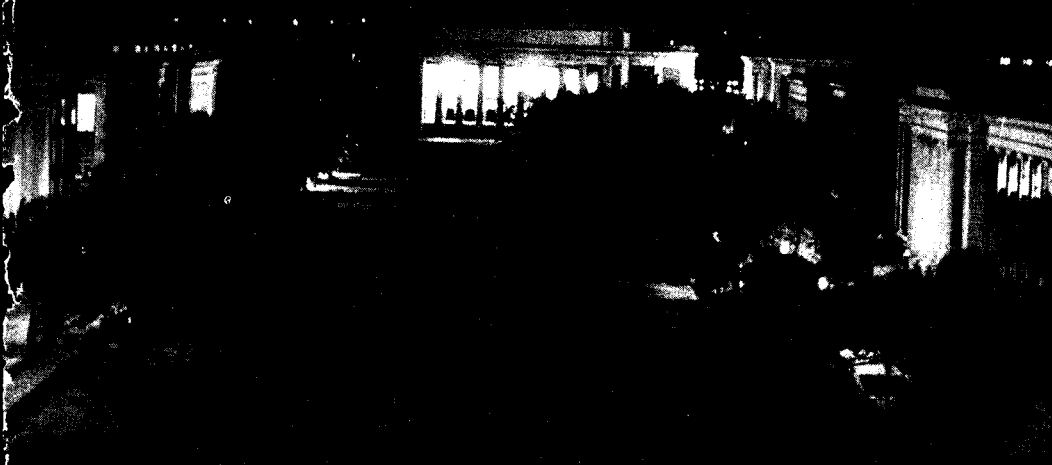


The Bulletin of the
UNIVERSITY of MINNESOTA

Learn for Living



EXTENSION CLASSES

1949-1950

TWIN CITIES AREA

CALENDAR

1949

September	12	Monday	Fall registration begins
September	24	Saturday	Last day for registration without late fee
September	26	Monday	Fall quarter and semester classes begin
October	8	Saturday	Last day for transfer without late fee
December	12	Monday	Winter quarter registration begins
December	17	Saturday	Christmas recess—Fall quarter closes

1950

January	3	Tuesday	Fall semester resumes. Winter quarter begins
January	23	Monday	Spring semester registration begins
February	3	Friday	Fall semester closes
February	4	Saturday	Last day for registration without late fee
February	6	Monday	Spring semester begins
February	18	Saturday	Last day for transfer without late fee
March	13	Monday	Spring quarter registration begins
March	18	Saturday	Winter quarter closes
March	27	Monday	Spring quarter begins
June	2	Friday	Spring semester closes
June	10	Saturday	Spring quarter closes

Opening and closing dates for classes on other than semester or quarter basis are indicated below description of each class. Registration should be made during the two weeks preceding the opening of such classes; the customary privilege fees for late registration will be in effect after the opening session of all these classes. See page 4 for registration regulations.

EXTENSION OFFICES

Minneapolis (Campus): Ground floor, southeast entrance, Nicholson Hall, University of Minnesota, Main 8158

Minneapolis (Downtown): 690 Northwestern Bank Building, Marquette Ave. and Sixth St. South, Ma 0624

St. Paul: Extension Center, 500 Robert St., Cedar 6175

Duluth: 504 Alworth Building, Radisson 1317

SPECIAL OFFICE HOURS

Campus Office: September 12 through October 1 and January 23 through February 11: **weekdays**, 12:00 to 8:15 p.m.; **Saturdays**, 8:00 a.m. to 5:00 p.m.

Minneapolis Office: September 12 through September 23 and January 23 through February 4: **weekdays**, 12:00 to 8:15 p.m.; **Saturdays**, 8:30 a.m. to 5:00 p.m.

St. Paul Office: September 12 through October 1 and January 23 through February 11: **weekdays**, 12:00 to 8:15 p.m.; **Saturdays**, 8:30 a.m. to 5:00 p.m.

REGULAR OFFICE HOURS

Campus Office: Monday through Thursday, 8:00 a.m. to 8:00 p.m.; Friday, 8:00 a.m. to 5:00 p.m.; closed Saturdays.

Minneapolis and St. Paul Offices: Weekdays, 8:30 a.m. to 5:00 p.m.; Saturdays, 9:30 a.m. to 12:00 noon.

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BOARD OF REGENTS

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

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Center for Continuation Study, Norman Johnson, Center for Continuation Study Building
Community Program Service, James S. Lombard, 229 Northrop Memorial Auditorium
Correspondence Study, F. Lloyd Hansen, 251 Nicholson Hall
Evening and Special Classes, Huntington Miller, 54 Nicholson Hall
Municipal Reference Bureau, Clarence C. Ludwig, 15 Library Building
Radio Station KUOM, Burton Paulu, Eddy Hall
State Organization Service, William C. Rogers, 150 Nicholson Hall

GENERAL EXTENSION DIVISION

Evening and Special Classes—Twin Cities Area

REGISTRATION REGULATIONS

The following regulations apply to veteran as well as nonveteran students unless otherwise indicated. In addition all service veterans should read **SPECIAL REGISTRATION INFORMATION FOR VETERANS** on page 5.

Registration dates, offices, and office hours are indicated inside the front cover of this bulletin; registration may also be made by mail **EXCEPT BY VETERANS**. Registration forms will be sent to nonveterans upon request to any Extension office.

Eligibility

The University's Extension classes are open to everyone who can handle them successfully. Service veterans may register under the G.I. Bill. See Special Information Regulations for Veterans, page 5. See page 7 for information as to "prerequisites." If you are in doubt as to your qualifications for a course, you should consult the class instructor or an Extension Division adviser before registering. If this is not possible we recommend that you register anyway, to avoid payment of late registration fee, and consult the instructor at the first class session. If the instructor decides that you are not qualified, or that the course does not meet your needs, a note from him to this effect, submitted with your notice of cancellation (see Cancellations and Refunds, below) will bring you a full refund, or a transfer to another class will be accepted without penalty during the first two weeks of classes.

Fees

The full amount of the tuition and other special fees is payable at the time of registration. Checks or money orders should be drawn for the exact amount due and made payable to the University of Minnesota. The fee for each class is designated in the listing of the class in this bulletin.

Registration Periods

All registrations should be made during the two weeks preceding the first week of a class term (semester, quarter, or special). Registration will be permitted through the first three weeks of a term, subject to certain regulations and fees as set out below. No registrations will be accepted after the third week of any term without special permission of the Students' Work Committee.

Late Registrations

All initial registrations received after the opening of a class term will be considered "late registrations" and will be subject to a privilege fee. A fee of \$2 is charged through the first week of classes; during the second week the fee increases 50 cents per day up to a maximum of \$5. The time of registration by mail will be determined by the postmark. These special fees are not included in the privileges of the G.I. Bill and must be paid by the veteran personally.

Additions and Transfers

Classes may be added to an initial registration and transfers will be permitted without penalty through the first two weeks of classes. During the third week additions or transfers will be permitted only upon presentation of a **Special Registration Permit** endorsed by the instructor of the class which the student wishes to enter. A privilege fee of \$2 will be required (veterans included) to complete all such late additions or transfers. No classes may be added or transfers made after the third week of classes without special permission of the Students' Work Committee.

Auditors

A student who does not expect to do all the required work of a class may register as **auditor** by writing "Aud." in the credit column of the registration form, or by asking his instructor to record him as an auditor any time before the final examination. Auditors' status carries no credit. Auditors pay the same fee as other students. **No veteran** may audit any class, however, without written permission from the Extension Veterans' office.

Cancellations and Refunds

Notice of cancellation and application for refund, accompanied by a fee receipt, must be in writing and submitted by the student to the main office of the Extension Division. **The effective date of cancellation** for the purpose of calculating refunds will be that on which notice is received, regardless of the date of last attendance.

Full refund will be made only when notice of cancellation is received before the opening of classes, or when class offerings are cancelled by the Extension Division, or in certain cases upon certification of the instructor (see Eligibility above).

Partial refunds, in accordance with general university regulations, will be made for all other cancellations which occur during the first eight weeks of classes, provided proper notice is received. **The scale of refunds is available for inspection at any Extension Division office.**

No refunds can be made to students who attend class after the first half of the class sessions have been held.

Veterans please refer to **Special Registration Information** section below for additional notes regarding cancellations by veterans.

Maximum Work Load

The maximum amount of Extension work, including both evening classes and correspondence study courses, to be carried by students employed full-time is 10 credit hours. Permission to exceed this maximum load must be received from the Students' Work Committee.

Present or Former University Day-School Students

A student who is regularly registered for day class work in any unit of the University may register for Extension classes only with the permission of the dean or head of his unit.

A student who has been dropped from any unit of the University may not register for Extension work without written permission from the dean or head of that unit.

SPECIAL REGISTRATION INFORMATION FOR VETERANS

Veterans eligible for education and training under the G.I. Bill (P.L. 346) or the Vocational Rehabilitation Act (P.L. 16) may register for Extension classes at the University of Minnesota upon presentation of proper authorization from the Veterans Administration. The expenses of tuition, fees, books, and supplies for these classes will be paid by the Veterans Administration. In certain cases, depending on income, number of dependents, and credit load being carried, veterans under P.L. 346 may be eligible to receive partial or full subsistence payments from the Veterans Administration.

As a certain amount of delay may be met in obtaining proper authorization from the Veterans Administration, we urge all veterans to check the requirements below and to apply promptly for the necessary papers or to make certain that their current papers are in order, well in advance of registration. The Veterans Office, Room 56, Nicholson Hall, University of Minnesota, MAIn 8158, Extension 6295-6296, will supply all forms or information necessary to making application for Certificates of Eligibility, Authorizations for Related Instruction or Letters of Authorization. The regional Office of the Veterans Administration is now located at Fort Snelling, St. Paul 11, Minnesota

New Extension Veteran Students

Veterans using their educational benefits under P.L. 346 for the first time, when registering for Extension classes only, must present either an original Certificate of Eligibility or a certified copy, or photostat of their discharge or separation papers. If a veteran has previously used his educational benefits at some educational institution or training establishment, other than the University of Minnesota, a Supplemental Certificate of Eligibility must be presented. Veterans who are basically enrolled in another educational institution, or who are in on-the-job training under P.L. 346, must present an Authorization for Related Instruction. Rehabilitation veterans under P.L. 16 must present a Letter of Authorization at each time of registration.

Former University of Minnesota Veteran Students

Veterans using educational benefits under P.L. 346 who have previously submitted an Original, or Supplemental, Certificate of Eligibility to the University of Minnesota, need not secure additional authorization for registration in Extension classes unless they have been in attendance at some other educational institution or training establishment since attending the University or unless they have received a degree from the University of Minnesota. Veterans basically enrolled in another educational institution must present an Authorization for Related Instruction at each time of registration. On-the-job trainees under P.L. 346 who have previously submitted an Authorization for Related Instruction to the University of Minnesota need not secure additional authorization for registration provided their Extension classes are related to their training objective. Rehabilitation veterans under P.L. 16 must present a letter of Authorization at each time of registration. Veterans who are not certain as to the validity of their Certificate of Eligibility, or Authorization for Related Instruction now on file, should apply to the Veterans Office, Room 56, Nicholson Hall, University of Minnesota, for information on this subject. **No veteran registration will be accepted if there is any doubt as to the validity of the Certificate of Eligibility or Authorization for Related Instruction now on file.**

All Veteran Students

No veteran will be accepted for registration in Extension classes without proper authorization from the Veterans Administration. In certain cases, when necessary to avoid payment of late registration fees, a cash registration will be accepted with full refund privileges, pending receipt of a Certificate of Eligibility or Authorization for Related Instruction. Because of the detailed Report of Registration of Veterans which must be submitted to the Veterans Administration, veterans must register in person at some General Extension Division Office. **No registration by mail will be accepted from any veteran.** This rule applies to former Extension veteran students as well as new enrollees.

Cancellation of Classes by Veterans

In addition to the regulations governing cancellations listed on page 5, veterans are urged to report all cancellations immediately to the Veterans Office, General Extension Division, in order to protect their eligibility status. **This office will notify the Veterans Administration of the cancellation as of the date received.** Regulations require that in the case of cancellations all books, supplies, and equipment issued must be turned in to one of the General Extension Division offices. Veterans failing to abide by this regulation will be personally liable for payment for such materials.

GENERAL INFORMATION

How to Use This Bulletin for Registering

The listing of each class in this bulletin should in most cases give you all the information you need for filling out your registration forms. Most classes appear under their appropriate department or subject heading; where several classifications are possible, cross-references will usually be given. Use of the index at the back of the bulletin plus a little search will usually determine whether the class you are seeking is being offered.

The first line or two of the listing gives you the class number, if any, the title, the number of credits, and the cost per term (semester, quarter, or special) plus special fees, if any. All numbered listings are university credit classes and are the same as those of corresponding day classes or have been approved for Extension use by the department concerned. Other classes are not numbered and are indicated as for "Extension credit"; any of these classes may be applicable toward an appropriate Extension Certificate (see Extension Certificates, page 10). A few class listings are daggered (†), others are continuation classes, i.e., run for two or three semesters or three quarters; for special information concerning registration in these classes see **Daggered Listings and Continuation Classes** below.

The description of the course content follows. If the class is repeated each semester, or if the enrolment is limited, it is so indicated at the end of the description. The course prerequisites, if any, terminate the description (see **Prerequisites** below).

The final items in the listing give the term in which it is to be offered, the day of the week and opening time, the location and the instructor if assigned. Where there is more than one section two schedules are given.

Classes listed in this bulletin may be cancelled because of insufficient enrolment.

Classes not listed in this bulletin will, when possible, be organized on petition from a sufficient number of persons.

Prerequisites

Prerequisites are stated for information, not as obstacles. Many Extension classes list no prerequisites, and are open to all who can profit by them. Other classes are of such a nature that they cannot be carried through without certain previous study. The prerequisites listed for the latter are those which, in the judgment of the department concerned, should be met by students who expect to receive university credit for the class. In many cases a reasonable equivalent of related study, training, or experience will be accepted. If you are in doubt as to your status, consult the instructor at or before the first class session. See paragraph on **Eligibility in Registration Regulations** section on page 4 for special refund or transfer privileges in such cases.

Daggered (†) Listings

The units of classes followed by the dagger symbol must be taken in sequence and credit cannot be received for the first unit until the second is completed. Students who have not completed the first unit of a daggered course at the University but who believe they are qualified to enroll in the second unit must receive permission of the Students' Work Committee before registering for the second unit.

Continuation Classes

Unless otherwise indicated (see, for instance, special notes under **History** and **Art** headings) units of classes which run for two semesters should be taken in sequence and the first unit of the course should be considered as prerequisite to the second unit even though the two units are listed together with "no prerequisite" indicated (see French 1-2, or Machine Design I-II). Students who believe they have the equivalent of the first unit in work done elsewhere, or in practical experience, should consult the instructor either before registering or at the first class session to be sure they have the necessary background to qualify for the advanced unit.

Credits

Validity—The credits listed in the class description are quarter credits, notwithstanding the fact that regular Extension terms are organized as semesters rather than as quarters. Unless these credits are called Extension credits, they are understood to be valid toward a degree in the college under which the class concerned is organized; Extension credits count only toward Extension certificates, not toward degrees. Note that classes in certain subjects carry less university credit in Extension than do the corresponding day school classes

owing to the limited number of class-hours and extent of course content of the Extension class (i.e., Econ. 6-7 carries 6 credits in Extension against 10 credits in the College of Science, Literature, and the Arts and the School of Business Administration). The successful completion of these subjects in Extension, however, does meet the prerequisite requirements of advanced subjects in both Extension and day school.

Transfer—Credits may sometimes be transferred from one college to another, or from another accredited institution to this University, but requests for such transfer are always ruled on individually and according to their merits; consult the Students' Work Committee.

Established by special examination—A student who, by independent study or by experience, has gained knowledge which he believes to be equivalent to that covered by a particular Extension class may establish credit for such class by passing a special examination on the subject matter covered by the class. The fee for such special examination is \$5. In the same way, a student may establish credit for work done at an unaccredited institution. Arrangements for special examinations are made through the Students' Work Committee.

Residence—Credits earned in undergraduate Extension classes in Minneapolis, St. Paul, and Duluth are "resident" credits.

