder
23f,w,s. Trombone (2-4 cred. per qtr.) MacKay
24f,w,s. Tuba (2-4 cred. per qtr.) MacKay
25f,w,s. Percussion (2-4 cred. per qtr.) Denecke
26f,w,s. Harp (2-4 cred. per qtr.) Miller
27f,w,s. Organ (2-4 cred. per qtr.) Berryman, Jennings

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

- 53f-54w-55s. Romantic Movement.** A survey of the musical literature of the nineteenth and twentieth centuries with special reference to the influences of the Romantic philosophy. Nationalism and the twentieth-century idioms (6 cred.; jr., sr.; prereq. 35) Kendall
60f-61w-62s.¶ Instrumental Ensemble. A course in the playing of chamber music by great composers, which includes sonatas, trios, quartets, quintets, etc. (6 cred.; jr., sr.) Stephens
63f-64w-65s.¶ Vocal Ensemble. A course designed to train students in small group singing (trios, quartets, etc.) and to acquaint them with repertoire in this field from madrigals to opera and oratorio (6 cred.; jr., sr.; prereq. 6 cred. in 12 or 12C) Hull
66f-67w-68s.¶ The Chamber Singers. A small mixed vocal ensemble of select voices. The objective is to prepare for concert presentation sacred and secular music from sixteenth century to contemporary composers (6 cred.; prereq. permission of instructor) Aliferis
70f-71w-72s. Normal Piano. A course covering piano literature, Grades I to V, for the development of students in fundamentals of rhythm, ear training, technique, sight reading, and interpretation at preschool, adult beginner, and advanced levels (6 cred.; jr., sr.; prereq. 2 years of piano) Kendall
76f. Form and Analysis. Key, harmonic, and form analyses of important contrapuntal and homophonic music, especially that of Bach and Beethoven (3 cred.; jr., sr.; prereq. 6T) Stephens

* S.L.A. major students must take individual rather than class lessons in their major instrument. Music education majors will take individual lessons in their major but may take class lessons in their minor instruments. No student may take class lessons for more than 6 credits. Classes in piano will be composed of four students; classes in voice may be composed of six students.

† Students may not take special examinations in applied music for work done elsewhere while in residence at this University.

‡ Students may enter any quarter.

- 77f-78w-79s. **Elementary Composition.** The study of form through original work in melodic construction of phrases, periods and sections, leading to melodic composition in smaller homophonic forms (6 cred.; jr., sr.; prereq. proficiency examination and permission of instructor) George
- 80f-81w-82s. **Advanced Normal Piano.** A laboratory course based on 70-71-72. Supervised presentation of literature to individuals and groups (6 cred.; sr.; prereq. 70-71-72) Kendall
- 90f-91w-92s.† **Advanced Instrumental Ensemble.** The more difficult chamber music is studied as literature in performance looking toward public presentation (6 cred.; sr.; prereq. 60-61-62) Stephens
- 93f-94w-95s. **Improvisation.** This course which attempts to encourage the student toward greater flexibility in service-playing offers a continuation of the application of harmonic and contrapuntal technique to extemporization at the organ (3 cred.; jr., sr.; prereq. 6T and 12 cred. in organ, Mu. 27 or permission of instructor) Berryman
- 97f-98w-99s. **Counterpoint.** Strict, sixteenth-century and Bach style counterpoint in two and three parts; the writing of canons, motets, inventions, and fugues (6 cred.; jr.; prereq. 6T) Fetler
- 104f-105w-106s. **American Music.** A study of music in America from early colonial times to the present through reading and record listening. American Indian music, European folk music transplanted to this continent, the origin and development of jazz and contemporary American music all receive special consideration (6 cred.; jr., sr., grad.; prereq. 36, or 9 cred. in American history or American studies) McConkie
- 121f-122w-123s. **Advanced Harmony.** The study of chromatic harmony through analysis of representative nineteenth- and twentieth-century works, with emphasis on the theories of Hindemith, Schenker, and Schönberg (6 cred.; jr., sr., grad.; prereq. 6T) George
- 124f-125w-126s. **History of Opera.** A survey of opera as music and drama, including production, styles, and cultural background, from the late sixteenth century to the present day with emphasis on modern repertoire which is to be broadcast during the year by the Metropolitan Opera Company (9 cred.; jr., sr., grad.; prereq. 9 cred. in either history of music, history of art, history of the theater, European history from 1600, or permission of instructor) Downes (*Offered alternate years*)
- 127f-128w-129s. **Composition.** Original work in various forms (6 cred.; sr., grad.; prereq. 97-98-99 and 121-122-123) Fetler
- 134f-135w-136s. **History of Church Music.** Trends in church music from the beginning to the present including the relationships of music to various theologies and liturgies (6 cred.; jr., sr., grad.; prereq. 34-35-36 or permission of instructor) Berryman
- 137f-138w-139s. **Keyboard Harmony.** Practical ear training as applied to the piano. Chorales are transposed into all keys in four parts and expanded chords by melodic and harmonic analysis. Modulation is also studied (3 cred.; jr., sr., grad.; prereq. 3T-6T) Jennings
- 141f-142w-143s. **Orchestration.** A detailed study of the instruments of the orchestra together with a practical study of art of symphonic scoring (6 cred.; jr., sr., grad.; prereq. 6T) Aliferis
- 144f-145w-146s. **Bach Through Beethoven.** Study of the forms, techniques, and styles of the late Baroque and Classical periods with particular attention to the following masters: Bach, Handel, Gluck, Mozart, Haydn, and Beethoven (9 cred.; jr., sr., grad.; prereq. 36) Downes
- 154f-155w-156s. **Music in the Middle Ages and Renaissance.** An intensive study of monophonic music from the period of Gregorian Chant to that of the English Madrigal School (6 cred.; jr., sr., grad.; prereq. 34-35-36) Ar. (*Offered alternate years. Not offered 1954-55*)
- 164f-165w-166s. **Music in the Baroque Era.** An intensive study of the music of the early, middle, and late Baroque periods in Italy, The Netherlands, Germany, Austria, France, and Spain (6 cred.; jr., sr., grad.; prereq. 34-35-36) McConkie (*Offered alternate years. Not offered 1953-54*)
- 197f-198w-199s. **Advanced Counterpoint.** Study of Bach's *Art of the Fugue*; practice in the technique of writing three- and four-voice fugues, with emphasis on special contrapuntal devices and problems; analysis of polyphonic examples of various periods (6 cred.; jr., sr., grad.; prereq. 97-98-99) Fetler

† Students may enter any quarter.

For Graduate Students Only

- 200f-201w-202s. **Basis of Musical Expression** (9 cred.; grad.; prereq. 56-57-58) Ar. (Offered alternate years. Not offered 1954-55)
- 204f,w,s. **Graduate Applied Music** (3 cred. per qtr.; maximum 9 cred.; prereq. placement test by Music Dept. staff; minimum of 12 hours practice per week) Staff
- 209f-210w-211s. **Advanced Topics in Music** (9 cred.; grad.; prereq. 76) Oberg (Offered alternate years. Not offered 1953-54)
- 212f,w,s. **Special Problems** (3 to 9 cred.; grad.; prereq. 202 or 211) Oberg
- 227f-228w-229s. **Seminar in Composition and Orchestration** (9 cred.; open only to graduates who have completed an undergraduate major sequence in music theory and composition, including the following: 97-98-99, 121-122-123, 127-128-129, 141-142-143, 197-198-199) Aliferis

MUSIC EDUCATION

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

- Mu.Ed.63w. **Conducting I**. Basic elements of baton technique; styles of beats, types of arcs, preparatory beats, patterns, and the other general ideas involved in starting the young conductor (2 cred.; jr., sr.; prereq. 4-5-6 or equiv.) Prescott
- Mu.Ed.65f,w. **Instrumentation**. A study of orchestra and band instruments in combination; revision of materials suitable for school use and discussion of the capabilities of school performers on the various instruments (3 cred.; jr.; prereq. Mu. 6T) Ivory

NATURAL SCIENCE

See General Studies, page 73.

NAVAL SCIENCE

Department Chairman—Captain Doyle M. Coffee

The course in naval science is designed to give those students enrolled in the Naval ROTC program the fundamental essentials in naval subjects so that, upon graduation, they may receive a commission in the Navy, Naval Reserve, Marine Corps, or Marine Corps Reserve. This course is, however, available to any male student in the College of Science, Literature, and the Arts as well as to those in other colleges of the University. For information concerning the requirements and the opportunities in the NROTC program consult the *Bulletin of General Information*, or call at the Naval Science office, 203 Armory.

The College of Science, Literature, and the Arts will accept credits from junior and senior courses in naval science to fulfill a minor toward the B.A. degree.

Junior College Courses

- 11f. **Naval Orientation**. Naval history and sea power (3 cred.) Ar.
- 12w. **Naval Orientation**. Functions of the Navy within the National Military Establishment (3 cred.) Ar.
- 13s. **Naval Orientation**. Duties and responsibilities of a naval officer (3 cred.) Ar.
- 21f. **Naval Weapons** (3 cred.) Ar.
- 22w. **Principles of Fire Control** (3 cred.) Ar.
- 23s. **Applied Naval Electronics** (3 cred.) Ar.

Senior College Courses

I. LINE OFFICER SEQUENCE

- 51f. **Aerology and Navigational Piloting** (3 cred.) Ar.
- 52w. **Celestial Navigation** (3 cred.) Ar.
- 53s. **Navigational Rules of the Road and Maneuvering Board** (3 cred.) Ar.

- 61f. Marine Power Plants (3 cred.) Bertsch
- 62w. Diesel Engines; Damage Control (3 cred.) Bertsch
- 63s. Military Justice and Leadership (3 cred.) Bertsch

II. SUPPLY CORPS OFFICER SEQUENCE*

- 57f. Introduction to Supply, Naval Finance, and Naval Accounting (3 cred.) London
- 58w. Supply Ashore (3 cred.) London
- 59s. Supply Afloat (3 cred.) London
- 66f. Advanced Supply Afloat and Ship's Store (3 cred.) London
- 67w. Naval Clothing and Small Stores Commissary (3 cred.) London

III. MARINE CORPS OFFICER SEQUENCE*

- 54f. Evolution of the Art of War I (3 cred.) James
- 55w. Evolution of the Art of War II (3 cred.) James
- 56s. Modern Basic Strategy and Tactics (3 cred.) James
- 64f. Amphibious Warfare I (3 cred.) James
- 65w. Amphibious Warfare II (3 cred.) James

NORWEGIAN

See Scandinavian, page 141.

PERSONAL ORIENTATION

See General Studies, page 74.

PHILOSOPHY

Department Chairman—Wilfrid Sellars

Major Advisers in the College of Science, Literature, and the Arts—Professor Feigl; Associate Professors Holmer, Shaw; Assistant Professors Brodbeck, Hospers.

Major Sequence in the College of Science, Literature, and the Arts—Two courses from 50-51-52, one of which shall be 52, and others to make a total of at least 30 credits in Senior College philosophy courses including at least 12 credits in courses numbered above 100.

(Prerequisite for major sequence, courses 1 and 2. Courses 1A and 2A will not be accepted for this requirement.)

Although there is no language requirement for the undergraduate major in philosophy, attention is called to the language requirements for the M.A. (one foreign language) and Ph.D. (two foreign languages, of which one shall be German) degrees in philosophy at this University. Students who plan graduate work in philosophy are urged to complete at least a substantial part of these requirements before graduation.

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 courses 1, 2, and 3 are scheduled so that one may be taken at almost any hour and so that, if another of the courses is elected, it may usually be taken at the same hour in the following quarter.

The attention of students majoring in other departments is called to the many courses in the following lists which bear directly or indirectly on their field of concentration.

* Students in both the supply corps and marine corps sequence courses take Nav. Sci. 63 during the spring quarter as this is a required background course toward a commission in the Naval or Marine Corps Service.

Students intending to enter theological seminaries or other institutions of training in religious work should note the special pretheological curriculum which is indicated in this bulletin (page 155).

Junior College Courses

- 2Af-1Aw-3As. Selected Problems of Logic, Selected Problems of Philosophy, Selected Problems of Ethics.** A special sequence of courses in philosophy especially for pre-legal 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.) Terrell
- 1f,w,s. Problems of Philosophy.** Introduction to the subject; the main fields of investigation; permanent problems; principal methods and schools of philosophy; historical and contemporary views (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.) Castaneda, Donagan, Hospers, Raab, Terrell
- 2f,w,s. Logic.** A study of the difference between logical and fallacious reasoning; the functions and uses of language; rules of good definition and sound argument (5 cred.; fr., soph., jr., sr.; no prereq.) Castaneda, Raab, Shaw, Terrell
- 3f,w,s. Ethics.** An examination of the problems which arise when human beings attempt to think systematically about conduct and values (are there absolute standards?) the problem of free will, and a survey of historical views about the right and the good (5 cred.; open to some fr.* and to soph., jr., sr.; no prereq.) Castaneda, Hospers, Raab, Terrell
- 4s. Introduction to Philosophy of Art.** An elementary study of certain fundamental principles in the appreciation of the arts, with emphasis upon elements of form and expression which the various arts have in common. This course forms part of a sequence with Art 1, Mu. 10, and Spch. 8. It may not be taken, however, unless Art 1 or Mu. 10 has been taken previously. For a more thorough study of the philosophy of art, see course 151-152 (4 cred.; prereq. Art 1 or Mu. 10) Hospers (*Not offered 1953-54. Offered 1954-55*)
- 10f,w. Science and Religion.** An inquiry into the nature of science and religion as currently interpreted, with an attempt to find grounds of conflict and/or reconciliation (2 cred.; soph., jr., sr.; no prereq.) Donagan
- 20. 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.) (*Not offered*)
- 40s. Logic of Scientific Reasoning.** An introduction to the principles of scientific method; definition and classification; observation, measurement, experiment; elementary statistical concepts; hypotheses, theories, evidence, and confirmations; the nature and limits of the scientific enterprise (3 cred.; fr., soph., jr., sr.; prereq. 2) Terrell

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

- 50f-51w-52s. § General History of Philosophy.** Materials once covered in the course Readings in Philosophical Classics will be incorporated into this five-hour course. The attention of advanced students is called to course 230-231-232 (page 118) (15 cred.; jr., sr.; no prereq.) Shaw
- 59. Esthetics.** The role of art in society; esthetic values and standards; analyses of esthetic expression, representation, form, matter, medium, etc.; style and other philosophical problems in the history of art (See 151-152) (3 cred.; jr., sr.; no prereq.) (*Not offered*)
- 73. Philosophy of Law.** 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.) (*Not offered 1953-54*)

* Courses 1A, 2A, 3A are open in any quarter to a limited number of freshmen with the permission of their advisers. Course 2 is open to freshmen. Courses 1 and 3 are open to third-quarter freshmen.

‡ Students may enter any quarter.

- 81f-82w-83s. § Science and Civilization** (Formerly Phil. 80-81-82) 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 (9 cred.; designed primarily as a sr. integrative course, but open to jrs. with permission of instructor; no prereq.) Scriven
- 101f-102. Principles of Philosophy.** Topics include knowledge, meaning, truth, reality, mind, and nature, human values and action (4 cred. per qtr.; open only to sr. and grads. who have not had 1 or 2; no prereq.) Terrell (*102 not offered 1953-54*)
- 103s. Eighteenth-Century Philosophy** (Formerly Phil. 111A) The philosophy of the enlightenment in France, England, and Germany. 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.) Shaw
- 104s. Nineteenth-Century Thought** (Formerly Phil. 115A) Main currents in British and European philosophy; the ideological background; the interaction between Continental and British thinkers; realism and positivism; German and British idealism; Romanticism; philosophical psychology; materialism; evolutionism and its philosophical consequence (3 cred.; jr., sr., grad.; prereq. permission of instructor) Brodbeck (*Not offered 1953-54. Offered 1954-55*)
- 105f. Introduction to American Philosophy: Puritanism to Pragmatism** (Formerly Phil. 114) A study of Puritanism, the Revolutionary period, transcendentalism, and evolutionism (3 cred.; jr., sr., grad.; especially for students of American history and literature) Brodbeck
- 106w. American Philosophy from William James** (Formerly Phil. 114A) Continuation of 105 (3 cred.; jr., sr., grad.; prereq. 105 or permission of instructor) Brodbeck
- 107w. Philosophy in Modern Literature** (Formerly Phil. 135) A survey of basic philosophical ideas in modern civilization as they are expressed in major works of literature (3 cred.; jr., sr., grad.; no prereq.) Terrell
- 108w. Political and Social Ethics** (Formerly Phil. 165) A discussion of the ethical principles, theoretical and practical, at the basis of the political order (3 cred.; jr., sr., grad.; prereq. one course from 50-51-52 or permission of instructor) Hospers
- 112f-113w. Plato** (Formerly Phil. 106-107) Study of the philosophy of Plato based on analysis of major dialogues (6 cred.; jr., sr., grad.; prereq. 50 or permission of instructor) Sellars
- 114s. Aristotle** (Formerly Phil. 108) Study of the philosophy of Aristotle based on analysis of selected passages from his major works. Particular attention given to his relationship to Plato. A survey will be made of Aristotelian tradition in Western philosophy (3 cred.; jr., sr., grad.; prereq. one course from 50-51-52 or permission of instructor) Shaw
- 115s. Epicureanism and Stoicism** (Formerly Phil. 148) Greek philosophy after Aristotle. Modern elements in stoic logic (3 cred.; jr., sr., grad.; prereq. 50) Shaw (*Not offered 1953-54. Offered 1954-55*)
- 116w. Skepticism** (Formerly Phil. 149) The development of Greek and Roman skepticism; the revival of skepticism in the French Renaissance and its influences in the seventeenth and eighteenth centuries (3 cred.; jr., sr., grad.; prereq. 50) Shaw (*Not offered 1953-54. Offered 1954-55*)
- 118f. Readings in Medieval Philosophy** (Formerly Phil. 130) An analysis of selected works of the principal medieval philosophers (3 cred.; jr., sr., grad.; prereq. 50, 51 or permission of instructor) Shaw (*Not offered 1953-54. Offered 1954-55*)
- 120. Rationalism** (Formerly Phil. 110) The philosophies of Descartes, Spinoza, and Leibnitz (3 cred.; jr., sr., grad.; prereq. one course from 50-51-52 or permission of instructor) (*Not offered*)
- 121f. Descartes** (Formerly Phil. 125) An analysis of the philosophical works of Descartes (2 cred.; jr., sr., grad.; prereq. one course from 50-51-52 or permission of instructor) Shaw
- 122w. Spinoza** (Formerly Phil. 126) A study of the philosophy of Spinoza based primarily on the analysis of his *Ethics* (2 cred.; jr., sr., grad.; prereq. 121 or permission of instructor) Donagan
- 123s. Leibnitz** (Formerly Phil. 127) A study of the philosophy of Leibnitz based on the analysis of selected philosophical writings (2 cred.; jr., sr., grad.; prereq. 121 or permission of instructor) Sellars (*Not offered 1953-54. Offered 1954-55*)

‡ Students may enter any quarter.

- 130f. **Locke and Berkeley** (Formerly Phil. 133) An analysis of the principal epistemological works of Locke and Berkeley with emphasis upon their sources and influence (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Shaw
- 131w. **Hume** (Formerly Phil. 134) A detailed study of Hume's *Treatise and Inquiry* (3 cred.; jr., sr., grad.; prereq. 52 and 130) Shaw
- 134s. **Kant** (Formerly Phil. 112) A study of the philosophy of Kant based on an analysis of selected passages from his major works (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Sellars (*Not offered 1953-54. Offered 1954-55*)
- 137w. **Kierkegaard and Scandinavian Philosophy** (Formerly Phil. 113) A study of the philosophical tradition in the Scandinavian countries, with special reference to Kierkegaard and his significance (3 cred.; jr., sr., grad.; prereq. one course from 50-51-52 or permission of instructor) Hong
- 140w. **Contemporary Philosophy** (Formerly Phil. 115) A study of current systematic and critical philosophies, especially idealism, naturalism, realism, pragmatism, positivism, and existentialism, as represented by their principal exponents (3 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Raab
143. **Philosophy of John Dewey** (Formerly Phil. 116) 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. 52 or permission of instructor) (*Not offered*)
- 147s-148-149. **Readings in Recent Philosophy** (Formerly Phil. 117-118-119) An intensive study of works by Russell, Whitehead, and Collingwood; works by other authors (9 cred.; jr., sr., grad.; prereq. 52 or permission of instructor) Holmer (*148-149 not offered 1953-54. Offered 1954-55*)
- 150s. **Ethical Theory** (Formerly Phil. 164) Distinguishing characteristics of a moral judgment; applications of moral judgments to motives, acts, consequences, and persons; moral freedom and responsibility; moral relativity, skepticism, and unity; ethical monism and pluralism; examination of representative systems (3 cred.; jr., sr., grad.; prereq. one course from 50-51-52 or permission of instructor) Sellars
- 151f-152w. **Principles of Esthetics** (Formerly Phil. 159-160) The nature of the esthetic experience; standards of esthetic evaluation; beauty in art and beauty in nature; the status of subject matter in the arts; the relation of form and content; the concepts of representation, expression, style, meaning, and truth in the arts; the use of symbols in art; the relation of the arts to knowledge, and to society; the relation of esthetics to ethics (6 cred.; jr., sr., grad.; prereq. permission of instructor) Hospers
- 154f. **Elements of Symbolic Logic** (Formerly Phil. 147) A systematic introduction to modern logic. The topics include the dimensions of language; calculus of propositions, classes, and relations; applications to foundations of mathematics (4 cred.; jr., sr., grad.; prereq. 2 or permission of instructor) Brodbeck
- 157s. **Metaphysics** (Formerly Phil. 155) A study of some recent attempts to discover general principles characteristic of the universe (4 cred.; jr., sr., grad.; prereq. one course from 50-51-52 or permission of instructor) Terrell
- 158w. **Theory of Knowledge** (Formerly Phil. 143) An analysis of the logical structure and experiential roots of knowledge. The topics include meaning, validity, truth, reason and experience, induction, criteria of objectivity, and reality (4 cred.; jr., sr., grad.; prereq. 2 or permission of instructor) Feigl
- 160f. **Philosophy of Science** (Formerly Phil. 153) 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 (4 cred.; jr., sr., grad.; prereq. 2 or permission of instructor) Feigl
- 164w. **The Logic of the Social Sciences I** (Formerly Phil. 140) A philosophical examination of the foundations of the behavior sciences in general; their concepts, laws and theories; concrete illustrations from these sciences; problems of value and objectivity; logical nature of social philosophies and ideologies; role of the social scientist in a democratic society (3 cred.; jr., sr., grad.; prereq. 15 cred. in social science, psychology, education, history, or philosophy, or permission of instructor) Brodbeck
- 165s. **The Logic of the Social Sciences II** (Formerly Phil. 141) A closer and more specific study of the items introduced in the preceding course, with greater attention to the logical methods and problems peculiar to each of the specialized social sciences (3 cred.; jr., sr., grad.; prereq. 164) Brodbeck

- 167f. **Philosophy of History** (Formerly Phil. 170) A study of the idealistic, theological, and economic interpretations of history, with particular reference to the concepts of progress, continuity, pluralism, etc., and to the philosophical aspects of historical methods (3 cred.; jr., sr., grad.; prereq. 6 cred. in philosophy or 10 cred. in history) Donagan
170. **Comparative Philosophy** (Formerly Phil. 123) 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. one course from 50-51-52 or permission of instructor) (*Not offered*)
- 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. in philosophy) Donagan
- 181w. **Psychology of Religion.** Current interpretations of religious experience and behavior, according to various psychologies (3 cred.; jr., sr., grad.; prereq. 6 cred. in philosophy) Donagan
- 182s. **Philosophy of Religion.** Discussion of the ground and sanctions of religion, according to various philosophies (3 cred.; jr., sr., grad.; prereq. 6 cred. in philosophy) Donagan
- 190f-191w-192s. **Seminar in Philosophy** (Formerly Phil. 191-192-193) Topics to be arranged according to students' interests, e.g., see courses marked Ar. (9 cred.; sr., grad.; prereq. 9 credits in philosophy or permission of instructor) Feigl, Sellars, and others

For Graduate Students Only

- 206-207. **Seminar in Comparative Philosophy.** 206: Theory of knowledge and methodology. 207: Ethics and philosophy of religion (3 cred. per qtr.; prereq. 170 or permission of instructor) (*Not offered 1953-54*)
- 210f-211w-212s. **Seminar in Moral Philosophy.** A systematic study at the graduate level of concepts and problems relating to the moral universe of discourse (3 cred. per qtr.; prereq. 150 or permission of instructor) Sellars
- 220f-221w-222s. **Seminar in Philosophical Analysis.** A systematic study at the advanced level of the basic concepts and problems of epistemology (3 cred. per qtr.; prereq. 150 or permission of instructor) Sellars
- 223-224-225. **Seminar in Philosophy of Language.** A systematic study at the advanced level of concepts and problems relating to the structure, meaning, and use of language. Recent developments in the logical and psychological investigations of language will be analyzed and an attempt made to assess their significance for philosophy. 223: The logical syntax of language. 224: Meaning and meaningfulness. 225: The evaluative and normative use of language (3 cred. per qtr.; jr., sr., grad.; prereq. 158 or 154 or permission of instructor) (*Not offered 1953-54*)
- 230f-231w-232s. **History of Philosophy** (Advanced) (3 cred. per qtr.; primarily for grad. students from other departments who have had no previous courses in philosophy) Hospers
- 233-234-235. **Seminar in Philosophy of Religion.** A systematic study of the conceptual structure of religion (3 cred. per qtr.; prereq. 182 or permission of instructor) (*Not offered 1953-54*)
- 236-237-238. **Seminar in the History of the Philosophy of Religion.** A historical study seeking to isolate the origins, the nature, the scope of philosophy of religion in Western culture from the Greeks through the eighteenth century (3 cred. per qtr.; prereq. 182, a knowledge of the history of philosophy, and permission of instructor) (*Not offered 1953-54*)
- 241-242-243. **Seminar: Philosophy of the Physical Sciences** (3 cred. per qtr.; prereq. permission of instructor) (*Not offered 1953-54*)
- 244w-245s-246. **Seminar: Philosophy of Psychology** (3 cred. per qtr.; prereq. permission of instructor) Feigl (246 *not offered 1953-54*)
- 247w-248s-249. **Seminar: Logic of the Exact Sciences** (3 cred. per qtr.; prereq. permission of instructor) Brodbeck (249 *not offered 1953-54*)
- 250-251-252. **Seminar: Philosophy of the Social Sciences** (3 cred. per qtr.; prereq. permission of instructor) (*Not offered 1953-54*)

PHYSICAL EDUCATION FOR MEN

Department Chairman—Louis F. Keller

A towel and locker fee of \$2.50 per quarter is charged all students using physical education facilities for activity. A laboratory fee of \$1 per quarter credit is charged for the courses listed below. Uniforms for class work or recreational activity may be rented for \$2 per quarter.

The following courses in physical education for men are open, with a maximum of 6 credits, to students in the College of Science, Literature, and the Arts. Students planning to enter the College of Education later are held to a requirement of 3 credits.

1A1-Bw-Cs. Sports Education. 1A-B-C 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 (1 cred. per qtr.; no prereq.)

1A1. Boxing, Wrestling, Handball, Squash, Touchball. Vancisin and staff
Swimming, Beginning (for nonswimmers only) Boyce, Thorpe
Adapted Activities (by permission of instructor only) Osell

1Bw. Basketball, Volleyball, Stunts. Vancisin and staff
Swimming, Beginning. Boyce, Thorpe
Adapted Activities (by permission of instructor only) Osell

1Cs. Swimming, Track, Softball. Vancisin and staff
Swimming, Beginning. Boyce
Adapted Activities (by permission of instructor only) Osell

2A1-Bw-Cs. Sports Education. The program in 2A-B-C offers an opportunity to develop proficiency in an elected recreational sport in which the student has had previous experience (1 cred. per qtr.; no prereq.)

2A1. Bowling.* Ar.
Swimming, Intermediate (prereq. ability to swim 50 yards) Boyce, Thorpe
Swimming, Advanced (prereq. ability to swim 100 yards) Boyce
Wrestling. Bartelma
Boxing. Ar.
Square and Folk Dancing, Coeducational. Ar.
Ballroom Dancing, Coeducational. Ar.
Gymnastics and Weight Lifting. Ostrander
Handball and Squash. Ar.

2Bw. Bowling.* Ar.
Swimming, Intermediate (prereq. ability to swim 50 yards) Boyce
Swimming, Advanced (prereq. ability to swim 100 yards) Boyce
Badminton. Brain
Wrestling. Johnson
Boxing. Ar.
Square and Folk Dancing, Coeducational. Ar.
Ballroom Dancing, Coeducational. Ar.
Gymnastics and Weight Lifting. Ostrander
Basketball. Vancisin
Golf. § Bolstad
Skating, Beginning. Ar.
Skating, Intermediate. Ar.
Skating, Advanced. Ar.

2Cs. Swimming, Advanced. Thorpe
Life Saving (prereq. ability to swim 440 yards) Thorpe
Tennis. Brain
Golf. § Bolstad
Handball and Squash. Ar.
Square and Folk Dancing, Coeducational. Ar.
Ballroom Dancing, Coeducational. Ar.
Swimming, Intermediate. Ar.
Tennis. Brain

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

§ Student must furnish his own equipment.