Graduate—A graduate student may, upon the approval of his graduate adviser, petition the dean of the Graduate School to have transferred to his graduate record not more than six quarter credits under Plan A or nine quarter credits under Plan B in courses numbered 100 and above offered by the Extension Division of the University of Minnesota in the Twin City area, and taught by regularly approved members of the graduate faculty (for this information, consult the chairman of the Students' Work Committee). Petition to transfer is limited to credits earned in Extension classes since September, 1943. Such transfers of credits will not give residence credit.

For special adjustments which are possible regarding graduate credit in the School of Social Work, consult the School of Social Work.

Honor points—For Extension certificates honor points are used only to ascertain whether a student has the required C average; they are not used to reduce the number of credits required for a certificate. Students in Extension classes who are seeking degrees should consult an officer in the college in which the degree is sought regarding the status of honor points in that college.

Grades

The grades A, B, C, and D indicate work of varying degree of merit, D being the lowest passing grade. The grade F, failure, indicates a deficiency so serious that the student must repeat the class to earn credit in it; nor may a student who receives a failure in a continuation class register for another part of such a class until the failure is made up.

Incomplete work which is of at least D grade, but for acceptable reasons not complete, may be marked I, Incomplete, provided the student has completed three fourths of the work of the class. Incomplete work may be completed in any way the instructor directs and should have the student's earliest attention. If this is not done within a year, the incomplete becomes a cancellation. In such a case, a student may ask that the cancellation be set aside and that he be permitted to make up the incomplete. If his request is approved, the special examination fee, \$5, is charged.

Reports of students' grades are sent them by the Extension clerk in the University Office of Admissions and Records and cannot be furnished by the Extension offices. The assistant dean's office, however, will check reports if necessary and will obtain transcripts of students' records upon request.

Athletic Facilities and Season Tickets

Recreational activities for men and women are listed in this bulletin. In addition, men may use the gymnasium and swimming pool on terms available on request.

Any student enrolled for at least five credits of Extension classes (but not correspondence study courses) with a minimum fee of \$25 may purchase one season ticket book at \$10. Married students may purchase a second book for use by husband or wife only. Price of second book is subject to additional federal

admission tax equal to amount paid by general public. Books may be bought at the special student athletic ticket sale headquarters on the campus the week before classes begin. Regulations governing purchase, transfer, and cancellation of these books are available on request.

The University Library

Extension students attending classes in Minneapolis or St. Paul are entitled to draw books from the University Library to be used in connection with their classes but are subject to all library regulations including those in regard to return upon demand and to fines on overdue books. These regulations are set forth in the *Library Handbook*, copies of which may be had at the loan desk. Students who wish to have library privileges must pay a small deposit at the Campus Extension office before applying for a library card.

Minneapolis Symphony Orchestra Tickets

Special rates for season tickets to the regular concert season are available to students registered for at least five credits in Extension classes.

Correspondence Study Courses

A large selection of correspondence study courses is available to students who prefer this form of study; ask for a bulletin.

ADVICE AND COUNSELING

Members of the Extension Division staff are available at all offices by **appointment** throughout the year for general advisory services on the selection of classes, programs of study, certificate and degree requirements, etc. The Students' Work Committee in the Minneapolis Campus office assists students in arranging programs of study leading to university degrees, and handles evaluations of transcripts for advanced standing, satisfaction of prerequisites, special examinations, and other academic matters. Appointments for the testing and counseling services of the university Student Counseling Bureau may also be arranged through the Students' Work Committee.

Every effort will be made to have an adviser on duty at the Minneapolis Campus office at all times during special office hours before each semester (see inside cover). If special advice is required, however, an appointment is recommended. Advisers will be on duty at downtown offices during registration periods at convenient hours; consult offices for schedule or make special appointments.

UNIVERSITY DEGREES

It is possible through Extension classes alone to meet all the requirements for several of the regular university degrees such as: in the College of Science, Literature, and the Arts, the 4-year bachelor of arts with a liberal arts major and the 2-year associate in liberal arts; in the School of Business Administration, the bachelor of business administration and the bachelor of science in economics. In other degree programs an Extension student can complete all but a few credits in the most advanced subjects, while in still others such as Engineering, Education, Prelegal, Nursing, Pharmacy, Dentistry, etc., the Extension Division can furnish the equivalent of from one to two years of the total degree program.

A student who wishes to become a candidate for a university degree must eventually meet the admission requirements of the University and the entrance and degree requirements of the college in which the degree is sought. The Extension Students' Work Committee will assist the student to determine his status with regard to these requirements. In all cases an Extension student who has reached the point of qualifying for senior college (the equivalent of junior or third year) standing should apply for admission to the college or school of his choice and, upon acceptance for admission, should select an adviser in such college or school and continue a program of study under the adviser's supervision. **All students who expect to complete the requirements for a university degree during a coming semester should make formal application at the beginning of the semester for the award by the college or school concerned.**

EXTENSION CERTIFICATES

The General Extension Division awards certificates for the satisfactory completion of approved programs of study. The work may be done in evening classes, correspondence study courses, or both. Most day-school or Summer Session credits from the University of Minnesota may be approved. Students may also transfer credits from other accredited institutions provided a minimum of 25 per cent of the credits required for the certificate is earned at the University of Minnesota. For advice or information on programs of study leading to certificates, including **permission for substitution and transfer of credits**, consult the Students' Work Committee. Certificates are awarded to students who complete with a C average any of the following programs of study:

LIBERAL EDUCATION CERTIFICATE

Liberal Education Certificate (45 credits)

English requirement: Freshman Composition 4-5-6, or exemption

Spread requirement: at least 6 credits in each of the following fields:

Humanities: English composition (beyond 4-5-6) or literature, fine arts, foreign languages, humanities, philosophy, speech

Sciences: astronomy, botany, chemistry, geology, mathematics, physics, psychology, zoology

Social Sciences: anthropology, economics, geography, history, political science, sociology

Concentration requirement: at least 12 credits in one subject, or in approved related subjects in addition to the 6 or 9 credits earned in that subject under the spread and English requirements above.

Electives: additional courses approved by the Students' Work Committee to make a total of 45 credits for the certificate.

BUSINESS CERTIFICATES

Junior Certificate (45 credits)

Core requirement:

Business English or Composition 4, or exemption

B.A. 51 Business Law

Econ. 5 Elements of Statistics

Econ. 6-7 Principles of Economics

Econ. 22-23 Principles of Accounting

Spread requirement: at least one three-credit course in any three of the following fields:

Business Administration: B.A. 89 Production Management

Distribution: Advertising, Marketing and Merchandising, Traffic and Transportation

Finance

Labor and Personnel

Business Law: B.A. 52, 53, or 56

Concentration requirement: at least 9 additional credits in one of the following fields, or approved combination thereof:

Accounting

Advertising

Economics

Finance

Insurance

Labor and Personnel

Marketing and Merchandising

Statistics

Traffic and Transportation

Electives: additional courses approved by the Students' Work Committee to make a total of 45 credits for the certificate.

Senior Certificate (90 credits)

Core requirement:

Business English and Business Correspondence or Composition 4-5-6, or exemption

B.A. 51 and either 52 or 53 Business Law

B.A. 89 Production Management

Econ. 3 Elements of Money and Banking

Econ. 5 Elements of Statistics

Econ. 6-7 Principles of Economics

Econ. 22-23 Principles of Accounting

Econ. 161 Labor Problems and Trade Unionism

Concentration requirement: at least 18 additional credits in one of the following fields, or approved combination thereof:

- | | |
|-------------|-----------------------------|
| Accounting | Labor and Personnel |
| Advertising | Marketing and Merchandising |
| Economics | Statistics |
| Finance | Traffic and Transportation |
| Insurance | |

Electives: additional courses approved by the Students' Work Committee to make a total of 90 credits for the certificate.

ENGINEERING CERTIFICATES

Junior Certificate (45 credits)

Core requirement:

- M.&M. 11 College Algebra
- M.&M. 12 Trigonometry
- M.&M. 13 Analytic Geometry
- M.&M. 24 Differential Calculus
- M.&M. 25 Integral Calculus
- M.&M. 26 Technical Mechanics: Statics
- D.&D.G. 1-2 Engineering Drawing

Electives: additional courses approved by the Students' Work Committee to make a total of 45 credits for the certificate.

Senior Certificate (90 credits)

Core requirement:

- M.&M. 11 College Algebra
- M.&M. 12 Trigonometry
- M.&M. 13 Analytic Geometry
- M.&M. 24 Differential Calculus
- M.&M. 25 Integral Calculus
- M.&M. 26 Technical Mechanics: Statics
- M.&M. 127 Technical Mechanics: Dynamics
- M.&M. 128a-128b Strength of Materials
- D.&D.G. 1-2 Engineering Drawing

Concentration requirement: at least 30 additional credits in one of the following fields, or approved combination thereof:

- | | |
|--------------------------|------------------------|
| Aeronautical Engineering | Electrical Engineering |
| Civil Engineering | Mechanical Engineering |

Electives: additional courses approved by the Students' Work Committee to make a total of 90 credits for the certificate.

INDUSTRIAL RELATIONS CERTIFICATE

Industrial Relations Certificate (45 credits)

Core requirement: (37 credits)

- *Econ. 6-7 Principles of Economics
- *Econ. 161 Labor Problems and Trade Unionism
- Econ. 162 Labor and Social Movements
- Econ. 164 Labor Legislation and Social Insurance
- B.A. 167 Introduction to Industrial Relations
- Survey of Current Problems in Industrial Relations
- *Psy. 1-2 General Psychology
- Psy. 4-5 Introductory Laboratory Psychology
- Psy. 122-123 Vocational and Personnel Psychology

Electives: an additional 9 credits selected from the following courses:

- | | |
|------------------------------------|--------------------------------|
| *B.A. 86 Office Management | Wage and Salary Administration |
| B.A. 89 Production Management | Elements of Supervision |
| Psy. 119 Psychology of Personality | Motion Study |
| Psy. 144-145 Abnormal Psychology | Time Study |
| *Soc. 100 Social Psychology | Plant Layout |

Special requirement: to qualify for the Certificate award upon completion of the core and elective requirements a student must pass an Industrial Relations Classification and Placement Test administered by the Industrial Relations Center.

* Also offered by correspondence study.

GENERAL CLASSES

AGRICULTURE

Note—Students who travel by street car or bus can reach the Agriculture Buildings on the St. Paul Campus by taking the intercampus street car that leaves the Minneapolis Campus at 6:00 p.m.

Agr. Eng. 42A-B Art Metal Work. See Engineering Classes, page 53.

Frozen Foods. 2 Extension credits. \$10 plus \$1 materials fee.

A comprehensive study of the principles of freezing and storing foods, including practical instruction in the preparation and freezing of foods for the locker plant and home freezer. 12 class meetings. **Note opening date and location on Minneapolis campus.**

November 1-January 31

T 6:20 Physics 133, Minneapolis Campus,
Winter

6 Types and Breeds of Light Horses. 3 credits. \$15 plus \$3 laboratory fee.

The origin, history, and characteristics; the economic and recreational importance of the breeds of light horses. Practice judging of the more popular types and breeds. No prerequisite.

Spring Semester

T 8:05 Livestock Pavilion, St. Paul Campus,
Harvey

7 Principles of Livestock Production. 3 credits. \$15 plus \$2 laboratory fee.

An introduction to the livestock industry including a study of the basic principles involved in selection, feeding, breeding, and management of beef cattle, sheep, swine, horses, and poultry. Practice in judging the various kinds of farm animals. No prerequisite.

Fall Semester

T 7:00 Livestock Pavilion, St. Paul Campus,
Harvey

12 Dairy Stock Feeding and Management. 3 credits. \$15.

Emphasis on the practical side of dairy stock feeding and management of a modern dairy. Application of principles of nutrition to feeding. Feeding standards; characteristics of various feeding stuffs; formulation of rations. No prerequisite.

Fall Semester

Th 6:20 Haecker Hall 9, St. Paul Campus,
Gullickson

Hort. 10 Home Floriculture and Gardening. 3 credits. \$15.

A practical course in the science of house plant growing, propagation and care of plants; and, special emphasis on autumn gardening activities; growing bulbs in the garden and in pots for the home in winter. Student projects in growing plants from cuttings; and growing and forcing bulbs for winter house plants. A special course for the housewife, the school teacher, the tired business man, the weary professional worker, and the plain-dirt gardener who wants to extend his knowledge of plant culture and enjoy some activity with plants throughout the year. No prerequisites.

Fall Semester

T 6:20 Horticulture 102, St. Paul Campus,
Phillips

Hort. 24 Home Landscape Planning. 3 credits. \$15.

An opportunity for the home owner to learn the principles of planning the home grounds and how to apply them to his own problem of landscaping his home grounds. This course is also designed to meet the needs of the nurseryman, the landscape gardener, and the student who expects to make his living by landscaping. Anyone planning a new home will find this course especially helpful in accomplishing his ideal, which is a well-planned house, and well-planned and planted grounds and gardens. No prerequisites.

Fall Semester

Th 6:20 Horticulture 102, St. Paul Campus,
Phillips

Hort. 25 Home Landscape Planting and Construction. 3 credits. \$15.

More or less a continuation of the course in Home Landscape Planning; however, a beginning student may take this course without being handicapped. Special emphasis is placed upon the recognition and use of plant materials in securing artistic landscape compositions and the planning and planting of ornamental gardens; also construction of lawns, gardens, walks, walls, fences, terraces, pools, etc. An art course in landscaping and gardening presented in a practical way for the home owner, the landscape gardener, the student of art and nature.

Spring Semester

Th 6:20 Horticulture 102, St. Paul Campus,
Phillips

Hort. 51 Garden Flowers and Home Gardening. 3 credits. \$15.

A complete, practical course in home gardening for the experienced gardener as well as the beginner. All the practical horticultural aspects of plant growing and garden and home grounds care are covered in lecture, demonstrations, and illustrations; student projects in propagating plants in greenhouses, hot beds, and home facilities. Special emphasis on pruning, fertilizing, weed control, and insect and disease control. Also a survey of all the plants recommended for Minnesota gardens and yards. No prerequisites.

Spring Semester

T 6:20 Horticulture 102, St. Paul Campus,
Phillips

Fruit and Vegetable Gardening. 3 Extension credits. \$15 plus \$1 laboratory fee.

In this course it is planned to keep in mind the needs and desires of the class. The use of technical terms and commercial practices will be reduced to bare essentials. In fruit growing, emphasis will be placed on planting, pruning, fertilizing, control of pests and selection of suitable varieties. Grafting by different methods will be demonstrated and several periods will be devoted to the actual practice of grafting. Vegetable crops will be discussed under culture, varieties and protection from pests. 12 meetings. No prerequisites.

February 10-April 28

F 6:20-9:00 Horticulture 8, St. Paul Campus,
Weir

ANTHROPOLOGY**40 Introduction to Anthropology.** 3 credits. \$15.

The course serves as an introduction to the entire field of anthropology: physical anthropology, prehistory, cultural anthropology. Lectures and reading will cover man's relations to the primates, human evolution, the races of man, the development of culture, and a survey of the varieties of ways of life in primitive and modern societies. Introductory anthropology should be of special interest to students of related fields like history, sociology, and psychology.

Fall Semester

T 8:05 Wesbrook 206, Winchester

41 Introduction to Cultural Anthropology. 3 credits. \$15.

At the present time increasing contacts with other peoples in all parts of the world make it important that we of the West understand the patterns of living of other societies. To this end cultural anthropology can be of valuable assistance. The present course provides an introduction to the fundamentals of cultural anthropology—the nature of culture, cultural change, culture and personality, and the varieties of major institutions like the family, etc. Special attention is given to the description of several different societies on different levels of social and technological complexity.

Spring Semester

T 8:05 Wesbrook 206, Winchester

80 The American Indian. 3 credits. \$15.

A survey of the native cultures of the Americas. Descriptive accounts of the physical types, languages, prehistory, and cultures of North, Central, and South America. No prerequisite.

Fall Semester

Th 8:05 Nicholson 102, Spencer

ART

* Note—All studio drawing and painting classes, designated by asterisks (*), will meet for a 2½-hour period. Those who wish to receive university credit in these courses will be expected to do some work outside of class—consult instructor. Students may register for any unit number of these sequences in any semester, provided units are satisfactorily completed in the order listed or instructor's consent is obtained for registration in an advanced unit on the basis of background and ability. Advanced standing credit will be granted in special cases for work done elsewhere—consult chairman of Art Department.