PHYSICAL EDUCATION FOR WOMEN

Department Chairman—Gertrude M. Baker

The following courses in physical education for women are open, with elective credit up to 6 credits, to students in the College of Science, Literature, and the Arts. Students planning to enter the College of Education later are held to a requirement of 5 credits in activity courses. After this credit requirement has been met, a choice may be made of "Additional Elective" courses listed on page 121.

A physical education fee of \$3.25 per quarter is charged for all activity courses. In addition, a \$3.25 fee is charged for the following numbered courses: 54, 76, 87, 88. Maximum fee per student, \$6.50 per quarter.

Students must report to the Norris Gymnasium for Women the first day of each quarter in order to be placed in the proper section, day, and hour of the activity course. This registration is in addition to the regular registration. For special permission to take two courses in physical education, see Miss Tenney, 106 Norris Gymnasium.

Fall Quarter

Aquatics

- Swimming, Beginning
- Swimming, Advanced Beginning
- Swimming, Intermediate
- Swimming, Advanced
- American Red Cross Senior Life Saving

Individual Sports

- Archery, Elementary
- Badminton, Elementary
- Bowling
- Social Games and Mixers
- Rifle marksmanship

Body Building

- Posture and Individual Exercise

Rhythms

- Ballroom Dance, Elementary
- Folk and Square Dance
- Modern Dance, Elementary

Team Sports

- Volleyball

Winter Quarter

Aquatics

- Swimming, Beginning
- Swimming, Advanced Beginning
- Swimming, Intermediate-Advanced
- American Red Cross Senior Life Saving

Individual Sports

- Archery, Elementary
- Badminton, Elementary
- Bowling
- Rifle marksmanship
- Skating, Elementary
- Social Games and Mixers
- Tennis, Elementary

Body Building

- Posture and Individual Exercise

Rhythms

- Ballroom Dance, Elementary
- Folk and Square Dance
- Modern Dance, Elementary
- Modern Dance, Intermediate-Advanced

Team Sports
Basketball
Volleyball

Spring Quarter

Aquatics

Canoeing
Swimming, Beginning
Swimming, Advanced Beginning
Swimming, Intermediate
Swimming, Advanced and Diving
Swimming, Synchronized
American Red Cross Senior Life Saving
American Red Cross Water Safety Instructors Course

Individual Sports

Archery, Elementary and Intermediate
Golf, Elementary
Golf, Intermediate
Golf, Advanced
Riding, Elementary
Tennis, Elementary
Tennis, Intermediate-Advanced

Body Building

Posture and Individual Exercise

Rhythms

Ballroom Dance, Elementary
Folk and Square Dance
Modern Dance, Elementary
Modern Dance, Intermediate-Advanced

Team Sports

Softball

Additional Elective Courses—These courses may not be used to meet a college requirement in physical education:

- 25f, s. **American Red Cross First Aid** (Standard Course) (2 cred.; no prereq.)
26w. **American Red Cross First Aid** (Advanced) (1 cred.)
54f, w, s. **Camp Leadership** (3 cred.; no prereq.)
76s. **Advanced Folk Dance** (2 cred.; prereq. permission of instructor)
80s. **Principles of Rhythm** (3 cred.; prereq. permission of instructor)
87w. **Dance Composition** (2 cred.; prereq. permission of instructor)
88s. **Advanced Problems in Dance Composition** (2 cred.; prereq. permission of instructor)

PHYSICS

Department Chairman—Alfred O. C. Nier

Major Advisers in the College of Science, Literature, and the Arts—Professors Buchta, Valasek, and Wall.

Major Sequence in the College of Science, Literature, and the Arts—Courses 101-103-105 and 107-109-111, plus 6 additional credits in Senior College courses in physics.

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 Buchta.

For the 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. Students who have any credit in one of the sequences 1-2-3, 4-5-6, or 7-8-9 should consult the department chairman before registering in another sequence.

Junior College Courses

- 1f-2w-3s.* Introduction to Physical Science.** Demonstration lectures on the principles of physics and the physical phenomena underlying these principles. A course designed for those who wish a general cultural introduction to physics but do not plan to major in that subject (9 cred.; prereq. high school algebra and plane geometry) Ar.
- 1af-2aw-3as. Introduction to Physical Science—**with laboratory included. May be used in fulfilling the laboratory-science group requirement (12 cred.; prereq. high school algebra and plane geometry) Ar.
- 4f-5w-6s. General Physics** (primarily for premedical students). 4: Mechanics. 5: Heat and electricity. 6: Sound and light. Laboratory work is an integral part of course (15 cred.; prereq. Math. 15-16, or with permission of department chairman Math. 6, and either Math. 7 or 8, which are courses in college algebra; premedical students should take Math. 15-16) Ar.
- 7f-8w-9s.¶ General Physics** (primarily for students majoring in physics, mathematics, or chemistry and for students in Institute of Technology). Mechanics, heat, electricity, sound, light. Laboratory work is an integral part of the course (15 cred.; prereq. registration in differential calculus for 7; courses should be taken in order given above) Ar.
- 7s. General Physics** (1st qtr. of 7-8-9. See 7f-8w-9s) Ar.
- 8f-9w.¶ General Physics** (2nd and 3rd qtrs. of 7-8-9. See 7f-8w-9s) Ar.

Senior College Courses

Senior College credit is allowed for Phys. 8 and 9 to students not majoring in chemistry, mathematics, or physics.

- 50w,s. Intermediate Physics.** Selected topics in modern physics (4 cred.; prereq. 15 cred. in physics and registration in integral calculus) Ar.
- 50aw,s. Intermediate Physics Laboratory.** Laboratory parallel to Phys. 50 (1 cred.; prereq. registration in 50) Ar.
- 101f-103w-105s.§ Theoretical Physics.** An analytical survey of fundamental principles of mechanics, thermodynamics, kinetic theory of gases, electricity, and magnetism, designed to supplement the general course and to prepare students for more specialized graduate courses (15 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 106 or registration in 106) Nier
- 107f-109w-111s. Modern Physics.** Selected topics in modern physics such as photoelectric effect, mass spectroscopy, ionization of gases, optical spectra, nuclear physics, radioactivity, X rays (9 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51) Collins
- 110s-112s.§ Modern Experimental Physics.** Laboratory work. Characteristics of vacuum gauges, mass spectroscopy, electronic tubes and associated circuits, radioactivity, Geiger counters, ionization of gases (3 cred. per qtr.; jr., sr., grad.; prereq. 120-121 or permission of instructor) Ar.
- 114f,w,s-116f,w,s-118f,w,s.§ Elementary Physical Investigation.** Special problems, either experimental or theoretical in which the student may have some special interest. Permission of department chairman required for registration (3 cred. per qtr.; jr., sr., grad.; prereq. 15 cred. in phys., Math. 51) Ar.
- 120f. Atomic Physics.** A laboratory course to introduce techniques and methods used in physics research laboratories. Vacuum gauges and systems, properties of charged particles, X-ray diffraction, ionization of gases, mass spectroscopy, photoelectricity, secondary electron emission (3 cred.; jr., sr., grad.; prereq. 50 or registration in 107 or permission of instructor and I.T.M. 25 or Math. 51) Blair
- 121w. Experimental Nuclear Physics I.** A laboratory course in nuclear physics not requiring extensive knowledge of electronic circuits. Natural radioactivity, cloud chambers, ionization chambers, properties of nuclear radiations, alpha, beta, and gamma rays, neutrons; shielding artificial radioactivity, photographic techniques, health protection (3 cred.; jr., sr., grad.; prereq. 50 or registration in 107 or permission of instructor and I.T.M. 25 or Math. 51) Blair

* This course does not satisfy any of the laboratory science requirements for entrance to the Senior College.

¶ Senior College credit is allowed for Phys. 8 and 9 to students not majoring in chemistry, mathematics, or physics.

§ Students may enter any quarter when permission is given by the instructor.

- 122s. Experimental Nuclear Physics II.** A laboratory course in techniques in nuclear physics requiring knowledge of electronic circuits. Geiger, proportional, scintillation, and coincidence counters. Cosmic rays. Nuclear resonance phenomena. Health monitoring instruments (3 cred.; jr., sr., grad.; prereq. 121, 146 or special permission of instructor) Blair
- 131f. Geometrical Optics.** Theory of mirrors, prisms, and lenses. Theory of diaphragms and brightness of images. Optical instruments (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51) 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) Valasek
- 134f,w. Experimental Optics.** Laboratory work in spectrometry, optics of compound lenses, photometry, absorption, interferometry, and polarized light (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics) Valasek
- 135. Spectroscopy.** Light sources, instruments and methods used in spectroscopy of the X ray, ultraviolet, visible, and infrared regions of the spectrum (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51) (Not offered 1953-54)
- 136w,s. Spectrum Analysis.** Laboratory work dealing with the measurement of wave lengths, intensities, and absorption coefficients in the infrared, visible, and ultraviolet regions of the spectrum (3 cred.; jr., sr., grad.; prereq. 15 cred. in physics) Valasek
- 144f. Electrical Measurements.** An experimental course covering ballistic and current galvanometers, magnetic flux measurements, potentiometer methods, D.C. bridges, and audio-frequency A.C. bridges (4 cred.; jr., sr., grad.; prereq. 15 cred. in physics, Math. 51) Blair
- 146w. Physics of Vacuum Tubes and Associated Circuits.** Thermionics (3 cred.; prereq. 144 and permission of instructor) Ar.
- 148s. Application of Electronic Circuits.** A study of the application of various electronic circuits which are useful in physics research. Lecture and laboratory work involving amplifiers, computing circuits, servomechanisms, regulating circuits, and others especially adapted to work in physics (3 cred.; jr., sr., grad.; prereq. 146 or permission of instructor for those who already have a basic knowledge of electronics) Ar.
- Zool.155f,*156w,*157s.*§ Biophysics** (3 cred. per qtr.; jr., sr., grad.; prereq. 28 cred. distributed between physics and biology and permission of instructor; physical chemistry and general physiology recommended; for more complete description of this course see page 159) Schmitt
- 181f-183w-185s. Atomistics and Elementary Quantum Mechanics.** An introduction to wave mechanics, atomic structure, and nuclear physics (9 cred.; sr., grad.; prereq. 101-103-105 or permission of instructor) Williams
- 191f-192w-193s. Introduction to Mathematical Physics.** Intensive treatment of the equations of mathematical physics using material drawn from the fields of mechanics, small vibrations of continuous media, acoustics, electromagnetic theory, and heat conduction (9 cred.; sr., grad.; prereq. 101-103-105, Math. 106-107-108 or I.T.M. 80, I.T.M. 150-152-153 or equiv.) Freier

GEOPHYSICS

School of Mines and Metallurgy

- Geophys.108f. Introduction to General Geophysics—Physics of the Earth** (3 cred.; jr., sr., grad.; prereq. Phys. 7-8-9, Geol. 1-2; Geol. 125 recommended but not required) Mooney
- Geophys.109w. Introduction to General Geophysics—Elementary Seismology** (3 cred.; jr., sr., grad.; prereq. Phys. 7-8-9, Geol. 1-2) Mooney
- Geophys.110s. Introduction to Exploration Geophysics** (3 cred.; jr., sr., grad.; prereq. Phys. 7-8-9, Geol. 1, 2; Geol. 125 recommended but not required) Mooney
- Geophys.125f. Principles of Gravity and Magnetic Exploration** (2 cred.; jr., sr., grad.; prereq. Phys. 7-8-9, Geol. 125, I.T.M.25) Mooney
- Geophys.126w. Principles of Seismic Exploration** (2 cred.; jr., sr., grad.; prereq. Phys. 7-8-9, Geol. 125, I.T.M.25) Mooney

* The schedule for this course is uncertain. Students wishing to take it should consult the department.

§ Any section of this course may be taken separately when permission is given by the instructor.

Geophys.127s. Principles of Electrical Exploration (2 cred.; sr., grad.; prereq. Phys. 9, Geol. 125, I.T.M. 25) Mooney

Geophys.130s. Special Problems. Individual research (1-3 cred.; prereq. permission of instructor) Mooney

These courses are part of a five-year curriculum offered in the Institute of Technology. For further information consult the *Bulletin of the Institute of Technology*. The courses may be taken for credit by students in this college.

PHYSIOLOGY

College of Medical Sciences

Department Chairman—Maurice B. Visscher

Major Adviser in the College of Science, Literature, and the Arts—Dr. King.

Major Sequence in the College of Science, Literature, and the Arts—Course 106-107; 15 credits in approved Senior College courses in related fields.

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

Junior College Courses

4f.s.*§ **Human Physiology** (4 cred.; prereq. 1 qtr. zoology, 1 qtr. chemistry) Ar.

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

60f.w. **Human Physiology** (6 cred.; prereq. courses in physiological chemistry and human or mammalian anatomy; primarily for medical technology and 5-year nursing students) Ar.

101w. **Human Physiology** (Formerly 58-59) (10 cred.; prereq. courses in physiological chemistry and human or mammalian anatomy; primarily for dental students) Staff

106s-107su. § **Human Physiology** (Formerly 103-104) (15 cred.; jr., sr.; prereq. courses in zoology, organic chemistry, and neuroanatomy; primarily for medical and graduate students; this is now a single course, and registration for either 106 or 107 singly is not permitted) Staff

POLITICAL SCIENCE

Department Chairman—Lloyd M. Short

Major Advisers—Professors Anderson, Christensen, Levi, Mills, Quigley, Short; Associate Professors McClosky, McLaughlin, Sibley, Warp; Assistant Professor Turner.

Preparation for a Major Sequence—Fifteen credits, including course 1-2 (6 cred.) or 5 (5 cred.), and A-B (6 cred.), and 3 credits selected from courses 3 (3 cred.), C (3 cred.), and 25 (3 cred.); plus history (1-2-3 or 4-5-6 or 20-21-22), or economics (6-7 and 5), or sociology (1 and 45). In addition Phil. 2 and Psy. 1-2 are recommended.

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

§ Students may register for lectures without laboratory.

Major Sequence—The preparatory work noted above is designed to provide a general knowledge of (1) the systems of government of the United States and of major European states, and (2) the principal terms and concepts of political science. To this knowledge the major sequence should add: (3) a knowledge of the works of a number of great contributors to political ideas; (4) fairly exact and thorough knowledge of some extensive part of three of the following fields of political science: (a) American government—including politics, administration, public law, and local government (courses numbered 51-52-53, 80, and those numbered from 100 to 139); (b) comparative government (courses numbered 97 and from 140 to 159); (c) political theory (courses numbered 160-170); (d) international relations (courses numbered 85 and 171-199); and (e) political behavior (courses numbered 167-168-169). In addition the student must show ability to study independently and write a satisfactory term paper in at least one of the three chosen fields (see course 94).

To these ends the major student will be required to obtain 30 credits in Senior College courses in political science. He will elect to concentrate in one of his three selected fields and will take courses totaling at least 15 credits in that field. He will obtain at least 9 credits in his second and at least 6 credits in his third selected field. The major and minor work should constitute an integrated plan of study.

Majors in International Relations (Foreign Service Training, Area Studies)—Special programs in international relations and foreign areas will be arranged for students of good standing who desire a general introduction to these fields. Courses are drawn from political science, economics, history, geography, and related departments. Those intending to take the examinations for the United States Foreign Service are advised to follow such a program and to prepare themselves adequately in modern foreign languages. See page 90 in this bulletin and the special bulletin, *Programs in International Relations and Area Studies*; consult Mr. Quigley, Mr. Christensen, Mr. Levi, or Mr. McLaughlin.

Special Readings and Honors Courses—Students of high ability 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 five fields noted above.

Major Advisers in the College of Education—Professor Christensen; Associate Professor Warp.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: At least 36 credits in political science including 1-2-3, A-B, and 25, and at least 18 credits in Senior College courses.

Minor recommendation: At least 23 credits in political science, including 1-2-3, or A-B-C, and 25, and not less than 11 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

- 1f-2w†-3s. American Government and Politics.** An analysis of the principles, organization, procedures, and functions of government in the United States—national, state, and local. Attention will be given throughout to current issues (9 cred.; no prereq.) Christensen.
- 1w-2s.† American Government and Politics.** (1st two qtrs. of 1-2-3. See 1f-2w-3s) Naftalin.
- 5f,w,s.§ American Government and Politics** (Covers most of 1-2) (5 cred.; no prereq.) Naftalin and others.
- Af-Bw†-Cs.¶ The State in the Modern World.** An examination of principles, structure, and operation of the modern state. Emphasis on nation state; historical development; democratic government; United States, Great Britain; totalitarian government; Nazi Germany, Soviet Russia; conflict between states. (9 cred.; no prereq.) Lippincott
- Aw-Bs.†¶ The State in the Modern World** (1st two qtrs. of A-B-C. See Af-Bw-Cs) Turner
- 25f,s. World Politics.** Introduction to contemporary international relations; the policies of the great powers; nationalism; imperialism; internationalism (3 cred.; no prereq.) 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.

- 51f-52w†-53s. Field Work in Government and Politics.** Field study of political organization, leadership, and activities in the local community; performance of typical operations in government such as preparing and presenting reports, drafting bills, formulating budgets, conducting meetings and elections (9 cred.; jr., sr.; prereq. 9 cred.; 53 may be taken before taking 51-52; registration limited to Minnesota residents) Naftalin (53 not offered in 1953-55)
- 80f. National Government in the United States**—with special reference to current problems and developments (3 cred.; jr., sr.; no prereq.; not open to soph. or students who have had 1-2 or equiv.) Warp
- 85w,s. Problems of World Politics** (3 cred.; jr., sr.; prereq. 25 or Hist. 1-2-3 or permission of instructor) Mills (Offered during winter quarter 1953-54 and during spring quarter 1954-55)
- 91f-92w-93s. Honors Work in Selected Fields** (Cred. ar.; jr., sr.; prereq. 18 cred.; consult major advisers) Ar.
- 94f,w,s. Major Paper** (No cred.; jr., sr.; required of all majors; consult major advisers) Ar.
- 101f. Principles of the American Constitution I.** Nature of constitutions, judicial review, national, state, interstate relations (3 cred.; jr., sr., grad.; prereq. 1-2 or equiv.) Anderson
- 102w. Principles of the American Constitution II.** Organization and powers of the national government (3 cred.; jr., sr., grad.; prereq. 101 or equiv.) Anderson
- 103s. Principles of the American Constitution III.** Constitutional rights, due process and equal protection of the law (3 cred.; jr., sr., grad.; prereq. 101 or 102 or equiv.) Anderson
- 104-105-106. American Constitutional Development.** Influence of constitutionalism on American institutions; antecedents of our constitutional system; framing of the Constitution of 1787; executive, legislative, judicial roles in constitutional change; issues and trends in constitutional growth (9 cred.; jr., sr., grad.; prereq. 9 cred. or Hist. 20-21-22) (Not offered)
- 108w. Legislative Organization and Procedure.** A study of Congress and the state legislatures at work (3 cred.; jr., sr., grad.; prereq. 6 cred.) Short
- 116f-117w.† Local Government.** Theory, legal basis, areas, organization, politics, and administration (6 cred.; jr., sr., grad.; prereq. 9 cred. or permission of instructor) Naftalin

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

§ This course covers most of Pol.Sci. 1-2. No student will be given credit for both 1-2 and 5. Course 5 may be substituted for 1-2 whenever 1-2 is required.

¶ C may be taken concurrently with B.

118. **Local Government.** Major functions, state supervision, finance (3 cred.; jr., sr., grad.; prereq. 116 or permission of instructor) (*Not offered*)
- 120f. **Municipal Functions** (3 cred.; jr., sr., grad.; prereq. 6 cred.) Ludwig
- 121w. **Municipal Administration** (3 cred.; jr., sr., grad.; prereq. 120 or permission of instructor) Ludwig
- 122s. **Municipal Problems.** Intensive study of selected municipal problems. (Individual conferences—no regular class) (3 cred.; jr., sr., grad.; prereq. 121 or permission of instructor) Ludwig
- 123f. **City Planning.** (Same as Arch. 104) General survey of the economic, governmental, social, and technical phases of city planning and group housing (3 cred.; sr., grad.; no prereq.) Caplow, Filipetti, Vaile, Warp
- 124f. **Recent Social Legislation.** Federal, state, and local programs in the field of public assistance and social security, with particular emphasis on the major programs of the Social Security Act, health insurance, and housing (3 cred.; jr., sr., grad.; prereq. 6 cred.) Christensen
- 126w-127s. **Government and the Economic Order** (6 cred.; jr., sr., grad.; prereq. 1-2 or 5) Warp
- 129w. **Social Legislation and Social Institutions in the Scandinavian Countries** (3 cred.; jr., sr., grad.; prereq. Soc. 1 or permission of instructor) Ar.
- 131f. **Public Administration.** Organization and areas, administrative responsibility (3 cred.; jr., sr., grad.; prereq. 6 cred.) Short
- 132w. **Public Administration.** Personnel administration (3 cred.; jr., sr., grad.; prereq. 131 or permission of instructor) Short
- 133s. **Public Administration.** Financial administration (3 cred.; jr., sr., grad.; prereq. 131 or permission of instructor) Short
135. **Problems of Public Planning** (2 cred. without term paper, 3 cred. with term paper; jr., sr., grad., and soph. with permission of instructor; prereq. 9 cred.) (*Not offered*)
- 137f. **American Political Parties.** The role and functions of the party in American government; party composition and organization; the process of nomination and policy formulation; the regulation of party organization and activities (3 cred.; jr., sr., grad.; prereq. 6 cred. or 12 cred. in social science) Christensen
- 138s. **American Political Campaigns and Elections** (3 cred.; jr., sr., grad.; prereq. 6 cred. or 12 cred. in social science) Naftalin
- 141f-142w.† **European Governments.** Theory and practice (6 cred.; jr., sr., grad.; prereq. 6 cred. or 12 cred. in social science) Turner
- 143s. **Government of the U.S.S.R. and Adjacent States** (3 cred.; jr., sr., grad.; prereq. 6 cred.) Turner
- 145f. **Government and Politics of the Scandinavian Countries** (3 cred.; jr., sr., grad.; prereq. course C or equiv. or permission of instructor) Ar.
- Psy.147s. **Political Psychology** (3 cred.; jr., sr., grad.; prereq. Psy. 140) Bird.
- 149f. **Government and Politics of the British Empire—India and the Tropical Colonies** (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Mills (*Not offered 1953-54. Offered 1954-55*)
- 150w. **Government and Politics of the British Empire—Development of Dominion Status** (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Mills (*Not offered 1953-54. Offered 1954-55*)
- 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 and 150 with grade of C+ or better, or permission of instructor) Mills (*Not offered 1953-54. Offered 1954-55*)
- 153f. **Japanese Government and Politics.** Constitutional and political development in Japan; political ideas, government, political parties, and problems (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Quigley
- 154w. **Chinese Government and Politics.** Constitutional and political development in China; political ideas, government, political parties, and problems (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Quigley
- 155w-156s. **Government and International Relations in Latin America.** An analysis of the factors that have conditioned the constitutional and political organization of the principal Latin-American states; their relations with the other American nations, the development and the nature of the inter-American political system (6 cred. or permission of instructor) Christensen

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

- 160f. **American Political Thought** (3 cred.; jr., sr., grad.; prereq. 6 cred. in political science or 12 cred. in social science or permission of instructor) Sibley
- 161w. **Problems of Democracy** (3 cred.; jr., sr., grad.; prereq. 6 cred. in political science or 12 cred. in social science or permission of instructor) Sibley
- 162s. **Recent Political Thought** (3 cred.; jr., sr., grad.; prereq. 6 cred. in political science or 12 cred. in social science or permission of instructor) Sibley
- 164f. **Development of Political Thought: Greece and Rome** (3 cred.; jr., sr., grad.; prereq. 6 cred. in political science or 12 cred. in social science or permission of instructor) Sibley
- 165w. **Development of Political Thought: The Middle Ages** (3 cred.; jr., sr., grad.; prereq. 6 cred. in political science or 12 cred. in social science or permission of instructor) Sibley
- 166s. **Development of Political Thought: Early Modern** (3 cred.; jr., sr., grad.; prereq. 6 cred. in political science or 12 cred. in social science or permission of instructor) Sibley
- 167-168-169w,s. **Political Behavior**. Analysis of the various aspects of political behavior, with attention to such topics as: the role of personality and leadership; the functions of myth, ideology, and interests; group behavior and public opinion; factors in voting and elections; the consequences of organization; attitudes and the psychology of political preference; quantitative techniques and the measurement of political behavior (9 cred.; jr., sr., grad.; prereq. permission of instructor) McClosky (*In 1954-55 scheduled as 167f-168w-169s*)
171. **Scandinavian Foreign Policy** (3 cred.; jr., sr., grad.; prereq. 6 cred. in history or political science or permission of instructor) (*Not offered*)
- 175f-176w†-177s. **Conduct of American Foreign Relations**. The Department of State and the Foreign Service; diplomatic and consular functions and problems; special economic and financial agencies; relations with international organizations; treaties and executive agreements; formulation of policy (9 cred.; jr., sr., grad.; prereq. 9 cred. or Hist. 93-94-95) McLaughlin
- 180f-181w†-182s. **International Law**. 180-181: Relation of international law to individuals, states, international community; jurisdictional problems; survey of principles developed in diplomatic practice, national courts, international adjudications. 182: War, military occupation, war crimes, neutrality, pacific settlement (9 cred.; jr., sr., grad.; prereq. 9 cred. or permission of instructor) McLaughlin
- 184f. **International Organization I**. Development and conditions of success. United Nations and regional organizations (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Levi
- 185w. **International Organization II**. Specialized agencies and other organs for the promotion of international cooperation, especially in the social and economic field (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Levi
- 186s. **International Organization III**. International offices and civil service; international administration; planning for an international order (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Levi
- 187f. **Problems of European Organization**. Plans for political, economic, and social reconstruction of Europe; contributions of European and non-European nations toward reconstruction; present situation in key states; politics of reconstruction (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Levi
191. **East Asia in International Relations I**. The period of separatism (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Quigley (*Not offered 1953-54*)
192. **East Asia in International Relations II**. The period of inequality (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Quigley (*Not offered 1953-54*)
193. **East Asia in International Relations III**. Contemporary development (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Quigley (*Not offered 1953-54*)
- 194s. **The Far East in International Relations** (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Quigley
- 195f. **Colonial Government and the Problems of Imperialism**. Motives of American, British, Dutch, French, and Spanish colonization; ancient and modern imperialism (3 cred.; jr., sr., grad.; prereq. 6 cred. or permission of instructor) Mills (*Offered 1953-54. Not offered 1954-55*)

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

197w. **The Mediterranean Area in World Affairs.** Economic, political, and strategic conditions; policies of the European and Asiatic States, post-war conflict of interests between the Western powers and Russia (3 cred.; jr., sr., grad.; prereq. 25 or Hist. 125a-126a-127a) Mills

Courses Primarily for Graduate Students

The following courses may be taken by seniors majoring in political science with permission of the instructor:

- 201-202. **Readings in American Government.** A different topic will be chosen each year. Among topics to be dealt with are federalism and intergovernmental relations, executive-legislative relations, and the judicial process (6 cred.; grad.; prereq. permission of instructor) (*Not offered*)
- 204w-205s.† **Seminar in Public Law** (6 cred.; grad.; prereq. 18 cred. in political science or permission of instructor) Warp
- 207-208-209. **Seminar in Theories of Law and Politics** (9 cred.; grad.; prereq. 18 cred. in political science or permission of instructor) (*Not offered*)
- 210f-211w-212s.† **Special Seminar in Public Administration** (9 cred.; grad.; admission only with permission of staff) Warp, Ludwig, Short
- 214w. **Seminar in Political Parties** (3 cred.; grad.; prereq. 12 cred. or permission of instructor) Christensen
- 216-217w-218s. **Seminar in Comparative European Government** (9 cred.; grad.; prereq. 12 cred. or permission of instructor) Levi (216 not offered)
- 219-220-221. **Seminar in Political Power in the Modern World** (9 cred.; grad.; prereq. 12 cred. or permission of instructor) (*Not offered*)
- 222-223-224. **Seminar in Recent Political Thought, American and Foreign, with Special Reference to the Problems of Democracy** (9 cred.; grad.; prereq. 12 cred. or permission of instructor) (*Not offered*)
- 225f-226w-227s. **Readings in the Classics of Politics (Including Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Mill, Marx, Lenin, Hitler)** (9 cred.; grad.; prereq. 12 cred., including 6 cred. in political theory, or permission of instructor) Lippincott
228. **Seminar in Political Theory: Freedom and Control in the Democratic State** (3 cred.; grad.; prereq. 12 cred. or permission of instructor) (*Not offered*)
- 229f. **Scope and Methods of Political Science** (3 cred.; grad.; prereq. 12 cred. or permission of instructor) Anderson
- 230f-231w-232s. **Seminar in Political Behavior** (9 cred.; grad.; prereq. 167-168-169 or permission of instructor) McClosky (*Not offered 1953-54. Offered 1954-55*)
- 238f. **Topics in International Law and Diplomacy I.** Survey of the historical development of the law of nations and of international judicial activity in the modern world (3 cred.; sr. with permission of instructor, grad.; prereq. 180-181 or permission of instructor) McLaughlin
- 239w. **Topics in International Law and Diplomacy II.** Modern international law; an examination of recent developments and current issues in the law of collective security, international criminal law, the codification and development of law through international agencies (3 cred.; sr. with permission of instructor, grad.; prereq. 180-181 or permission of instructor) McLaughlin
- 240s. **Topics in International Law and Diplomacy III.** Legal aspects of international trade and finance. Status and rights of business enterprises abroad; their diplomatic protection. Legal regulation of international business transactions: tariffs, quotas, exchange restrictions; taxation; commercial treaties and conventions (3 cred.; sr. with permission of instructor, grad.; prereq. 180-181 or permission of instructor) McLaughlin
- 241s. **Interdepartmental Seminar in East and South Asia.** The topic, to be announced each year, will serve as a focus for approaches of several departmental disciplines to problems of the area (2 or 3 cred.; sr. with permission of instructor, grad.; prereq. major in East and South Asian Area Study or permission) (Consult Quigley, Mills, Levi) Ar.
- 242f-243w-244s. **Topics in Colonization and Imperialism** (9 cred.; grad.; prereq. 195 or permission of instructor) Mills
- 245f-246w-247s. **Seminar in Far Eastern Government and Politics** (9 cred.; grad.; prereq. 153-154 or equiv.) Quigley

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

248w-249s. Seminar in International Organization (6 cred.; grad.; prereq. permission of instructor) Levi

PSYCHOLOGY

Department Chairman—Paul E. Meehl

Major Advisers in the College of Science, Literature, and the Arts—Professors Bird, Elliott, Longstaff, Paterson, Tinker; Associate Professors Clark, MacCorquodale; Assistant Professor Jenkins.