All registrations for St. Paul Art classes will be taken only at the Extension Center, 500 Robert Street.

1 Understanding the Arts. 3 credits. \$15.

An illustrated lecture course designed to give the student an understanding of art, including painting, sculpture, architecture, and the industrial arts. This understanding is based on the study of the great works of art, knowledge of the principles involved in their creation, and recognition of the place of art in its social setting. No prerequisite.

Fall Semester

Th 6:20 Jones 104

***20-21-22 First Year Drawing and Painting.** 2 credits each semester. \$15 plus \$1 laboratory fee. **First Year Drawing and Painting Laboratory** (St. Paul). 2 Extension credits. \$10.

Introduction to materials and techniques; still life, figures, and landscape. No prerequisite.

Fall Semester			Spring Semester		
T	7:00	Main Engineering 417, Doseff	T	7:00	Main Engineering 417, Doseff
Th	7:00	Main Engineering 417, Young	Th	7:00	Main Engineering 417, Young
Lab. T	7:00	St. P. Gallery, MacKenzie	Lab. T	7:00	St. P. Gallery, MacKenzie

***30-31-32 Commercial Drawing.** 2 credits each semester. \$15 plus \$1 laboratory fee.

Elementary and advanced commercial art: design, lettering, layouts, posters in pen and ink, pencil, color, or other media. Solutions of practical problems stressed. Special attention to fashion drawing and design. No prerequisite.

Fall Semester			Spring Semester		
M	7:00	417 Main Engineering, Doseff	M	7:00	417 Main Engineering, Doseff

***33-34-35 Sculpture I—Modeling.** 2 credits each semester. \$15 plus \$1 laboratory fee.

A basic course in sculpture introducing the student to the fundamental materials and problems of three-dimensional design necessary for further work in sculpture or ceramics. Modeling in clay and plaster. Ceramic sculpture. Portrait, figure, and volume design. No prerequisite.

Fall Semester			Spring Semester		
W	7:00	Main Engineering 405, Sabean	W	7:00	Main Engineering 405, Sabean

***43-44-45 Design Workshop (General Crafts).** 2 credits each semester. \$15 plus \$1 laboratory fee.

Studies in the nature of materials, exercises in three-dimensional design. Work in metal, wood, clay, leather, plastics, etc. Class meets for 2½-hour period. No prerequisite.

Fall Semester			Spring Semester		
T	7:00	Jones 2	T	7:00	Jones 2

46 History of Architecture Survey. 3 credits. \$15.

A one-semester course covering the most important phases of the full-year course, History of Architecture 51-52-53. Significant architecture of the past, with particular reference to the geographic, social, and technical influences which produced it. Designed for students who wish to prepare for the State Architectural Registration Examination or for those who wish a general background in history of architecture. Will carry elective credit in the College of Science, Literature, and the Arts. No prerequisite.

Fall Semester		
T	6:20	Nicholson 100, Boss

***50-51-52 Pictorial Composition.** 2 credits each semester. \$15 plus \$1 laboratory fee. **Pictorial Composition Laboratory** (St. Paul). 2 Extension credits. \$10.

A basic course which approaches painting specifically in terms of the problems involved in organization of the picture space and the nature of the artist's materials. Practice in composition ranging from representational to abstract and nonobjective painting with emphasis upon individual development and experimentation in all media. Prerequisite: First Year Drawing and Painting or equivalent with instructor's consent.

Fall Semester			Spring Semester		
T	7:00	Jones 200B	T	7:00	Jones 200B
W	7:00-9:30	St. P. Gallery, MacKenzie	W	7:00-9:30	St. P. Gallery, MacKenzie
Lab. T	7:00	St. P. Gallery	Lab. T	7:00	St. P. Gallery

***60-61-62 Second Year Drawing and Painting.** 2 credits each semester. \$15 plus \$1 laboratory fee. **Second Year Drawing and Painting Laboratory** (St. Paul). 2 Extension credits. \$10.

Still life and figure problems to be carried out in charcoal, chalk, water color, and oil. Study of problems related to drawing and painting through experiments designed to suit the needs and purposes of the individual student. Prerequisite: First Year Drawing and Painting or equivalent with instructor's consent.

Fall Semester			Spring Semester		
T	7:00	Jones 200B	T	7:00	Jones 200B
W	7:00	St. P. Gallery, MacKenzie	W	7:00	St. P. Gallery, MacKenzie
Lab. T	7:00	St. P. Gallery	Lab. T	7:00	St. P. Gallery

***73-74 Illustration Techniques for Commercial and Industrial Design.** 2 credits each semester. \$15 plus \$1 laboratory fee.

Commercial art problems in line and wash drawing for newspaper reproduction and industrial design problems in rendering of industrial products. Stress is placed on development of necessary skills needed for a successful renderer rather than upon creative design.

* See note directly under Art.

Skills include line and wash drawing; lettering; rubbed chalk and carbon pencil rendering; interior and exterior freehand and scaled perspective. Prerequisite: Art 22 or equivalent with instructor's consent.

Fall Semester
M 6:30 Jones 104

Spring Semester
M 6:30 Jones 104

83 Interior Design (Interior Decorating I). 3 credits. \$15 plus 50 cents laboratory fee.

A study of traditional and modern furniture used today and of how to combine various styles. Additional subjects include room composition, color, floor coverings, wall treatments, window treatments. Some general discussions of new ideas and materials in home building. Interesting optional field trips. Drawing not emphasized. Slides and practical demonstrations are used in the regular class procedure. Each section is limited to 75 students, accepted in order of registration. Repeated spring semester. No prerequisite.

Fall Semester
M 6:20 Nicholson 209, Lewis
T 6:20 Nicholson 209, Lewis
W 6:20 Nicholson 209, Lewis
Th 8:05 Nicholson 209, Lewis

Spring Semester
M 6:20 Nicholson 209, Lewis
Th 6:20 Nicholson 209, Lewis

84 Interior Design (Interior Decorating II). 3 credits. \$15 plus 50 cents laboratory fee.

A study of decorative fabrics is an important part of the course. Students plan color schemes for specific rooms and have available beautiful fabrics and other materials. Such accessories as china, glass, silver, and movable wall decorations are included. Several talks are given by buyers from loop stores. Students are required to do some drawing and experimenting with paints; therefore, auditing is not advised. Prerequisite: Art 83.

Spring Semester
T 6:20 Nicholson 106, Lewis
W 6:20 Nicholson 106, Lewis

***90-91-92 Print Processes.** 2 credits per semester. \$15 plus \$1 materials fee.

Engraving, etching, lithography, block prints. Prerequisite: consent of instructor.

Fall Semester
Th 6:20 Jones 203, Myers

Spring Semester
Th 6:20 Jones 203, Myers

***93-94-95 Ceramics.** 2 credits each semester. \$15 plus \$1 laboratory fee. **Ceramics Laboratory (St. Paul).** 2 Extension credits. \$10.

Basic fundamentals of pottery including handbuilding, wheel throwing—slip casting, glaze theory, and formulation of original glazes—use of all types of ceramic decoration. Technique of firing kiln. No prerequisite.

Fall Semester
M 6:20 Jones 10
W 7:00 St. P. Gallery, MacKenzie
Th 7:00 St. P. Gallery, MacKenzie
Lab. M 7:00 St. P. Gallery

Spring Semester
M 6:20 Jones 10
W 7:00 St. P. Gallery, MacKenzie
Th 7:00 St. P. Gallery, MacKenzie
Lab. M 7:00 St. P. Gallery

Use of Color. 3 Extension credits. \$15.

Lectures and laboratory work demonstrating how color should and should not be used in public buildings and private residences. The use of color in stage work and in clothing for men and women will also be considered. This course is designed to be of service both to the amateur home decorator and to the professional artist, architect, advertiser, or decorator. Class meets twice a week for eight weeks beginning January 3. Students are expected to supply own water colors and paper.

January 3-February 22
TW 6:20 Jones 104, Hopkins

ArtEd. 18-19 Survey of Art. See page 17.

Agr.Eng. 42A-B Art Metal Work. See Engineering Classes, page 53.

Architectural Drafting. See page 55.

Production Illustration. See page 54.

Industrial Design. See page 55.

Beginning and Advanced Cameracraft. See page 30.

Applied Photography I-II. See page 30.

Motion Picture Photography. See page 30.

* See note directly under Art.

ASTRONOMY

Note—Students who wish to use astronomy to meet the natural science requirement for either the A.L.A. or B.A. degrees in the College of Science, Literature, and the Arts may do so by completing Astronomy 11 and 13 and another related course approved by the Students' Work Committee.

11 Descriptive Astronomy. 3 credits. \$15.

The general principles and fundamental facts of astronomy; illustrated by lantern slides, simple problems, and naked-eye and telescopic observation. The new Spitz Projection Planetarium will be used extensively to provide superior demonstration opportunities regardless of weather conditions. Higher mathematics not necessary.

Fall Semester

W 6:20 Physics 133, Luyten

13 Practical and Stellar Astronomy. 3 credits. \$15.

Supplements Astronomy 11, which, however, is not prerequisite; higher mathematics not necessary. A detailed description of the constellations and individual stars, and structure of the sidereal universe, determination of time from the stars; extended opportunity for the use of the telescope and the observation of the heavenly bodies, supplemented by use of the new Spitz Projection Planetarium.

Spring Semester

W 6:20 Physics 133, Luyten

BACTERIOLOGY

Note: Students who cannot furnish their own microscopes for bacteriology classes will be required to pay \$3 for a microscope rental card which may be obtained at the first laboratory session.

53 General Bacteriology. 5 credits. \$25 plus \$3 laboratory fee.

Culture media; methods of staining and identification; principles of sterilization and disinfection; examination of air, water, milk; relation of bacteriology to the industries and to disease; bacteriology as a science; morphology and physiology. Class meets 6 hours per week for 11 weeks. Prerequisite: 10 credits in chemistry and 4 credits in biological sciences, or permission of instructor.

Fall Quarter

MW 7:00 Millard 214

114 Yeasts, Molds, and Actinomyces. 4 credits. \$20 plus \$3 laboratory fee.

Isolation and identification of fungi important in industry, medicine, and bacteriology. General principles of mycology with application to industry and medicine. Emphasis on special techniques. Class meets 6 hours per week for 11 weeks. Prerequisite: 53 or equivalent.

Fall Quarter

TTh 7:00 Millard 201, Roth

CHEMISTRY

A \$10 chemistry deposit card is required for each of the courses in chemistry. Information concerning the procurement of this card will be given at the first meeting of each class. A course fee of \$3 and charges for laboratory material and breakage will be punched out of the deposit card. The balance will be returned to the student at the end of the semester.

6-7† General Inorganic Chemistry. 5 credits per semester. \$25.

Study of the general laws of chemistry and of the nonmetals, metals and their compounds. No prerequisite.

Fall Semester

6 Lab. T 7:00-10:00 Chemistry 325, Herr	7 Lab. T 7:00-10:00 Chemistry 325, Herr
Lect. Th 7:00-9:00 Chemistry 325, Herr	Lect. Th 7:00-9:00 Chemistry 325, Herr

Spring Semester

12 Semimicro Qualitative Analysis. 5 credits. \$25.

Laboratory work in systematic qualitative analysis of cations with lectures on solutions, ionization, chemical and physical equilibria, oxidation and reduction, etc. Prerequisite: Inorganic Chemistry 2, 5, 7 or 10.

Fall Semester

Lect. T 8:00-10:00 Chemistry 325, Herr	
Lab. Th 7:00-10:00 Chemistry 325, Herr	

1 Quantitative Analysis—Gravimetric. 5 credits. \$25.

Principles and methods of gravimetric analysis; typical problems and proper laboratory practice. Prerequisite: Inorganic Chemistry 11 or 12.

Spring Semester

Lect. T 6:00-8:00 Chemistry 315, Herr	
Lab. Th 7:00-10:30 Chemistry 310, Herr	

† See Information, page 7.

2 Quantitative Analysis—Volumetric. 5 credits. \$25.

General principles, methods and calculations of volumetric analysis. Prerequisite: Inorganic Chemistry 11 or 12.

Fall Semester

Lect. T 6:00-8:00 Chemistry 315, Herr
Lab. Th 7:00-10:30 Chemistry 310, Herr

7 Quantitative Analysis—Premedical. 4 credits. \$20.

Introductory, covering principles and methods of gravimetric and volumetric quantitative analysis; typical problems and proper laboratory practice. Prerequisite: Qualitative Analysis 11 or 12.

Spring Semester

Lect. T 8:00-10:00 Chemistry 315, Herr
Lab. Th 7:00-10:30 Chemistry 310, Herr

123 Advanced Quantitative Analysis. 3 credits. \$15.

Prerequisite: Analytical Chemistry 1-2 or equivalent. Repeated spring semester.

Fall Semester

TTh 7:00-10:00 Chemistry 310, Herr

Spring Semester

TTh 7:00-10:00 Chemistry 310, Herr

CHILD WELFARE**40 Child Training.** 3 credits. \$15.

Physical and mental development of the child; training of young children; behavior problems; techniques of good and bad management. Repeated spring semester. Prerequisite: Psychology 1-2.

Fall Semester

T 8:05 Folwell 101, Cummings

Spring Semester

T 8:05 Folwell 101, Cummings

80 Child Psychology. 3 credits. \$15.

A survey of the psychology of the young child from the standpoint of development and learning. Repeated spring semester. Prerequisite: Psychology 1-2.

Fall Semester

M 6:20 Folwell 101, Hansen

Spring Semester

M 6:20 Folwell 101, Hansen

132 Later Childhood and Adolescence. 3 credits. \$15.

The meaning of adolescence; growth and personality development; vocational guidance; sex education, social adjustment, and emancipation from the family. Prerequisite: Child Welfare 80 or equivalent.

Fall Semester

M 8:05 Folwell 101

140 Behavior Problems in Younger Children (Same as S.W. 173A). 3 credits. \$15.

Nature and origin of behavior difficulties in younger children; relation of earlier to later maladjustment; assessment, treatment and training. Prerequisite: 12 credits in psychology, educational psychology or sociology.

Fall Semester

W 6:20 Folwell 101

141 Behavior Problems in Older Children (Same as S.W. 173B). 3 credits. \$15.

Origin and underlying factors in behavior difficulties in older children; adjustment at adolescence; treatment and training. Prerequisite: 12 credits in psychology, educational psychology or sociology.

Spring Semester

W 6:20 Folwell 101

166 Maturity and Aging: Developmental Changes and Adjustment in Maturity and Old Age. 3 credits. \$15.

Changes in interests, learning and personality; creative activities and rehabilitation. Prerequisite: 15 credits in psychology, education, or sociology.

Spring Semester

W 8:05 Folwell 101

EDUCATION**Art Education****18-19 Survey of Art in Life and Education.** 3 credits each semester. \$15.

An introductory survey for the layman, especially elementary teachers, to develop appreciation and understanding through illustrated lectures, laboratory demonstrations and experiments of the content and importance of art in modern education. 18: The importance of design in historic and modern art; influential ideas, individuals and movements; significant relationships between art and nature. 19: Social and educational significance of design in contemporary life; personal appearance, the home, architecture, city-planning,

industrial design, advertising, theater, hobbies, etc. The number listed is the emphasis which prevails for the semester. A complete course is offered each semester; open to all. No prerequisite.

Fall Semester
18 W 6:20 Jones 109, Gayne

Spring Semester
19 W 6:20 Jones 109, Gayne

Curriculum and Instruction

152 Supervision: Adjustment of Schools to Individual Differences. 3 credits. \$15.

Adaptation of the school, curriculum and classroom procedures to the abilities and interests of the pupils. Prerequisite: 15 hours in education.

Spring Semester
M 6:20 N. W. Bank Bldg. 690, Van Wagenen

Educational Psychology

113-114-115 Psychology of Elementary School Subjects. 3 credits each semester. \$15.

A discussion of the research studies in the field of psychology of the elementary school subjects. Prerequisite: 10 hours in psychology and education.