A student considering the choice of a major in psychology must consult the Student Counseling Bureau prior to seeking his first conference with a major adviser.

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 psychology courses. Mr. Tinker.

B. Human and animal behavior. Prerequisites: 9 credits in psychology. Courses 114; 148; 151; either 152 or 153; 165; and 12 additional credits in Senior College courses either in psychology or zoology. Messrs. Elliott and MacCorquodale.

C. Differential psychology. Prerequisites: 1-2 and 4-5. Course 3 is recommended. Course 70 or equivalent; 125-126-127; 130 or 160; Ed.Psy. 120; 3 credits chosen from Psy. 155, Ed.Psy. 140, 142, 144; and 6 additional credits in Senior College psychology courses. Messrs. Paterson, Longstaff, Clark, and Jenkins.

D. Social and political psychology. Prerequisites: 1-2 and 4-5. Course 70 or equivalent; 140; 147; 167; 168; and 12 additional Senior College psychology credits. It is recommended that students elect Jour. 115 and 130-131 as part of the 12 additional credits required. Psy. 156 is recommended to students with certain interests. Messrs. Bird and Clark.

All students majoring in psychology are strongly urged to elect courses in mathematics, especially Math. 15-16, and 127-128-129. Math. 15-16 or 51 and Zool. 1-2-3 are required for students planning to enter graduate work in clinical psychology.

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

Majors in psychology may take not more than 33 Senior College credits in psychology, educational psychology, and child welfare combined. This is in accordance with the general principle that a liberal arts degree should not involve over-specialization.

The following fundamental courses in each sequence require original work and should not be taken until as late in the student's program as possible. Sequence A, courses 101-102-103; sequence B, courses 151, and 152 or 153; sequence C, 125-126, 127; sequence D, 167, 168.

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

Junior College Courses

1f-2w.†§ **General Psychology.** A general introduction to the study of human behavior with emphasis on the development of the individual (6 cred.; soph., jr., sr.; no prereq.)

Bird, Elliott, MacCorquodale, Russell

1w-2s.†§ **General Psychology** (See 1f-2w) Heron, MacCorquodale

1s-2s.†§ **General Psychology** (6 cred.; soph., jr., sr.; no prereq.) Russell

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

§ Psy. 1-2 is intended to be the normal beginning course in psychology. It is a prerequisite for all advanced courses in psychology. It is the course prerequisite to business, education, law, medicine, and social work. 1-2, together with 4-5, meets the natural science requirement for entrance to the Senior College under Plan I.

- 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. 1-2) 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.; soph., jr., sr.; prereq. may be taken with or after 1-2; sections limited to 48) Tinker and others
- 4w-5s.† **Introductory Laboratory Psychology** (See 4f-5w) Tinker and others
- 4s-5s.† **Introductory Laboratory Psychology** (See 4f-5w) (4 cred.; soph., jr., sr.; prereq. may be taken with or after 1-2 or 2) Tinker and others

Senior College Courses

In this department courses numbered between 50 and 65 are open to sophomores who have an average grade of at least C in all their courses and an average of B in the prerequisite 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. 1-2) Heron
- 55s. **Psychology of Sensation.** An elementary treatment with demonstrations of sensory perception in such areas as vision, hearing, touch, and kinesthesia. Demonstrations and discussions will be related to the everyday experiences of the individual (3 cred.; jr., sr.; prereq. 1-2) Tinker
- 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) Clark
- 86s. **Biographical Psychology.** Human personalities in relation to their ancestries, their bodies, and their environments, physical and social (3 cred.; sr.; prereq. 12 cred. in psychology) Elliott (*Not offered 1953-54. Offered 1954-55*)
- 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) Elliott, Bird, Paterson, Tinker, Heron, Longstaff, Clark, Meehl, MacCorquodale, Rosen, Russell, Schachter, Jenkins
- 101f-102w†-103s. **Experimental Psychology.** An advanced treatment of emotions, psychophysical methods, association, reaction time, sensation, and perception. After several experiments involving the use of standard equipment, the student completes a minor research project (3 cred. per qtr.; jr., sr., grad.; prereq. 1-2, and 4-5 or equiv. in another science) Tinker
- 108f. **Systems of Psychology.** A reading course on the chief systems or schools of theoretical psychology. A term paper is required (3 cred.; sr., grad.; prereq. preparation for advanced work in psychology and permission of instructor) Elliott
- 114w. **Human Behavior.** An integrative approach, examining the background, development, and organization of human behavior. Consciousness and purpose are treated as properties of the living body (3 cred.; sr., grad.; prereq. 1-2, 4-5 or Zool. 1-2-3, or Phil. 1) Elliott
- 118s. **The Psychology of Language.** The nature and forms of verbal behavior; motivational and emotional influences in the emission of speech; the problem of reference of meaning; internal language processes; etc. Emphasis on experimental data (3 cred.; jr., sr., grad.; prereq. 9 cred. in psychology or 6 cred. and permission of instructor) MacCorquodale

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

- 125f-126w. § Psychology of Individual Differences.** Quantitative studies of such factors as age, sex, race and nationality, physical traits, family heredity, and environment in the causation of individual differences in abilities and temperament (3 cred. per qtr.; sr., grad.; prereq. 1-2, 4-5 or 5 cred. in statistics) Paterson (for advanced majors or minors); Jenkins (for general students)
- 125s, 126s. § Psychology of Individual Differences** (See 125f-126w) (6 cred.) Jenkins (Not offered 1953-54)
- 127f, w. s. Projects in the Psychology of Individual Differences** (3 cred.; sr., grad.; primarily for majors in Sequence C; prereq. 125-126) Paterson, Longstaff, Jenkins
- 128f-129w. Psychology of Learning.** Psychological theory: its characteristics and function. Critical analysis of all learning theories and their application to problems of normal and abnormal behavior (3 cred. per qtr.; jr., sr., grad.; prereq. 9 cred. in psychology) Heron
- 130w, s. Vocational and Occupational Psychology.** Psychology of individual differences in intelligence, aptitudes, interests, and training, with special reference to vocational guidance and problems of occupational adjustment. Lectures and laboratory work (3 cred.; jr., sr., grad.; prereq. 9 cred. in psychology) Paterson
- 132f-133w. † Psychology of Motivation.** Classical and contemporary theories of motivation. Elaboration of basic drives into motives, acquisition of new drives and goals; dynamics of the elaborated drive structure. Particular reference to motivation in complex situations involving set, level of aspiration, the Zeigarnik effect, frustration, etc. (6 cred.; jr., sr., grad.; prereq. 9 cred. in psychology) Russell
- 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 (2 cred. per qtr.; sr., grad.; prereq. 9 cred. or permission of instructor for 135-136, 130 for 137) Ar.
- 140w. Social Psychology.** A study of experimental investigations of group behavior. Special emphasis will be put upon the place of emotions, drives, and personality traits in the adjustment of individuals to the demands of modern societies (3 cred.; jr., sr., grad.; prereq. 1-2, 4-5, and 9 cred. in social science) Bird
- 144f-145w. † Abnormal Psychology.** Normal and abnormal behavior contrasted. Emphasis on the dynamics, and particularly the social determinants, of personality maladjustments (6 cred.; jr., sr., grad.; prereq. 9 cred. in psychology; or 6 cred. in psychology and either Zool. 1-2-3 or 12 cred. in social science) Bird, Rosen
- 147s. Political Psychology.** A consideration of problems and points of view falling within the area of both political science and psychology. The importance of deriving techniques for the identification of political attitudes. The part played by psychological factors in the determination of belief, propaganda, and public opinion (3 cred.; jr., sr., grad.; prereq. same as for 140) 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 permission of instructor) Hathaway
- 151f. Animal Psychology.** Historical, philosophical, and biological foundations; consciousness; motivation; learning; reasoning; judgment; abnormal behavior; social influences (3 cred.; jr., sr., grad.; prereq. 1-2, 4-5 or equiv. in another science) Heron
- 152w, 153s. Individual Investigations in Animal Psychology.** Students may enter either quarter. Each student, working independently, attempts the solution in the laboratory of a definite problem (3 cred. per qtr.; jr., sr., grad.; prereq. 151) Heron
- 155s. Industrial Psychology.** Psychological problems in industrial production with special reference to biomechanics (the adaptation of the machine to the capacities and limitations of the operator), work and effort, and the role of communication in an industrial organization (3 cred.; jr., sr., grad.; prereq. 1-2 and Math. 15-16 or equiv. or 10 cred. of statistics) Russell, Jenkins
- 156f, 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., grad.; prereq. 1-2 and Principles of Economics) Longstaff

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

‡ Course 126 may not be taken until after completion of 125.

- 160f.w. **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) Longstaff
- 165f. **Advanced General Psychology**. A reconsideration of the topics of general psychology with special emphasis on behavior theory and the methods of science. Historical backgrounds, learning, motivation, and emotion are discussed (3 cred.; jr., sr., grad.; prereq. 1-2 and one course numbered above 50) MacCorquodale
- 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 147 for undergraduate students, a course in statistics for graduate students) 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) Clark
- 171f-172w.† **Clinical Psychology**. A survey of the methods of clinical psychology emphasizing basic concepts and research problems, especially in a psychiatric setting. Theory of diagnosis, the history and mental status, structured tests, major diagnostic groups, psychological deficit, prediction, psychotherapy, and interprofessional relations (6 cred.; sr., grad.; prereq. 145 and a course in mental measurements or statistics) Meehl

For Graduate Students Only

- 200-201-202. **History of Psychology I: European**
- 203-204-205. **History of Psychology II: American**
- 207-208-209. **Group Dynamics**
- 210-211-212. **Research Problems**
- 215,216,217. **Seminar in Special Areas of Psychology and Related Sciences**
219. **Psychology of Personality**
- 220-221-222. **Personality, Its Structure and Dynamics**
- 230-231-232. **Field Work in Psychometrics and Applied Psychology**
- 235-236-237. **Clinical Practice in the Student Counseling Bureau**
- 240,241,242. **Seminar in Student Personnel Work**
- 243,244. **Experimental Psychodynamics**
- Phil.244-245-246. **Seminar: Philosophy of Psychology**
246. **Advanced Abnormal Psychology**
- 250-251-252. **Topics in Psychology**
- 253-254. **Clinical Use of Projective Techniques**
- 257-258-259. **Methods of Research in Group Behavior**
- 260-261-262. **Seminar in Diagnostic and Therapeutic Interviewing**
- 265-266-267. **Seminar in Advanced Clinical Psychology**
270. **Advanced Psychological Measurement**
- 271-272-273. **Seminar in Recent Literature of Psychology**
274. **Preclinical Practicum in Clinical Psychology**
- 280-281-282. **Psychology for Fellows in Psychiatry or Neurology**
286. **Advanced Biographical Psychology**
290. **Introduction to Projective Techniques**
291. **Practicum in Interpretation of Projective Techniques**
- 292-293. **Seminar in Theoretical Problems of Group Functioning**
- 295-296-297. **Seminar in Individual Differences and Applied Psychology**
299. **Tabulating Equipment Laboratory**

PUBLIC HEALTH

Medical School

Department Chairman—Gaylord W. Anderson

Advisers in the College of Science, Literature, and the Arts—Professor Anderson; Associate Professor Thomson; and Professor Treloar for Biostatistics.

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

Major Advisers in the College of Education—Professor Anderson; 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 public health 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 or 100 and 57, 59, 102, Bact. 53, and Phys. 2, 4, or 51.

For additional details of courses of study in public health consult the *Bulletin of the School of Public Health*.

Junior College Courses

3f,w,s.§ Personal Health. Elementary principles of normal body function; predisposing and actual causes of disease; ways in which disease may be avoided (2 cred.; fr., soph.; no prereq.; not open to students who have taken G.C. 10C) Thomson

4s.§ Health Problems of the Community. Personal health and prevention of disease in the family; relation to community health and disease control, important diseases and their prevention (2 cred.; prereq. 3 or G.C. 10C, or successful passing of exemption exam.; exemption from 3 on basis of military service does not serve as a prerequisite) Fox

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

50f,w.§ Personal and Community Health. Causes of diseases and of physical defects; fundamental principles and working methods of health conservation and disease prevention. Lectures, discussions, and directed readings (3 cred.; not open to jrs. and srs. who have taken 3, 4, 51, 52, 53, 100, or G.C. 10C; no prereq.) Thomson

51f,w.§ Community Hygiene. Elementary concepts of development, spread, and prevention of preventable diseases; community programs for their control (3 cred.; jr., sr.; prereq. 3 or G.C. 10C; not open to students who have taken 4, 50, 52, 53, or 100 or those excused from 3 or 50 on basis of military service) Cowan

55w. Nursing and Social Problems in the Control of Gonorrhoea and Syphilis (2 cred.; prereq. 53 or 100 and 62; Soc. 50 or 51 may be substituted by presocial work students; open to public health nurses and sociology majors) Ar.

57w.§ Health of Infant and Preschool Child (2 cred.; jr., sr.; prereq. 4, or 50, or 51, or 52, or 53, or 100) Boynton

59w,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, or 100; exemption from 3 on the basis of military service will not be accepted as a substitute for suitable course in personal health) Anderson, Thomson

60f,s. Tuberculosis and Its Control (2 cred.; for nurses; others may be admitted by special permission; prereq. 4 or 50 or 51 or 52 or 53 or 100 and 62) Myers

75w. Community Sanitation (3 cred.; jr., sr.; prereq. 4 or 50 or 51 or 52) Ar.

100f,s. Elements of Preventive Medicine and Public Health (5 cred.; for public health nurses, others by special permission; prereq. 3 or 50, or equiv. and a course in bacteriology) Anderson, Thomson

102f,s. Environmental Sanitation I (3 cred.; sr., grad.; prereq. 53 or 100 or permission of instructor; may be taken concurrently with prerequisites) Bosch, Olson

103f,w,s. Public Health Bacteriology (Cred. ar.; grad.; prereq. Bact. 101-102, 116 and permission of instructor) Bauer

106w. Public Health Administration (3 cred.; physicians, engineers, nurses, social workers, and others by permission; prereq. 53 or 100 or equiv.) Anderson

125s. The Community Health Education Program (3 cred.; prereq. 53 or 100, or 104 and 106, or to be taken concurrently with 106) Grout

§ No credit is granted for this course in the major sequence in public health nursing.

- 126s. **Industrial Health Problems** (3 cred.; prereq. 53 or 100, Chem. 1-2 or equiv., or permission of instructor) Foker
- 141s. **Social and Economic Aspects of Medical Care** (3 cred.; prereq. 106 or permission of instructor) Mickey

For other courses in public health see the *Bulletin of the Graduate School*, or the *Bulletin of the School of Public Health*.

BIOSTATISTICS

- 110f. **Biometric Principles**. Introduction to statistical analysis with emphasis on basic principles of statistical reasoning. The description of univariate distributions, normal correlations, simple tests of significance, and goodness of fit (3 cred.; jr., sr., grad.; prereq. 18 cred. in biological science or mathematics through analytical geometry; to be taken with 111; undergraduate students admitted to 110f only if electing also to register for 130) Treloar
- 110s. **Biometric Principles** (See 110f) (Primarily for students not proceeding to advanced courses in biostatistics) Ar.
- 111f,s. **Biostatistics Laboratory**. Practical training in machine calculation and statistical techniques discussed in 110, with which it is to be taken concurrently (2 cred.) Ar.
- 120w. **Advanced Biostatistics I**. Exact sampling distributions (t , χ^2 , F); small sample tests and their power; analysis of variance (3 cred.; prereq. 110 with grade not lower than C; 121 must be taken concurrently) Elveback
- 121w. **Advanced Biostatistics Laboratory I**. Applications of theory discussed in 120, which must be taken concurrently (2 cred.) Elveback
- 130s. **Advanced Biostatistics II**. Correlation and regression with two or more variables; further discussion of χ^2 and analysis of variance (3 cred.; prereq. 120 with grade not lower than C; 131 must be taken concurrently) Elveback
- 131s. **Advanced Biostatistics Laboratory II**. Applications of theory discussed in 130, which must be taken concurrently (2 cred.) Elveback

Other courses in biostatistics designed primarily for students in public health, medicine, or Graduate School may be opened to students in S.L.A. by special arrangement with Mr. Treloar.

PHYSIOLOGICAL HYGIENE

- 91f.* **Physiological Hygiene** (4 cred.; jr., sr.; prereq. 8 cred. in chemistry and 4 cred. in human anatomy or equiv.; primarily for students in physical education and public health) Taylor, Brozek
- 92w.* **Physiological Hygiene** (4 cred.; jr., sr.; prereq. 91 or equiv.; primarily for students in physical education and public health) Taylor, Brozek
- 95f. **Principles of Human Nutrition** (3 cred.; prereq. 3 cred. in chemistry and 10 cred. in biology) J. T. Anderson
- 191w. **Science of Human Nutrition** (3 cred.; jr., sr., grad.; prereq. 8 cred. in organic chemistry or biochemistry, 91, 92 or Physiol. 103 or equiv. and permission of instructor) Keys, J. Anderson
- 192w. **Physiology of Exercise** (4 cred.; jr., sr., grad.; prereq. 92 or Physiol. 103 or equiv. and permission of instructor) Taylor, Simonson
- 194f. **Human Factors in Industry** (3 cred.; sr., grad.; prereq. 20 cred. in at least two of the following: chemistry, biology, psychology, engineering; primarily for students in the Schools of Business Administration and Public Health, and the Institute of Technology) Brozek

RADIO

Courses relating to radio are offered by the School of Journalism and the department of Speech and Theater Arts to juniors and seniors who have had the fundamental prerequisite courses.

* Both quarters must be completed for credit except with special permission of instructor.

RHETORIC

College of Agriculture, Forestry, and Home Economics

Department Chairman—Ralph G. Nichols

477, w.s. **Efficient Reading.** Designed to increase reading rate, comprehension, and vocabulary. Open to all students who score above the 30th percentile on a standard reading test. Not a remedial course (1 cred. for S.L.A. students; no prereq.) Brown

ROMANCE LANGUAGES

Department Chairman—Francis B. Barton

Major Advisers in the College of Science, Literature, and the Arts—Professors Pattison and Grismer; Associate Professor Clefton.

Major Sequences 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 in French numbered 50 or above, of which at least 9 must be in literary courses.

ITALIAN

Twenty-four credits in Italian courses numbered 50 or above, and 3 additional credits chosen from the following: Eng. 75; Fr. 115-116-117, 121-122-123; Ital. 159-160, 161-162; Lat. 133; Hist. 65a-66a-67a.

SPANISH

Courses 65-66-67 or 68-69; 53-54, if the student has not taken Span. 20; 55; a minimum of 15 additional credits chosen from courses in Spanish 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.

LATIN-AMERICAN STUDIES

See International Relations and Area Studies, page 90.

MIXED (FRENCH, ITALIAN, AND SPANISH)

Five credits in conversation and composition.

A survey course of 9 credits, 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: Associate Professor Clefton; Spanish: Professor Pattison.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—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 8 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 Spanish-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

1f-2w. § Beginning French. This beginning course stresses correct pronunciation of French, the basic essentials of grammar, and the reading of simpler prose texts. Oral French and conversation at this level are given all possible attention (10 cred.; no prereq.; students submitting one year of high school French for entrance must take 2 and those offering two years must take 3) Ar.

1w-2s. Beginning French (See 1f-2w) Ar.

1s. Beginning French (1st qtr. of 1-2. See 1f-2w) Ar.

1af-2aw. § Beginning French—Conversational Section. Ten class meetings a week; five hours of demonstration (introduction to texts dealing with common conversational material and real life situations; necessary grammatical analysis of sentence patterns) plus five hours of intensive conversational drill in sections small enough to insure for each student individual attention. Less outside preparation required than for the standard courses (10 cred.; no prereq.) Ar.

1bf-2bw-3bs. † § French Language and Culture. The objectives of this course are (1) to provide without emphasis on formal grammar a practical reading knowledge of French adequate for the needs of most students in other fields; and (2) to impart a broad view and appreciation of the contribution of French culture to Western civilization. This course will stress direct experience with a variety of reading material both in French and in English (15 cred.; no prereq.) Falk

2f. Beginning French (2nd qtr. of 1-2. See 1f-2w) Ar.

3f-4w. Intermediate French. This intermediate course reviews and simplifies the elementary grammar and verb study and aims at reading proficiency through translation of short stories, plays, and short novels. There is supplementary practice in oral 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 3 and take 4) Ar.

3w-4s. Intermediate French (See 3f-4w) Ar.

3s. Intermediate French (1st qtr. of 3-4. See 3f-4w) Ar.

3as. § Intermediate French—Conversational Section. Continuation of French 1a-2a (5 cred.; prereq. 1af-2aw) Ar.

4f. Intermediate French (2nd qtr. of 3-4. See 3f-4w) Ar.

20f,s. ¶ Oral and Written French (5 cred.; prereq. 4, or four ¶ years of high school French) 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 Scholastic Committee. See statement on page 24.

50f,w. French Pronunciation (3 cred.; jr., sr.; prereq. 3-4) Sullivan

52s. French Pronunciation and Diction (Open only to candidates for the French play) (1 or 2 cred.; jr., sr.; prereq. 3-4) Ar.

53f. French Composition (3 cred.; jr., sr.; prereq. 3-4) Carduner

54w-55s. French Conversation (6 cred.; jr., sr.; prereq. 53 or 20) Carduner

63f. Advanced French Composition (3 cred.; jr., sr.; prereq. 53 or 20 with a grade of B) Blinoff

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

§ The sequence of courses that must be followed is 1-2-3 or 1a-2a-3a or 1b-2b-3b, and a student may not receive credit for more than one of these sequences.

¶ Students who have had three years of high school French may be admitted to Fr. 20 with permission of instructor.

138 COURSE OFFERINGS AND MAJOR REQUIREMENTS

- 64w-65s. **Advanced French Conversation** (6 cred.; jr., sr.; prereq. 63) Blinoff
 70f-71w-72s. **Survey of French Literature** (9 cred.; jr., sr.; prereq. 3-4) Clefthon
 73w-74s. **Survey of French Literature** (Same as 70-71-72) (10 cred.; jr., sr.; prereq. 3-4) Brackney
 75f-76w-77s. **French Civilization and Culture** (9 cred.; jr., sr.; prereq. 3-4) Blinoff
 100. **Practical French Phonetics** (3 cred.; jr., sr., grad.; prereq. 20 or 53-54 or permission of instructor) (*Not offered 1953-54*)
 103f-104w-105s. **French Syntax and Composition** (3 cred.; jr., sr., grad.; prereq. 63 or reg. in 63) Barton
 107s. **Cours de Style** (3 cred.; jr., sr., grad.; prereq. 63-64 or permission of instructor) Blinoff
 110f. **French Literature: Nineteenth Century—Chateaubriand and Romantic Prose** (3 cred.; jr., sr., grad.; prereq.*) Barton
 111f. **French Literature: Nineteenth Century—Drama** (3 cred.; jr., sr., grad.; prereq.*) Ar. (*Not offered 1953-54. Offered 1954-55*)
 112s. **French Literature: Nineteenth Century—Poetry** (3 cred.; jr., sr., grad.; prereq.*) Clefthon
 115f-116w-117s. **French Literature: Seventeenth Century.** 115: Formation of the classic ideal. 116: Corneille, Molière, Racine. 117: Prose (9 cred.; jr., sr., grad.; prereq.*) Desgranges
 118f-119w-120s.** **French Literature: Eighteenth Century** (9 cred.; jr., sr., grad.; prereq.*) Clefthon
 121-122-123. **French Literature: Sixteenth Century** (9 cred.; jr., sr., grad.; prereq. 9 cred. in literature courses above 74 or permission of instructor) (*Not offered 1953-54*)
 130f. **French Romantic Poetry: Victor Hugo** (3 cred.; jr., sr., grad.; prereq.*) Clefthon
 131. **Parnassian Poetry** (3 cred.; jr., sr., grad.; prereq.*) (*Not offered 1953-54*)
 132. **Baudelaire** (3 cred.; jr., sr., grad.; prereq.*) (*Not offered 1953-54. Offered 1954-55*)
 146w. **Contemporary French Dramatic Literature** (3 cred.; jr., sr., grad.; prereq.*) Barton
 156s. **French Realistic Novel** (3 cred.; jr., sr., grad.; prereq.*) Ar. (*Not offered 1953-54. Offered 1954-55*)
 157. **Modern French Novel: France, Loti, Bourget** (3 cred.; jr., sr., grad.; prereq.*) (*Not offered*)
 158s. **Contemporary French Novel I.** Course conducted in French (3 cred.; jr., sr., grad.; prereq.*) Desgranges (*Not offered 1953-54*)
 159s. **Contemporary French Novel II.** Special problems course conducted in French (3 cred.; jr., sr., grad.; prereq.*) Desgranges (*Not offered 1953-54. Offered 1954-55*)
 171f-172w-173s.† **History of French Language** (3 cred.; jr., sr., grad.; prereq. one year of Latin or permission of instructor) Brackney
 181f-182w-183s.** **Movement of Ideas in French Literature.** 181: Sixteenth and seventeenth centuries. 182: Nineteenth century. 183: Contemporary period (9 cred.; jr., sr., grad.; prereq.*) Desgranges (*Not offered 1953-54. Offered 1954-55*)

For Graduate Students Only

- 201f-202w-203s. **Old French Phonology and Morphology** (6 cred.) Brackney
 204f-205w-206s. **Reading in Old French Literature** (6 cred.) Brackney
 207f-208w-209s. **Old Provençal** (6 cred.) Brackney
 225f-226w-227s. **French Seminar: Contemporary Period** (6 cred.) Ar.

ITALIAN

Junior College Courses

- 1f-2w.¶ **Beginning Italian** (8 cred.; no prereq.) Pacifici
 3s. **Intermediate Italian** (4 cred.; prereq. 2 with grade of C) Pacifici
 4f. **Intermediate Italian** (4 cred.; prereq. 3) Nissen (*Not offered 1953-54. Offered 1954-55*)
 5w.¶ **Reading Knowledge of Italian** (5 cred.; prereq. knowledge of French, Latin, or Spanish; no previous knowledge of Italian necessary) Nissen (*Not offered 1953-54. Offered 1954-55*)

* 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.

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

** Students may enter any quarter with permission of instructor.

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 Scholastic Committee. See a statement on page 24.