Fall Semester
113-114 Th 6:20 St. P. Ext. Center 217,
Van Wagenen

Spring Semester
114-115 Th 6:20 St. P. Ext. Center 217,
Van Wagenen

120 Basic Principles of Measurement. 3 credits. \$15.

Principles of measurement applied to the construction and evaluation of tests and to the interpretation of scores. Illustrations from achievement, intelligence, interest, attitude, and personality tests. Prerequisite: Ed.Psy. 60 or equivalent.

Fall Semester
M 6:20 N. W. Bank Building. 690, Van Wagenen

Music Education

224E Seminar and Individual Research Problems in Music Education. 2-6 credits. \$10-30.

The student is individually guided in the conduct of field studies and investigations within his major needs and interests in music education. Seniors and graduates.

Note—Mu.Ed. 224E is applicable toward the B.S. and M.Ed. degrees in Music Education. Course will be taught on the individual conference basis by appointment with Professor Winslow. Call Main 8177, Extension 229 or 342.

Nursing Education

58 Introduction to Ward Administration. 3 credits. \$15.

The place of the head nurse in the hospital organization, basic principles of maintaining a good nursing service, analyzing patients' needs and directing the activities of the ward personnel. Open to graduate nurses. Repeated spring semester.

Fall Semester
M 5:00 Medical Sciences 113

Spring Semester
M 5:00 Medical Sciences 113, Grainger

62 Personnel Work in Nursing. 3 credits. \$15.

Survey of principles of techniques of personnel work applied to problems in schools of nursing. The relationship of such topics as individual differences, human behavior, personality, emotions, and intelligence to the problem of personnel guidance. Study of such techniques as psychological tests, personnel records, orientation periods, remedial programs, and counseling interviews in schools of nursing. Open to graduate nurses.

Fall Semester
T 6:20 Medical Sciences 113, Johnston

72 Application of Principles of Learning to Clinical Teaching. 3 credits. \$15.

Study of learning situations in the basic professional program in nursing. Sources, selections, and organization of instructional materials; evaluation of nursing care; content and methods of clinical teaching; measurement of outcomes. Open to graduate nurses. Repeated spring semester.

Fall Semester
Th 6:20 Medical Sciences 113, Paskewitz

Spring Semester
Th 6:20 Medical Sciences 113, Boyle

ENGLISH

English Placement Tests.

Admission to composition classes beyond Preparatory Composition is based on satisfactory score in English Placement Test, or satisfactory completion of Preparatory Composition. Please note the following: (1) If you took the Placement Test in a Minnesota high

school within the last three years, you must ask for assignment to the proper composition class a week before the first meeting of the class. (*You need not take the test again.*) Telephone, write, or call in person giving in addition to your name, the name of your high school and the date of graduation. (2) If you have not taken the test, or if you took the test more than three years ago, report for it at the following time and place.

7:00	Tuesday, September 20	Fall Semester	Room 106, Nicholson Hall
7:00	Tuesday, September 20		Room 206, St. P. Ext. Center
7:00	Wednesday, September 28		Room 106, Nicholson Hall
		Spring Semester	Room 106, Nicholson Hall
7:00	Tuesday, January 31		

Preparatory Composition. No credit. \$11.25.

Intensive drill on grammatical forms, structure, and theme writing. No prerequisite. Repeated during spring semester. Note Composition 4-5-6 below.

	Fall Semester		Spring Semester
T 6:20	Folwell 209, Stolz	T 6:20	Folwell 209, Stolz

4-5-6 Freshman Composition. 4½ credits each semester. \$22.50.

This sequence satisfies the English requirement for graduation and is prerequisite to other English classes. Class meets for a period of 2½ hours each week. Prerequisite: Preparatory Composition or satisfactory score on English Placement Test, explained above.

	Fall Semester		Spring Semester
4-5 M 6:20	Folwell 105, del Plaine	4-5 W 6:20	Folwell 105, Jones
T 6:20	Folwell 105, White	5-6 M 6:20	Folwell 105, del Plaine
W 6:20	St. P. Ext. Center 214, White	T 6:20	Folwell 105, White
5-6 W 6:20	Folwell 105, Jones	W 6:20	St. P. Ext. Center 214, White

Grammar Review. 2 Extension credits. \$10.

A "refresher" course for those who need a quick and thorough review of grammar, mechanics, and usage. More intensive than Preparatory Composition. Twelve meetings. No prerequisite.

	Fall Quarter		February 9-April 27
Th 6:20	Folwell 105, Jones	Th 8:05	St. P. Ext. Center 219, Lewis

27-28 Advanced Writing. 3 credits each semester. \$15.

Offers training in the fundamentals of creative writing, through lectures and the criticism of manuscripts. Advanced Writing 27 deals with expository writing; articles, essays, criticism, etc. Advanced Writing 28 deals with description and narration. Students may begin with either 28 or 27. Prerequisite: Composition 4-5-6, or consent of instructor.

	Fall Semester		Spring Semester
27 T 8:05	Folwell 205, Rice	28 T 8:05	Folwell 205, Rice

Introduction to World Literature (G.C. 30E). 3 General College credits. \$15.

A course designed to show through selections from world literature that human nature and personality remain basically uniform throughout all periods of history. Tracing through literature man's collective responses to his physical, social and individual personal world. Among authors read in each of these aspects will be: Pushkin, Keats, Wordsworth, Pascal, Homer, Sophocles, Ibsen, Rabelais, Montaigne, Bacon, Rousseau, the Bible. No prerequisite.

	Spring Semester
Th 8:05	Nicholson 102, Hensley

39 Twentieth-Century Novel. 3 credits. \$15.

The novel since Thomas Hardy. The course covers at least the following three English novels: Thomas Hardy's *Tess of the D'Urbervilles*, Joseph Conrad's *Lord Jim*, Arnold Bennett's *The Old Wives' Tale*; and the following three American novels: Ernest Hemingway's *A Farewell to Arms*, Thomas Wolfe's *Of Time and the River*, John Steinbeck's *The Grapes of Wrath*. Prerequisite: Composition 4-5-6 or exemption.

	Fall Semester
Th 8:05	Nicholson 103, Acker

52-53 English Novel. 3 credits each semester. \$15.

A historical survey of the development of the English novel. 52: Defoe, Fielding, Smollett, Goldsmith, Austen and Scott; 53: Dickens, Thackeray, the Brontës, George Eliot and Hardy. Prerequisite: Composition 4-5-6 and 6 additional credits.

	Fall Semester		Spring Semester
52 W 6:20	Folwell 205, Moore	53 W 6:20	Folwell 205, Moore

69-70 Short Story Writing I-II. 3 credits each semester. \$15.

The technique of the short story with constructive work in story writing. Prerequisite: 27 and 28 or 29, or consent of instructor.

	Fall Semester		Spring Semester
69 Th 6:20	Folwell 205, Davis	70 Th 6:20	Folwell 205, Davis

85 Present-day English. 3 credits. \$15.

A scientific introduction to the living language. Attention will be paid to its vocabulary, its grammatical structure, its sounds, and to popular misconceptions about English. Open to students with Senior College standing and to others by permission. Graduate credit available upon completion of special work arranged in consultation with the instructor.

Spring Semester

M 6:20 Folwell 110, Allen

91-92 Seminar in Writing (Advanced Short Story). 3 credits each semester. \$15.

For advanced and professional students who write with facility and desire personal direction. Criticism of manuscripts submitted. Prerequisite: consult instructor.

Fall Semester

91 M 6:20 Folwell 203, Blum

Spring Semester

92 M 6:20 Folwell 203, Blum

174 American English. 3 credits. \$15.

Historical development of the distinctive vocabulary of American English; lexical and phonetic differences between it and British English; dialect distribution in the United States, with special reference to the speech of the Middle West, including Minnesota. Open to students with Senior College standing and to others by permission.

Fall Semester

M 6:20 Folwell 110, Allen

Business English. See page 44.**Humanities.** See page 24.**Magazine Writing.** See Journalism, page 25.**Radio Writing.** See page 33.**FAMILY LIFE****1 Preparation for Marriage.** See Personal Orientation, page 28.**Contemporary Family Problems.** See Sociology, page 37.**FRENCH****1-2 Beginning French.** 3 credits each semester. \$15.

Grammar, pronunciation, reading, and practice in speaking. No prerequisite.

Fall Semester

1 W 6:20 Folwell 227, Sullivan

Spring Semester

2 W 6:20 Folwell 227, Sullivan

3-4 Intermediate French. 3 credits each semester. \$15.

Readings from modern authors, review of essential grammar, emphasis on spoken French. Prerequisite: French 1-2 or 2 years of preparatory French.

Fall Semester

3 M 6:20 Folwell 213

Spring Semester

4 M 6:20 Folwell 213

17a-b French for Graduate Students. No credit. \$15.

Fundamentals of grammar; reading of appropriate prose. Prepares for examinations in French. No prerequisite for 17a; for 17b: 17a, or two years of French in high school or equivalent.

Fall Semester

17a M 6:20 Folwell 102, Brackney

17b M 6:20 Folwell 124, Pulleyn

Spring Semester

17a M 6:20 Folwell 124, Pulleyn

17b M 6:20 Folwell 102, Brackney

66-67 French Conversation. 3 credits each semester. \$15.

Discussion of current affairs, based mainly on readings from French newspapers. Prerequisite: 4 or consent of instructor.

Fall Semester

66 W 6:20 Folwell 203, Fermaud

Spring Semester

67 W 6:20 Folwell 203, Fermaud

GARDENING

(For all classes in Gardening, see Agriculture, page 12.)

GEOGRAPHY

11 Human Geography. 5 credits. \$25.

A study of the development, types, and uses of maps, followed by a consideration of the factors of the physical environment and their effect on human activities. Current problems in the use of our natural resources are used as illustrative material. This is a basic course and a prerequisite for further courses in geography. It likewise supplies background material necessary for intelligent interpretation of the world's news. No prerequisite.

Fall Semester

T 6:20 Burton 103, Jennings

71 Geography of North America. 3 credits. \$15.

A study of the major geographic regions of the United States and Canada, with special emphasis on the geographic basis for the economic activities. Prerequisite: Geography 11.

Spring Semester

T 6:20 Burton 103, Weaver

GEOLOGY

1 General Geology (Dynamic). 3 credits. \$15.**A Dynamic Geology Laboratory.** 2 credits. \$10.

These classes, 1 and A combined, constitute Geology 1 of the College of Science, Literature, and the Arts. They consist of an introductory treatment of the materials of the earth, and the geologic processes; principles of earth sculpture, glaciation, volcanic activity, mountain building, etc.; geologic occurrence of gems, ores, oil, and other economic mineral resources. No prerequisite.

Fall Semester

1 T 6:20 Pillsbury 210, Wright

A T 8:05 Pillsbury 22, Berg

Note—Registration may be made for the combined classes or for Geology 1 but it is recommended that they be taken together. Students who have completed 3 credits in Geology 1 or 8 may register for Geology A.

2 General Geology (Historical). 3 credits. \$15.

A résumé of the theories as to the origin of the earth, its geologic history, and the changes in its plant and animal life throughout the ages. Prerequisite: Geology 1.

Spring Semester

T 6:20 Pillsbury 210, Swain

25 Elements of Rock Study. 3 credits. \$15.

A study of rock forming minerals and igneous, sedimentary, and metamorphic rocks, their occurrence and classification. No prerequisite.

Fall Semester

Th 6:20 Pillsbury 110, Gruner

26 Elements of Rock Study. 3 credits. \$15.

A continuation of the study of rock forming minerals and igneous, sedimentary, and metamorphic rocks. Prerequisite: Geology 25.

Spring Semester

Th 6:20 Pillsbury 110, Gruner

91-92 Invertebrate Paleontology. 2 credits each semester. \$10.

Morphology and classification of some invertebrate fossil genera, with special attention to those common in Minnesota rocks. No prerequisite. This course cannot be substituted for Geology 107 of the College of Science, Literature, and the Arts. Class is limited to 20.

Fall Semester

91 Th 6:20 Pillsbury 105, Bell

Spring Semester

92 Th 6:20 Pillsbury 105, Bell

GERMAN

1-2 Beginning German. 3 credits each semester. \$15.

Grammar, pronunciation, reading, and practice in speaking. No prerequisite.

Fall Semester

1 T 6:20 Folwell 207, Ramras

Spring Semester

2 T 6:20 Folwell 207, Ramras

3 Beginning German. 3 credits. \$15.

Readings from modern authors, review of essential grammar, emphasis on spoken German. Prerequisite: German 1-2 or 2 years of high school German.

Fall Semester

T 6:20 Folwell 206, Uhle

4 Intermediate German. 3 credits. \$15.

Modern narrative prose. Prerequisite: German 3.

Spring Semester

T 6:20 Folwell 206, Uhle

17a-b German for Graduate Students. No credit. \$15.

Designed to help graduate students acquire a reading knowledge of German as required of candidates for higher degrees. Grammar is reduced to a minimum, with stress on recognition of forms encountered in reading. Rapid reading of simple, graded material. Intensive reading of more difficult material selected from the various fields of specialization. Detailed study of several sets of examinations in each of the fields. No prerequisite for 17a; for 17b: two years of German in high school, or equivalent.

Fall Semester

17a M 6:20 Folwell 206, Downs
17b M 6:20 Folwell 209, Wangsness

Spring Semester

17a M 6:20 Folwell 209, Downs
17b M 6:20 Folwell 206, Wangsness
17b M 6:20 Hort. 302, St. P. Campus,
Prottegeier

HEALTH**50 Public and Personal Health. 3 credits. \$15.**

Causes of diseases and of physical defects; fundamental principles and working methods of health conservation and disease prevention. Lectures, discussions, and directed readings. Open to students who have not taken 3, 4, 52, 53, or Human Biology (G.C. 10C) in the General College. No prerequisite.

Fall Semester

W 6:20 Medical Sciences 111, Thomson

63 Principles of Public Health Nursing. 3 credits. \$15.

The public health nurse's role in the various services of a public health program; discussion of individual, family, and community health problems; teaching in the home, principles of organization and administration of public health nursing services including planning of the program; some discussion of special services such as school and industrial nursing. Prerequisite: open to public health nurses.

Fall Semester

M 6:20 Millard 129

100 Elements of Preventive Medicine. 5 credits. \$25.

Nutrition, diet, susceptibility, resistance and immunity to disease; methods of spread and prevention of communicable and degenerative diseases; protection of food, water, and milk; school health work; vital statistics. Prerequisite: 12 credits in biological science or consent of instructor.

Fall Semester

T 6:20 Millard 129, Cowan

102 Environmental Sanitation. 3 credits. \$15.

Methods for promoting man's health and comfort by controlling his environment; water supply sanitation, food sanitation, pollution abatement; sewage, excreta, and waste disposal; bathing place sanitation, air hygiene, illumination, housing, control of insect and animal vectors of disease, industrial hygiene and sanitation. Prerequisite: 50 or 51 or 53 or 100 or by permission of instructor.

Spring Semester

M 6:20 State Board of Health 360, Pierce

115 Food Sanitation. 3 credits. \$15.

Sanitary problems associated with the production, processing, and distribution of foods including dairy products and meat. Methods of public health supervision and control. Lectures, demonstrations and field observations.

Fall Semester

W 6:20 Millard 129, Adams

133 Mental Hygiene. 3 credits. \$15.

Discussion of emotional factors underlying wholesome family relations and of problems which interfere with successful adjustment in family and community life. Illustrative case material related to problems met by the public health nurse will be used. For public health nurses. Limited to 25 students. Prerequisite: 62-63 and experience in public health nursing.

Fall Semester

W 6:20 Medical Sciences 113, Wood

HISTORY

Note—Although it is preferable that the units of these history classes be taken in sequence, students may register for credit in any single semester or quarter unit unless otherwise indicated.

1-2-3 Civilization of the Modern World. 3 credits each quarter. \$15.

1: The rise of the European state system as the framework within which Western civilization developed, and the economic, cultural, political, intellectual, and religious implications of the emerging system; 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. No prerequisite. Class meets for 2½ hour period weekly.

Fall Quarter**Winter Quarter****Spring Quarter**

1 T 6:20 Nicholson 103, Tyler 2 (Same schedule as fall) 3 (Same schedule as fall)

20-21-22 American History. 3 credits each quarter. \$15.

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. No prerequisite. Class meets for 2½ hour period weekly.

Fall Quarter**Winter Quarter**

20 M 6:20 Nicholson 107, Allen

21 (Same schedule as fall)

Th 6:20 St. P. Ext. Center 214, Tyler

Spring Quarter

22 (Same schedule as fall)

79a-79b Foundations of National Power. 3 credits each semester. \$15.

A discussion of the present and potential strength of the major powers in the world today and of the areas of possible conflict. 79a: A brief survey of the rise of the modern state system will be followed by a more detailed evaluation of the geographic, social, political and military factors that constitute the elements of national power. An analysis will then be made of those states lying in the Western European and Mediterranean regions. No prerequisite. 79b: An analysis of the power potentials of states lying in Eastern Europe, Asia, the Far East and the Western Hemisphere, with emphasis on the Soviet Union and the United States. No prerequisite, but 79a is recommended for full understanding of 79b.

Fall Semester**Spring Semester**

79a T 6:20 Burton 111, Bowditch

79b T 6:20 Burton 111, Bowditch

106a-107a (formerly 59-60) Continental Europe. 3 credits each semester. \$15.

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 Second German Reich. No prerequisite.

Fall Semester**Spring Semester**

106a W 6:20 Burton 111, Allen

107a W 6:20 Burton 111, Allen

109-110 (formerly 65-66) Europe in the Twentieth Century. 3 credits each semester. \$15.

Course 65: 1900-1918; Course 66: 1918 to present. Background and causes of the First World War, history of Europe during four years of war, the Paris Conference and peace treaties, the new political and social order in central and eastern Europe, problems of the western democracies, the attempt at a new world order and its collapse, the background and history of the Second World War. No prerequisite.

Fall Semester**Spring Semester**

109 W 6:20 Burton 112, Deutsch

110 W 6:20 Burton 112, Deutsch

118-119 (formerly 67a-b) History of World War II. 3 credits each semester. \$15.

118: Origins and backgrounds; the principal powers and their relationships; the rise of totalitarian ideologies and systems; international relations of the 1930's; how the war came; the period of Axis preponderance.

119: The breakdown of Nazi-Soviet relations; war in the East and at sea; decline of Axis fortunes; the U.S. entry; interrelation of European and Far Eastern wars; inter-allied relations; the battles of France and Germany; liquidation of the War; occupation problems and policies; affairs of the U.N.; relations of the victor powers and the peace settlements. No prerequisite.

Fall Semester**Spring Semester**

118 W 8:05 Burton 112, Deutsch

119 W 8:05 Burton 112, Deutsch

185d-186d (formerly 97-98) Minnesota and the Northwest. 3 credits each semester. \$15.

Begins with the period of exploration and the French, British, and American occupation. The fur trader and the voyageur; Indian missionary efforts of all denominations. A survey of early settlement and frontier life as well as the political and economic conditions in the territory and young state up to 1890. No prerequisite for 185d; those who wish credit in 186d must have passed 185d (97 last year), others may register as auditors in 186d.

Fall Semester**Spring Semester**

185d Th 6:20 Nicholson 103, Nute

186d Th 6:20 Nicholson 103, Nute

HOUSING

Planning Your Modern Home. 2 Extension credits. \$10 plus 50 cents laboratory fee.

This is a non-technical course prepared for those who plan to build, modernize, or redecorate their home. The course will review the principles of planning and decorating and will investigate modern materials and techniques. It is intended to explain modern trends in residential design and to evaluate new developments so that home planners may invest their money wisely. Twelve meetings. No prerequisite.

Fall Quarter

T 8:05 Murphy Aud., Graffunder

Drawing Your Modern Home. 2 Extension credits. \$10.

The purpose of this course is to enable you to put down on paper and in intelligible form the plans for a modern home which you may have been turning over in your mind. Practice in sketching and in the minimum essentials of drafting. Typical conventions. The course is designed to supplement the preceding course, Planning Your Modern Home, but the latter is not prerequisite. Twelve meetings.

February 7-April 25

T 8:05 Main Engineering 304, Heath

Use of Color. See page 15.

Architectural Drafting I-II. See page 55.

Interior Design. See Art, page 15.

HOW TO STUDY

(See Personal Orientation, page 28.)

HUMANITIES

Note—Although it is preferable that the Humanities courses be taken in sequence, this is not a requirement and any single unit or combination of units will prove satisfactory to students who wish to make such a selection.

1-2 Humanities in the Modern World I-II. 3 credits each semester. \$15.

This course offers an introduction to the study of the humanities in the modern world. The materials used are history, prose criticism, literature, and art. The period dealt with is from time of Voltaire to the present. The authors read include Voltaire, Goethe, Dostoevski, Marx, Zola, and Tolstoy. No prerequisite.

Fall Semester

1 Th 8:05 Nicholson 107, Livingston

Spring Semester

2 Th 8:05 Nicholson 107, Livingston

3 Humanities in the Modern World III. 3 credits. \$15.

The impact of evolution; socialism and imperialism; religion and morals in a changing world; the wars and totalitarianisms. Period: from about 1870 to about 1914. Authors: Huxley, Turgeneff, Nietzsche, Shaw, Lenin, Forster, and the poets. No prerequisite.

Fall Semester

M 6:20 Nicholson 106, Swanson

4 Humanities in the Modern World IV. 3 credits. \$15.

An introduction to the study of humanities in the modern world. Its period is described as "between the wars," the years from 1918 to the present. Material to be selected from such authors as: Lenin, Malraux, Freud, and Lawrence. No prerequisite.

Spring Semester

M 6:20 Nicholson 106, Swanson

11 The Greek Heritage. 3 credits. \$15.

The heroic age of legend—"Men like gods"; the golden age of Athens—tragedy, the concepts of goodness and beauty, the struggle for the state; the age of reason—the concepts of reason, justice, order. Selected readings in the historians and Aristotle; longer readings in Homer, Plato, the dramatists. Greek architecture and sculpture. No prerequisite.

Fall Semester

T 6:20 St. P. Ext. Center 214, Ames

12 The Roman and the Medieval Heritage. 3 credits. \$15.

Roman jurisprudence and organization; epicureanism and stoicism. Selections from Lucretius, Epictetus, Marcus Aurelius, Medieval faith, theocracy, chivalry, monasticism. Selections from St. Augustine, St. Thomas Aquinas, the Rule of St. Benedict. Longer readings from Dante, Chaucer. Early religious paintings, ecclesiastical and feudal architecture. No prerequisite.

Spring Semester

T 6:20 St. P. Ext. Center 214, Ames

JAPANESE

1-2 Beginning Japanese. 3 credits each semester. \$15.

Introduction to conversational Japanese using romaji. Reading of Japanese texts. Instruction in writing of characters. Use of Chinese-Japanese character dictionary.

Fall Semester

1 M 6:20 Folwell 104, Syro-Boiarsky

Spring Semester

2 M 6:20 Folwell 104, Syro-Boiarsky

51-52 Reading in Japanese. 3 credits each semester. \$15.

Study of grammatical construction; drill in conversation; reading Japanese text. Prerequisite: Japanese 1-2 or consent of instructor.

Fall Semester

51 M 8:05 Folwell 104, Syro-Boiarsky

Spring Semester

52 M 8:05 Folwell 104, Syro-Boiarsky

JOURNALISM

13 Introduction to Reporting. 3 credits. \$15.

Newspaper reporting—the nature of news, fact gathering, and news writing—is used as a vehicle in this course to introduce students to various kinds of journalistic writing. Its emphasis on conciseness, fact-selection, and color make it an appropriate prelude to magazine writing, radio writing, advertising copy writing, and other such forms. Prerequisite: English Composition 4-5-6 or exemption and permission of instructor.

Fall Semester

T 6:20 Murphy 311, Jensen

73 Magazine Writing. 3 credits. \$15.

The writing of nonfiction articles for general and specialized periodicals, and newspaper feature articles; subjects and materials; analysis of manuscript markets; study of magazine policies and practices; training in editing procedures; use of pictures. Repeated in spring semester. No prerequisite.

Fall Semester

Th 6:20 Murphy 311, Kahm

Spring Semester

Th 6:20 Murphy 311, Kahm

78 Public Relations. 3 credits. \$15.

A survey of the techniques and practices of workers in the public relations field. The function of the public relations counsel and publicity expert and their relationship to the communications media, to employer and employee, consumer and citizen. The production of public relations programs and campaigns for business and industry, social work agencies, educational institutions, and government. Prerequisite: 13 or permission of instructor.

Fall Semester

W 8:05 Murphy 308, Emery

84 Mass Communications in Modern Society. 3 credits. \$15.

A study of the major agencies of mass communication—press, radio, and motion picture—and their role in the opinion-forming process. A survey of the rapid growth of these media; their structure; their interrelationships with publics and government. Methods developed recently by research specialists for analyzing and quantifying the content and readership or listenership of newspapers, periodicals, radio broadcasts and motion pictures. Prerequisite: consent of instructor.

Fall Semester

Th 6:20 Murphy 302, MacLean

85 Interviewing for Public Opinion Surveys. 3 credits. \$15.

Class discussions of and practice in techniques of interviewing. Depth interviewing, or getting at basic attitudes which are often not verbalized in the conventional polling procedures. Treatment of "open end" questions. What an interviewer must know about sampling problems. Practical meaning of such determinants of opinion as A-B-C-D socio-economic estimates. Personal interview vs. mail and telephone techniques. Problems relating to questionnaires; interview bias, etc. Prerequisite: consent of instructor.

Spring Semester

Th 6:20 Murphy 302, MacLean

87 Radio Advertising. 3 credits. \$15.

The relation of radio advertising to the station, the network, the station representative, radio talent, transcription companies, sponsors, and advertising agencies. Program selection, time buying, program ratings. Preparation and presentation of radio advertising copy. Radio advertising standards and ethics. Self-regulation and listener-response. Prerequisite: 18 or B.A. 88 or acceptable advertising experience and consent of instructor. (See note below.)

Spring Semester

W 8:05 Murphy 302, Seehafer

Note—In order that the students best qualified may be accepted under the limit of 30, registrations for this class will be accepted only provisionally and must be accompanied by a special form filled out by the applicant. Forms may be obtained from any Extension office. Students will be notified of their acceptance or rejection before the opening session. PLEASE REGISTER EARLY.

97 Advertising Copy, Layout, and Typography. 3 credits. \$15.

Practical study of advertising copy, layout, and typography, with particular emphasis upon retail classification of newspaper advertising. Lectures and laboratory work are designed to teach the student how to write and arrange copy and headline forms, how to handle illustrations, borders, and other type devices, and how to improve attention-getting qualities of display advertising. Students receive individual criticism of all advertisements prepared as class projects. Limited to thirty students. Prerequisite: consent of instructor. (See note below.)

Fall Semester

T 6:20 Murphy 308, Seehafer

Note—In order that the students best qualified may be accepted under the limit of 30, registrations for this class will be accepted only provisionally and must be accompanied by a special form filled out by the applicant. Forms may be obtained from any Extension office. Students will be notified of their acceptance or rejection before the opening session. PLEASE REGISTER EARLY.

Psy. 167 Psychology of Attitudes and Public Opinion. See page 33.

For other advertising classes, see page 44.

For other writing classes, see page 19.

LIBRARY SCIENCE**51 Origins of the Book.** 2 credits. \$10.

A historical survey of writing and the materials and methods of writing from the earliest times through the invention and spread of printing in the fifteenth century. Twelve meetings. No prerequisite.

Fall Quarter

W 6:20 Library 5, Shove

52 History of Publishing. 2 credits. \$10.

A survey of publishers and publishing from the sixteenth century to the present, with special attention to the history of publishing in the U.S.A.; present-day publishing houses and their specialties; current trends in publishing and their effect upon libraries. Twelve meetings. No prerequisite.

Winter Quarter

W 6:20 Library 5, Shove

MATHEMATICS

(For all mathematics classes, see page 56.)

MUSIC**Practical Music.**

Individual instruction in music, as well as study in the regular classes offered by the Department of Music, is open to registration through the General Extension Division by students not able to attend day classes full time. This includes instruction in piano, organ, voice, violin, cello, and all orchestral instruments, as well as classes in history and theory of music. Students will register as for Extension classes but attend the regular day sessions. The courses offered, the time and place of meeting, and the fees for individual instruction will be found in the program of classes for the College of Science, Literature, and the Arts, in the *Class Schedule*. For further information consult any office of the General Extension Division.

Enjoying Music. 3 Extension credits each semester. \$15.

This is a class for those who wish to develop or increase their enjoyment and understanding of music as a means toward life enrichment. The lectures are carefully and completely illustrated by recordings. Students registered for this class are cordially invited to come early (any time between 7:00 and 8:00), during which time the instructor or an assistant will be present to play whatever recordings students may care to select from the extensive record library of the General College. Students may enter either semester. No prerequisite. Limited to 50 students.

Fall Semester

T 8:05 Wesbrook 202, Hill

Spring Semester

T 8:05 Wesbrook 202, Hill

34-35-36 History of Music. 3 credits each semester. \$15.

A course in historical appreciation, designed to give an understanding of music as literature, a nontechnical account of the principal music forms, the historic origins and associations; the nature and scope of musical expression. The class covers the history of music from Ancient Greece to the present day; it begins with Bach, continues to the twentieth century, and then reverts to the earliest period. Extensive musical illustrations. No prerequisite.

Fall Semester

35-36 Th 6:20 Scott Hall 104, Ferguson

Spring Semester

36-34 Th 6:20 Scott Hall 104, Ferguson

40-41-42 University Symphony Orchestra. 1½ credits each semester. \$7.50.

Standard orchestral literature is performed. Open to players of orchestral instruments. Prerequisite: consent of instructor. Students enrolled in this course with the consent of the chairman of the Department of Music are given the opportunity of rehearsing with the University Symphony Orchestra and participating in several concert presentations during the year.

Fall Semester	Spring Semester
40-41 T 7:00 Northrop Aud., Oberg	41-42 T 7:00 Northrop Aud., Oberg

43-44-45 University Chorus. 1½ credits each semester. \$7.50.

The University Chorus is available to Extension students through the General Extension Division. Students may register for any unit number either semester upon consent of director.

Fall Semester	Spring Semester
T 7:00 Nicholson Aud., Aliferis	T 7:00 Nicholson Aud., Aliferis

56 Bach, Beethoven, Wagner, and Brahms. 3 credits. \$15.

Critical study of selections from the master works of the four greatest composers; biographical readings, topics and analyses, giving historical and literary backgrounds to culminative periods in composition. This is the equivalent of the first quarter of the regular sequence of Music 56-57-58. Prerequisite: Music 34-35-36.

Fall Semester
W 6:20 Scott Hall 104, Ferguson

Piano Playing for Pleasure I-II-III. 3 Extension credits each semester. \$15 plus \$3 laboratory fee.

It is easy to play the piano. Within a semester's time enough of the art may be acquired to enable one to enjoy playing for one's own pleasure. The fundamentals will be taught to individuals in small groups. Two sections limited to 20 students each: Section I open to beginners without previous musical training; section II-III open to more advanced players. Students may register for two semesters in the advanced section.

Fall Semester	Spring Semester
I M 6:20 Scott Hall 104, Twichell	I M 6:20 Scott Hall 104, Twichell
II-III M 8:05 Scott Hall 104, Twichell	II-III M 8:05 Scott Hall 104, Twichell

Symphony Listeners Rehearsals. 3 Extension credits. \$15.

This course is intended to furnish a background for and preview of Minneapolis Symphony concerts. The class will meet on the Tuesday evenings directly preceding each of the regularly scheduled concerts, October 18-January 24 and February 21-April 11. Programmed works will be illustrated on the phonograph or piano and analyzed for form and structure. Historical and biographical data will be covered briefly but only insofar as they shed light on the music itself. Special attention will be paid to modern and unfamiliar works. Listening and discussion. No prerequisite.

October 18-January 24	February 21-April 11
T 6:20 Scott Hall 104, Ivory	T 6:20 Scott Hall 104, Ivory

Music Education

For full information on all Music Education courses offered in 1949-50, see Education section, page 18.

NATURAL HISTORY**Birds of Minnesota.** No credit. \$15.

A laboratory and field class in identifying and enjoying the birds of this region. Early meetings will make use of collections of the Museum of Natural History, but as soon as weather permits the class will meet in field locations on Sunday mornings at 7:30. No prerequisite.