- 69f. *Survey of Italian Literature I* (3 cred.; jr., sr.; prereq.§) Nissen (*Not offered 1953-54. Offered 1954-55*)
- 70w. *Survey of Italian Literature II* (3 cred.; jr., sr.; prereq.§) Nissen (*Not offered 1953-54. Offered 1954-55*)
- 71w. *Modern Poetry (Leopardi, Carducci)* (3 cred.; jr., sr.; prereq.§) Pacifici (*Offered 1953-54. Not offered 1954-55*)
- 72f. *Modern Drama (Giacosa, Bracco, Pirandello)* (3 cred.; jr., sr.; prereq.§) Pacifici (*Offered 1953-54. Not offered 1954-55*)
- 73s. *Boccaccio* (3 cred.; jr., sr.; prereq.§) Nissen (*Not offered 1953-54. Offered 1954-55*)
- 74s. *Petrarch* (3 cred.; jr., sr.; prereq.§) Pacifici (*Offered 1953-54. Not offered 1954-55*)
- 159f-160w.** *Dante* (6 cred.; jr., sr., grad.; prereq. one course above 50) Nissen (*Not offered 1953-54. Offered 1954-55*)
- 161f-162w. *The Sixteenth Century* (6 cred.; jr., sr., grad.; prereq. one course above 50) Pacifici (*Offered 1953-54. Not offered 1954-55*)
- 164s. *Dante in English* (3 cred.; jr., sr., grad.; prereq. permission of instructor; no knowledge of Italian necessary) Nissen (*Not offered 1953-54. Offered 1954-55*)

PORTUGUESE

- 1f-2w. *Beginning Portuguese* (10 cred.; no prereq.) Ar. (*Not offered 1953-54*)
- 3s. *Intermediate Portuguese* (5 cred.; prereq. 1-2) Ar. (*Not offered 1953-54*)

SPANISH

Junior College Courses

- 1f-2w.§§ *Beginning Spanish*. This beginning course is for students who have had no previous training in the language. Oral and aural practice. Elementary principles of grammar, reading, and writing of easy Spanish prose (10 cred.; no prereq.; students submitting one year of high school Spanish for entrance must take 2; those offering two years must take 3) Ar.
- 1w-2s. *Beginning Spanish* (See 1f-2w) Ar.
- 1s. *Beginning Spanish* (1st qtr. of 1-2. See 1f-2w) Ar.
- 1af-2aw.§§ *Beginning Spanish—Conversational Section*. This beginning course stresses conversation. It aims to give the students a basic active speaking vocabulary, assurance in self-expression, and facility in the spoken language. Ten class meetings a week: five hours of demonstration (introduction to texts dealing with real-life situations and necessary grammar) plus five hours of intensive conversational drill in sections small enough to insure for each student individual attention. Less outside preparation required than for the standard course (10 cred.; no prereq.) Ar.
- 2f. *Beginning Spanish* (2nd qtr. of 1-2. See 1f-2w) Ar.
- 3f-4w. *Intermediate Spanish*. Grammar review and composition. Extensive reading from modern Spanish authors and conversation (10 cred.; prereq. 1-2 or two years of high school Spanish; students who have had three years of high school Spanish will omit 3 and take 4) Ar.
- 3w-4s. *Intermediate Spanish* (See 3f-4w) Ar.
- 8s. *Intermediate Spanish* (1st qtr. of 3-4. See 3f-4w) Ar.
- 3as.§§ *Intermediate Spanish—Conversational Section*. Continuation of 1a-2a (5 cred.; prereq. 1af-2aw) Ar.
- 4f. *Intermediate Spanish* (2nd qtr. of 3-4. See 3f-4w) Ar.

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

** Students may enter any quarter with permission of instructor.

§§ Students may not receive credit for both 1 and 1a.

- 20w,s. Oral and Written Spanish (5 cred.; prereq. 4 or four§ years of high school Spanish) Ar.
 38w-39s. Spanish Shorthand and Technical Vocabulary (6 cred.; five hours per week; prereq. B grade in 53, and 30 words a minute typing) 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 Scholastic Committee. See a statement on page 24.

- 52w. Spanish Pronunciation and Diction (Open only to candidates for the Spanish play; open to others with permission of instructor) (1 or 2 cred.; jr., sr.; prereq. 3-4) Cuneo
 53f. Spanish Composition (3 cred.; jr., sr.; prereq. 3-4) Irving
 54w-55s. Spanish Conversation (6 cred.; jr., sr.; prereq. 53 or 20) Irving
 56s. Spanish Phonetics and Diction (3 cred.; jr., sr.; prereq. 20 or 53) Cuneo
 57w. Commercial Spanish (5 cred.; jr., sr.; prereq. 20 or 53) Cuneo
 60f. Advanced Spanish Composition (3 cred.; jr., sr.; prereq. 53 or 20 with grade of B) Floripe
 61w-62s. Advanced Spanish Conversation (6 cred.; jr., sr.; prereq. 60) Floripe
 65f-66w-67s. Survey of the Literature of Spain (9 cred.; jr., sr.; prereq. 3-4) Floripe
 68w-69s. Survey of the Literature of Spain (10 cred.; jr., sr.; prereq. 3-4) Pattison
 70f-71w-72s. Latin-American Civilization and Culture (9 cred.; jr., sr.; prereq. 3-4) Cuneo
 74f-75w-76s. Survey of the Literature of Spanish America (9 cred.; jr., sr.; prereq. 3-4) Irving
 90f-91w-92s. Spanish Civilization and Culture (9 cred.; jr., sr.; prereq. 3-4) Ar. (*Not offered 1953-54. Offered 1954-55*)
 103f-104w-105s. Spanish Syntax and Composition (3 cred.; jr., sr., grad.; prereq. 60 or reg. in 60) Pattison
 110f-111w-112s. Spanish Literature: Nineteenth Century (9 cred.; jr., sr., grad.; prereq.*) Pattison (*Not offered 1953-54. Offered 1954-55*)
 115f-116w-117s. Spanish Literature: Seventeenth Century (9 cred.; jr., sr., grad.; prereq.*) Floripe
 120. The Ballad (3 cred.; jr., sr., grad. prereq.*) (*Not offered*)
 130. Cervantes: Don Quijote (3 cred.; jr., sr., grad.; prereq.*) (*Not offered*)
 131. The Picaresque Novel (3 cred.; jr., sr., grad.; prereq.*) (*Not offered*)
 140f-141w-142s. Contemporary Latin-American Literature (9 cred.; jr., sr., grad.; prereq. a survey of the literature of Spain or Latin America) Floripe
 146-147-148. Spanish-American Novel and Short Story (9 cred.; jr., sr., grad.; prereq. a survey of the literature of Spain or Spanish America) (*Not offered*)
 155f-156w-157s. Spanish Literature: Sixteenth Century (9 cred.; jr., sr., grad.; prereq.*) Grismer (*Not offered 1953-54. Offered 1954-55*)
 161f-162w-163w,s. Hispano-Arabic Culture (3 cred.; jr., sr., grad.; prereq. 4 and permission of instructor) Irving (*Not offered 1953-54. Offered 1954-55*)
 171-172-173. History of the Spanish Language (3 cred.; jr., sr., grad.; prereq. 4 and one year of Latin or permission of instructor) (*Not offered*)
 174f-175w-176s. Contemporary Spanish Literature (9 cred.; sr., grad.; prereq.*) Pattison

For Graduate Students Only

- 230f-231w-232s. Research Methods and Materials (3 cred.) Grismer (*Not offered 1953-54. Offered 1954-55*)
 241f-242w-243s. Old Spanish Philology (6 cred.) Grismer (*Not offered 1953-54. Offered 1954-55*)
 244f-245w-246s. Readings in Old Spanish Literature (6 cred.) Irving

* The prerequisite is 65-66-67 or 68-69.

§ Students who have had three years of high school Spanish may be admitted to 20 with the permission of the department.

250f-251w-252s. **Spanish Seminar** (6 cred.) Pattison

253f-254w-255s. **Seminar in Latin-American Literature** (6 cred.) (*Not offered 1953-54. Offered 1954-55*)

RUSSIAN

See Slavic and Oriental Languages, page 143.

SANSKRIT

See Linguistics, page 101.

SCANDINAVIAN

Department Chairman—Alrik Gustafson

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

Major Sequence in Scandinavian Languages and Literature in the College of Science, Literature, and the Arts—Courses 51-52, 61 or 71, 161 or 162, 171, 172, 191-192-193 and 5 additional credits in Scandinavian numbered 51 and above.

Major Sequence in Scandinavian Area Studies. See special bulletin, *Program in Scandinavian Area Studies.*

Junior College Courses

1f-2w. **Beginning Norwegian** (10 cred.; no prereq.) Nelson

3s. **Intermediate Norwegian** (5 cred.; prereq. 1-2 or equiv.) Nelson

4f-5w-6s. **Advanced Norwegian** (9 cred.; prereq. 1-2-3 or equiv.) Nelson

7f-8w. **Beginning Swedish** (10 cred.; no prereq.) Lorenzen

9s. **Intermediate Swedish** (5 cred.; prereq. 7-8 or equiv.) Lorenzen

10f-11w-12s. **Advanced Swedish** (9 cred.; prereq. 7-8-9 or equiv.) Lorenzen

22w-23s. § **Scandinavian Life Today and Yesterday.** A descriptive survey of present-day Scandinavian life and culture, with some attention paid to historical origins but with primary emphasis being placed upon twentieth-century developments in political and economic democracy and social reform, in architecture and painting, in music, literature, and the home crafts (6 cred.; no prereq.) Gustafson and staff (*Not offered 1953-54. Offered 1954-55*)

Senior College Courses

Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

51f. § **Scandinavian Literature in the Nineteenth Century.** A survey of Danish, Norwegian, and Swedish literature from the Romantic Movement and mid-nineteenth-century idealistic realism to the realistic and naturalistic break-through in the drama and prose fiction of the 1870's and 1880's (2 cred.; jr., sr.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson (*Not offered 1953-54. Offered 1954-55*)

52w. § **Contemporary Scandinavian Literature.** A rapid sketch of characteristic trends in the Scandinavian literature of the last half century, especially as reflected in lyric poetry, the short story, and representative autobiographical works (2 cred.; jr., sr.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson (*Not offered 1953-54. Offered 1954-55*)

61s. **Norwegian Conversation.** Practice in conversation employing the common Norwegian vocabulary and idiom of today and based on material drawn from present-day Norwegian life (3 cred.; jr., sr.; prereq. 1-2-3 or equiv.) Nelson

§ No knowledge of the Scandinavian languages is required except for majors in Scandinavian.

- 71s. **Swedish Conversation.** Practice in conversational Swedish of today with subject matter drawn from immediate everyday material from present-day Swedish life (3 cred.; jr., sr.; prereq. 10-11-12 or equiv.) Lorenzen
- Geog.106s. Scandinavia** (3 cred.; jr., sr., grad.) Ar.
- Ger.113f-114w. Gothic** (6 cred.; sr. with completed major sequence, grad.) Downs (*Not offered 1953-54. Offered 1954-55*)
- Soc.117s. Scandinavian Folk Movements: Their Social and Political Significance** (3 cred.; jr., sr., grad.; prereq. Soc. 1 or permission of instructor) Ar.
- Hist.122f-123w-124s. History of the Scandinavian Countries** (9 cred.; jr., sr., grad.) Ar.
- Pol.Sci.129w. Social Legislation and Social Institutions in the Scandinavian Countries** (3 cred.; jr., sr., grad.; prereq. Soc. 1 or permission of instructor) Ar.
- Pol.Sci.145f. Government and Politics of the Scandinavian Countries** (3 cred.; jr., sr., grad.; prereq. Pol.Sci. C or equiv. or permission of instructor) Ar.
- 161w.§ The Scandinavian Novel I. The late nineteenth century.** An examination of "the great tradition" in the modern Scandinavian novel, together with the circumstances, intellectual and political, social and economic, out of which it grew (3 cred.; jr., sr., grad.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson
- 162s.§ The Scandinavian Novel II. Contemporary trends.** A study of characteristic trends in Scandinavian life and thought in the twentieth century as expressed in the prose fiction of Sigrid Undset, Johannes V. Jensen, Olav Dunn, Hjalmar Bergman, Pär Lagerkvist, Halldor Laxness, F. E. Sillampää, and others (3 cred.; jr., sr., grad.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson
- 171f.§ Ibsen and the Beginnings of the Modern Drama.** An intensive examination of the plays of Ibsen, especially with reference to the role he has played as "the founder" of the modern European drama (3 cred.; jr., sr., grad.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson
- 172w.§ Strindberg and the Drama in Revolt and Transition.** A study of Strindberg as master of the naturalistic drama and as "the father of modernity" in the European and American theater since his day (3 cred.; jr., sr., grad.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson
- 173s.§ The Contemporary Scandinavian Theater.** An examination of the Scandinavian theater of today, particularly with reference to its "experimental" trends both in dramatic composition and staging (3 cred.; jr., sr., grad.; prereq. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson
- Ger.176-177-178. Problems and Research Trends in Germanic Philology** (9 cred.; sr., grad.; prereq. at least two Germanic dialects) (*Not offered*)
- 176. The Germanic Languages** (3 cred.) (*Not offered*)
- 177. The Germanic Literary Tradition.** A comparative discussion of the native and foreign records of the Old Germanic period (3 cred.) (*Not offered*)
- 178. Linguistic Geography** (*Not offered*)
- Art 176f,177w,178s. Scandinavian Art** (3 cred. per qtr.; jr., sr., grad.; prereq. 9 cred. in history of art or 9 cred. in history or literature with permission of instructor) Ar. (*Not offered*)
- Hist.176bf-177bw-178bs. Selected Readings in Scandinavian History** (9 cred.; sr., grad.) Ar.
- 185. History of the Scandinavian Languages** (3 cred.; sr., grad.; prereq. 4-5-6 or 10-11-12 or at least one Germanic language) (*Not offered*)
- 191f-192w-193s. Readings in the Scandinavian Literatures.** Intensive reading of representative Scandinavian texts. Designed especially for majors and minors in Scandinavian, each student fulfilling his reading requirements in Danish or Norwegian or Swedish depending upon his language of primary interest (3 cred. per qtr.; prereq. 4-5-6 or 10-11-12) Gustafson
- 195. Introduction to Old Norse Language and Literature.** Old Norse phonology and morphology. Survey of Old Icelandic history and literature (4 cred.; sr., grad.; prereq. 113) (*Not offered*)
- 199s. Scandinavian Area Proseminar** (3 cred.; sr., grad.; prereq. major work in Scandinavian Area Studies) Gustafson and staff

§ No knowledge of the Scandinavian language is required except for majors in Scandinavian.

For Graduate Students Only

- 215f-216w-217s. **Studies in Scandinavian Romanticism** (9 cred.) Gustafson
 218f-219w-220s. **Studies in Late Nineteenth-Century Scandinavian Literature** (9 cred.)
 (Not offered 1953-54. Offered 1954-55)
 221f-222w-223s. **Dramatic Interpretative Problems in Strindberg** (9 cred.) Gustafson

SECRETARIAL TRAINING

See Economics, page 55.

SEMITIC

See Slavic and Oriental Languages below.

SLAVIC AND ORIENTAL LANGUAGES

Department Chairman—Thomas F. Magner, acting chairman

Major Advisers in the College of Science, Literature, and the Arts—Assistant Professor Mather, Chinese; Instructor Brower, Japanese; Assistant Professors Blinoff, Magner, Niemi, Russian.

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

CHINESE

Courses 51-52-53, 56-57-58, 101-102-103, 110-111, and 6 credits in Ling. 151-152-153 (Honors Course).

JAPANESE

Courses 51-52-53, 56-57-58, 101-102-103, 110-111, and 6 credits in Ling. 151-152-153 (Honors Course).

RUSSIAN

Courses 51-52-53, 61-62, 71-72-73, 75-76, and 6 additional credits selected from 56-57-58, 101-102-103, 125-126-127, 131-132-133.

CHINESE

Junior College Courses

1f-2w-3s. **Beginning Chinese.** 1-2: Conversational exercise in the national language (Mandarin), and introduction to script and reading. 3: Selected readings in colloquial style (15 cred.; no prereq.) Mather

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.

51f-52w-53s. **Intermediate Chinese.** 51-52: Contemporary Chinese newspaper. 53: Traditional Chinese texts (9 cred.; jr., sr.; prereq. 3) Mather

57f-58w-59s. **Composition** (6 cred.; prereq. 3) Mather

101f-102w-103s. **Advanced Chinese.** Readings in Chinese historical, documentary, literary, philosophical, or philological texts, selected according to the student's needs (9 cred.; prereq. 51-52-53 or equiv.) Mather

110f-111w. **Chinese Literature in Translation.** A survey in the best available English translations of Chinese *belles-lettres* from the first millenium B.C. to the present (6 cred.; prereq. 8 cred. in literature; knowledge of Chinese not required) Mather (Not offered 1953-54. Offered 1954-55)

JAPANESE

Junior College Courses

- 1f-2w-3s. **Beginning Japanese.** 1: Introduction to conversational Japanese using romanzi. 2-3: Reading, introduction to writing of characters, use of Chinese-Japanese character dictionary, and further conversation (15 cred.; no prereq.) Brower

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.

- 51f-52w-53s. **Intermediate Japanese.** Study of grammatical constructions; drill in conversation; reading (9 cred.; jr., sr.; prereq. 3) Brower
 56f-57w-58s. **Japanese Composition** (6 cred.; jr., sr.; prereq. 3) Brower
 101f-102w-103s. **Advanced Japanese.** Readings in modern prose and poetry; introduction to the classical language (9 cred.; jr., sr.; prereq. 51-52-53) Brower
 110f-111w. **Japanese Literature in Translation.** Chronological survey of Japanese literature from the eighth century A.D. to the present; lectures, discussions, reports; readings in translations. 110: Primitive, classical, and feudal periods to ca. 1400. 111: Feudal and modern periods from ca. 1400 to the present (6 cred.; jr., sr., grad.; prereq. 6 credits in literature; knowledge of Japanese not required) Brower
(Offered 1953-54. Not offered 1954-55)

OLD CHURCH SLAVIC

- Ling.113f-114w-115s. **Old Church Slavic (Old Bulgarian).** An introduction to Slavic linguistics. The descriptive grammar of the earliest Slavic texts and the comparison of OCS with other Indo-European languages (9 cred.; jr., sr., grad.; prereq. Ling. 131-132 or equiv.) Magner

RUSSIAN

Junior College Courses

- 1f-2w-3s. **Beginning Russian** (15 cred.; no prereq.) Magner, Niemi

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.

- 51f-52w-53s. **Intermediate Russian** (9 cred.; jr., sr.; prereq. 3) Magner
 56f-57w-58s. **Russian Conversation** (9 cred.; jr., sr.; prereq. 3) Blinoff
 61f-62w-63s. **Russian Composition** (6 cred.; jr., sr.; prereq. 3) Blinoff
 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 permission of instructor) Niemi
 75f-76w.¶ **Russian Civilization and Culture.** A consideration of various aspects of Russian culture (land, peoples, languages, institutions, intellectual and artistic trends and achievements) (6 cred.; jr., sr.; prereq. 10 cred. in history or literature) Blinoff
 81-82-83. **Reading of Nonliterary Russian Texts** (9 cred.; jr., sr.; prereq. 51-52-53 or permission of instructor) *(Not offered)*
 101f-102w-103s. **Russian Literature in Translation.** 101: Pushkin, Lermontov, Gogol. 102: Turgenev and Dostoevski. 103: Tolstoy and the period from 1880 (9 cred.; jr., sr., grad.; prereq. 8 cred. in literature; no knowledge of the Russian language required) Niemi
 125f-126w-127s. **History of the Russian Language.** A linguistic analysis of the development of the Russian language from the time of the earliest records to the present (9 cred.; jr., sr., grad.; prereq. 51-52-53 or equiv.) Magner
 131f-132w-133s. **Russian Poetry—Nineteenth Century** (9 cred.; jr., sr., grad.; prereq. 71-72-73 or permission of instructor) Niemi

¶ No knowledge of the Russian language is required.

SANSKRIT

Ling.128f-129w-130s. **Readings in Sanskrit** (9 cred.; sr. with permission of instructor, grad.; prereq. at least two Senior College courses in early European languages) (*Not offered* 1953-54)

SEMITIC

1f-2w-3s. **Modern Spoken Arabic** (9 cred.; no prereq.) Ar.

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

124-125-126. **Introduction to Biblical Hebrew** (9 cred.; jr., sr., grad.; no prereq. but this course cannot be used to satisfy language requirements) (*Not offered*)

SERBO-CROATIAN

1f-2w-3s. **Beginning Serbo-Croatian** (9 cred.; no prereq.) Magner

SOCIAL SCIENCE

See General Studies, page 74.

SOCIAL WORK

For undergraduate prerequisites, see sequence D in the Department of Sociology. For social work courses see the *Bulletin of the Graduate School*.

SOCIOLOGY

Department Chairman—E. D. Monachesi

Major Advisers in the College of Science, Literature, and the Arts—Professors Monachesi, Nelson, Rose, Vold; Associate Professors Caplow, Martindale; Assistant Professors Francis, Ramsey; Instructor Taves.

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

Sequences A, B, and C are built upon a *core* requirement of 21 credits as follows: courses 53, 111, 120, 162, 180, and 140 or 141, and 170 or 171.

Sequence A. **General Sociology**—any 9 credits in Senior College sociology courses in addition to the core group.

Sequence B. **Social Problems and Social Policy**—9 credits chosen from courses 50, 91, and/or any courses listed under Section I—Social Problems and Social Policy in addition to the core.

Sequence C. **Social Research**—9 credits chosen from courses 91, 182, 183, 184-185-186, in addition to the core.

(Prerequisites: For Sequences A, B, C—Soc. 1 and 45, and a total of 15 credits from courses in sociology, anthropology, education, history, philosophy, political science, psychology, and zoology.)

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, 140, 141, 162; three Senior College courses in sociology numbered 100 or above in addition to those specifically required; Econ. 6-7 or its equivalent; Psy. 144-145; Phil. 70 or Soc. 172 or Pol.Sci. 162; at least 6 credits in Senior College courses in one of the departments of anthropology, history, or political science; two courses in public health. A student majoring in this sequence must earn a minimum of 60 credits in Senior College courses.

(Prerequisites: For Sequence D, Soc. 1, 45, 49; Pol.Sci. 1-2 or 5; Psy. 1-2.)

Education for social work is on three levels: (1) undergraduate study, which includes social sciences and some courses of primarily informational nature dealing directly with social work; (2) one year of graduate social work study which includes technical theory courses in social work and field work practice; (3) a second year of graduate study devoted to specialization in a particular field of social work, advanced field work practice and research. The undergraduate level of study prepares for some beginning positions in social work. Training at the graduate level opens opportunities for work with professional recognition. For full information regarding graduate professional preparation for social work, see the *Bulletin of the Graduate School* and the special *Bulletin of the School of Social 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—Mr. A. L. Johnson.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: 36 credits including 1, 14, and 49.

Minor recommendation: 19 or 20 credits including 1, 14, and 49.

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

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

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

Junior College Courses

- 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 (3 cred.; no prereq.) Sirjamaki
- 1Af,w,s. Introduction to Sociology** (For students of the College of Agriculture, Forestry, and Home Economics only) (3 cred.; no prereq.) Taves
- 2f,w,s. Intermediate Sociology.** A sociological analysis of modern American society. Topics emphasized include the distribution of population, urban-rural differences, social factors in business system, occupational groups, the determination of social status, and minority group adjustment. An attempt is made to familiarize the student with current research methods (3 cred.; prereq. 1 or 1A) Caplow
- 14w,s. Rural Sociology.** A presentation of factual data necessary to an understanding of the problems of rural social life (3 cred.; no prereq.) Taves
- 14Af,w. Rural Sociology** (For students of the College of Agriculture, Forestry, and Home Economics) (3 cred.; no prereq.) Taves
- 45f,w,s. Social Statistics.** An introduction to statistical methods employed in analyses of social data including methods of measuring central tendency, dispersion, significance of differences, and correlation (5 cred.; no prereq.; not open to students who have received credit in Econ. 5) Ar.
- 49f,w,s. Social Problems.** A survey course in contemporary social problems with special emphasis on personal demoralization and social disorganization (3 cred.; no prereq.) Johnson

Senior College Courses

Course 53 is open to third quarter sophomores who have an average grade of at least C in the prerequisite courses. Other Senior College courses in this department are open to Junior College students only by special permission of the Scholastic Committee. See a statement on page 24.

- 50f.w. **An Introduction to the Theory and Practice of Social Work.** A survey of social service with consideration of areas of social needs, social agencies, their purpose and function, and the methodology and philosophy of social work practice (5 cred.; jr., sr.; prereq. 49) Cohn
- 53f.w.s. **Elements of Criminology.** A general survey of the field of criminology (3 cred.; jr., sr.; prereq. 1 or 1A or permission of instructor) Vold
- 91f.s. **Case Method Applied to the Study of Human Problems.** General application of the interviewing method for students who plan to work professionally in fields involving human relationships, such as social work, public health nursing, speech pathology, etc. (3 cred.; jr., sr.; prereq. 50 or permission of major adviser) Cohn
95. **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 permission of major adviser) (Not offered)
- 97f-98w-99s. **Tutorial and Honors Work in Selected Fields** (9 cred.; jr., sr.; prereq. permission of major adviser in sociology) Ar.

I. SOCIAL PROBLEMS AND SOCIAL POLICY

- 100s. **Contemporary Penology.** An analysis of some of the more important developments in recent attempts at the treatment of criminals and the prevention of crime (3 cred.; jr., sr., grad.; prereq. 1, 53 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Vold
- 101f. **Criminological Theories—Historical and Contemporary.** A consideration and an evaluation of the major historical and contemporary theories of criminal behavior (3 cred.; jr., sr., grad.; prereq. 1, 53 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Vold
- 102w. **Adult Parole and Probation.** A critical examination of problems and practices in the supervision of adult criminals (3 cred.; jr., sr., grad.; prereq. 1, 53 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Vold (Not offered 1953-54. Offered 1954-55)
- 103f. **Juvenile Courts and Probation.** The historical, legal, and social aspects of juvenile courts and probation. A critical survey of juvenile courts and probation work based upon a consideration of the nature of delinquent behavior—its "causes," its modification, and its prevention (3 cred.; jr., sr., grad.; prereq. 53) Monachesi
- 104w. **Police Problems and Practices in the United States.** 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. 1, 53 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Vold
- 106f. **City Planning.** General survey of the economic, governmental, social, and technical phases of city planning and group housing (3 cred.; jr., sr., grad.; no prereq.) Caplow, Filipetti, Vaile, Warp
- 111w. **Population Trends.** This course emphasizes the cultural and social phases of population change with particular reference to birth rates, death rates, and migration. The implications of population change are also discussed (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Francis
- 112s. **World Population Problems.** A study of population policy, both historical and present-day, in Europe, Asia, and other selected areas but with special emphasis on the United States. Some discussion is given to the field of population and power politics (3 cred.; sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Francis
- 115s. **Social Aspects of Housing and Standards of Living.** An analysis of the housing of the masses in relation to the problems arising in urban overcrowding, population distribution, and standard of living as affected by the distribution of national income, and the factors related to personal and social disorganization (3 cred.; sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Caplow
- 117s. **Scandinavian Folk Movements: Their Social and Political Significance** (3 cred.; jr., sr., grad.; prereq. Soc. 1 or permission of instructor) Ar.