Spring Semester
Th 6:20 Museum of Natl. Hist. 309, Breckenridge

Fish and Fishing in Minnesota. Extension credit by special arrangement. \$9.

A short course for sportsmen and others who want accurate—but nontechnical—knowledge of Minnesota fish; their habits and habitats, their feeding and propagation, their distribution and importance. Lectures, demonstrations, and discussions. 10 meetings beginning February 22. Enrolment limited to 100 accepted in order of registration. No prerequisite.

February 22-April 26
W 8:05 Zoology 313, Eddy

Wild Game of Minnesota. 2 Extension credits. \$10.

A nontechnical survey of the upland game birds, waterfowl and mammals, particularly the fur bearers and big game of Minnesota; their habits, characteristics and requirements. Recognition and conservation of principal game species will be discussed. Illustrated lectures and demonstrations. 12 meetings. No prerequisite.

Fall Quarter
W 6:20 Museum of Natl. Hist. 309, Gunderson

PERSONAL ORIENTATION

1 How To Study. 3 Extension credits or 2 S.L.A. credits (see below). \$15.

Practical assistance to the student in developing efficient study habits, organizing materials, training the memory, preparing for examinations, and improving the speed and comprehension of reading. This course should be of special value to veterans and others who are planning an educational program and have not engaged in organized study for an extended period. Two credits may be granted in S.L.A. with consent of instructor. Class limited to 35. No prerequisite. Repeated spring semester.

Fall Semester
M 6:20 Nicholson 101, Couch
Th 8:05 Nicholson 101, Couch

Spring Semester
M 6:20 Nicholson 101, Couch
Th 8:05 Nicholson 101, Couch

Efficient Reading. 3 Extension credits. \$15.

Designed for students, business, or professional people of up-to-average reading ability who wish to improve their reading speed and comprehension. Emphasis is on reading techniques of particular use in achieving or maintaining superior scholastic or professional status. Maximum use is made of the tachistoscope and the Harvard Reading Films, two recently developed visual aids. Parallels Efficient Listening and is a suggested follow-up for How to Study. No prerequisite. Class is limited to 34. Repeated spring semester.

Fall Semester
W 6:20 Nicholson 101, Brown

Spring Semester
W 6:20 Nicholson 103, Brown

Efficient Listening. See page 40.**F.L. 1 Preparation for Marriage.** 3 credits. \$15.

A discussion of the function of the family today, problems of dating and courtship, the engagement, selection of a mate, relations of husband and wife, family crises and bases of marital stability. No prerequisite. Limited to 35 students.

Fall Semester
T 6:20 Nicholson 207, Dyer

Spring Semester
T 6:20 Nicholson 207, Neubeck

Occupational Adventure. No credit. \$15 plus \$1 materials fee.

Designed to help you answer the question "What can I do best," this course is intended for those who are contemplating taking up a new field of work for profit or enjoyment. For example: The housewife who foresees a need for going to work at some later date; the businessman who contemplates retirement, but wants to do something different for enjoyment rather than income; the jobholder who merely wishes "a second string to his bow," perhaps as a hobby. Evaluation of interests, abilities, aptitudes, and personality traits through scientific testing methods. Attention given to individual problems through special appointments with instructor on class evenings.

Fall Semester
T 7:00 Folwell 110, Goulding

Contemporary Family Problems. See page 37.**Common Legal Problems.** See page 45.

PHILOSOPHY

1 Problems of Philosophy. 3 credits. \$15.

Introduction to the problems of philosophy; main fields of investigation; permanent problems; principal methods and schools of philosophy; historical and contemporary views. Repeated spring semester. No prerequisite.

Fall Semester
M 8:05 Folwell 322, Conger

Spring Semester
Th 6:20 Folwell 322, Brodbeck

2 Logic. 3 credits. \$15.

There is a difference between "straight" and "crooked" thinking. Logic is the study of these differences. What pitfalls beset the attempt to think straight? When is a term properly defined? Why are sound definitions important? What do you understand by proof? When is proof of a statement called for? When is it complete? What is a hypothesis? How many of these do you use in an average conversation? What is meant by scientific thinking? Do you do any of it? Through systematic analysis of these and other related questions, the study of logic will show you what is involved in straight thinking. No prerequisite.

Fall Semester
W 6:20 Folwell 322, Brodbeck

Spring Semester
T 8:05 Folwell 305, Hospers

3 Ethics. 3 credits. \$15.

Problems of life in terms of (1) contemporary social, political, and economic forces, and (2) the character of the individual; the psychological and philosophical foundations of morality; the reconstruction of morality; the history of morals and ethical thought. No prerequisite.

Fall Semester
T 6:20 Folwell 322, Hospers

Spring Semester
M 6:20 Folwell 322, Holmer

50 History of Ancient Philosophy. 3 credits. \$15.

A survey of Greek and Roman philosophy in its ancient cultural setting. Development and meaning of the classical tradition. Special attention to Plato, Aristotle, and Plotinus. No prerequisite.

Spring Semester

T 6:20 Folwell 322, Sellars

54 Introduction to the Scientific Way of Thinking. 3 credits. \$15.

This class endeavors to clarify the meaning of modern science by examining its basic concepts, methods, and presuppositions. Only through such an integrative understanding can the dangers connected with high specializations be counteracted. Among the topics discussed are: principles of mature thinking; scientific procedures such as observation, measurement, experimentation, logical and mathematical reasoning, description, explanation, statistics, etc.; outstanding theories and problems of science; science, philosophy, religion, and social issues; the unity of science. No prerequisite.

Fall Semester

Th 6:20 Folwell 322, Feigl

70 Modern Philosophies of Social Reform. 3 credits. \$15.

From the French Revolution to 1848. Social criticism in the period of rising industrialism. A consideration of the philosophical basis of liberalism, utopian socialism, and democracy. No prerequisite.

Spring Semester

W 6:20 Folwell 305, Wiggins

87 Readings in Religious Classics. 3 credits. \$15.

A course designed to acquaint the general reader with several of the best literary expressions of religion. No attempt will be made to settle theological or sectarian issues. Emphasis will be placed on the understanding of each author's work as it relates to his life and that of his contemporaries. Selected readings are planned from the following works of authors of diverse temperament, persuasion, time and place: Augustine's *Confessions*, St. Francis' *Little Flowers*, Luther's *On Christian Liberty*, Pascal's *Pensees*, and Kierkegaard's *For Self-Examination*. No prerequisite.

Fall Semester

W 8:05 Folwell 305, Holmer

Comparative Religious Thought Today I. 3 Extension credits. \$15.

The living religions of the world presented by leading advocates of each religion. Hinduism, Buddhism, Mohammedanism, Shintoism, and Confucianism will be examined, but emphasis will be placed upon the different religions of our own culture. These will include the Catholic, liberal Protestant, conservative Protestant, Christian Science, Unitarian, Judaism, Bahai, and the sects. No prerequisite.

Fall Semester

M 8:05 Nicholson 106, Swanson

Comparative Religious Thought Today II. 3 Extension credits. \$15.

A discussion of the different concepts expressed in modern religious thought concerning basic religious ideas—God, man, Jesus, immortality, prayer, the Bible, right and wrong, the purpose of life. No prerequisite.

Spring Semester

M 8:05 Nicholson 106, Swanson

PHOTOGRAPHY

Students in all Photography classes must furnish their own cameras.

Owing to the limited laboratory facilities available for the Beginning and Advanced Cameracraft classes, and in order that students best qualified may be accepted under the limits indicated, registrations for these will be accepted only provisionally.

1. The Beginning course will be limited to 24 students and the Advanced to 16.

2. *Registrations will be accepted only provisionally and must be accompanied by a special questionnaire filled out by the applicant.*

3. Through the questionnaires, selected lists will be made of students qualified for either the Beginning or Advanced courses. These students will be notified in time to permit them to appear at the first class session.

4. If more than the maximum admissible number of students for either class are selected as qualified through the questionnaires, a further selection by means of special tests may be necessary at the time of the first class session.

Beginning Cameracraft. 3 Extension credits. \$15 plus \$5 laboratory fee.

A course for real beginners, those with little or no experience. Work will be about evenly divided between assigned experiments, approved personal projects, and lectures and demonstrations. Class enrolment limited to 24 selected students (see note above).

Fall Semester	Spring Semester
M 6:20 Murphy 20	M 6:20 Murphy 20

Advanced Cameracraft. 3 Extension credits. \$15 plus \$5 laboratory fee.

A course for established amateurs with some experience and familiarity with special photographic equipment and techniques. Work will include some assigned projects, lectures and demonstrations, but special attention will be given to individual interests and requirements. Class enrolment limited to 16 selected students (see note above).

Fall Semester	Spring Semester
W 6:20 Murphy 20	W 6:20 Murphy 20

Applied Photography I. 3 Extension credits. \$15 plus \$2.50 laboratory fee.

A course designed for practicing amateur photographers who wish to improve their skill in all fields of monochrome photography. In addition to lectures and demonstrations, students will have an opportunity to work in laboratory classes under the guidance of an experienced instructor. Time will be devoted to portraiture, architecture, landscape, news and illustration photography. There will be lecture and laboratory periods on retouching, mounting, and darkroom work. Enrolment limited to 25 students. Prerequisite: Beginning Cameracraft. *Students must have adequate access to darkroom facilities.*

Fall Semester
W 7:00 Wesbrook 3, Stallings

Applied Photography II. 3 Extension credits. \$15 plus \$2.50 laboratory fee.

This course is designed for those who wish to become proficient in the growing field of color photography. Lectures and laboratory periods on all phases of photography, darkroom work, and photofinishing in the color medium. Field trips under the instructor's supervision will replace some class sessions. Enrolment limited to 25 students. Prerequisite: Applied Photography I or equivalent with consent of instructor. *Students must have adequate access to darkroom facilities.*

Spring Semester
W 7:00 Wesbrook 3, Stallings

Motion Picture Photography. 3 Extension credits. \$15 plus \$2.50 laboratory fee.

Designed to meet the needs of teachers interested in the visual field and of amateur motion picture photographers in general. The course will cover the requirements of good cinematography, with laboratory sessions on proper editing techniques, special effects, and titling. The student will be required to expose approximately three 100-foot rolls of 16 mm. or three 25-foot rolls of 8 mm. motion picture film. These movies will be criticized periodically by the instructor. Beginning photography desirable but not essential. Enrolment limited to 25 students.

Fall Semester
M 7:00 Wesbrook 3, Stallings

Motion Picture Laboratory. 3 Extension credits. \$15 plus \$7.50 laboratory fee.

This course is designed for the advanced amateur who needs practical experience in motion picture production. The class produces a 16 mm. motion picture on a subject chosen by the instructor. All phases of work including actual photography, editing, and directing are included. All film and material are furnished by the Extension Division. Narrative sound is added to the picture if time allows. Prerequisite: Motion Picture Photography or equivalent in experience with approval of instructor.

Spring Semester
M 7:00 Wesbrook 3, Stallings

PHYSICS**1-2†-3 Introduction to Physical Sciences.** 3 credits each semester. \$15.

Lectures and experimental demonstrations of the principles underlying physical phenomena. A course designed for those who wish a general cultural introduction to physics but do not plan to major in that subject. Physics 1 (mechanics); Physics 2 (heat, electricity and modern physics); Physics 3 (acoustics, optics, and modern physics) will be offered in the fall of 1950 if enrolment is sufficient. Prerequisite: high school algebra and plane geometry.

Fall Semester	Spring Semester
1 T 7:00 Physics 166, Christensen	2 T 7:00 Physics 166, Christensen

1a-2a†-3a Introduction to Physical Sciences—with laboratory included. 4 credits each semester. \$20.

The complete sequence 1a-2a-3a fulfills the laboratory-science group requirement in SLA; 3a will be given in the fall of 1950 if enrolment is sufficient. Lecture group meets with class described above. Twelve 2-hour laboratory periods scheduled for a portion of the semester. Prerequisite: high school algebra and plane geometry.

Fall Semester	Spring Semester
1a Th 7:00 Physics 153	2a Th 7:00 Physics 153

† See Information, page 7.

POLITICAL SCIENCE

Note—Qualified students may petition for graduate credit in political science courses numbered over 50. Action should be taken at time of registration. Consult Students' Work Committee for correct procedure.

1 American Government and Politics: Part I. 3 credits. \$15.

All of us are aware of the impact of the war upon the American system of government and the tremendous part that government plays in our lives. This course is designed to provide an intelligent understanding of certain fundamental features of our governmental system: the nature of our constitution, the protection of individual rights and liberties, political parties, public opinion, nominations and elections. Special attention will be given throughout to current developments, wartime changes, and postwar problems. No prerequisite.

Fall Semester

M 6:20 Nicholson 100, Christensen

A student must complete both Part I and Part II in order to receive credit toward a university degree for either part. Credit toward an extension certificate will be granted for any single unit, however.

2 American Government and Politics: Part II. 3 credits. \$15.

Recognizing that the American citizen must have an understanding of our system of government if he is to play an active and intelligent part in helping it meet the problems of the future, this course is designed to provide a description, analysis, and evaluation of the legislative, executive, and judicial branches of our government (national, state, and local) with special attention to current developments, wartime changes, and postwar problems. No prerequisite. (See note above.)

Spring Semester

M 6:20 Nicholson 102, Warp

3 American Government and Politics: Part III. 3 credits. \$15.

The emphasis of this course is not upon the structure of American government but upon the functions and activities which it undertakes and upon those factors in our contemporary society which affect the range of these activities. The course is designed to aid the citizen who wishes to be informed on how we conduct our foreign relations; who is responsible for our national defense policies; what are the revenue sources which government may tap in order to finance its manifold activities. The currently discussed problems of the relationships of government to business, to agriculture, and to labor are stressed. Evaluations of social welfare programs, ranging from public educational services and housing programs to old age and unemployment insurance, are included within the subject matter. No prerequisite. (See note above.)

Spring Semester

W 6:20 Nicholson 101, Dawson

7 Comparative European Government. 3 credits. \$15.

An introduction to, and analysis of, the government and politics of Europe, particularly of England, France, Italy, Germany and the Scandinavian countries. Attention will be given to fundamental principles, institutional character and tendencies, parties and contending ideologies, the internal power relations, etc.

Fall Semester

M 6:20 Nicholson 102, McClosky

15 Elements of Political Science. 3 credits. \$15.

An introductory study of the state, sovereignty and liberty, constitutions, the forms of government, and the functions of the state; principles and practices, purposes and institutions, the place which the modern state should occupy in society and the means for the attainment of that position. No prerequisite.

Fall Semester

T 8:05 St. P. Ext. Center 217, Tucker

25 World Politics. 3 credits. \$15.

Significance of contemporary events abroad and their effect on American interests. Implications of the Yalta, San Francisco, Potsdam, and other conferences. Schedule of lectures will be altered to explain current developments and trace causes. No prerequisite.

Fall Semester

W 6:20 Nicholson 216, Mills

55 Government of the Soviet Union. 3 credits. \$15.

An analysis of the government and politics of Soviet Russia that seeks to explain the rise of Bolshevism; the sources and nature of its ideology; the history of the Communist regime; institutional character; the organization of power; the role of the party; foreign, economic and cultural policies; significance for Western Civilization. No prerequisite. (See note on page 31.)

Spring Semester

M 6:20 Nicholson 103, McClosky

60 Principles of Public Administration. 3 credits. \$15.

Public administration is about people. In fact, public administration in a real sense may be regarded as the development of people. The emphasis in this course is on the organization of people in administrative activities; the sociology of administration or how people behave in administrative groups; the problems of coordination of administrative groups and activities; the relations between central and field organization; communications; and the structure and practice of administrative authority. There will be special lectures by administrative officials, federal, state, and local. No prerequisite. (See note on page 31.)

Fall Semester

T 6:20 Nicholson 101, Warp

65 Government of Minnesota. 3 credits. \$15.

An analysis of the structure and functions of state units. Discussion of such problems as legislative organization and procedure; the executive and the administration; personnel problems; political parties; taxation and finance. Emphasis on the changing relationships between city and state, and state and nation. No prerequisite. (See note on page 31.)

Fall Semester

Th 8:05 Nicholson 100, Tucker

70 American Political Parties. 3 credits. \$15.

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. Prerequisite: 6 credits or 12 credits in social science. No prerequisite. (See note on page 31.)

Spring Semester

M 6:20 Nicholson 100, Christensen

75 Local Government in the United States. 3 credits. \$15.

The status and importance of local government in the United States; city governmental, administrative, and political organization; city and county politics and "bosses"; the problem of city government reorganization with special reference to the Twin Cities; the campaign for the council-manager type of city government; the functions of local government—law enforcement, public welfare, housing and city planning, etc.; city financial organization and problems; threats to municipal home rule. No prerequisite. (See note on page 31.)

Spring Semester

T 8:05 St. P. Ext. Center 217, Tucker

80 American National Government. 3 credits. \$15.

A study of the organization, functions, processes, and problems of the national government—the determination of its policies and their administration. No prerequisite. (See note on page 31.)

Spring Semester

Th 8:05 Nicholson 103, Tucker

85 Problems of World Politics. 3 credits. \$15.

Continuation of Political Science 25 which, however, is not prerequisite. Special attention to the Far East, the Near East, and Europe. No prerequisite. (See note on page 31.)

Spring Semester

W 6:20 Nicholson 216, Mills

98 Conduct of American Foreign Relations I. 3 credits. \$15.

Organization and work of the Department of State, trends in recent reorganizations; the Foreign Service; diplomatic and consular functions and problems; special foreign affairs agencies; relations with international organizations. No prerequisite. (See note on page 31.)

Fall Semester

T 6:20 Nicholson 107, McLaughlin

99 Conduct of American Foreign Relations II. 3 credits. \$15.

Treaties and executive agreements; the role of public opinion, political parties and pressure groups, Congress and Congressional committees, and executive leadership in the formation of foreign policy; the problem of democratic control of foreign policy; analysis of procedures and controlling forces in recent examples of American foreign policy. No prerequisite. (See note on page 31.)

Spring Semester

T 6:20 Nicholson 107, McLaughlin

PORTUGUESE**1-2 Beginning Portuguese.** 3 credits each semester. \$15.

Grammar, pronunciation, reading, and practice in speaking. No prerequisite.

Fall Semester

1 T 6:20 Folwell 205, Luckey

Spring Semester

2 T 6:20 Folwell 205, Luckey

PSYCHOLOGY

1a Application of Psychology to Living. 3 credits. \$15.

This course is devoted to psychology in personal relationships and in the achievement of mental health. It centers, for the most part, around our fundamental needs—the source of all our actions and satisfactions—and it presents principles highly applicable in the life of every person. This course has no prerequisite, and it may be taken with the same satisfaction before or after Psychology 1-2. Repeated spring semester. Elective credit in S.L.A. Not to be confused with A Elem. Psy.

Fall Semester		Spring Semester	
M 6:20	St. P. Ext. Center 206, White	M 8:05	Nicholson Hall 213, White
T 6:20	Nicholson Hall 213, White	T 8:05	St. P. Ext. Center 206, White
Th 8:05	Nicholson Hall 213, White	Th 6:20	Nicholson Hall 213, White

1-2† General Psychology. 3 credits each semester. \$15.

This course is designed to orient the student to the whole field of psychology. Its emphasis is upon methods of investigation. Required for most other courses in psychology. No prerequisite.

Fall Semester		Spring Semester	
1 W 6:20	Nicholson Hall Aud., White	2 W 6:20	Nicholson Hall Aud., White
F 7:00	St. P. Ext. Center 206, White	F 7:00	St. P. Ext. Center 206, White

4-5† Introductory Laboratory Psychology. 2 credits each semester. \$15.

Experiments illustrating the subject matter and methods of the psychology of today. Each student interprets his own performances with respect to general ability, special abilities (mechanical, clerical, artistic, etc.), interests, and personality traits. Supplies the laboratory experience necessary for using psychology as the natural science requirement in the Junior College. May be taken with or after Psychology 1-2.

Fall Semester		Spring Semester	
4 W 8:05	Psychology 211	5 W 8:05	Psychology 211

119 Psychology of Personality. 3 credits. \$15 plus \$1 laboratory fee.

Designed to dissolve the halo of mystery surrounding the concept of personality, to the end that persons may better understand themselves and those they influence. Personality factors in relationship to business, family, and marital life. Special study of the many conditions, cultural and biological, which produce the varied traits distinguishing one person from another. Emphasis upon the importance of early experience in forming character. Prerequisite: Psychology 1-2.

Fall Semester	
W 8:05	Psychology 115, Heron

122-123† Vocational Development and Personnel Psychology. 3 credits each semester. \$15 plus \$1 laboratory fee.

Deals with selecting, counseling, training, and maintaining an efficient labor force in industry. Theory and practice of giving, interpreting, and evaluating psychological tests and of interviewing; constructing and using rating scales; training, maintaining, and promoting employees. There will also be actual practice in the use of psychological tests. Not open for credit to those who have taken Psychology 160-161 for credit. Prerequisite: Consent of instructor.

Fall Semester		Spring Semester	
122 M 6:20	Psychology 211, Longstaff	123 M 6:20	Psychology 211, Longstaff

144-145† Abnormal Psychology. 3 credits each semester. \$15.

Normal and abnormal behavior contrasted; varieties of maladjustment, or inadequacies of personality as shown in everyday life, contrasted against the background of neurotic and psychotic persons in order to consider programs of mental hygiene. Prerequisite: Psychology 1-2.

Fall Semester		Spring Semester	
144 M 8:05	Psychology 115, Schofield	145 M 8:05	Psychology 115, Schofield

167 Psychology of Attitudes and Public Opinion. 3 credits. \$15.

Emphasis is placed on how opinions develop and on social aspects of polling as well as on such survey techniques as sampling methods and question formulation. Application of polling methods to consumer studies and to measurement of industrial morale is considered. No prerequisite; elementary statistics desirable.

Spring Semester	
Th 6:20	Psychology 115, Jones

S.W. 70 Introductory Psychiatry. See page 38.

RADIO

Writing for Radio and Television I. 3 Extension credits. \$15 plus \$1 laboratory fee.

Up-to-date instruction in writing for both radio and television; fundamentals of technique of writing for the ear (radio) and for both eye and ear (television) stressed throughout the 17 weeks of writing actual script. Students alerted to constant changes in

† See Information, page 7.

both mediums. Designed for radio and television writers or those who plan to do such writing, for educators, advertising men and women, public service executives, anyone interested in communication. Participants are urged to select script subjects that fit their particular interests or jobs. The student begins with short announcements, and progresses through the various announcement forms into short and longer programs of drama, comedy, interviews, music, etc. Cultural, entertainment, and advertising values maintained throughout. Handling of radio sound effects and music. Making the television camera work for you. Constant survey and discussion of current radio and television with emphasis on new developments in each. Selected work presented in "audition" program each semester. Particular scripts may be presented on KUOM or other suitable stations. Prerequisite: a good command of English. Repeated spring semester.

Fall Semester

T 6:20 Murphy 302, Weaver

Spring Semester

T 8:05 Murphy 302, Weaver

Writing for Radio and Television II. 3 Extension credits. \$15 plus \$1 laboratory fee.

Basic plan: writing a series of 15-minute or longer programs for consecutive presentation. The course may be used by active script writers to get unhampered criticism of their work before it is submitted to station or network, or sponsoring agency or business firm. Frequently used as refresher course by writers and former students. Emphasis on skillful use of the elements of the respective mediums: in radio, the spoken word, sound effects, and music; in television, the camera, or visual appeal, plus the spoken lines, sound effects, and music. Participants are urged to set up projects in their own fields of interest or employment. Experimentation in new program patterns encouraged. Selected work presented in "audition" program each semester. Approved scripts frequently presented on KUOM or other suitable stations. Prerequisite: I to precede II, II to precede III.

Spring Semester

T 6:20 Murphy 302, Weaver

Writing for Radio and Television III. 3 Extension credits. \$15 plus \$1 laboratory fee.

Writing for Radio and Television III for those who have completed I and II or equivalent in advanced writing can be offered if a sufficient number enroll.

Fall Semester

T 8:05 Murphy 302, Weaver

Spring Semester

Radio Speech (Speech 65). 3 credits. \$15 plus \$1 laboratory fee.

Speech and psychology of radio; announcing; interpretative reading, voice, diction, articulation, and pronunciation. Practice, exercises, projects, and reports on problems of appeal and audience response. Voice recordings will be made. Enrolment limited to 25. Repeated spring semester. Prerequisite: Speech 1-2, or consent of instructor.

Fall Semester

W 6:20 Station WCCO, Ziebarth

Spring Semester

W 6:20 Station WCCO, Ziebarth

Radio Drama (Speech 66). 3 credits. \$15.

A study of the methods and techniques involved in the production of radio dramatic programs. Students participate in all phases, including acting, sound effects, music selection, script analysis and production directing. Prerequisite: Speech 1-2 or consent of instructor.

Fall Semester

W 6:20 Murphy 302, Engar

Speech 81 Interpretative Reading. See page 40.

RECREATION

Note that the recreational activities are offered in three groups: for women only, for both men and women, for men only. Unless otherwise designated, all classes meet one hour per week, carry no credit, and require no prerequisites.

Activities Open Only to Women

Golf (Beginning)—for Women. \$7.50 plus \$1.75 special fee.

Class and individual instruction in the use of the brassie, midiron, mashie, and putter. Discussion of rules, golf etiquette, and terminology. Last few lessons in spring at University Golf Course. Sections limited to 20. Equipment (clubs and soft balls) furnished by students. Repeated spring semester.

Fall SemesterT 5:30 Norris Gym. 60, Jaeger
T 6:30 Norris Gym. 60, Jaeger**Spring Semester**T 5:30 Norris Gym. 60, Jaeger
T 6:30 Norris Gym. 60, Jaeger
W 5:30 Norris Gym. 60, Tenney
W 6:30 Norris Gym. 60, Tenney

Golf (Intermediate)—for Women. \$7.50 plus \$1.75 special fee.

First ten weeks: class and individual instruction in the use of the brassie, midiron, mashie, and putter; next seven weeks: supervised play at the University Golf Course. Students furnish own clubs. Sections limited to 20. Prerequisite: some knowledge of and experience in golf.

Spring Semester	
Th 5:30	Norris Gym. 60, Jaeger
Th 6:30	Norris Gym. 60, Jaeger
F 5:30	Norris Gym. 60, Bermingham
F 6:30	Norris Gym. 60, Bermingham

Rhythmic Exercise and Recreational Games for Physical Fitness—for Women. \$7.50 plus \$1.75 special fee.

Rhythmic exercise, group and individual, for general body control with special emphasis on streamlining the figure: posture, carriage, and relaxation. Repeated spring semester.

Fall Semester		Spring Semester	
Th 5:30	Norris Gym. 153, Wilson	Th 5:30	Norris Gym. 153, Wilson

Rhythm—for Children. Section I. \$7.50 plus \$1.75 special fee.

A course in rhythm training for the 6-7-year-old child with emphasis on free imaginative response to rhythm fundamentals and music.

Fall Semester		Spring Semester	
S 10:00	Norris Gym. 151, Bockstruck	S 10:00	Norris Gym. 151, Bockstruck

Rhythm—for Children. Section II. \$7.50 plus \$1.75 special fee.

A course in rhythm training for children between the ages of 8 and 9 years. In addition to imaginative rhythmic response this course will include application of rhythm fundamentals in ball activities, rhythmic games and dances. The making of original dance patterns will be stressed in both sections.

Fall Semester		Spring Semester	
S 9:00	Norris Gym. 151, Bockstruck	S 9:00	Norris Gym. 151, Bockstruck

Swimming for Girls. \$7.50 plus \$1.75 special fee.

A course in swimming for girls between the ages of 6 and 12 years. A health examination for which a fee of 50 cents is charged will be given at the first class meeting. Second meeting will be for the purpose of classifying swimmers into the following groups: beginners; advanced beginners (those who are at home in shallow water); intermediate swimmers (those who are at home in deep water). Swimmers may bring their own suits. Caps are required for all swimmers. Classes are limited to 20 girls in each section.

Fall Semester		Spring Semester	
Beginners		Beginners	
S 8:45-9:30	Norris Gym. 51, Bermingham	S 8:45-9:30	Norris Gym. 51, Bermingham
Advanced Beginners		Advanced Beginners	
S 9:30-10:15	Norris Gym. 51, Bermingham	S 9:30-10:15	Norris Gym. 51, Bermingham
Intermediate Swimmers		Intermediate Swimmers	
S 10:15-11:00	Norris Gym. 51, Bermingham	S 10:15-11:00	Norris Gym. 51, Bermingham

Swimming (Beginning)—for Women. \$7.50 plus \$1.75 special fee.

For beginners and those who want to increase their skill in strokes and diving. A health examination, for which a fee of 50 cents is charged, will be given at the first class meeting. Sections limited to 30. Repeated spring semester.

Fall Semester		Spring Semester	
T 6:00	Norris Gym. 51, Larson	M 6:00	Norris Gym. 51, Tinker
T 7:00	Norris Gym. 51, Larson	M 7:00	Norris Gym. 51, Tinker
		T 6:00	Norris Gym. 51, Larson
		T 7:00	Norris Gym. 51, Larson

Swimming (Intermediate and Advanced)—for Women. \$7.50 plus \$1.75 special fee.

A course for those who know how to swim but wish to learn new strokes or polish up on those they already know. Instruction in diving and water safety included. Sections limited to 30. Repeated spring semester.

Fall Semester		Spring Semester	
W 6:00	Norris Gym. 51, Larson	W 6:00	Norris Gym. 51, Larson
W 7:00	Norris Gym. 51, Larson	W 7:00	Norris Gym. 51, Larson

Synchronized Swimming and Water Ballet—for Women. \$7.50 plus \$1.75 special fee.

Instruction in, and adaptation of, strokes and aquatic activities of synchronized and water-ballet swimming. Experience in developing group and individual routines. Sections limited to 30. Repeated spring semester.

Fall Semester		Spring Semester	
T 6:00	Norris Gym. 58	T 6:00	Norris Gym. 58
T 7:00	Norris Gym. 58	T 7:00	Norris Gym. 58

Tennis (Beginning)—for Women. \$7.50 plus \$1.75 special fee.

Group and individual instruction. First eleven weeks' instruction given indoors; last six weeks at the university tennis courts. Individual practice for the improvement of strokes; working with tennis robot. Students furnish own tennis rackets and balls.

Spring Semester

Th 5:30 Norris Gym. 151, Hauptfeuhrrer
Th 6:30 Norris Gym. 151, Hauptfeuhrrer

Badminton (Beginning)—for Women. \$7.50 plus \$1.75 special fee.

Practice in beginning game skills and strategy. Rackets and birds will be supplied.

Fall Semester

M 8:00 Norris Gym. 153, Ziemer

Spring Semester

M 8:00 Norris Gym. 153, Ziemer

Activities Open to Both Men and Women**Country Dancing I-II. \$7.50 plus \$1.75 special fee.**

A recreational course reviving old American dances, the schottische, polka, and the more popular European folk dances. Repeated spring semester. Two sections: I for beginners; II for those who have had some experience.

Fall Semester

I M 6:00 Norris Gym. 151, Ziemer
II M 7:00 Norris Gym. 151, Ziemer

Spring Semester

I M 6:00 Norris Gym. 151, Ziemer
II M 7:00 Norris Gym. 151, Ziemer

Country Dancing III-IV. \$7.50 plus \$1.75 special fee.

III Intermediate: A recreational course which presupposes the level of skill secured by the end of a thorough elementary course. IV Advanced: A recreational course for those who have already acquired considerable repertoire and skill in this area. These courses are repeated in spring semester.

Fall Semester

III W 7:00 Norris Gym. 151, Bell
IV W 8:00 Norris Gym. 151, Bell

Spring Semester

III W 7:00 Norris Gym. 151, Bell
IV W 8:00 Norris Gym. 151, Bell

Badminton Club—for Men and Women. One period, 5 months, \$10.50.

Four periods per week, as scheduled below, will be devoted to playing the game. Registration will be by periods, with a maximum of 16 players accepted for each. Prospective students should register at the campus office of the General Extension Division to insure acceptance in any period. Registration may be for more than one period per week. Students furnish own rackets and shuttlecocks.