II. SOCIAL PSYCHOLOGY AND SOCIAL PROCESSES

- 120f.w. **Social Psychology.** Research and theory regarding the relation of the individual to social groups. Emphasis on the socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Rose
- 121s. **Advanced Social Psychology.** An examination of the methods of acquiring knowledge in social psychology, with analysis of outstanding pieces of research. The studies examined are concerned with the social psychology of small groups, neurotic behavior, mass behavior, and the making of political and economic choices. A major aim is to familiarize the student with current thinking and research in this field in the light of concepts and theories presented in the introductory course in social psychology (3 cred.; jr., sr., grad.; prereq. 120 or permission of instructor) Rose
- 122w. **Sociology of Conflict.** Manifest forms of antagonism among groups of persons; causes of conflict; methods of resolving through accommodation; the role of conflict and social change (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Vold
- 123s. **Intergroup Relations.** Interaction of social and cultural groups in America. Processes leading to group contact; characteristics and contributions of ethnic groups in the United States; mechanisms and problems of group adjustment. Democratic theory and practice; sources of prejudice; contemporary status of principal minority groups; international implications; trends and proposed solutions (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Rose
- 124s. **Social Mobility.** Relationship of social mobility to system of social stratification. Analysis of vertical and horizontal mobility. Relationship of social mobility to social organization. Social mobility in contemporary societies with special reference to the United States (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Ramsey

III. SOCIAL ORGANIZATION AND SOCIAL INSTITUTIONS

- 140f.w.s. **Social Organization.** The organization and structure of social groups; basic culture patterns of economic, political, and social institutions. Integration and disintegration of social groups and institutions. Essentials of social dynamics (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Sirjamaki
- 141f.s. **The Family.** The evolution of the family: development of family unity or disunity, the roles of the several members of the family, methods of investigation of the family (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Johnson
142. **Religion as a Social Institution** (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. social science, child welfare, education, philosophy, or psychology, or permission of instructor) (*Not offered*)
143. **The Newspaper as a Social Institution** (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) (*Not offered*)
- 144w. **Social Stratification.** Social stratification as a phase of social organization. Analysis of caste, estates, and social classes. Analysis of social stratification in contemporary societies with special reference to the United States. Socio-economic status and social stratification (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Ramsey
- 145w. **Urban Sociology.** An introduction to the study of the city as a social organization. Emphasis is given to the analysis of urbanism as a way of life, and to the relationship between spatial and social configurations. A brief research project under supervision, using material drawn from the Twin Cities, is required (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science; not open to students who have taken the old courses 7 or 118) Sirjamaki

- 146f. Industrial and Occupational Sociology.** This course analyzes the occupational group, the factory, and the business enterprise as social institutions, with particular attention to the contrasting functions of formal and informal organization, and to the significance of cooperation, authority, communication, status, and group norms in the working situation (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in sociology, psychology, political science, or economics) Caplow
- 147w. Social Institutions of Modern France.** A general review of French demography, class structure, ecological and regional patterns, industrial organization, educational and religious institutions, bureaucratic forms, and other aspects of French society in the twentieth century. An attempt is made to supplement description from an American point-of-view with the perspective of French social theory (3 cred.; Jr., sr., grad.; prereq. 20 cred. of sociology, economics, or political science, or permission of instructor; reading knowledge of French desirable but not essential) Caplow, Rose (*Not offered 1953-54. Offered 1954-55*)
- 148f. Comparative Rural Societies: Latin America.** A survey course which will include in part the following topics: demographic characteristics, systems of agriculture, settlement patterns, class and caste, family life, and level of living; other social institutions and social change (3 cred.; jr., sr., grad.; prereq. 20 cred. in sociology, economics, or political science, or permission of instructor) Nelson (*Not offered 1953-54. Offered 1954-55*)
- 149w. Comparative Rural Societies: Western Europe.** Course organized essentially along lines like that for Latin America (148) (3 cred.; jr., sr., grad.; prereq. 20 cred. in sociology, economics, or political science, or permission of instructor) Nelson (*Not offered 1953-54. Offered 1954-55*)
- 150s. Modern German Social Structure.** An examination of the social order and institutions of twentieth-century Germany against a background of demography and ecological developments (3 cred.; jr., sr., grad.; prereq. 20 cred. in social sciences) Martindale (*Not offered 1953-54. Offered 1954-55*)

IV. RURAL LIFE AND WELFARE

- 160f. Rural Community Organization.** A study of the historical evolution, ecological characteristics, and demography of the rural community; the social processes, stratification, assimilation, conflict, and cooperation as manifested in rural society (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Nelson
- 161s. Rural Community Analysis.** Course offered on the St. Paul Campus and intended primarily for prospective rural teachers and extension workers. Emphasis placed on methods of making field studies of communities (3 cred.; sr., grad.; prereq. 1 and 15 cred. in social science, and permission of instructor) Ramsey
- 162w,s. Rural Social Institutions.** Factors in the rural environment which condition the functioning of rural social institutions, including the family, school, church, local government, health, and welfare (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Nelson

V. THEORIES OF SOCIAL CHANGE AND SOCIAL ORDER

- 170f. Analytical Social Theory.** Examination of the major problems of sociological theory; survey of main types of sociological theory (positivistic, rationalistic, idealistic); study of major theoretical concepts (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Martindale
- 171w. Social Life and Cultural Change.** Examination of theories of social change with particular attention to their methodological problems. Materials drawn from the comparative social thought and structure of antiquity utilized as basic data for analysis (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Martindale
- 172s. Backgrounds of Modern Social Thought.** Survey of major trends of social thought from the Renaissance to the nineteenth century with special attention to those factors contributing to the origin of sociology (3 cred.; jr., sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Martindale

VI. RESEARCH METHODS AND TECHNIQUES

- 180w.s. **Methods of Social Research.** A survey of major methods employed in social research including a consideration of their advantages and limitations when applied to specific types of problems (3 cred.; jr., sr., grad.; prereq. 45 or equiv.; students in School of Social Work only [w], others [s]) Monachesi
- 181s. **Problems in Rural Social Research.** A survey of methods currently used by students in investigating rural society; class reports on recent samples of rural research (2 cred.; sr., grad.; prereq. 1 and 15 cred. in social science, child welfare, education, philosophy, or psychology, or permission of instructor) Nelson
- 182f. **Statistical Methods.** Selected problems of social relationship described, analyzed, and interpreted by means of the common statistical methods (3 cred.; grad.; prereq. 45 or equiv.) Francis
- 183s. **Problems in Social Measurement.** A theoretical analysis of problems involved in measuring social variables, including a consideration of problems of reliability, validity, and standardization in the construction of new measuring instruments (3 cred.; jr., sr., grad.; prereq. 45 or 182 or equiv.) Monachesi
- 184f-185w-186s. **Field Work and Laboratory Training in Social Research.** Open to students whose records in statistical and research courses indicate ability to carry on individual research projects to advantage under supervision (6 to 9 cred.; jr., sr., grad.; prereq. 45 or 182 which may be taken simultaneously) Ramsey

VII. RESEARCH SEMINARS

For Graduate Students Only

- 200f,w.* **Seminar: Research Problems in Criminology** (Cred. ar.) Vold
- 200As.* **Seminar: Research Problems in Social Conflict** (Cred. ar.) Vold
- 201f,w,s.* **Seminar: Research in Social Psychology** (Cred. ar.) Rose
- 202f,w,s.* **Seminar: Research in Urban Sociology** (Cred. ar.) Caplow
- 203f-204w-205s.* **Seminar: Research in Social Theory** (Cred. ar.) Martindale
- 206f-207w-208s.* **Seminar: Statistical Theory in Relation to Social Theory and Practice** (Cred. ar.) Ramsey
- 209f.* **Research Methods in Rural Sociology** (Cred. ar.) Ramsey
- 210w-211s.* **Seminar: Problems in Population Research** (Cred. ar.) Ar.
- 215f.* **Research Seminar in Rural Social Policy** (Cred. ar.) Nelson
- 216w.* **Research Seminar in the Rural Community** (Cred. ar.) Nelson
- 217s.* **Research Seminar in Rural Social Theory** (Cred. ar.) Nelson
- 218f,w,s.* **Seminar in Methodological Problems in Sociological Research** (Cred. ar.) Francis
219. **Seminar: Research in Problems of Modern Mass Society** (Cred. ar.) (*Not offered*)
- 234f,w,s.* **Research Seminar in Juvenile Delinquency and Treatment** (Cred. ar.) Monachesi (*Not offered 1953-54. Offered 1954-55*)
- 238f-239w.* **Principles of Sociology** (3 cred. per qtr.) Monachesi
- 240f,w,s.* **General Seminar** (Cred. ar.) Ar.

SPANISH

See Romance Languages, page 136.

SPEECH AND THEATER ARTS

Department Chairman—E. William Ziebarth

Major Advisers in the College of Science, Literature, and the Arts—Professors Bryngelson, Gilkinson, Henrikson, Whiting, Ziebarth; Associate Professors Graham, Howell, Lassman, Smith, Thompson; Assistant Professor Fletcher.

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

A. General: courses 51, 61, 65, 67 or 142, 71, 81, 106, 119 and 169. Prerequisites: courses 1-2-3 or 5-6; 31-32; Psy. 1-2.

* These courses provide experience in written reports for Master's degree under Plan B.

B. Theater: courses 61, 81-82-83, 91, 92, 93, 111-112-113 and a comprehensive examination. Prerequisites: courses 1-2 or 5; 31, 32, 33, 34; Psy. 1-2.

C. Public Speaking and Discussion: courses 55-56-57, 61, 101-102-103, 106, 126, 143, 169. Prerequisites: courses 1-2-3 or 5-6; Psy. 1-2.

D. Radio: courses 65, 66, 67, 78-79, 81-82-83, 117, 143. Prerequisites: courses 1-2-3 or 5-6; 31, 32; Psy. 1-2.

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 Bryngelson, Gilkinson, Whiting; Associate Professors Graham, D. K. Smith.

Requirements for a Teacher's Certificate (applicable only to students in the College of Education)—Major recommendation: Courses 1-2 or 5, 31, 32, 61, 67, 71-72-73¶, 81-82, 101-102, 119; total 41 or 42 credits. Psy. 4-5 is advised.

Minor recommendation: Students minoring in speech are required to take Ed.T. 75C, Spch. 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, public speaking and discussion, or radio.

For further information concerning teaching majors and minors and concerning the specialized curriculum in speech pathology, students should consult the *Bulletin of the College of Education*.

Speech majors in the College of Education may substitute the language arts sequence with emphasis in speech. See the *Bulletin of the College of Education*.

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 Theatre.

Note—The University maintains a clinical service for students with speech-hearing defects. Students who desire treatment should consult the director of the Speech and Hearing Clinic, 20 Shevlin Hall.

Junior College Courses

1f-2w.†§ Fundamentals of Speech. Development of basic skills in speech: voice and action, oral reading, discussion, extemporaneous speaking (6 cred.; fr.,* soph., jr., sr.; no prereq.) Gilkinson, Smith, and others

1w-2s.† Fundamentals of Speech (See 1f-2w) Gilkinson, Smith, and others

1s. Fundamentals of Speech (1st qtr. of 1-2. See 1f-2w) Gilkinson, Smith, and others

2f. Fundamentals of Speech (2nd qtr. of 1-2. See 1f-2w) Gilkinson, Smith, and others

3f,w,s. Fundamentals of Speech. A continuation of 1f-2w (3 cred.; fr.,* soph., jr., sr.; prereq. 1-2) Gilkinson, Smith, and others

5f-6w.§ Fundamentals of Speech (10 cred.; fr.,* soph., jr., sr.; no prereq.) Gilkinson, Smith, and others

5w-6s. Fundamentals of Speech (See 5f-6w) Gilkinson, Smith, and others

5s. Fundamentals of Speech (1st qtr. of 5-6. See 5f-6w) Gilkinson, Smith, and others

6f. Fundamentals of Speech (2nd qtr. of 5-6. See 5f-6w) Gilkinson, Smith, and others

* Open to a limited number of freshmen with the approval of their advisers and the Department of Speech and Theater Arts.

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

‡ Credit will not be given for both 1-2-3 and 5-6.

§ Students wishing to specialize in the teaching of dramatics may substitute 33, 34, 91, 92, 111-112-113, for 67, 71-72-73, 119.

- 8s. Introduction to the Theater Arts.** A broad orientation in the stage arts and the film. It deals with the forms and variations of theatrical performance, such as drama, opera, musical drama, ballet, modern dance, and the film. It treats these as composite arts which include, unify, and integrate many individual arts, skills, and crafts. Lectures, demonstrations, films. (This course, together with Art 1, Mu. 10, and Phil. 4, forms a sequence in the Arts**) (4 cred.; no prereq.) Amberg
- 9f,w,s. Freshman Discussion and Debate.** Open to freshmen who win places on the Freshman Debate Squad (1 cred. by petition; fr. with C average; no prereq.) Bystrom
- 31f,w,s. Introduction to the Theater.** History and theory of the various arts and crafts of the theater. Special projects in theater crafts (3 cred.; fr., soph., jr., sr.; no prereq.) Whiting
- 32f,w,s. Beginning Acting, Creative Approach.** Creation and presentation of original scenes and skits. Ability to respond to the imaginative situation with sincerity, individuality, and effectiveness is stressed (3 cred.; soph., jr., sr.; prereq. 1-2 or 5, 31) Whiting
- 33f,w,s. Beginning Acting, Creative Approach.** Continuation of creative approach plus study in stage technique and make-up (3 cred.; soph., jr., sr.; prereq. 32) Moulton
- 34f,s. Stagecraft—Construction and Painting.** Theory and practice in construction, painting, and shifting of stage scenery (3 cred.; soph., jr., sr.; prereq. 31) Josal

Senior College Courses

Courses 51, 67, 97 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 Scholastic Committee. See a statement on page 24.

- 51s. Advanced Public Speaking.** Preparation and delivery of speeches on current public issues (3 cred.; jr., sr.; prereq. 1-2 or 5) Ziebarth
- 55f-56w-57s. Speech Writing and Platform Speaking.** Essentials of voice production and of effectiveness in delivery. The elements of oral style. Written speeches; practice in delivery (9 cred.; jr., sr.; prereq. 1-2 or 5) Gilkinson
- 61f,s. Personal Development Through Speech.** A study of behavior as indicated through speech; speech symptoms evaluated from cause and effect relations; psychologic factors in speech; analysis of individual problems of self-consciousness, stage fright; speech as a means of self-control as applied to teacher and pupil (3 cred.; jr., sr.; prereq. 1-2 or 5, Psy. 1-2) Bryngelson
- 65f,w,s. Radio and Television 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 or 5) Ziebarth
- 66f,w,s. 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 or 5; 65 recommended) Ar.
- 67f,w,s.§ Phonetics.** The study of English speech sounds as they occur separately and in connected speech. Strong and weak forms, stress, assimilation. Practice in ear training (3 cred.; jr., sr.; prereq. 1-2 or 5) Fletcher
- 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 or 5, 31, 32) Ballet (f,s), Josal (w)
- 78f-79w. Advanced Acting.** 78: Characterization, styles of acting, and stage technique. Presentation of scenes from great plays. 79: Continuation with emphasis upon stage dialects (6 cred.; jr., sr.; prereq. 31, 32) Graham
- 78w-79s. Advanced Acting** (See 78f-79w) Graham
- 81f-82w-83s.¶ Interpretative Reading.** Esthetic theory of literature and of oral reading. Practice in reading for interpretation and mastery of technique (9 cred.; jr., sr.; prereq. 1-2 or 5) Thompson
- 81w-82s.¶ Interpretative Reading** (1st two qtrs. of 81-82-83. See 81f-82w-83s) Thompson
- 91w. Stage Design.** Theory and practice of designing scenery as a functional environment for the stage play (3 cred.; jr., sr.; prereq. 31, 1-2 or 5) Josal

§ Students intending to take speech pathology should take phonetics the preceding year.

¶ 81 must be taken first.

** See under General Studies, page 72.

- 92s. **Stage Lighting.** Theory and practice in applying methods and principles of lighting in the theater (3 cred.; jr., sr.; prereq. 1-2 or 5, 31) Josal
- 93f. **Stage Costuming** (3 cred.; jr., sr.; prereq. 1-2 or 5, 31) Moulton
- 97f,w,s. **Intercollegiate Oratory and Debate.** Open to the student who represents the University in the annual contest of the Northern Oratorical League and to students who win places on the intercollegiate debate squad (1 to 3 cred. by petition; soph., with C average, jr., sr.; no prereq.) Howell
- 101f-102w-103s. **Argumentation and Persuasion.** Theories of modern motivational rhetoric. Analysis of persuasive speaking; practice in preparation and delivery of oral argument (9 cred.; jr., sr., grad.; prereq. 1-2 or 5; Psy. 1-2; 10 cred. in social science) Howell
- 105w. **Theory of Reading and Acting.** Literature as an art; its various forms; the psychology of the creative imagination; speech elements in literature; origins and nature of speech symbols and technique of their use. Collateral readings, problems, reports, term papers (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, 81-82-83, and Psy. 1-2) Thompson
- 106f,w,s. **Discussion.** Cooperative thinking; recognition and definition of problems, critical analysis, examination of possible solutions. Planning, preparing for, participating in, and leading classroom, public, and radio discussions (3 cred.; jr., sr., grad.; prereq. 1-2 or 5) Howell
- 107f. **Speech Reading.** An advanced course in the oral reading of selected great plays. Speech melody, rhythm, platform technique. Problems in esthetic analysis. Lecture recitals (3 cred.; jr., sr., grad.; prereq. 81-82-83 with a grade of B in 83) Thompson
- 109f.§ **Classical Rhetoric** (3 cred.; jr., sr., grad.; prereq. 101-102-103, Psy. 140) Smith (*Not offered 1953-54. Offered 1954-55*)
- 110f.§ **British Rhetoric and Oratory.** Critical study of British orators, their works, the historical setting. British rhetorical theory (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, 109 or permission of instructor) Smith (*Offered 1953-54. Not offered 1954-55*)
- 111f-112w-113s. **Stage Direction.** 111: Theory of direction and preparation of the prompt book with exercises in blocking. 112: Rehearsal problems and the direction of two one-act plays. 113: Problems of management and staging; the direction of a full length play (9 cred.; sr., grad.; prereq. 1-2 or 5, 31, 32-33, 34, 91-92-93 and permission of instructor) Whiting
- 115f-116w. **Playwriting and Production.** Creative practice in the problems of dramatic form and content. Two original one-act plays fall quarter, one full-length play winter quarter. The best plays will receive production in the University Theatre (3 cred. per qtr.; sr., grad.; prereq. 1-2 or 5, 31, 32, 33 or permission of instructor) Thompson
- 117s. **Writing Radio Drama.** The problems and techniques of aural drama, illustrated by the writing of an original radio drama through the stages of scenario, rough draft, and final draft (3 cred.; sr., grad.; prereq. 1-2 or 5, 31, 32 and permission of instructor) Thompson
- 119f. **Introduction to Speech Correction.** Basic orientation in speech correction. Analysis of common disorders of speech, their characteristics, prevention, and elimination. Designed as a basis for more advanced study in speech pathology or for a basic understanding of the field (3 cred.; jr., sr., grad.; prereq. 1-2 or 5) Henrikson
- 122f. **Introduction to Research.** Graduate research in speech: selections of topics and methods of investigation. Required of all graduate majors in speech (3 cred.; sr., grad.; prereq. 1-2 or 5, Psy. 1-2) Gilkinson
- 124w. **Experiments in General Speech.** An examination of studies of the correlates of speech skills, audience reactions, and speech improvement (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, Psy. 1-2) Gilkinson
- 126s. **History and Criticism of Public Address.** An examination of historical and critical studies of oratory. The study of orators: education and training, style, speech composition, topics and issues, historical settings (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, Psy. 1-2) Gilkinson
- 131f. **Creative Dramatics.** Studies in the principles and methods of developing original dramatizations with children. Observation of children's classes in creative dramatics. Readings, projects, term papers (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, 31 or elementary education major, or permission of instructor; Ed.C.I. 63 recommended) Graham

154 COURSE OFFERINGS AND MAJOR REQUIREMENTS

- 132s. **Children's Theater.** Studies in the theory and practice of selection, direction, and production of plays for children's audiences, coordinated with current productions of the Young People's University Theatre (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, 31 or permission of instructor) Graham
- 141f. **Anatomy and Physiology of the Voice Mechanism.** Consideration of respiration, articulation, and phonation. Practical applications to speech improvement (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, 67; Psy. 1-2 and 4-5 or permission of instructor) Fletcher
- 142w. **The Physical Bases of Speech.** Relationship of basic principles of sound to speech mechanism. Analysis of speech sound production (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6, 67, Psy. 1-2 and 4-5 or permission of instructor) Fletcher
- 143s. **Speech Instrumentation.** Application of mechanical and electronic equipment to speech; basic theory and uses (3 cred.; jr., sr., grad.; prereq. 1-2-3 or 5-6, 67, Psy. 1-2 and 4-5 or permission of instructor) Fletcher
- 152f. **Hearing Disorders.** Basic orientation to audiology. Physiology and anatomy of auditory mechanism. Symptomatology and pathology of hearing disorders, their medical and surgical treatment. Clinical and classroom management, including discovery programs, hearing aids, language development, lip reading, speech correction, auditory training, psychology of hard-of-hearing and deaf, vocational guidance, educational channels (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, 61, 67, Psy. 1-2 or permission of instructor) Lassman
- 153w. **Audiometry and Hearing Aids.** Theory and practice of clinical and group audiometry; screening and diagnostic techniques, pure tone and speech audiometry; hearing conservation programs. Characteristics of modern hearing aids; selection and usage problems (3 cred.; jr., sr., grad.; prereq. 1-2 or 5, 61, 67, 152, Psy. 1-2 or permission of instructor) Lassman
- 155s. **Lip Reading and Lip Reading Methods.** A study of the positions and movements involved in English speech and the current methods used in teaching lip reading (3 cred.; prereq. 1-2 or 5, 61, 67, Psy. 1-2, or permission of instructor) Lassman
- 157s. **Clinical Practice in Audiology.** Supervised practice with communication problems of deaf and hard-of-hearing persons, including lipreading, auditory training, language development, speech conversation, etc. (3 cred.; jr., sr., grad.; prereq. 152, 153, 155 or permission of instructor) Lassman (*Not offered 1953-54. Offered 1954-55*)
- 162w-163s.† **Speech Pathology.** 162: Neurology of speech. Stuttering and its associated symptoms. Relation of sidedness and speech disorders, heredity, current theories of stuttering, types of treatment. 163: Physiologic and psychologic aspects of organic and functional speech problems. Articulatory disorders. Diagnosis and treatment (6 cred.; jr., sr., grad.; prereq. 1-2 or 5, 61, 67, 119) Bryngelson (w) Henrikson (s)
- 164f-165w-166s.§ **Clinical Methods and Practice in Speech Pathology** (9 cred.; sr., grad.; prereq. 1-2 or 5, 61, 67, 119, 162, 163) Bryngelson
169. **Speech and Language in Human Behavior.** Basic orientation in the place of speech and language in human behavior. Individualized projects and collateral reading (3 cred.; jr., sr., grad.; prereq. permission of instructor) (*Not offered*)
- 170w. **Radio and Television Programming.** An intensive study of the theory and practice of radio and television programming. An examination of the principles of program effectiveness and a study of the program policies of the industry. The building and production of experimental programs with special emphasis on talk and discussion, and round table (3 cred.; jr., sr., grad.; prereq. 65 or 66, or permission of instructor) Ziebarth
- 171f-172w-173s. **History of the Theater.** A study of the plays, arts, and crafts of the theater from their beginnings to the present. Special reports and projects (9 cred.; sr., grad.; prereq. 1-2 or 5, 31) Graham
- Scand.171f.* **Ibsen and the Beginnings of the Modern Drama** (3 cred.; jr., sr., grad.; prereq. Scand. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson
- Scand.172w.* **Strindberg and the Drama in Revolt and Transition** (3 cred.; jr., sr., grad.; prereq. Scand. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson
- Scand.173s.* **The Contemporary Scandinavian Theater** (3 cred.; jr., sr., grad.; prereq. Scand. 4-5-6 or 10-11-12 or 8 cred. in literature) Gustafson

* No knowledge of Scandinavian language is required.

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

§ Students may not receive credit for this class if they have taken Ed.C.I. 174-175-176.

- 174-175-176. **Theater Backgrounds.** A study of playwrights from Aeschylus to the present day with emphasis on the theatrical effectiveness of their plays (9 cred.; sr., grad.; prereq. 1-2 or 5, 31; courses in literature recommended) (*Not offered*)
- 181f-182w-183s. **Readings in Speech.** Directed reading and preparation of reports on selected subjects (Cred. ar.; jr., sr., grad.; prereq. 1-2 or 5 and 6 additional cred. and permission of instructor) Bryngelson, Gilkinson, Graham, Henrikson, Howell, Thompson, Whiting, Ziebarth, Smith, Lassman, Fletcher
- Eng.184f-185w-186s. **The Interpretation of the Drama** (9 cred.; jr., sr., grad.; prereq. 6 cred. in English literature exclusive of A-B-C and classics, Eng. 55-56 recommended) Reisman (f), Coxe (w,s)
- 191f-192w-193s. **Technical Stage Problems.** Advanced study in theory of scenic design, theater architecture, stagecraft, and lighting. Special projects and reports (9 cred.; jr., sr., grad.; prereq. 111-112-113) Josal

For Graduate Students Only

- 201f,w,s. **General Seminar.** Staff
- 203f-204w. **Debate Coaching.** Study of literature concerning and methods of directing extra-curricular interscholastic public speaking, discussion, and debate activities. Each seminar member directs the preparation and practice of a group of undergraduate student speakers (2 cred. per qtr.; prereq. 1-2 or 5, 101-102-103, Psy. 1-2, 10 cred. in social science) Howell
- 207f-208w-209s. **Seminar in Rhetoric and Persuasion.** Howell
- 211f-212w-213s. **Seminar in Dramatic Theory.** Ar.
- 221f-222w-223s. **Seminar in Oral Interpretation of Literature.** Thompson
- 231f-232w-233s. **Seminar in Advanced Speech Problems.** Gilkinson
- 241f-242w-243s. **Seminar in Radio Research.** Ziebarth
- 251s. **Seminar in Listening Comprehension.** Nichols
- 261f-262w-263s. **Seminar in Speech Pathology.** Henrikson
- 271s. **Seminar in Hearing.** Lassman
- 275f-276w-277s. **Seminar in Rhetoric.** Smith
- 281f-282w-283s. **Seminar in Organic Disorders of Speech** (2 cred. per qtr.) Henrikson
- 291f-292w-293s. **Research in Special Problems.** Bryngelson, Fletcher, Gilkinson, Graham, Henrikson, Howell, Thompson, Whiting, Ziebarth

SWEDISH

See Scandinavian, page 141.

PREPARATION FOR THEOLOGICAL TRAINING

The title "Preparation for Theological Training" is accurate in fact but misleading in emphasis. That the studies taken in a liberal arts college actually precede seminary training is obvious enough. That their main function should be to prepare the student for seminary work is dubious. An even more important task is getting the student ready for his total responsibility as a minister and as a citizen—most particularly in those areas where the liberal arts college can do the job more efficiently than a specialized seminary program conceivably can.

The student should, of course, learn as early as possible what seminary he plans to attend and what prerequisites it demands. But he should study its catalog just as much to learn those areas in which it does *not* offer training as to ascertain those in which it does. For he should plan his program with a clear sense of his mission as a minister and of the part that the liberal arts can play in fulfilling that mission.

The student should consult with one of the senior advisers of the pretheological program at the earliest practicable time. These advisers are Mr. Holmer (106 Westbrook Hall) or Mr. McDonald (115 Folwell Hall).

This interdepartmental major takes for granted the completion of the Plan I program in the Junior College (slightly modified as suggested on page 156). Every attempt will be made, however, to adapt to this cur-

riculum the programs of transfer students or those who have been following Plan II in this college.

Junior College

- A. **English:** A-B-C or 4-5-6 required. Additional credits to total 18 minimum in English literature, composition, and speech (Eng. 21-22-23, 37-38-39, Comp. 27-28, Spch. 1-2 or 5 recommended).
- B. **Foreign Language:** Requirements to be fulfilled according to the schedule on page 9 of this bulletin. Greek is strongly recommended.
- C. **Social Science:** 9 credits in ancient history (Hist. 14-15-16 or 50-51-52) and at least 10 credits in other social sciences (Soc. 1-2 or Econ. 6-7 recommended).
- D. **Natural Science:** 6 credits in psychology (Psy. 1-2) and 9 credits minimum in other natural sciences (Nat.Sci. 1-2-3 recommended).
- E. **Health:** 2 credits (P.H. 3 or equivalent).
- F. **Philosophy:** 5 credits in logic (Phil. 2).

Note—Appropriate courses in music are strongly recommended for students with any aptitude or interest in that field. Clinical work in remedial speech is recommended for students with speech difficulties.

Senior College

A minimum of at least 60 credits must be earned in Senior College courses. The specific requirements are as follows:

- A. **Fine Arts:** 9 credits minimum in history of art and/or music.
- B. **History:** 18 credits minimum in medieval and modern history (at least 9 modern).
- C. **Language and Literature:** 9 credits minimum in English; 9 credits minimum in Greek, Hebrew, Latin, modern foreign language, foreign literature in translation, or humanities.
- D. **Philosophy:** 21 credits minimum, including history of philosophy (Phil. 50-51-52).
- E. **Social Sciences:** 12 credits minimum in anthropology, economics, political science, sociology (Soc. 50, An Introduction to the Theory and Practice of Social Work, strongly recommended), speech, psychology.

ZOOLOGY

Department Chairman—Dwight E. Minnich

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

Major Sequence in the College of Science, Literature, and the Arts—27 credits in Senior College courses of which at least 18 must be in courses with numbers between 49 and 100.

Preparation for Major: 1-2-3 or equivalent and 22, or equivalent. If possible beginning chemistry and at least one year of French or German should be completed during Junior College work.

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

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

For a course in general biology see Department of General Studies, page 73.

Junior College Courses

- 1f-2w-3s.† **General Zoology.** Structure, physiology, embryology, classification, and evolution of animals (10 cred.; no prereq.) Minnich, Stephens
- 14f-15w.† **General Zoology.** Structure, physiology, embryology, classification, and evolution of animals (For students of the College of Agriculture, Forestry, and Home Economics, School of Nursing, and College of Pharmacy) (6 cred.; no prereq.) Olson

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

- 22w. **Comparative Anatomy.** Comparative study of vertebrate systems tracing the development of the various structures from the lowest forms to man (5 cred.; soph., jr., sr.; prereq. 1-2-3) Eddy

Senior College Courses

Courses 50, 51, 52, 53, 54, 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 Scholastic Committee. See a statement on page 24.

- 50s. § **Introduction to General Physiology.** Comparative physiology of cells and cell systems. Physics and chemistry of protoplasm (5 cred.; soph., jr., sr.; prereq. 1-2-3 or 15 cred. in botany, and 10 cred. in chemistry or permission of instructor) Steinbach
- 51f. **Introductory Animal Parasitology.** An elementary course dealing with parasitic protozoa, worms and arthropods, and their relation to diseases of man and animals (5 cred.; jr., sr.; prereq. 1-2-3) Wallace
- 52w. **Introductory Entomology.** General morphology, life histories, habits, and classification of insects (5 cred.; jr., sr.; prereq. 1-2-3) Mickel
- 53s. **Fauna of the Central United States.** A study of the identification, classification, and life histories of common land and fresh-water animals exclusive of insects and birds (5 cred.; jr., sr.; prereq. 1-2-3) Eddy
- 54f. § **Histology.** Microscopic structure of the tissues and organs (5 cred.; jr., sr.; prereq. 1-2-3) Olson
- 57w-58s. † **Introductory Ornithology.** A laboratory and field course in the structure, classification, distribution, migration, habits, habitats, and identification of birds. (6 cred.; jr., sr.; prereq. 1-2-3 or 14-15) Warner
- 59w. § **General and Comparative Embryology.** A study of the embryological development of invertebrate and vertebrate forms (5 cred.; jr., sr.; prereq. 1-2-3 or equiv.) Spratt
- Ent.63w. **Mammalogy.** Distinguishing characteristics and life histories of the various mammal groups, particularly those represented in the state. Consideration is given to the possibilities of fur farming in case of certain species (4 cred.; jr., sr.; prereq. 22) Beer
- 81s. **Invertebrate Zoology.** A review of the invertebrate phyla with emphasis on structure and general classification (3 cred.; jr., sr.; prereq. 1-2-3) Stephens
- 82f. **Organic Evolution.** Survey of the history, the evidence, and the causes of evolution (3 cred.; jr., sr.; prereq. 1-2-3 or Bot. 1-2-3) Merrell
- 83f.s. **Introduction to Genetics and Eugenics.** The genetic principles derived from experimentation with both plants and animals are considered, together with their application to practical problems, including those of human society (3 cred.; jr., sr.; prereq. 1-2-3 or 10 cred. in botany) Reed (f), Merrell (s)
- 107-108. **Protozoology.** A survey of the free-living protozoa: structure, classification, identification; physiology, reproduction, life histories; genetics and morphogenesis (6 cred.; jr., sr., grad.; prereq. 15 cred.) (*Not offered*)
- 109w. **Sense Organs.** A survey of the structure and function of the sense organs of invertebrate and vertebrate animals (3 cred.; jr., sr., grad.; prereq. 15 cred. and permission of instructor) Minnich
- 110s. **Animal Reactions.** A survey of the nervous system, effectors, and behavior patterns of animals (3 cred.; jr., sr., grad.; prereq. 15 cred. and permission of instructor) Minnich
- 112f. **Advanced General Physiology.** Interactions between cell and environment; enzyme action and general protoplasmic structure and metabolism (3 cred.; jr., sr., grad.; prereq. 15 cred. with permission of instructor) Steinbach
- 113w. **Special Topics in Advanced General Physiology** (3 cred.; jr., sr., grad.; prereq. 15 cred. with permission of instructor) Steinbach
- 117f. **Animal Ecology.** General ecology stressing ecological principles and land communities (3 cred.; jr., sr., grad.; prereq. 15 cred. in zoology or entomology) Eddy
- 118w. **Animal Ecology.** Experimental approach to the study of environmental factors affecting animal populations (3 cred.; jr., sr., grad.; prereq. 15 cred. in zoology or entomology and permission of instructor) Hodson

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

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

- 119su.¶ Limnology.** A study of the conditions for life in the water and distribution of aquatic animals (4 cred.; prereq. 15 cred. in zoology; offered at Itasca Park Forestry and Biological Station only) Eddy
- 120s.¶ General Ecology of Insects.** Ecology with special reference to insects, their dispersal, distribution, abundance, natural control, and related problems (3 cred.; jr., sr., grad.; prereq. 15 cred. in zoology or entomology) Hodson
- 121f. Ichthyology.** A study of the taxonomy and habits of North American fishes with special reference to those of upper Mississippi drainage (3 cred.; jr., sr., grad.; prereq. 15 cred.) Eddy
- 125f-126w-127s. Advanced General Entomology.** Morphology, biology, and classification of insects (9 cred.; jr., sr., grad.; prereq. 15 cred.) Mickel
- 128f-129w. Insect Physiology.** General and comparative physiology of insects, a survey of the organ systems and their functioning in various insects (8 cred.; jr., sr., grad.; prereq. 15 cred. in zoology or entomology and permission of instructor; 50 or equiv. recommended) Richards
- Bot.136su. Organisms, Microclimate and Weather.** Relation of organisms including man to microclimate and to weather with special emphasis on heat and temperature, moisture and wind. Lecture, laboratory, field work, and discussion. Term paper required (4 cred.; prereq. 10 cred. in biology, botany, or zoology; course in physics recommended; offered at Itasca Park Forestry and Biological Station only) Lawrence
- 140s. Biological Microscopy.** Necessary elements of optics, use and limitations of the various types of microscopes, interpretation of microscopical data. Lab. and demonstrations plus project in field of student's interest (4 cred.; sr., grad.; prereq. 15 cred. in zoology, entomology, or botany; permission of instructor required) Richards
- 144f. Medical Entomology.** A study of the principal arthropods noxious to man and animals. Special emphasis is placed on those arthropods which serve as vectors of pathogenic organisms of man and animals (3 cred.; jr., sr., grad.; prereq. 15 cred. including 52 or equiv. and permission of instructor) Barr
- 145w. Parasitic Protozoa.** The structure, life histories, and economic relations of protozoal parasites of man and animals. Laboratory diagnosis (3 cred.; jr., sr., grad.; prereq. 15 cred. and permission of instructor) Wallace
- 146s. Helminthology.** Worm parasites of man and animals, their structure, life histories, and biological relationships (3 cred.; jr., sr., grad.; prereq. 15 cred. and permission of instructor) Wallace
- 160w-161s. Cytology.** A survey of cell structure and behavior with special reference to genetic cytology and cellular physiology (6 cred.; jr., sr., grad.; prereq. 15 cred. with permission of instructor) Ar.
- 170f. Advanced Genetics.** General laws involved in heredity and variation with their applications to micro-organisms, higher plants, and animals exclusive of man (3 cred.; jr., sr., grad.; prereq. 15 cred. including 83, and permission of instructor) Reed, Merrell
- 171w. Genetics of Speciation.** Application of genetic principles of problems of speciation and evolution (3 cred.; jr., sr., grad.; prereq. 15 cred. including 83, or permission of instructor) Merrell
- 175s. Human Genetics.** A study of the inherited characters in man, particularly in relation to medicine with some reference to the relation of genetics to marriage and to social conditions (3 cred.; jr., sr., grad.; prereq. 83 and permission of instructor) Reed
- 182s. Experimental Embryology.** Growth, differentiation, and metabolism of developing organisms (5 cred.; sr., grad.; prereq. 50 and 59 or equiv. and permission of instructor) Spratt
- 183f-184-185. Physiology of Development.** Designed to train advanced students in the organization, presentation, and evaluation of the results of research in experimental embryology. 183: Chemical embryology, metabolic aspects of growth, differentiation, and morphogenesis. 184: Embryonic differentiation, including neuroembryology. 185: Endocrines in development, including sex-differentiation (4 cred. per qtr.; sr., grad.; prereq. 182 or equiv. and permission of instructor; 183 will be offered fall of 1953-54, 184 fall of 1954-55, and 185 fall of 1955-56) Spratt
- 197f-198w-199s. Problems.** Advanced work in some special line (Cred. ar.; jr., sr., grad.; prereq. 1-2-3, special requirements) Ar.

¶ Either 119su or 120s or both may be taken to complete courses 117f, 118w.

For Graduate Students Only

- 100f-101w-102s. **Zoological Techniques**
 201f-202w-203s. **Research in Entomology**
 211f-212w-213s. **Research in Ecology**
 217f-218w-219s. **Research in Physiology**
 221f-222w-223s. **Research in Biophysics**
 229f-230w-231s. **Research in Histology**
 233f-234w-235s. **Research in Embryology**
 237f-238w-239s. **Research in Cytology**
 241f-242w-243s. **Research in Protozoology**
 251f-252w-253s. **Research in Genetics**
 261f-262w-263s. **Research in Parasitology**
 291f-292w-293s. **General Seminar**
 296f-297w-298s. **Special Seminar in Special Research Fields**

BIOPHYSICS

Zool.155f,*156w,157s.* Biophysics. A survey of the theoretical and experimental aspects of biology which can be studied by quantitative physical means. 155: Surveys tissue ultrastructure (biostatics) as revealed by hypermicroscopy, birefringence, X-ray, electron and radioactive means, and by colloidal and micellar phenomena. 156: Studies the dynamics of biophysical systems; excitatory state, contraction, secretion, synthesis. 157: Examines integrative biophysical systems; stability of systems, transmission of intelligence, sensory mechanisms (3 cred. per qtr.; jr., sr., grad.; prereq. 28 cred. distributed between physics and biology, and permission of instructor; physical chemistry and general physiology recommended; any section of course may be taken separately) Schmitt

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 the Scholastic Committee. See the *Bulletin of the College of Agriculture, Forestry, and Home Economics*.

* The schedule for this course is uncertain. Students wishing to take it should consult the department.

Section III

PREPROFESSIONAL CURRICULA IN SCIENCE, LITERATURE, AND THE ARTS

As explained on page 6 of this bulletin, many students enter the College of Science, Literature, and the Arts in order to secure the essential foundation for entrance into a professional school. The preprofessional work consists of courses particularly related to the field of ultimate interest together with courses of a broadening general education nature.

It is essential that the student study the preprofessional requirements for the field of his choice very carefully if he is to continue his college career without loss of time. Detailed outlines of the curricula in the College of Science, Literature, and the Arts which are prerequisite for entrance into the various professional schools are presented below.

A. UNIVERSITY COLLEGE

An administrative unit known as the University College has been created under a committee which may register students who find they must cross college lines to obtain a program fulfilling their needs. Any student who finds that his needs cannot be satisfied by the program in any one college of the University should call at 225 Johnston Hall to make an appointment to see the chairman of the committee, Professor J. W. Buchta, who also serves as assistant dean for the Senior College.

Admission to University College is based on the previous record of the student and the program proposed by the student. The program may contain courses in any college or division of the University but must show definite evidence of contributing to the objectives of the student and be deemed worthy of a degree by faculty members consulted by the chairman of the committee.

The degree of bachelor of arts or bachelor of science is granted by this unit of the University.

B. SCHOOL OF ARCHITECTURE—SIX-YEAR COURSE*

This curriculum is intended for students who wish to combine with their professional training more general education than is offered by the five-year professional curriculum in architecture. It leads normally to the bachelor of arts degree with a major in architecture at the end of four years and the bachelor of architecture degree at the end of six years.

The work of the first four years constitutes a modified version of the curriculum prescribed for the Science, Literature, and the Arts major in architecture. The following procedures and program of studies should be adhered to in order to complete the work required for the two degrees in the proper sequence and in the normal time:

First and Second Years

The first two years' work may be taken at the University of Minnesota in the Junior College of the College of Science, Literature, and the Arts, or at other accredited institutions. During this period the student should complete the requirements for entrance to the Senior College of the College of Science, Literature, and the Arts as stated on page 8.

* For detailed information about the individual subjects of study in this curriculum (course numbers and titles, credits, prerequisites, etc.) see Section II of this bulletin.

These requirements should include the following:

- High school or college equivalents of Math. 1, Higher Algebra and Solid Geometry.
- Inorg.Chem. 1-2 or 6-7 if the student does not have high school credit for chemistry.
- Math. 6, 7, 30, Trigonometry, Algebra, and Analytic Geometry (15 credits).
- Phys. 1a-2a-3a, Introduction to Physical Science (12 credits).
- Art 23A-24A-25A, Drawing and Painting I (6 credits).
- Approved electives to make a minimum total of 90 credits.

Third and Fourth Years

During these years the student is registered in the Senior College of the College of Science, Literature, and the Arts as a candidate for the bachelor of arts degree with a major in architecture. To register as such, the student must secure the approval of the School of Architecture. The required application forms may be obtained from either the School of Architecture or the Office of Admissions and Records. They must be submitted not later than July 15 preceding the beginning of the academic year for which admission is sought. The following courses should be included:

	Credits
Arch.AD-I, AD-II	Architectural Design, Grades I and II 36
Arch.51-52-53	History of Architecture 12
Art 60A-61A-62A	Drawing and Painting II 6
I.T.M.91, M.&M.92-93	Calculus, Mechanics, Strength of Materials 12
C.E.38-39-41	Structural Theory 9
or	
Arch.57-58-59	Building Materials and Methods 12

Approved electives and minor sequences to make a minimum total of 180 credits acceptable for the bachelor of arts degree.

Fifth and Sixth Years

During these years the student is registered in the Institute of Technology as a candidate for the bachelor of architecture degree. To register as such, the student must secure the approval of the School of Architecture and transfer to the Institute of Technology. Application must be made as prescribed above for admission to the third and fourth years' work. The following courses should be included: C.E. 38-39-41 (Structural Theory, 9 credits) or Arch. 57-58-59 (Building Materials and Methods, 12 credits); Arch. AD-III (Architectural Design, 24 credits); Arch. AD-IV (Architectural Design, 18 credits); Arch. AD-V (Thesis, 12 credits); Arch. 71-72-73 (Building Equipment, 9 credits); Arch. 104 (City Planning, 3 credits); Arch. 105 (Professional Relations, 3 credits); additional approved electives to make a minimum total of 270 credits for the two degrees.

C. SCHOOL OF BUSINESS ADMINISTRATION*

The purpose of the prebusiness curriculum is to combine an opportunity for some liberal education with preliminary basic courses in economics. In recognition of the widening social responsibility of business management, the student is urged to elect courses in several fields in addition to fulfilling the following requirements.

To be eligible for admission to the School of Business Administration, the student must present 90 credits, in addition to credits given for physical education, earned in a recognized college or university with a scholarship average of C or a smaller number of earned credits which, together with quality credits, will total a minimum of 90. One quality credit is granted for every five honor points in excess of the number necessary for a C average.

Quality credits earned in the Junior College may be applied only toward the 90 credits required for admission to the School of Business Administration. In other words, a student who has a surplus of honor points above the number required to complete 90 credits may not use these for credit in the School of Business Administration. Any excess

* For detailed information about the individual subjects of study in this curriculum (course numbers and titles, credits, prerequisites, etc.) see Section II of this bulletin.

credits other than quality credits, however, may be applied toward electives in the School of Business Administration.

The School of Business Administration offers courses leading to the degrees of *bachelor of business administration* and *bachelor of science in economics*. Students preparing to enter the school in pursuit of either of these degrees must satisfy prebusiness requirements as specified below.

A. Junior College Requirements for Admission to Sequences Leading to the Degree of Bachelor of Business Administration

Eng. A-B-C (Freshman English, 15 credits) or Eng. 4-5-6 (Freshman Composition, 9 credits) or exemption from the requirement. Twelve credits in Communication (Com. 1-2-3) will satisfy the English requirement

Nine credits in mathematics or one of the following laboratory sciences: botany, chemistry, geology, physics, zoology, or psychology with laboratory. Fifteen credits in Orientation in the Natural Sciences (Nat.Sci. 1-2-3) or 10 credits in The Physical World (Nat.Sci. 4-5-6) or 10 credits in General Biology (Nat.Sci. 7-8-9) will satisfy the science requirement

Eight credits in one of the following social sciences: anthropology, geography, history, political science, sociology† or 12 credits in Soc.Sci. 1-2-3 taken at the University of Minnesota

Ten credits in Principles of Economics (Econ. 6-7)

Sufficient electives to complete the minimum of 90 credits required for admission

Entering freshmen are urged to take Business History (Econ. 1-2)

The following three courses should, if possible, be taken during the sophomore year for they are prerequisite to certain courses in the core group:

Elements of Money and Banking (Econ. 3)

Elements of Statistics (Econ. 5) §

Principles of Accounting (Econ. 24-25-26) ¶

Students who do not elect the above courses in money and banking, statistics, and accounting during the sophomore year may substitute the following after entrance to the School of Business Administration:

Money and Banking (B.A. 57); Statistics Survey (B.A. 70); Elementary Accounting: Combined Course (B.A. 54-55)

In addition certain courses are required in special sequences in the school. These course prerequisites should be included in the Junior College program wherever possible. The major sequences and special course prerequisites are as follows:

Accounting: Mathematics of Investment (Math. 20) (prereq. Math. 8, or 6 and 7, or 15 and 16)

Advertising: General Psychology (Psy. 1-2)

Retail Store Training: General Psychology (Psy. 1-2); Typewriting (Econ. 32-33)

Foreign Trade: General Psychology (Psy. 1-2); 9 credits in political science; reading knowledge of a foreign language

Finance: Mathematics of Investment (Math. 20) (prereq. Math. 8, or 6 and 7, or 15 and 16)

Industrial Administration: See *Bulletin of the Institute of Technology*

Industrial Relations: General Psychology (Psy. 1-2)

Insurance: General Psychology (Psy. 1-2); Mathematics of Investment (Math. 20) (prereq. Math. 8, or 6 and 7, or 15 and 16). Introduction to the Mathematics of Life Insurance (Math. 21) recommended but not required

Merchandising and Selling: General Psychology (Psy. 1-2)

Office Management: General Psychology (Psy. 1-2); Typewriting (Econ. 32-33-34)

Secretarial and Supervisory Training: General Psychology (Psy. 1-2); Typewriting (Econ. 32-33-34); Shorthand (Econ. 37-38-39)

Transportation: General Psychology (Psy. 1-2); Geography of Commercial Production (Geog. 41)

† Social Statistics (Soc. 45) not accepted in fulfillment of this requirement.

§ Credit not granted in Econ. 5 to students who have had Social Statistics (Soc. 45).

¶ Students who have had a high school course or experience in bookkeeping may be admitted to Econ. 25 by passing a placement test which is normally given the first day of each quarter.

Distribution of Courses

Of the required and elective courses in economics, Econ. 1-2, recommended but not required, belongs in the freshman year; Econ. 3 may be taken in the freshman year (to make with Econ. 1-2 the sequence 1f-2w-3s), or may be taken later; Econ. 5, and 6-7 belong in the sophomore year. The sequence Econ. 24-25-26 may be started as early as the third quarter of the freshman year.

Of the courses taken to meet the requirements of (1) English, (2) social science, (3) mathematics or laboratory science, freshmen should take at least two and thus leave not more than one for the sophomore year. To meet the third of these requirements, students who intend to specialize in accounting, banking, insurance, or statistics should take mathematics instead of natural science. Indeed, mathematics is recommended for all students planning to enter the School of Business Administration, either as a subject to meet this requirement or as an elective.

Courses in English, mathematics, all the laboratory sciences, and all of the social sciences are open to freshmen.

Of other courses recommended above, Psy. 1-2 (General Psychology) belongs in the sophomore year; Econ. 32-33 (Typewriting) may be taken as early as the student's first quarter in college, with the instructor's permission; foreign language, which is required in the foreign trade sequence, may be taken as early as the beginning of the freshman year.

B. Junior College Requirements for Admission to Sequences Leading to the Degree of Bachelor of Science in Economics

Economics Sequence

	Credits
English (Comp. 4-5-6 or Com. 1-2-3 or Eng. A-B-C)	9 or 12 or 15
Mathematics	10
Elements of Money and Banking (Econ. 3) *	5
Principles of Economics (Econ. 6-7)	10
Elements of Statistics (Econ. 5) *§	5
Political science or history	9
Philosophy (Phil. 1 or 2)	5
Additional mathematics or laboratory science	10
Electives	27 or 24 or 21
	—
	90

Statistics Sequence

English (Comp. 4-5-6 or Com. 1-2-3 or Eng. A-B-C)	9 or 12 or 15
Trigonometry (Math. 6)	5
College Algebra (Math. 7)	5
Analytic Geometry (Math. 30)	5
Elements of Money and Banking (Econ. 3) *	5
Principles of Economics (Econ. 6-7)	10
Elements of Statistics (Econ. 5) *§	5
Political science or history	9
Philosophy (Phil. 1 or 2)	5
Additional mathematics	5
Principles of Accounting (Econ. 24-25-26) †	9
Electives	18 or 15 or 12
	—
	90

* Students who do not elect the above courses in money and banking and statistics during the sophomore year may substitute the following: Money and Banking (B.A. 57); and Statistics Survey (B.A. 70).

§ Credit not granted in Econ. 5 to students who have had Social Statistics (Soc. 45).

† Students who have had a high school course or experience in bookkeeping may be admitted to Econ. 25 by passing a placement test which is normally given the first day of each quarter.

D. SCHOOL OF DENTISTRY**

1. Two-Year Predental Course

The two-year predental course required for admission to the School of Dentistry is a part of the six-year course in dentistry leading to the degree of doctor of dental surgery. During the two years of prescribed work, students are registered in the College of Science, Literature, and the Arts and subject to its regulations. A minimum of 90 earned credits with a scholarship average of C is required for admission. Quality credits may not be applied to decrease the 90 credits. It is desirable that students should have had chemistry and higher algebra in high school. The required college courses are listed below:

Inorg.Chem. 1-2, 11 or 4-5, 11 or equivalent (General Inorganic Chemistry and Semimicro Qualitative Analysis, 12 credits)

Org.Chem. 61-62 (Elementary Organic Chemistry, 8 credits)

Eng. A-B-C (Freshman English, 15 credits) or Eng. 4-5-6 (Freshman Composition, 9 credits) or Com. 1-2-3 (12 credits) or exemption from the requirement

Phys. 1a-2a-3a (Introduction to Physical Science with laboratory included, 12 credits)

Zool. 1-2-3 (General Zoology, 10 credits)

Additional training in chemistry and zoology is recommended

Psychology, speech, economics, history, political science, and sociology are recommended as electives

It is recommended that the two years' work be distributed as follows:

First year—Inorg.Chem. 1-2, 11 or 4-5, 11 (12 credits); Comp. 4-5-6 (9 credits) or Eng. A-B-C (15 credits) or Com. 1-2-3 (12 credits); Zool. 1-2-3 (10 credits); one or more elective courses.

Second year—Org.Chem. (8 credits); Phys. 1a-2a-3a (12 credits); elective subjects to make the total of 90 credits for the two years' work.

2. Seven-Year Course in Arts and Dentistry Leading to the Degrees of Bachelor of Arts* and Doctor of Dental Surgery†‡

During the first three years of this course, the student does his work in the College of Science, Literature, and the Arts, subject to the regulations of the college, and must earn at least 135 credits, with a scholarship average of C. At least 30 credits§ must be in Senior College courses. He must complete the requirements for admission to the Senior College, which are given on pages 8-10 and also the work in chemistry, physics, and zoology prescribed for admission to the School of Dentistry.

During his third year, the student elects work in this college, subject to the approval of the assistant dean for the Senior College. The work of the freshman and sophomore years in the School of Dentistry, exclusive of technical and practical work, when completed according to the standards required by that school, counts as the equivalent of the fourth year (45 credits of the Arts course).

* From the College of Science, Literature, and the Arts.

† Only students who have completed the required work in the College of Science, Literature, and the Arts before entering the professional school will be permitted to avail themselves of the privilege of securing the B.A. degree in this combined course.

‡ From the School of Dentistry.

§ Thirty is the number usually required. For some students it may be reduced by special permission of the assistant dean for the Senior College.

** For detailed information about the individual subjects of study in this curriculum (course numbers and titles, credits, prerequisites, etc.), see Section II of this bulletin.

3. Course Leading to the Degrees of Graduate Dental Hygienist and Bachelor of Arts

This program consists of two years of work in the School of Dentistry and additional work in the College of Science, Literature, and the Arts. When students have completed the work for dental hygienists, as specified in the *Bulletin of the School of Dentistry*, with a C average, they may enter the Senior College of the College of Science, Literature, and the Arts; and they may qualify for the degree of bachelor of arts provided that they fulfill the requirements listed on pages 11-13 of this bulletin. A portion of the work done in the School of Dentistry may be used to satisfy the Junior College group requirements and/or be used as elective credits.

E. COLLEGE OF EDUCATION

All students who desire to receive a state teacher's certificate upon graduation from the University of Minnesota must be graduates of the College of Education. In many cases students register in that college at the beginning of their junior year. In certain four-year and five-year curricula, however, they should register in the College of Education at the beginning of their freshman year or as soon thereafter as they have made their curriculum choice. All of these curricula are described in the *Bulletin of the College of Education*. Students should secure a copy of the bulletin and should have an adviser in the College of Education.

Because of increasing requirements for certification and for other types of educational work, students are urged to consider taking five years of college work.

The following statement applies primarily to students preparing to teach academic subjects in high school.†

General Requirements for Entering the College of Education*

The following general requirements apply to all students who regularly enter the College of Education at the beginning of the junior year:

1. A total of 90 to 96 credits carried with a scholarship average of C (1.0), and an average of C+ (1.5) in major courses. (For each five honor points in excess of the number necessary for a C average, the number of credits is diminished by one.) For men 3, and for women 5, of these credits should be in physical education.

2. The student must have completed 6 credits in General Psychology, (Psy. 1-2).

3. Health education—All students in the College of Education, before graduation, are required to take a sequence of courses in (a) personal health, (b) community health, and (c) school health. Students who are exempted by examination from the first of these requirements while registered in the College of Science, Literature, and the Arts will also be exempt from (a) in the College of Education. The number of credits will depend upon possible exemption and the sequence of courses chosen. A minimum of 6 credits covering all three fields is required unless students are exempted from (a). It is strongly urged, but not required, that requirements (a) and (b) be met before entering the College of Education.

Junior College courses which may be taken to meet the requirement in personal health are as follows: P.H. 3 (Personal Health, 2 credits) or

* For exception in special cases to the total credit requirement, group requirements, or other requirements, the student may consult the Student Personnel Office, College of Education, 206 Burton Hall.

† Students who transfer to one of the specialized four-year or five-year curricula such as art education, elementary education, music education, physical education and others should consult the *Bulletin of the College of Education* for the requirements of the first two years.

G.C. 10C (Human Biology). The Junior College course to meet the requirement in (b) community health is P.H. 4 (Health Problems of the Community, 2 credits). The course P.H. 50 (Personal and Community Health, 3 credits),[†] taken after entering the College of Education, will meet the requirements of (a) and (b).

4. At the time of entrance to the College of Education a student must present a certificate from the Students' Health Service indicating that he is free from physical defects or health conditions that would prevent the successful pursuit of educational work, and a certificate from the Speech and Hearing Clinic that he meets the speech requirements for teaching.

5. At the time of applying for transfer to the College of Education, the student also must complete the necessary clearances on certain psychological tests in addition to the health and speech examinations.

Group Requirements for Students Entering the College of Education

Students preparing to teach academic subjects in high school take the first two years in the College of Science, Literature, and the Arts. To qualify for the state high school standard certificate they must have one major and one or more minors in subjects commonly taught in high schools. The College of Education offers major and minors in the following fields: language arts, English, speech, journalism; core curriculum; German, Latin, French, Scandinavian, Spanish; library science; social studies, geography, history, political science, sociology; natural sciences; public health; mathematics. The specific requirements for the different majors and minors are given in Section II of this bulletin and also in the *Bulletin of the College of Education*. Special combinations of majors and minors are provided in the language arts, natural sciences, and social studies curricula. Five-year curricula are offered in English education, natural science education, and social studies education.

The selection of suitable majors and minors and the most desirable combinations of subjects is very important in securing a high school teaching position. Counselors in the Student Personnel Office of the College of Education will help the student in making such selection and will also furnish information in regard to the current demands for teachers in the various fields and the possibility of future placement.

Before entering the College of Education the student must complete, in addition to the requirements listed above, the group requirements of the Junior College of the College of Science, Literature, and the Arts. With slight modifications the student may choose either Plan I or Plan II. (See pages 9, 10.) For most students Plan II is preferable. For purposes of general education, courses offered in the Department of General Studies are preferred.

Modifications to meet College of Education entrance requirements are as follows:

a. In either plan 6 credits in psychology (Psy. 1-2, General Psychology) are required.

b. In either plan the student is advised to complete the (1) personal health and (2) community health information requirement. This includes in addition to P.H. 3, Personal Health (or equivalent), the course P.H. 4, Health Problems of the Community.[†]

c. In Plan I the student may not use psychology (with laboratory) to meet the natural science requirement in Group D.

[†] P.H. 50 (Personal and Community Health, 3 credits) is a substitute for both P.H. 3 and 4. It is primarily for juniors and seniors but sophomores are sometimes allowed to take it.

d. In Plan II, Group D, the student must take a minimum of 9 credits in natural science exclusive of psychology and mathematics.

e. Within the total credits, a student must meet the following requirement in the Junior College: at least 15 credits in a major field with a 1.5 average and at least 10 credits in each of two minor fields. The major and minor must be selected from fields of study prevailing in high school curricula. The purpose of this requirement is to prepare the student for the study of advanced courses necessary to the completion of satisfactory teaching majors and minors.

Specialized Curricula. The specialized curricula offered by the College of Education based upon two years' work in the College of Science, Literature, and the Arts are business and distributive education and speech pathology. Students in these curricula are not held for the group requirements. The Junior College work, however, is selected to meet the professional needs and specific courses are required. The student should consult the *Bulletin of the College of Education* for requirements of his curriculum and should confer with the adviser of that curriculum early in his course.

F. LAW SCHOOL*

Ninety credits of academic work are required for admission to the Law School. Students entering the University intending to study law register for this academic work in the College of Science, Literature, and the Arts. A scholarship average of C for all courses taken up to the time of admission to the Law School is also required. Excess honor points do not reduce the number of credits required.

Before trying to plan their college course preliminary to the Law School, students should read carefully the statements about the law courses and the combined courses in arts and law and in business administration and law described below.

The following course has been outlined by the Law School for the two years of college study required. The courses listed have been selected for their contribution to more effective work in the Law School and to professional practice, and to provide a basic understanding of our culture and society, within the framework of which the legal system must operate. When the courses listed cannot be obtained, substitutes should be limited to the areas of knowledge indicated. A failure to conform to these requirements may result in exclusion from the Law School.

Accounting: Econ. 27† (Accounting Survey, 5 credits) or 24-25-26 (Principles of Accounting, 9 credits)

Economics: Econ. 6-7 (Principles of Economics, 10 credits)

English: Eng. A-B-C (Freshman English, 15 credits) or Comp. 4-5-6 (Freshman Composition, 9 credits) or Com. 1-2-3 (12 credits) and Comp. 27 (Advanced Writing, prelegal section, 3 credits)

History: Hist. 70-71-72 (English Constitutional History, 9 credits)

Humanities: Hum. 1-2-3 (Humanities in the Modern World, 15 credits)

Philosophy: Phil. 2Af-1Aw-3As (Selected Problems of Logic, Selected Problems of Philosophy, Selected Problems of Ethics, 9 credits) or Phil. 2, 1, 3 (Logic, Problems of Philosophy, Ethics, 15 credits)

Political Science: Pol.Sci. A-B (first two quarters of A-B-C) (The State in the Modern World, 6 credits); and either C (3 credits) or 25 (World Politics, 3 credits)

Psychology: Psy. 1-2 (General Psychology, 6 credits)

* For detailed information about the individual subjects of study in this curriculum (course numbers and titles, credits, prerequisites, etc.), see Section II of this bulletin.

† This course in accounting is a special course for prelaw students. It is not open to students who have had all or part of Econ. 24-25-26 (Principles of Accounting, 3 credits per quarter) or the old course 22-23 (Principles of Accounting, 4 credits per quarter).

Suggested electives to make up the total of at least 90 credits or for such additional work as the student may desire to take:

Econ. 3, Elements of Money and Banking
 Hist. 1-2-3, Civilization of the Modern World
 Hist. 20-21-22, American History
 Hum. 21, 22, 23, American Life I, II, III
 Nat.Sci. 1-2-3, Orientation in the Natural Sciences; or 4-5-6, The Physical World; or 7-8-9, General Biology
 Other courses in anthropology, economics, political science, sociology, and speech.

Courses designed for the development of physical skills or artistic talents and other courses not primarily of intellectual content may not be used for admission to the Law School.

Students taking the combined course leading to the degrees of bachelor of arts and bachelor of laws outlined below should comply with the requirements for admission to the Senior College of SLA as outlined on page 8.

In electing courses it should be borne in mind that a maximum of 21 credits of approved advanced work in SLA and in other departments may be taken by law students under the four-year law school program. See the *Bulletin of the Law School*.

It is recommended that the two years' work be distributed as follows:

<i>Freshman Year</i>		
<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
Credits	Credits	Credits
Comp. 4f or Com. 1f or Eng. Af ... 3, 4, or 5	Comp. 5w or Com. 2w or Eng. Bw ... 3, 4, or 5	Comp. 6s or Com. 3s or Eng. Cs ... 3, 4, or 5
Hum. 1f 5	Hum. 2w 5	Hum. 3s 5
Pol.Sci. Af 3	Pol.Sci. Bw 3	Pol.Sci. Cs
Electives 3	Electives 3	or Pol.Sci. 25s 3
14, 15, or 16	14, 15, or 16	3, 4, or 5
		14-18

<i>Sophomore Year</i>		
<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
Credits	Credits	Credits
Comp. 27f 3	Econ. 7w 5	Econ. 27s 5
Econ. 6f 5	Phil. 1Aw 3	Phil. 3As 3
Phil. 2Af 3	Psy. 1w 3	Psy. 2s 3
Hist. 70f 3	Hist. 71w 3	Hist. 72s 3
Electives 0-3	Electives 0-3	Electives 0-3
14-17	14-17	14-17

ROTC credits: A total of 6 credits for ROTC will be accepted for admission to the Law School.

Courses Leading to the Degrees of Bachelor of Science in Law¹ and Bachelor of Laws¹

The Law School offers two undergraduate degrees: bachelor of science in law (B.S.L.) and bachelor of laws (LL.B.). The B.S.L. requires two years (90 quarter credits) of prelaw college work and two years of law study. The LL.B. requires either: (1) two years of college and four years of law, or (2) a B.A. or equivalent academic degree before entering Law School plus three and one-half years of law. To qualify for bar examinations and admission to practice one must obtain the LL.B. The B.S.L., evidencing four years of substantial academic and law study, is available

¹ From the Law School.

for those who do not wish to practice law but desire a fairly extensive knowledge of it for use in other fields.

The "Two-Four" course leading to the LL.B. is the modern Minnesota Plan for legal education, designed to give the student a broad professional training in addition to the standard technical law work. It seeks to equip him not only for general law practice, but also for the numerous governmental and civic positions held by lawyers, and for the leadership traditionally assumed by the legal profession.

Students who have a B.A. or equivalent degree before entering the Law School can obtain an LL.B. degree with three and one-half years (144 quarter credits) of law study. This alternative program is mainly for students who have obtained a college degree before deciding to study law. For those who intend to study law when they enter college, the law faculty believes that the Minnesota "Two-Four" Plan offers a better balanced and more flexible program.

Students who desire only the B.S.L. degree may take either the specified prelaw subjects (see above) or 90 credits of such other prelaw work as they desire. The prebusiness course in the College of Science, Literature, and the Arts is acceptable. An average of "C" in the prelaw work is necessary. The two years of law work may be either the regular first- and second-year law subjects or selected law courses to meet individual needs.

Seven-Year Combined Course in Arts and Law Leading to the Degrees of Bachelor of Arts* and Bachelor of Laws†

This course requires three years of college work and four years in the Law School. The first two years of college work may be taken in any accredited college, but the third year must be taken in the College of Science, Literature, and the Arts of this University. All three years of college work may be taken before entering the Law School, or two years before entering the Law School, and the third year after the completion of one year or more of law work. The latter plan enables the student to select college work in which he may have become interested during his law course.

Students in this combined course must, before transferring to the Law School, complete the requirements for admission to the Senior College of the College of Science, Literature, and the Arts, stated on pages 8-10. The student must earn at least 90 credits with a scholarship average of C. Except for admission to the Law School this number of credits required may be reduced by application of the "quality credit" rules given on page 20. He must also earn, either before entering the Law School or after completing one year or more of the law course, 45 additional college credits, of which at least 30 must be in Senior College courses with a C average. This third year of work must be approved by the assistant dean for the Senior College of the College of Science, Literature, and the Arts. In order to satisfy the requirements for the degree of bachelor of laws, the three years of college work should include the subjects specified above for the prelaw course.

The degree of bachelor of arts is conferred when the 135 credits of college work specified above and at least the first year of the course in the Law School, with the standing required by that school for graduation, are completed. The degree of bachelor of laws is conferred when the work of all seven years is completed.

* From the College of Science, Literature, and the Arts.

† From the Law School.

Seven-Year Combined Course in Business Administration and Law Leading to the Degrees of Bachelor of Business Administration[¶] and Bachelor of Laws**

This program consists of two years of prelaw and prebusiness work as specified below, approximately one and one-half years in the School of Business Administration instead of the full two-year program, and three and one-half years in the Law School instead of the full four-year program, thus allowing the student to qualify for both the bachelor of business administration and the bachelor of laws degree in seven years.

The prelaw and prebusiness work must amount to 90 credits, exclusive of quality credits, and shall include the regular prelaw course[§] except Econ. 27 and in addition Econ. 5 (Elements of Statistics) and Econ. 24-25-26 (Principles of Accounting).

There are two options for the remaining five years:

- A. The first year exclusively in the Law School and the second year exclusively in the School of Business Administration, or vice versa. The third and fourth years exclusively in the Law School and the fifth year to be divided between the two schools, approximately half of the program being in each school.
- B. The distribution of both the business administration and the law course throughout the five-year program.

The course requirements in Business Administration include the general core group courses exclusive of Business Law (B.A. 51-52-53). This amounts to a total of 36 credits. Substitutes, such as Econ. 185 for B.A. 77, B.A. 184 for B.A. 89, may be made with the approval of an adviser. The remaining courses—approximately 32 credits—may be elected from the Senior College courses in economics and business administration with the approval of an adviser.

The course requirements in the Law School include all the courses of the first and second years, the required courses of the third and fourth years, and electives sufficient with the required courses to make a total of approximately 69 credits in the third and fourth years.

Students will be registered for the joint program in the Law School and the School of Business Administration throughout the five-year period. Their programs will be subject to approval of an adviser from the Law School and an adviser from the School of Business Administration.

G. COLLEGE OF MEDICAL SCIENCES*

The principal curricula offered in the College of Medical Sciences are the following: medicine, nursing, medical technology, physical therapy, and occupational therapy. Each affords training for a different profession and the requirements of each course should be read carefully.

1. COURSES LEADING TO THE DEGREE OF DOCTOR OF MEDICINE[†]

There are two seven-year courses of study which lead to the degree of doctor of medicine. Both require three full years of college work (135 credits exclusive of quality credits) which must include the courses prescribed for admission to the Medical School. In the first course the stu-

* For detailed information about the individual subjects of study in these curricula (course numbers and titles, credits, prerequisites, etc.), see Section II of this bulletin.

† Students who desire to receive a college degree before entering the Medical School must include all of the required premedical subjects in the "Course Leading to the Degree of Bachelor of Arts" for which the requirements are stated on pages 8-13. They may find it to their advantage to take the course with an interdepartmental major rather than a major in one department. (See page 12.)

§ See page 167 of this bulletin.

¶ From the School of Business Administration.

** From the Law School.

dent may freely choose elective subjects to make up the total of 135 credits. He will receive the degree of bachelor of science after he completes two years of work in the Medical School. In the second of the two courses, the student must meet the requirements for admission to the Senior College of the College of Science, Literature, and the Arts which he should enter, normally, after two years of residence in the Junior College. His program for the third year must be submitted for approval to the assistant dean for the Senior College. He will receive the degree of bachelor of arts after he completes satisfactorily one year of work in the Medical School.

Residence—First choice is given to residents of Minnesota, second choice to residents of neighboring states that do not have medical schools, third choice to other nonresidents who have acceptable reasons for attending here. Nonresidents are accepted only if their scholarship has been outstanding and other qualifications indicate that they have unusual promise for the study of medicine or a career in science. Applicants who make their homes in Minnesota only subsequent to graduation from high school are considered by the Admissions Committee of the Medical School as though nonresidents.

Program Plans—Because of the large number of applicants to the Medical School and the consequent high percentage of students failing to be admitted although they may meet the minimum entrance requirements, all premedical students are urgently advised to plan their three years of premedical work in such way that, in case they are not admitted to the Medical School, they may still proceed toward a degree in some other college without undue loss of time. They should consider this possibility from the first quarter of their registration in the University.

Seven-Year Course in Science and Medicine Leading to the Degrees of Bachelor of Science§ and Doctor of Medicine§

The minimum requirements in order to be considered for admission to the Medical School are three full years of college work, amounting to 135 credits,|| with a scholarship average of C. At the present time, because of the large number of applicants, few are accepted whose average is less than a very high C or B.

The premedical work, for which the student is registered in the College of Science, Literature, and the Arts, must include the required courses listed below or their equivalent as approved by the Admissions Committee of the Medical School.

Required Courses

- Eng. A-B-C (Freshman English, 15 credits) or Com. 1-2-3 (12 credits) or exemption from the requirement. Comp. 4-5-6 (9 credits) will be accepted as meeting part of this requirement when supplemented by additional credits in English composition, literature, or speech to make the total of at least 12 credit hours.
- Zool. 1-2-3 (General Zoology, 10 credits) and Zool. 83 (Introduction to Genetics and Eugenics, 3 credits)
- Chemistry—Inorg.Chem. 1-2, 11 or 4-5, 11 or equivalent (Inorganic Chemistry, 12 credits); Anal.Chem. 7 (Quantitative Analysis, 4 credits); Org.Chem. 61-62 (Elementary Organic Chemistry, 8 credits); and Phys.Chem. 107-108 (Elementary Physical Chemistry, 6 credits)

§ From the Medical School.

|| The following quotation from the *Bulletin of the Medical School* applies to students who do their premedical work here. "The total number of credits for admission to the Medical School required of students who do their premedical work at Minnesota may, at the discretion of the Admissions Committee, be diminished in the case of superior students, under the quality credit rule of the College of Science, Literature, and the Arts. Required courses may not be omitted without the approval of the Admissions Committee of the Medical School."

Mathematics—as a prerequisite for physics: Math. 1 (Higher Algebra, 5 credits) unless the student has had high school higher algebra; Math. 15-16 (Elementary Mathematical Analysis, 10 credits) or equivalent

Phys. 4-5-6 (General Physics, 15 credits)

Psy. 1-2 (General Psychology, 6 credits)

Social Science, 12 credits. This is a requirement in general education which may be met in a variety of ways, including course work in anthropology, economics, geography, history,* political science, social science, and sociology

Humanities, 9 credits. This is a requirement in general education which may be fulfilled with credits earned at the Junior or Senior College level. Course sequences in classics (including languages), comparative philology and linguistics, history,* humanities, and philosophy are accepted

It is suggested that the three years' work be distributed as follows:

First year—Inorg.Chem. 1f-2w, 11s or 4f-5w, 11s (12 credits); Math. 1, 15-16 (15 credits); Zool. 1f-2w-3s (10 credits); Comp. 4f-5w-6s (9 credits) or Com. 1f-2w-3s (12 credits) or Eng. Af-Bw-Cs (15 credits).

Second year—Org.Chem. 61f-62w and Anal.Chem. 7s (12 credits); Phys. 4f-5w-6s (15 credits); Comp. 27f, if the student elected Comp. 4-5-6 during the freshman year (3 credits); Psy. 1f-2w or Psy. 1w-2s (6 credits); social science (12 credits).

Third year—Phys.Chem. 107f-108w (6 credits); Humanities (9 credits); Zool. 83f or 83s (3 credits); and electives chosen in conference with an adviser.

Elective Courses

The Admissions Committee will show preference for the applicant who has displayed a well-developed interest in, and aptitude for, a special field of knowledge.

Prospective applicants normally are encouraged to concentrate their electives in the subjects listed below and they should devote at least 18 quarter credits to a sequence in one of the following. This represents work beyond required premedical courses. Normally the department chosen for elective emphasis should be different from that chosen to fulfill the required courses above.

Anthropology	English	Humanities	Romance Languages
Biostatistics	Fine Arts	Philosophy	Social Science
Child Welfare	German	Political Science	Sociology
Classics	History	Psychology	Speech
Economics			

Since the courses required for admission provide a concentration in physical and biological sciences, it is usually undesirable for the student who takes only three years of premedical work to devote many elective credits to botany, chemistry, geology, mathematics, physics, or zoology. However, an applicant who has a special interest in one of these particular sciences may be an exception to this general rule.

Although a reading knowledge of a modern foreign language is not a requirement for admission, competence in at least one foreign language is exceedingly important for those individuals who may become interested in *medical research* or in *graduate training in medicine*. It is recommended that such students devote at least 20 of their elective credits to German, French, or another appropriate modern foreign language.

Most students benefit from a fourth year of general or specialized education before they enter upon the medical course. This longer period of preparation is encouraged by the Admissions Committee of the Medical School.

For admission to the Medical School, a candidate's record must show a number of honor points at least equal to the total number of credits in

* History may be counted for credit in social science, or for credit in the humanities area but not toward fulfillment of both requirements.

the group of required subjects; also a number of honor points at least equal to the total number of credits in all subjects. A higher average is exacted of nonresident applicants. Applicants are required to take a battery of tests for premedical students given by the Student Counseling Bureau. The scores on these tests are considered by the Admissions Committee in advising students and determining admission. A student applying for admission should file credentials at least nine months before the admission date of the class for which he applies. An application blank may be obtained by addressing the assistant dean of the Medical School and *at the time of filing this should be accompanied by two transcripts of the applicant's college credits up to the date of application.* All admissions are subject to the limited registration regulations of the Medical School.

The work which is credited as the fourth year in candidacy for the degree of bachelor of science is taken in the Medical School. To earn this degree, a student must have completed the first two years of the medical course with a C average.

Students who have completed elsewhere three or more years of collegiate or university work which includes the required subjects specified above and which is in other respects the full equivalent of the three years of academic work required in this eight-year course will be awarded the degree of bachelor of science on recommendation of the faculty of the Medical School, provided they meet the scholarship requirements stated above.

The foregoing regulations governing the quality and amount of premedical training required for admission to the Medical School will apply for those who present the minimum amount of work. In cases of mature and superior students, especially those who have taken degrees and have a record of outstanding accomplishment in some special area of education (even though it may not have been closely related to medicine), concessions may be made. Such cases will be considered individually by the Admissions Committee upon petition to the dean of the Medical School.

A broad, general education is considered fundamental to medical study, but no student can pursue the medical course to advantage without adequate knowledge of biology, chemistry, and physics. Therefore, no substantial amount of the credits required in these premedical subjects is likely to be waived by the Admissions Committee.

Seven-Year Course in Arts and Medicine, Leading to the Degrees of Bachelor of Arts* and Doctor of Medicine†

During the first three years of this course, the student is registered in the College of Science, Literature, and the Arts, subject to the regulations of the college, and must earn at least 135 credits, with a scholarship average of C. (This number of credits may be reduced‡ by application of the "quality credit" rules given on page 20.) At least 30 credits must be in Senior College courses. He must complete the requirements for admission to the Senior College, given on pages 8-10 and also the work in chemistry, mathematics, physics, psychology, zoology, and foreign language prescribed for the seven-year course in science and medicine (page 171).§

During his third year, the student elects work in this college, subject to the approval of the assistant dean for the Senior College. The first

* From the College of Science, Literature, and the Arts.

† From the Medical School.

‡ For a statement about "quality credits" and admission to the Medical School, see the § footnote on page 171.

§ For recommended electives and the restrictions governing them, see page 172.

year of the course in the Medical School, when completed with the standards required by that school, counts as the equivalent of the fourth year (45 credits) of the Arts course.

For admission to the Medical School, a student's record must show a number of honor points at least equal to the number of credits in the group of required subjects; and also a number of honor points at least equal to the total number of credits. A higher standard is exacted of nonresident applicants. All admissions are subject to the limited registration regulations of the Medical School.

2. CURRICULUM IN NURSING*

The basic professional curriculum in nursing leading to the degree of bachelor of science in professional nursing is a sixteen-quarter program—six quarters in the College of Science, Literature, and the Arts or any other accredited university, college or junior college, and ten quarters in the School of Nursing. This program, open to both men and women, is planned to prepare students for staff level positions in all fields of nursing. The professional portion of the program is open to (a) students who have completed 95 quarter credits† of college work including required courses as listed below (with a C average), and (b) graduates of a Bachelor's degree program from an accredited college or university; candidates in this group who do not meet the requirements listed below are considered for admission on an individual basis. The following courses, or their equivalent, are required for admission to the School of Nursing:

	Credits
Eng. A-B-C or Comp. 4-5-6 or Com. 1-2-3	9-15
P.H. 3, Personal Health	2
Zool. 14-15 or Zool. 1-2-3§	6-10
Inorganic chemistry	8-10
Sociology or social science	9-12
History or political science or economics	5
Psychology	6
Child care, child psychology, or child development	3
Nutrition	2
Physical Education	5
Electives	25-40

Elective Courses

Choice of electives to make up the required total should be made on the basis of the individual's special interests. Recommended electives are courses in anthropology, child welfare, general studies, philosophy, physics, sociology, speech, and zoology.

Advisers from the School of Nursing faculty are assigned to pre-nursing students in the College of Science, Literature, and the Arts. Before registering each quarter, students should have their programs reviewed by their adviser in the School of Nursing, Room 116, Millard Hall.

Students from other universities or colleges may transfer to the University of Minnesota at any point in the pre-nursing program. Those who wish to complete all pre-nursing requirements before transferring

* For advanced professional and practical nursing curricula see the *Bulletin of the School of Nursing*.

† The number of credits may be diminished, in the case of superior students, under the quality credit rule of the College of Science, Literature, and the Arts.

§ Preferred courses.

to the University of Minnesota may do so provided they complete required courses as listed above. These students are urged to consult with the School of Nursing at the end of their freshman year.*

Information Concerning the Professional Program in the School of Nursing (Ten Quarters)

After transferring to the School of Nursing the student devotes ten quarters to professional study. During the first two quarters the student completes courses in anatomy, physiological chemistry, bacteriology, physiology, and pharmacology and starts courses in clinical nursing. During the next eight quarters emphasis is placed on clinical instruction and practice in medical, surgical, operating room, maternal, child, pediatric, psychiatric, rural, out-patient, communicable disease, and public health nursing. For further information regarding the program leading to the degree of bachelor of science in professional nursing see the *Bulletin of the School of Nursing*.

3. COURSE IN MEDICAL TECHNOLOGY

The Course in Medical Technology is a four-year course given in the College of Science, Literature, and the Arts and in the College of Medical Sciences. The degree of bachelor of science is awarded upon completion of the prescribed curriculum.

The first two years are spent in the College of Science, Literature, and the Arts. After completing 90 credits, including the required courses, with a C average, the student is eligible for admission to medical technology (that is, for registration in the College of Medical Sciences). The total number of required credits may be reduced in accordance with the quality credit rule of the College of Science, Literature, and the Arts. The entire fourth year (twelve months) is spent in a rotating practical service in the laboratories of the University Hospitals.

The following courses or their equivalents are prerequisites for admission to the junior year:

- Eng. A-B-C (Freshman English, 15 credits) or Eng. 4-5-6 (Freshman Composition, 9 credits) or Com. 1-2-3 (12 credits) or exemption from the requirement
- Chem. 1-2, 11 or 4-5, 11 (General Inorganic Chemistry and Semimicro Qualitative Analysis, 12 credits); Anal.Chem. 7 (Quantitative Analysis, 4 credits); Org.Chem. 61-62 (Elementary Organic Chemistry, 8 credits)
- Zool. 1-2-3 (General Zoology, 10 credits) and Zool. 54 (Histology, 5 credits)
- Anat. 4 (Elementary Human Anatomy, 5 credits)
- Phys. 1-2-3 (Introduction to Physical Science, 9 credits)
- Bact. 53 (General Bacteriology, 5 credits)
- Electives. There is no essential limitation to the subjects which may be chosen as electives.

The *Bulletin of the Course in Medical Technology*, which may be obtained at the Office of Admissions and Records, contains a suggested program for the first two years. For further information the student should consult special advisers in the Medical Technology office, W225 University Hospitals, telephone: Main 8551, extension 292.

Advisers—All students in this course should consult advisers in the Medical Technology office, W225 University Hospitals. Registration each quarter must be reviewed by one of these advisers.

* By action of the State Legislature, substantial scholarships have been established for nursing students, and anyone interested should inquire at the office of the School of Nursing.

X-Ray Training

Students who have completed all requirements of the Course in Medical Technology may extend their program to include some training in X-ray technology by special arrangement with the Department of Radiology, University Hospitals.

4. COURSE IN PHYSICAL THERAPY

The Course in Physical Therapy is a four-year course leading to a bachelor of science degree in physical therapy. The first two years are spent in the College of Science, Literature, and the Arts during which time the studies are mainly in the basic sciences. The last two years are spent in the College of Medical Sciences, Department of Physical Medicine and Rehabilitation. For more detailed information see the *Bulletin of Physical Medicine and Rehabilitation*. All students who are pursuing this course should consult with the physical therapy adviser in Room 204 Temporary West of Hospitals building. Registration each quarter must be reviewed by this adviser.

Physical medicine is that part of medical science concerned with the diagnosis and treatment of disease or injury by physical means. It includes the use of heat, cold, light, water, electricity, massage, exercise, rest, and climate. Many of the treatment techniques are carried out by trained personnel called physical therapists who work under the direction of physicians.

Recognition of such training is afforded by registration with the American Registry of Physical Therapists which is administered jointly with the American Congress of Physical Medicine.

Starred (*) courses are required for entrance into the Course in Physical Therapy. The other suggested courses are desirable electives.

Junior College Courses

Freshman year

- *Eng. A-B-C (Freshman English, 15 credits) or Comp. 4-5-6 (Freshman Composition, 9 credits) or Com. 1-2-3 (12 credits) or exemption from the requirement
- *Chem. 1-2 (General Inorganic Chemistry, 8 credits) or Chem. 4-5 (General Inorganic Chemistry, 8 credits) or Chem. 6-7 (General Inorganic Chemistry, 10 credits) or Chem. 9-10 (General Inorganic Chemistry, 10 credits) or Chem. 9-10 (General Inorganic Chemistry, 10 credits)
- *Zool. 1-2-3 (General Zoology, 10 credits)
- P.H. 3 (Personal Health, 2 credits); P.H. 4 (Health Problems of the Community, 2 credits)
- Hum. 1-2-3 (Humanities in the Modern World, 15 credits) or Hist. 1-2-3 (Civilization of the Modern World, 9 credits) or Soc. 1, 2 (Introduction to Sociology and Intermediate Sociology, 6 credits) or Pol.Sci. 1-2-3 (American Government and Politics, 9 credits)

Sophomore year

- *Phys. 1-2-3 (Introduction to Physical Science, 9 credits) or Phys. 1a-2a-3a (Introduction to Physical Science, with laboratory included, 12 credits) or Phys. 4-5-6 (General Physics, 15 credits) or G.C. 7A (Physical Science: Elements of Physics, 5 credits)
- Anat. 4 (Elementary Anatomy, 5 credits)
- *Psy. 1-2 (General Psychology, 6 credits)
- *Psy. 3 (Psychology Applied to Daily Life, 3 credits) or 3 other credits in psychology (C.W. 80, 3 credits, is acceptable)
- *Bact. 53 (General Bacteriology, 5 credits) or Phys. 4 (Human Physiology, 4 credits)
- C.W. 40 (Child Training, 3 credits) or C.W. 80 (Child Psychology, 3 credits)
- P.Med. 2 (Orientation to Physical Therapy, 1 credit)

5. COURSE IN OCCUPATIONAL THERAPY

The Course in Occupational Therapy is a program of four academic years plus one quarter which is given in the College of Science, Literature, and the Arts and in the Medical School. The degree of bachelor of science in occupational therapy is awarded upon completion of the prescribed curriculum.

The first two years are spent in the College of Science, Literature, and the Arts. After completing 90 credits and the required courses of the first two years with a high C average, the student is eligible for admission to the Course in Occupational Therapy in the Medical School, Department of Physical Medicine and Rehabilitation. Ten months are spent in clinical training in various types of hospitals and institutions for the sick and handicapped during the last year.

The following courses or their equivalents are prerequisites for admission to the junior year:

Eng. A-B-C (Freshman English, 15 credits) or Comp. 4-5-6 (Freshman Composition, 9 credits) or Com. 1-2-3 (12 credits) or exemption from the requirement

Zool. 1-2-3 (General Zoology, 10 credits)

Hum. 1-2 (Humanities in the Modern World, 10 credits)

Anat. 4 (Elementary Anatomy, 5 credits)

Psy. 1-2 (General Psychology, 6 credits)

Soc. 1 (Introduction to Sociology, 3 credits)

Physiol. 4 (Human Physiology, 4 credits)

Art 1 (Principles of Art, 4 credits)

Art 10 (Photography, 3 credits)

Art 23 (Drawing and Design I, 3 credits)

Art 33-34 (Textile Design: Weaving, 6 credits)

Art 45 (Ceramic Processes, 3 credits)

C.W. 40 (Child Training, 3 credits)

Phys.Ed. 1 (1 credit)

Phys.Ed. 51 (Mechanics of Movement, 3 credits)

Phys.Med. 1 (Orientation to Occupational Therapy, 2 credits)

Phys.Med. 5 (Therapeutic Recreation, 2 credits)

P.H. 3 (Personal Health, 2 credits)

P.H. 60 (Tuberculosis, Its Control, 2 credits)

Ind.Ed. 1 (Woodwork, 3 credits)

Ind.Ed. 15 (Graphic Arts, 3 credits)

Ind.Ed. 20 (Craftwork "A," 3 credits)

Electives to make a total of at least 90 credits

For more detailed information the student should consult a special adviser in the Occupational Therapy office, 211 Temporary West of Hospitals building, telephone: Main 8158, extension 6610. See *Bulletin of the Department of Physical Medicine and Rehabilitation*.

Advisers—All students in this course should consult a special adviser in the Occupational Therapy office and have their program reviewed each quarter. This applies to students who are still in the College of Science, Literature, and the Arts.

H. SOCIAL WORK

Professional study in the School of Social Work, which is a part of the College of Science, Literature, and the Arts, is at the graduate level. The recommended preprofessional program is *Sequence D* of the Department of Sociology which is described on page 145 of this bulletin.

FACULTY

College of Science, Literature, and the Arts

Listed below are the faculty members, full or part time, with rank of instructor or above. The roster was compiled in the spring of 1953 and is approximately accurate for 1953-54.

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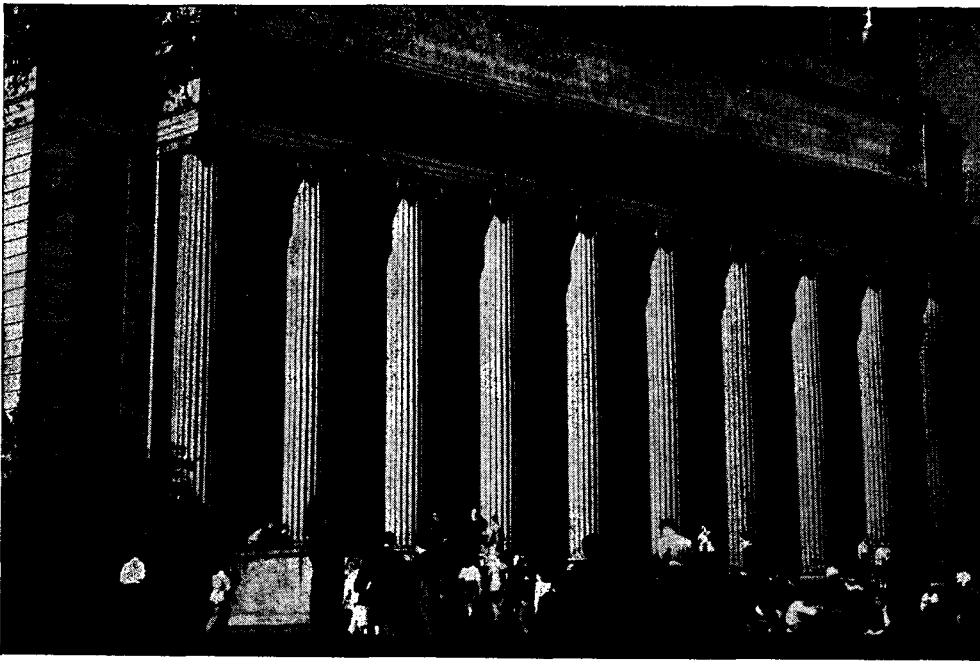
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UNIVERSITY OF MINNESOTA



School of Social Work 1953-1954

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Helen Kretchmer, M.A., Medical Social Work Supervisor and Assistant Professor of Social Work, University Hospitals
Alma Laabs, M.A., Lecturer in Social Work; Supervisor of Visiting Teachers, Minneapolis Board of Education
Juanita Luck, M.S.S.A., Lecturer in Social Group Work
Verval Mueller, M.A., Associate Professor of Social Work; Major Adviser, Medical Social Work
Anne Winslow Oren, M.A., Instructor in Social Work
Ruby Pernel, M.S.S.A., Associate Professor of Social Work; Major Adviser, Social Group Work
O. Alta Quello, M.A., Instructor in Social Work
Kurt Reichert, M.A., Lecturer in Social Work
Henriette E. Saloshin, M.S.W., Instructor in Social Work

Lyndell Scott, M.A., Associate Professor of Social Work
 Malcolm B. Stinson, M.A., Ph.D., Associate Professor; Major Adviser, Social Work Research and Public Welfare
 Dorothy Whitmore, M.A., Associate Professor of Social Work; Major Adviser, Social Casework
 Helen J. Yesner, M.S.W., Assistant Professor of Social Work

OTHER FACULTY

C. Knight Aldrich, M.D., Associate Professor of Psychiatry
 Gaylord W. Anderson, M.D., Dr.P.H., Professor of Public Health
 Richard Anderson, M.D., Lecturer in Psychiatry
 Miriam Andrus, M.A., M.S.W., Clinical Assistant Professor of Social Work; Chief, Social Services, Veterans Administration Hospital
 A. B. Baker, M.D., Ph.D., Associate Professor of Medicine, Division of Nervous and Mental Diseases
 Robert P. Bush, M.D., Lecturer in Psychiatry
 Asher N. Christensen, B.A., Professor of Political Science
 Dale B. Harris, Ph.D., Professor of Child Welfare
 Hyman S. Lippman, M.D., Ph.D., Clinical Associate Professor of Pediatrics and Psychiatry; Director, Amherst Wilder Child Guidance Clinic, St. Paul
 Sue Mason, M.S.S., Clinical Assistant Professor of Social Work; Chief, Social Services, Veterans Administration Regional Center
 Elio D. Monachesi, Ph.D., Professor and Chairman, Department of Sociology
 Marvin Sukov, M.D., Clinical Associate Professor of Psychiatry and Neurology

FIELD WORK AGENCIES

American Red Cross, Home Service Division	Jewish Family and Children's Service (Minneapolis)
Amherst Wilder Child Guidance Clinic	Jewish Family Service (St. Paul)
Capitol Community Center	Lutheran Welfare Association
Children's Service, Inc.	Minneapolis Board of Education—Visiting Teachers
Citizens Club	Minnesota Division of Social Welfare
Elliot Park Neighborhood House	Northeast Neighborhood House
Emanuel Cohen Center (Minneapolis)	Ramsey County Welfare Board
Family and Children's Service (Minneapolis)	Travelers Aid Society
Family Service, Inc. (St. Paul)	University of Minnesota Hospitals
Girl Scouts (St. Paul)	University of Minnesota Student Activities Bureau
Hallie Q. Brown Community House	Veterans Administration Hospital
Hennepin County Welfare Board	Veterans Administration Regional Office
Jewish Community Center (St. Paul)	Young Women's Christian Association

School of Social Work

EDUCATION FOR SOCIAL WORK

In the problem-solving continuum which is life for individuals, groups, and communities, social work is a professional service enabling a solution for problems that fall within the area of personal, person-to-person, and person-to-environment relationship adjustments. This expanding field of professional service demands competently trained personnel. With our rapidly changing world the need for skilled social work increases and the responsibilities of the worker increase and call for the ability, skill, and integrity of the highest order.

Social work services touch all sorts and conditions of people, including children needing protection, guidance or placement, families in trouble, persons in need of medical or psychiatric help, and groups in need of informal education and recreation. Communities as well as individuals have suffered from abnormal conditions and shifting of populations and have become more conscious of the importance of social welfare organization.

Social workers facing such wide and varied responsibilities need very broad understanding, sound judgment, and thorough professional education. At this University, education for social work is offered on these levels: (1) undergraduate study, which includes a broad range of social sciences, and some courses of primarily informational nature which deal directly with social work; (2) two years of graduate social work study which includes basic technical social work theory courses and field work practice under tutorial supervision and research culminating in the Master's degree; and following at least three years of successful social work practice experience after the Master's degree; (3) two additional years of graduate study and research leading to the Ph.D. degree.

UNDERGRADUATE CURRICULUM

The undergraduate curriculum, offered in the College of Science, Literature, and the Arts, with participation by the faculty of the School of Social Work, affords the fundamentals of a broad, modern education, focused toward social problems and an approach to social work. It furnishes the foundation upon which graduate professional education for social work is built.

The following undergraduate course of study is recommended but not required for those who desire a four-year course and for those who expect to do graduate study in the School of Social Work. (See Admission Requirements outlined on following pages.) The organization of the course aims to give the undergraduate the fundamentals of a broad, modern education.

Junior College—The work of the first two years, taken in the Junior College, consists of the regular academic requirements and fundamental courses in sociology, psychology, and political science. The requirements for admission to the Senior College are given under the heading "Junior

College Programs for Entering the Senior College" in the *Bulletin of the College of Science, Literature, and the Arts*. The specific subject requirements for the first two years may be met under either Plan I or Plan II as set forth in that bulletin and must include the following courses in the two years' work:

- Soc. 1 (Introduction to Sociology, 5 credits)
- Soc. 45 (Social Statistics, 5 credits)
- Soc. 49 (Social Problems, 3 credits)
- Pol. 1-2 or 5 (American Government and Politics, 6 or 5 credits)
- Psy. 1-2 (General Psychology, 6 credits)

Recommended electives are:

- Anth. 40 (Introduction to Anthropology)
- Geog. 4 (Human Geography)
- Hist. 1-2-3 (Civilization of the Modern World)
- Phil. 1, 2, 3 (Problems of Philosophy, Logic, Ethics)
- Soc. 2 (Individual and Minority Group Adjustment)
- Sph. 1-2-3 or 5-6 (Fundamentals of Speech) or Comp. 27-28-29 (Advanced Writing)

Senior College—The work of the junior and senior years is subject to the requirements of the course leading to the degree of bachelor of arts which are given under the heading "Requirements in the Senior College" in the *Bulletin of the College of Science, Literature, and the Arts* with this exception:

The requirements of a major sequence and one or two minors are replaced by the following interdepartmental sequence:

- Soc. 50 (The Areas of Social Work); 53 (Elements of Criminology); 91 (Case Method Applied to the Study of Human Problems); 140 (Social Organization); 141 (The Family); 162 (Rural Social Institutions).
- Econ. 6-7 (Principles of Economics) or its equivalent.
- Psy. 144-145 (Abnormal Psychology).
- Phil. 70 (Philosophies of Social Reform) or Soc. 172 (Theories of Social Reconstruction) or Pol. 162 (Recent Political Thought).
- Public health—at least two courses.
- Anthropology, history, or political science—at least 6 credits in Senior College courses in one of the three.
- Nine credits or three courses in Senior College courses in sociology numbered 100 or above in addition to those specifically required.
- Electives to make the required total (normally 90 credits).

Satisfactory completion of four years' work of this curriculum leads to the degree of bachelor of arts.

Details regarding the undergraduate course will be found in the *Bulletin of the College of Science, Literature, and the Arts*.

PROFESSIONAL SOCIAL WORK STUDY

Professional social work study is carried on in the School of Social Work and calls for study at the graduate level. The student must be eligible for admission to the Graduate School of the University of Minnesota. The course leads to the degrees of master of social work and doctor of philosophy.

ADMISSION

An applicant of satisfactory scholastic record (not less than 1.5 undergraduate grade point average or midway between a B and C average) whose Bachelor's degree was granted by a recognized college or university may be admitted by the dean of the Graduate School upon recommendation of the Admissions Committee of the School of Social Work.

A candidate for admission to the School of Social Work must present 39 quarter credits in social sciences, i.e., in sociology, political science, economics, psychology, history, or anthropology, including one or more courses in at least three of these social sciences, and must include a course

in statistics. In addition the candidate should present some credits in physiology or biology, abnormal psychology, child psychology and a survey course in the field of social work. However, if the candidate is otherwise eligible for admission but lacks some prerequisites he may be permitted to enter the School of Social Work but will be required to complete such prerequisites before becoming a candidate for the Master's degree. Knowledge of a foreign language is not required for the Master's degree.

Application blanks and instructions regarding admission should be secured from the School of Social Work, 400 Ford Hall.

Applications and transcripts in duplicate must be filed in advance of the registration date (preferably four to six months before the opening of fall quarter). The number of beginning students is limited, with preference given to students wishing to enroll in the fall quarter and planning to remain throughout the academic year and who wish to take this training for the specific purpose of entering social work practice. Beginning graduate students are admitted only fall quarter. Persons with previous training and experience may be admitted at the quarter which makes progression from this previous training feasible.

The application for admission is considered first by a committee of the major advisers in social work, which makes recommendations to the dean of the Graduate School upon whose approval the candidate is admitted. Acceptance of candidates is based upon the following criteria: evidence of ability to meet standards of graduate work, usually indicated by grades of high quality; evidence of aptitudes for interpersonal relationships; evidence of emotional stability; and evidence of acceptable motivation for entering this profession. The Admissions Committee evaluates the application by considering the applicant's own statement of interests and aptitudes; psychological tests when available; letters of reference indicating personal aptitude for social work.

After formal notice of admission has been received, students must notify the director in writing that they will appear and be in attendance before arrangements for field placements can be finalized. Students should also present themselves promptly on the dates set for registration and have their programs fully planned before the date at which classes begin. No student will be admitted to a class after the first week of the term except by special permission. Students returning to school must make arrangements in advance to assure field work placement.

Advanced standing may be granted for work done in other approved schools of social work, limited by the rules stated below.

DEGREES

The degrees of master of social work, requiring two years of graduate work, and doctor of philosophy, requiring at least four years of graduate work, are awarded to candidates who complete special curricula in various branches of social work. Students may be admitted, however, without necessarily being candidates for degrees.

MASTER OF SOCIAL WORK DEGREE

The degree of master of social work requiring two years of graduate study will be awarded to students who complete the "core" (see below) and fulfill the following requirements:

1. Ninety credits including a 9-credit degree project (as indicated below) must be presented with an average grade of B or better. No credit is allowed for course work of D quality.
2. One or more courses from each of the basic eight areas in social work which are:

(a) Casework	(e) Social Administration
(b) Psychiatric and Psychological Information	(f) Community Organization
(c) Medical Information	(g) Group Work
(d) Public Welfare	(h) Social Research
3. A degree project of 9 quarter credits consisting of seminar research papers or a single research report requiring independent work under faculty supervision which demonstrates capacity for critical evaluation and analysis must be presented. All 9 of these research credits must be earned preferably under the supervision of one faculty member.
4. Not less than 45 credit hours must be earned in residence at the University of Minnesota with an average of B or better.
5. Not more than 45 credit hours will be accepted by transfer and then only if earned in an accredited school of social work. Credits accepted for transfer shall be an average of B or better quality. Credits of D or lower will not be accepted.
6. Not more than 9 credit hours earned in extension courses will be accepted to apply on degree requirements and then only if the grade received is B or better and the course (a) was taught by a member of the graduate faculty, (b) is numbered above 100, (c) carries the same title and content as a corresponding course in the regular curriculum.
7. The candidate must successfully pass a written examination and/or an oral examination conducted by a committee of three or more members of the graduate faculty.
8. All credits offered for the degree must have been earned within seven years preceding the quarter in which the degree is conferred.
9. Following the completion of 40 graduate credits not less than 15 of which must have been earned at the University of Minnesota and not later than the end of the quarter preceding the quarter in which the degree is to be conferred, the student shall apply for admission to candidacy for the degree, using the appropriate application form. The application for candidacy will be reviewed by the faculty of the School of Social Work. The school will recommend to the Graduate School dean, through the appropriate graduate group committee, the acceptance or rejection of the application for candidacy.
10. Not later than the beginning of the final quarter's work and after admission to candidacy the student shall submit, through his major adviser, a program of all credits presented for the degree upon the appropriate degree program form.

TABULAR SUMMARY

REQUIREMENTS	UNDER DIRECTION OF	DATE
Program of study	Adviser and dean of the Graduate School	First year program on entrance; second year program beginning of fourth quarter
Approval of candidacy for M.S.W. degree	Committee from School of Social Work and dean of Graduate School	Not later than middle of fifth quarter
Approval of degree project subject	Adviser and committee of School of Social Work	Not later than beginning of fifth quarter
Filing of degree program form	Adviser and dean of the Graduate School	Not later than beginning of sixth quarter
Approval of degree project	Committee of graduate faculty	Before admission to final oral examination
Final oral examination	Committee of graduate faculty	Not later than 5 weeks before Commencement
Graduation fee	Office of Admissions and Records	Not later than 5 weeks before Commencement
Finished bound copies of degree project	Adviser and faculty of School of Social Work	Before end of sixth quarter

MASTER OF ARTS IN SOCIAL WORK

Students who began their work prior to fall quarter, 1948, may complete a program already started for the master of arts degree in social work under either Plan A or Plan B (see the *Bulletin of the Graduate School*). Such students, in lieu of completing requirements for the master of arts degree in social work, may become candidates for the degree of master of social work provided they fully meet all standards indicated above.

DOCTOR OF PHILOSOPHY DEGREE IN SOCIAL WORK

Students who have the Master's degree in social work from this school, or the comparable Master's degree from a member school accredited by the Council on Social Work Education, if the record made is distinctly superior, and who have not less than three years of successful social work experience following the acquisition of the Master's degree, may become candidates for the Ph.D. degree in social work by:

1. Completing advanced work in social work in courses or seminars approved by their major adviser.
2. Completing a minor satisfactory to the department in which the minor is taken.
3. Meeting university requirements of reading proficiency in two foreign languages (or authorized substitute for one language).
4. Passing the comprehensive preliminary examination covering major and minor fields, and subsequently completing the research, thesis requirements, and final examinations.
5. Otherwise meeting Graduate School requirements for the Ph.D. degree.

For further particulars, see the *Bulletin of the Graduate School*.

The program for the Ph.D. degree at this school has as its primary objective advanced education in research and social work administration emphasizing preparation for leadership, research, and teaching.

For further information and application materials address request to the director of the School of Social Work.

GRADUATE CURRICULUM IN SOCIAL WORK

The curriculum of the School of Social Work includes a group of "core" courses which are considered necessary preparation for any form

of social work, and basic to further specialization. Among courses submitted for the Master's degree each student must present those included in the "core." The core curriculum is as follows:

	Credits
S.W. 210-211-212	Initial Field Training in Social Work 12
S.W. 220	Casework I 3
S.W. 248-249-250	Medical and Psychiatric Information for Social Workers 9
S.W. 267, 268	Public Welfare I and II 5
S.W. 275	Principles of Administration Applied to Social Work 3
S.W. 280	Community Organization 2
S.W. 282A	Principles of Group Work I 3
Soc. 180	Methods of Social Research 3

Normally students are not admitted for part-time work at this school and in any case students will not be permitted to accumulate more than 18 quarter credits on a part-time basis prior to enrolment as a full-time student for at least two consecutive quarters.

Special work is offered in the following fields: the protection, guidance, and placement of children; juvenile delinquency and probation; family welfare; social group work; public welfare; medical social work; school social work; psychiatric social work; community organization; and social work administration.

The School of Social Work, as well as the special sequences in group work, medical social work, psychiatric social work and school social work, is accredited by the Council on Social Work Education.

FIELD WORK

Field work opportunities are designed for students registered for full-time work in the School of Social Work. Field work is required throughout the six quarters of graduate work. During the first year (S.W. 210-211-212), students engage in field work at the rate of 4 clock hours each week for each credit. Normal registration is 4 or more credits, hence 16 or more clock hours each week. During the second year (S.W. 215-216-217), field work is at the rate of 3 clock hours each week for each credit. Normal registration is 6 or more credits, hence 18 or more clock hours each week.

Special casework training centers have been established in social agencies in the Twin Cities, each under the direction of a university instructor who gives full time to field work supervision. Field work opportunities in specialized areas are available for students who meet the requirements established by the School of Social Work and the agencies concerned.

A student wishing a field placement must indicate his desire in writing at least four months in advance of the period of study. The faculty decides where the student will be assigned for field training.

FELLOWSHIPS, ASSISTANTSHIPS, AND LOAN FUNDS

Fellowships—This school shares in the opportunities offered by several national and state agencies which provide fellowships available to students in any accredited school of social work. The following may be especially cited:

MINNESOTA DIVISION OF SOCIAL WELFARE—Stipend computed on estimated cost of living plus tuition with contractual obligations to accept employment.

U.S.P.H.S. MENTAL HYGIENE ACT STIPENDS—\$1,600 for psychiatric social work students (limited to second graduate year).

U. S. VETERANS ADMINISTRATION WORK-STUDY PLAN—Approximately \$170 monthly for second-year medical and psychiatric social work students.

COUNCIL OF JEWISH WOMEN—For a graduate woman student in group work.

HANNAH G. SOLOMON SCHOLARSHIP FUND, NATIONAL COUNCIL OF JEWISH WOMEN—Provides tuition to Jewish man or woman under 27 years of age on basis of scholarship and need.

NATIONAL FOUNDATION FOR INFANTILE PARALYSIS—For medical social work students a grant not to exceed approximately \$1,500. Most of these stipends are for second graduate year but a few are available for both graduate years.

WHEATRIDGE FOUNDATION—For medical social work students \$1,000 per year plus tuition. Grant may be renewed for a second year.

EVANGELICAL LUTHERAN CHURCH BOARD OF CHARITIES—For group work and casework students in the amount of \$800 per academic year. Available to graduate students in the Lutheran Church.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION—For a graduate woman student in group work.

GIRL SCOUTS—For graduate women students in group work.

MRS. ARCHIE WALKER SCHOLARSHIP FUND—For graduate group work students. Amount awarded based on student's need.

GEORGE DAVIS BEVIN FOUNDATION—For students preparing for work in the field of mental hygiene of children. \$300 per academic year.

HENNEPIN COUNTY TUBERCULOSIS ASSOCIATION FELLOWSHIP—\$1,000 per academic year.

Loan Funds—Student loans are available through the Office of the Dean of Students.

FRANCES MONEY MEMORIAL LOAN FUND—Provides loans to medical social work students.

Teaching Assistantships—Several teaching assistantships are open to students who have had at least two quarters of graduate social work study and have displayed superior classroom and field work ability. Such teaching assistantships carry stipends for part-time service.

FACILITIES FOR STUDY AND PROFESSIONAL CONTACTS

The University Library, with approximately 1,622,500 volumes, is well provided with current literature in the social sciences, including periodicals and government publications for this country and abroad. There is a seminar room located in the University Library which is reserved for the special use of social work students. Available to social work students is the Gertrude Vaile Library Shelf which contains books and pamphlets used in many social work courses. A social service branch of the Minneapolis Public Library makes easily available all of the current materials in the social work field. This collection is located in the Citizens Aid Building, which is the headquarters of the social work agencies of

Minneapolis. In St. Paul, the Public Library, the State Historical Library, the James J. Hill Reference Library, and the Library of the State Division of Social Welfare supplement these sources.

The Minnesota Welfare Conference, which is outstanding among state conferences, is held each spring in the Twin Cities, and students are advised to attend. Other professional conferences and organizations meet in the Twin Cities at various times during the year.

The Student Social Workers' Association is an organization made up exclusively of students. Any person registered in social work courses at the University is eligible for membership. Meetings are held throughout the year for the purpose of discussing social work and also student problems.

Students enrolled on a full-time basis are eligible for student membership in the American Association of Social Workers. Medical social and group work students during their second graduate year in the school are eligible for student membership in their respective professional associations. It is expected that all full-time students will avail themselves of membership and that they will incorporate participation in the association into their program of graduate study.

EXPENSES

ESTIMATED EXPENSES (NINE-MONTH BASIS)

Living expenses	\$1,400.00
Books	60.00
Incidental fee (\$18.85 per quarter)	56.55
Matriculation deposit	5.00
Social Work 210-211-212, 215-216-217 (\$5 per quarter)	15.00
Tuition (resident) (\$38 per quarter)	114.00
Tuition (nonresident) (\$100 per quarter)	300.00

All university fees are subject to modification without notice.

Students seeking assistance in securing living quarters should communicate with the Student Housing Bureau, Eddy Hall, Minneapolis 14.

COURSES IN SOCIAL WORK

For Graduate Students Only

A. GENERAL SOCIAL WORK COURSES

- S.W.200. The Field of Social Work. A study of the field of social work, including fields of specialization, functions of agencies, and contributions made by outstanding leaders. (3 cred.; no prereq.) (Not offered 1953-54)
- S.W.201w. The History and Theory of Social Work. A consideration of the historical backgrounds of the modern social work movement and the evolution of the theory underlying it. (3 cred.; no prereq.) Scott
- S.W.205f,206w,207s. Special Topics in Social Work. (Cred. ar.) Staff
- S.W.209w,s. Seminar in Social Agencies and Institutions. (Cred. ar.)

B. FIELD WORK COURSES

- S.W.210f-211w-212s. Initial Field Training in Social Work. Field practice in social work process under direct supervision. (Cred. ar.; prereq. 220 or 282A which may be taken simultaneously, or equiv.) Staff
- S.W.215f-216w-217s. Advanced Field Training in Social Work. Field practice in social work process under direct supervision. (Cred. ar.; prereq. 221 or 282B) Staff
- S.W.219f,w,s. Seminar for Field Training Supervisors. (Cred. ar.; limited to persons engaged in supervising students in field work) Staff

C. CASEWORK

- S.W.220f. Casework I. A study of the generic processes in social casework practice and an approach to understanding the individual in the social situation with some exercise in the process of case analysis. (3 cred.; prereq. 210 which may be taken simultaneously) Whitmore
- S.W.221w-s. Casework II. A continuation of Casework I emphasizing a critical analysis of the casework process and development of skills in casework method. (4 cred.; prereq. 220 plus 211 which may be taken simultaneously, or equiv.) Whitmore
- S.W.222f-w. Advanced Casework. Case discussion focused primarily on treatment processes. (4 cred.; prereq. 221 or equiv.) Boehm, Scott
- S.W.224. Seminar in Casework in the Public Agency. (Cred. ar.; prereq. 221 or permission of instructor) (Not offered 1953-54)
- S.W.225f. Seminar in Family Casework. (Cred. ar.; prereq. 221 or permission of instructor) Boehm
- S.W.226. Seminar in Casework in Health Problems. (Cred. ar.; prereq. 221 or permission of instructor) Mueller (Not offered 1953-54)
- S.W.227f. Seminar in Social Work in the Psychiatric Setting. (Cred. ar.; prereq. 221 and 215 which must be taken simultaneously) Connery
- S.W.228. Seminar in Social Case Recording. (Cred. ar.) (Not offered 1953-54)
- S.W.229. Seminar in Casework Supervision. (Cred. ar.; prereq. 222) (Not offered 1953-54)

D. MEDICAL AND PSYCHIATRIC INFORMATION COURSES

- S.W.239s. Seminar in Psychiatric Social Work. (2 cred.; prereq. 240, and concurrent field placement in a psychiatric setting) Lippman
- S.W.240f. Dynamics of Human Behavior Based on Psychoanalytic Theory. (2 cred.; prereq. 250) Anderson
- S.W.248f,249w,250s. Medical and Psychiatric Information for Social Workers. A consideration of the socio-psycho-medical factors associated with personality development germane to social work practice. (9 cred.) Mueller, Bush, and staff
- S.W.259f. Seminar in Medical Social Work. (Cred. ar.; prereq. 221) Mueller
- P.H.106f. Public Health Administration. (3 cred.; prereq. P.H. 53 or equiv.) Anderson
- P.H.141s. Social and Economic Aspects of Medical Care. (3 cred.; prereq. P.H. 106) Mickey

E. CHILD WELFARE COURSES

- S.W.260s. The Child and the State. Development of the rights of the child in relation to parental rights as evidenced in child labor laws, the juvenile courts, adoption, aid to dependent children, the changing status of the illegitimate child, and public organization for more effective administration of laws relating to child dependency, delinquency, and neglect. (3 cred.; no prereq.) Guilford
- S.W.262s. Principles of School Social Work. Casework function of social worker in public school programs with discussion of the kinds of cases and problems encountered by the visiting teacher. (2 cred.; prereq. 221 or 282B) Laabs
- S.W.266f. Seminar in Child Welfare. (Cred. ar.) Guilford

F. PUBLIC WELFARE COURSES

- S.W.267f. Public Welfare I. Historical development and existing functions of present-day public welfare services. (3 cred.; no prereq.) Guilford
- S.W.268w. Public Welfare II. Continuation of Public Welfare I. (2 cred.; prereq. 267) Guilford
- S.W.269f,w,s. Seminar in Public Welfare Administration. (Cred. ar.; prereq. 268) Stinson

G. SOCIAL ADMINISTRATION AND COMMUNITY ORGANIZATION

- S.W.275s. Principles of Administration Applied to Social Work. A technical study of methods of planning, organizing, and directing social agencies, and of making the public aware of their work. (3 cred.; prereq. 200 or equiv.) Kidneigh
- S.W.276. Legal Aspects of Social Work. Legal information for social workers to furnish background for understanding social problems having legal implications with reference to the court system; legal process; legal rights of recipients. Not designed to teach technical law. (3 cred.; prereq. 200 or equiv.) (Not offered 1953-54)
- S.W.279f. Seminar in Administration and Community Organization. (Cred. ar.; prereq. 275 and 280) Kidneigh

S.W.280s. Community Organization. An analysis of the process by which groups and individuals within a community work together toward a social goal and the professional worker's role in this process. (2 cred.; prereq. 200, 220, and 282A or permission of instructor) Reichert

H. GROUP WORK COURSES

- S.W.282Af,s. Principles of Group Work I. A general introduction to the philosophy of social group work, its place in the community, understanding of the needs of individuals in groups, the group work process and its use in various fields, as recreation, hospital, and psychiatric settings. Special emphasis on casework—group work relations and the referral process. (3 cred.; fall quarter open to social work students only, spring quarter open to all graduate students; prereq. 210 which may be taken simultaneously) Konopka, Luck
- S.W.282Bw. Principles of Group Work II. Understanding of the group process, formation of groups, the role of the group worker in relation to different kinds of groups, and as the effect of social forces in the community on group behavior. Teaching of record writing, use of face sheet material. (2 cred.; prereq. S.W. 282A plus 211 and 236 which may be taken simultaneously, or equiv.) Saloshin
- S.W.283w. Use of Program in Groups I. Understanding of program as a tool in meeting the needs of the individual in the group and of the community. Understanding the value of specific program in relation to needs. Teaching skill in planning and executing program activities. (2 cred.; prereq. S.W. 282A) Saloshin
- S.W.284f. Use of Program in Groups II. Program planning and execution with special emphasis on the teaching of principles and practice of the discussion method. (1 cred.; prereq. S.W. 282A) Luck
- S.W.285s. Group Work III. Intensified understanding of the individual in the group. Analysis of record material taken from normal and therapeutic groups including referral process. (2 cred.; prereq. S.W. 282B) Saloshin
- S.W.286w. Group Work IV—Therapeutic Group Work. Group work in a psychiatric setting. Work with individuals in a group for therapeutic purposes. Understanding of the role of the worker. Therapeutic grouping. A discussion of literature on group therapy. (2 cred.; prereq. S.W. 285 and permission of instructor) Konopka
- S.W.287f. Supervision and Administration in Group Work I. Principles and practice of administrative supervision, departmental planning, financing, budgeting, work with board, staff and volunteers. Supervision of staff and volunteers. Use of supervisory records. (2 cred.; prereq. S.W. 285) Saloshin
- S.W.288w. Supervision and Administration in Group Work II. Principles of relationship and responsibility of the professional group worker toward the field of social work, related fields, and the wider community. Methods to carry out this responsibility. (2 cred.; prereq. S.W. 287) Luck
- S.W.289f,s. Seminar in Group Work. (Cred. ar.) Konopka

I. RESEARCH COURSES

- S.W.293f,w,s. Special Studies in Social Work. (Cred. ar.; fulfills 9-cred. requirement for degree project) Staff
- S.W.299w,s. Seminar in Recent Research in Social Work. (Cred. ar.) Scott
- S.W.300f,w,s. General Seminar in Social Work. (Cred. ar.) Kidneigh, Boehm, Konopka, Stinson
- Soc.180w. Methods of Social Research. (3 cred.; prereq. Soc. 45 or 182 or equiv.) Monachesi
- Soc.182f. Statistical Methods. (3 cred.; prereq. Soc. 1 and 15 cred. in social science, child welfare, education, philosophy or psychology, or permission of instructor) Francis
- Soc.183s. Problems in Social Measurement. (3 cred.; prereq. Soc. 45 or 182 or equiv.) Monachesi