Periods: 6:00 to 7:30 p.m., and 7:30 to 9:00 p.m., Cooke Hall gymnasium, Monday and Friday, beginning September 26 and continuing through February with a recess at Christmas. In addition to the regular class periods, those registered may use the badminton courts when available for general intramural play. In charge: Smith, Bowman.

Activities Open Only to Men**Golf—for Men. \$10 plus \$1 materials fee.**

The fundamentals of golf. Motion pictures or stereopticon slides show proper form of stroke. Eight to ten meetings for pictures, lectures, etc., will be held on Monday nights beginning February 6. Lessons or appointments with competent golf instructors in the golf gymnasium will be scheduled for Tuesday, Wednesday, Thursday, or Friday evenings between February 6 and April 17. The last five meetings will be held, weather permitting, at the University Golf Course, where various professionals will assist. The outdoor schedule is adjusted to light. Students will furnish their own clubs.

Spring Semester

M 7:00 Cooke Hall 205, Smith

Swimming—for Men. \$7.50.

Class and individual instruction for beginners in all swimming strokes, in diving, in senior lifesaving; preparation for Red Cross examinations. Woolen bathing suits not permitted. Health examination at first meeting. Other sections arranged on demand.

Spring Semester

M 8:05 Cooke Hall, Boyce

Swimming for Boys. \$7.50.

A course for boys 6 to 12 years of age and at least 48 inches tall. The first meeting will be for the purpose of classifying swimmers into the proper groups: beginning, intermediate, advanced. Swimmers are required to bring their own towels.

Spring Semester

Beginners and Intermediate
S 10:00 Cooke Hall, Ostrander
Advanced
S 11:00 Cooke Hall, Boyce

RELIGION

Comparative Religious Thought Today. See page 29.

Readings in Religious Classics. See page 29.

RUSSIAN

1-2 Beginning Russian. 3 credits each semester. \$15.

A beginning course with emphasis on reading. Comprehensive discussion of the Russian grammatical system, interpretation of easy texts, and composition. After fulfilling the requirements of the course, students will have the basic knowledge necessary for the reading of any kind of Russian texts.

Fall Semester

1 M 6:20 Folwell 113, Blinoff

Spring Semester

2 M 6:20 Folwell 113, Blinoff

5 Elementary Scientific Russian. 3 Extension credits. \$15.

The publication of numerous important scientific contributions in Russian makes it essential for scientists in this country to have at least some rudimentary reading knowledge of the Russian language. The course in Scientific and Technical Russian is designed as a short cut for the acquisition of such a reading knowledge. No previous knowledge of Russian is necessary, but acquaintance with some scientific field or with the usual English scientific terminology is essential.

Fall Semester

T 6:20 Folwell 113, Blinoff

6 Intermediate Scientific Russian. 3 Extension credits. \$15.

Reading and translation of classic and current Russian scientific literature. Prerequisite: Elementary Scientific Russian or Russian 1-2.

Spring Semester

T 6:20 Folwell 113, Blinoff

SCANDINAVIAN

1-2 Beginning Danish. 3 credits each semester. \$15.

Intended primarily for beginners in Danish. A minimum of grammar, with emphasis on simple composition and conversation, and some reading of elementary selected prose. No prerequisite.

Fall Semester

1 Th 6:20 Folwell 12, Aarsleff

Spring Semester

2 Th 6:20 Folwell 12, Aarsleff

1-2 Beginning Norwegian. 3 credits each semester. \$15.

This course, intended for students who have little or no previous knowledge of Norwegian, stresses spoken Norwegian, but provides in addition the essentials of grammar and some practice in simple composition. No prerequisite.

Fall Semester

1 W 6:20 Folwell 12, Eikaas

Spring Semester

2 W 6:20 Folwell 12, Eikaas

5-6 Advanced Norwegian. 3 credits each semester. \$15.

Designed for students with some theoretical and practical knowledge of Norwegian. Provides a rapid review of grammar and considerable practice in conversation and composition. Readings in Norwegian. Prerequisite: Norwegian 1-2 or equivalent.

Fall Semester

5 W 8:05 Folwell 12, Eikaas

Spring Semester

6 W 8:05 Folwell 12, Eikaas

7-8 Beginning Swedish. 3 credits each semester. \$15.

Intended primarily for beginners in Swedish. A minimum of grammar, with emphasis on simple composition and conversation, and some reading of elementary selected prose. No prerequisite.

Fall Semester

7 T 6:20 Folwell 12, Gustafson

Spring Semester

8 T 6:20 Folwell 12, Gustafson

9-10 Intermediate Swedish. 3 credits each semester. \$15.

This course is designed either for students who have completed 7-8 or its equivalent, or for those who have a reasonable practical working knowledge of Swedish. Review of fundamentals of grammar, together with conversation and composition and readings in Swedish literature. Prerequisite: Swedish 7-8 or equivalent.

Fall Semester

9 T 8:05 Folwell 12, Gustafson

Spring Semester

10 T 8:05 Folwell 12, Gustafson

SOCIOLOGY AND SOCIAL WORK

Classes in Sociology

Contemporary Family Problems. 3 Extension credits. \$15.

A practical survey of the problems of family life today. Factors underlying the development of family unity or disunity. The roles of the several members of the family, contemporary parent-child relationships, adolescence, courtship, marital adjustments, divorce, and other family problems. No prerequisite.

Fall Semester

T 6:20 St. P. Ext. Center 218, Johanson

Spring Semester

W 6:20 Nicholson 107

1 Introduction to Sociology. 3 credits. \$15.

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; the processes involved in social change and the social problems that accompany social change. A survey of the fundamental social institutions, such as the family and the church; the development and decline of social institutions; change in the institutional functions and social disorganization. Repeated spring semester. No prerequisite.

Fall Semester

T 8:05 St. P. Ext. Center 218, Johanson T 6:20 Nicholson 111, Caplow
Th 6:20 Nicholson 107, Caplow

Spring Semester**7 Urban Sociology. 3 credits. \$15.**

An introduction to the study of city life and city growth. Special emphasis is given to the analysis of urbanism as a culture pattern, and to the use of local and familiar source material drawn from the Twin Cities. A brief research project under supervision is required. Prerequisite: Sociology 1.

Fall Semester

T 6:20 Nicholson 102, Caplow

14 Sociology of Rural Life. 3 credits. \$15.

Presentation of the factual data necessary to understanding the problems of modern rural social life in the United States. The social processes, stratification, assimilation, conflict, and cooperation as manifested in rural society will be emphasized. (See 161 below.) Prerequisite: Sociology 1 or equivalent.

Spring Semester

Th 6:20 Nicholson 102, Marshall

49 Social Problems. 3 credits. \$15.

A survey course in contemporary social problems with especial emphasis on personal demoralization and social disorganization.

Spring Semester

Th 6:20 Nicholson 107, Caplow
T 6:20 St. P. Ext. Center 218, Johanson

70 Introductory Psychiatry. 3 credits. \$15.

A lecture course, the subject matter of which includes a discussion of mental hygiene, mental mechanisms; psychiatric history taking; review of schools of psychiatry; classification of mental diseases. No prerequisite.

Spring Semester

T 6:20 Nicholson 100, Hanson

161 Rural Community Analysis. 3 credits. \$15.

With instructor's consent qualified students may register for senior or graduate credit under the course number and title, attending the class sessions of Sociology 14, above, and completing extra assignments under the instructor's supervision. Prerequisite: Sociology 1 and 15 credits in social science and instructor's consent.

Spring Semester

Th 6:20 Nicholson 102, Marshall

170 Social Life and Cultural Change. 3 credits. \$15.

A study of recent social trends in the United States with emphasis upon their relationships to problems of human welfare, social control, and social reorganization. The theory of cultural lag and the idea of progress, etc. Prerequisite: Sociology 1 and 15 credits in social science, child welfare, education, philosophy, psychology, or consent of instructor.

Spring Semester

W 6:20 Nicholson 102, Martindale

Classes in Social Work

Note—These classes are open to persons employed in social work positions who are recommended by the executive of the agency in which they are employed and approved by an adviser in the School of Social Work. In satisfaction of requirements for membership in professional social work organizations, the courses listed are accounted as "technical social work" courses. Credit in certain university departments may be granted by application upon successful completion of these courses. Students interested in this should consult their department advisers before registration.

91 Case Method Applied to the Study of Human Problems. 3 credits. \$15.

The general application of the interviewing method for students who plan to work professionally in fields involving human relationships, as Social Work, Public Health Nursing, Speech Pathology, etc. Prerequisite: Social Work 50 or 51 or consent of instructor.

Fall Semester

M 6:20 Nicholson 103

92 Working with Groups. 3 credits. \$15.

A study of the application of the group work method for students who are workers in children's institutions, settlement houses, informal educational and recreational agencies. Includes discussion of some basic mental hygiene concepts, programming according to individual needs and other practical problems. No prerequisite.

Fall Semester

Th 9 to 11 a.m. TSF 109, Konopka

176 Dynamics of Human Behavior Based on Psychoanalytic Theory. 3 credits. \$15.

The application of psychoanalysis in the understanding of abnormal behavior; the lectures deal with normal and abnormal behavior, especially in relation to problems met by the social worker and teacher. Prerequisite: 6 credits in sociology and 6 credits in psychology and consent of an adviser in the School of Social Work.

Fall Semester

Th 6:20 St. P. Wilder Clinic, 670
Marshall Ave., Lippman

SPANISH**1-2 Beginning Spanish. 3 credits each semester. \$15.**

Grammar, pronunciation, reading, and practice in speaking. No prerequisite.

Fall Semester

1 M 6:20 Folwell 227, Rodgers
T 4:40 Mpls. N. W. Bank Bldg. 690
T 8:05 St. P. Ext. Center 219, Mousolite
Th 6:20 Folwell 227

Spring Semester

2 M 6:20 Folwell 227, Rodgers
T 4:40 Mpls. N. W. Bank Bldg. 690
T 8:05 St. P. Ext. Center 219, Mousolite
Th 6:20 Folwell 227

3-4 Intermediate Spanish. 3 credits each semester. \$15.

Review, composition, readings from modern authors. Attention to correspondence and commercial practice if desired. Prerequisite: Spanish 1-2 or 2 years of preparatory Spanish.

Fall Semester

3 T 6:20 St. P. Ext. Center 219, Buss
W 6:20 Folwell 201

Spring Semester

4 T 6:20 St. P. Ext. Center 219, Buss
W 6:20 Folwell 201

5-6 Written and Spoken Spanish. 3 credits each semester. \$15.

Practice in speaking, review grammar and composition. Prerequisite: 3-4.

Fall Semester

5 W 6:20 St. P. Ext. Center 204,
Mousolite
Th 6:20 Folwell 213, Mills

Spring Semester

6 W 6:20 St. P. Ext. Center 204, Mousolite
Th 6:20 Folwell 213, Mills

7-8 Latin-American Culture. 3 credits each semester. \$15.

This course offers a panoramic view of Latin-American culture. It attempts to interpret the land, the people, and their history; the political, social, and economic organization; the cultural and literary traditions in such a way as to give the North American a unified picture of the twenty countries of Latin America. Lectures and readings in English; Spanish not necessary. No prerequisite.

Fall Semester

7 Th 6:20 Folwell 201, Cuneo

Spring Semester

8 Th 6:20 Folwell 201, Cuneo

53-54 Spanish Composition and Conversation. 3 credits each semester. \$15.

Practical composition, including correspondence and conversation. Prerequisite: Spanish 5-6 or equivalent.

Fall Semester

53 T 6:20 Folwell 213, Mills

Spring Semester

54 T 6:20 Folwell 213, Mills

140-141 Contemporary Latin-American Literature. 3 credits each semester. \$15.

Prerequisite: A survey of the literature of Spain or Spanish America or consent of instructor.

Fall Semester

140 Th 6:20 Folwell 203, Irving

Spring Semester

141 Th 6:20 Folwell 203, Irving

SPEECH

1-2†-3 Fundamentals of Speech. 3 credits each semester. \$15 plus \$1 laboratory fee.

Speech as a means of social adaptation and control; techniques of body and voice; organization of speech material and study of types of speeches; practice for correctness and effectiveness in presentation. Voice recordings. No prerequisite.

Fall Semester

1	M	8:05	Folwell 308, Irwin
	Th	6:20	St. P. Ext. Center 216, Bystrom
2	M	6:20	Folwell 305, Irwin
	Th	6:20	St. P. Ext. Center 216, Bystrom
3	M	6:20	Folwell 305, Irwin
	Th	6:20	St. P. Ext. Center 216, Bystrom

Spring Semester

1	M	8:05	Folwell 308, Irwin
	Th	6:20	St. P. Ext. Center 216, Bystrom
2	M	6:20	Folwell 305, Irwin
	Th	6:20	St. P. Ext. Center 216, Bystrom
3	M	6:20	Folwell 305, Irwin
	Th	6:20	St. P. Ext. Center 216, Bystrom

32 Beginning Acting. See Theater, page 41.

78 Advanced Acting. See Theater, page 41.

81 Interpretative Reading. 3 credits. \$15 plus \$1 laboratory fee.

The oral reading of prose literature, for those who wish to develop facility and effectiveness in speaking, acting, or reading out loud. Individual practice in developing imaginative, physical, and vocal skills necessary for communicating the total meaning of a piece of fiction, poetry, or drama. Enrolment limited to 20. Prerequisite: Speech 1-2-3 or 5-6 or consent of instructor.

Fall Semester

W 8:05 Folwell 308, Thompson

Beginning Practical Speech Making. 3 Extension credits. \$15 plus \$1 laboratory fee.

A beginning course for business and professional people who are desirous of learning to speak extemporaneously so that their ideas may be presented in an organized way and expressed with confidence and effectiveness; individual attention to cases of nervousness or embarrassment. Each student speaks before the class each meeting. Beginning classes each semester; students may continue in Advanced Practical Speech Making. Voice recordings will be made. No prerequisite. (Sections limited to 25 each.)

Fall Semester

M	6:20	Folwell 6, Woods
M	6:20	St. P. Ext. Center 217, Sandquist
T	6:20	Folwell 8, Nichols
W	8:05	Folwell 6, Sandquist

Spring Semester

M	6:20	Folwell 6, Woods
T	6:20	Folwell 8, Nichols
Th	6:20	St. P. Ext. Center 206, Woods

Advanced Practical Speech Making. 3 Extension credits. \$15 plus \$1 laboratory fee.

An advanced course for business and professional people who are desirous of developing skill in extemporaneous speaking dealing with life problems and public questions; individual attention to special problems. Each student speaks before the class each meeting. Voice recordings will be made. Open only to students who have completed Beginning Practical Speech Making, except by special permission of instructor. (Sections limited to 25 each.)

Fall Semester

W 6:20 St. P. Ext. Center 217, Woods

Spring Semester

W 6:20 Folwell 8, Sandquist

Efficient Listening. 3 Extension credits. \$15.

The primary emphasis in this course is upon efficient listening to instructive and directive speech. Of particular value to those who wish to improve concentration when listening to lectures, dictated material, instructions orally presented. Half of each class session is occupied with lectures on such topics as inefficient listening and its causes, the desire to learn and learning economy, the elements of concentration, speech structuralization, comprehension of main points, four usable systems of note-taking and emotional adjustment to the speaker and his thesis. The other half of each class session is devoted to student performance.

Fall Semester

M 6:20 Folwell 12, Nichols

Spring Semester

M 6:20 Folwell 12, Nichols

Vocabulary Building I. 1½ Extension credits. \$7.50 plus \$1 materials fee.

A practical course designed to increase students' speaking and reading vocabularies. Mimeographed matter, in lieu of text, issued each meeting. Home study suggested but not required. Not a recitation class. Meets weekly for one hour. No prerequisite.

Fall Semester

T 6:20 St. P. Ext. Center 217, Dreher
T 8:05 Folwell 308, Dreher

† See Information, page 7.

Vocabulary Building II. 1½ Extension credits. \$7.50 plus \$1 materials fee.

A more advanced and detailed study of words. Includes composition, exercises, reports, tests; not a recitation class; home study recommended. Meets weekly for one hour. No prerequisite.

Spring Semester

T 6:20 St. P. Ext. Center 217, Dreher
T 8:05 Folwell 308, Dreher

THEATER**Beginning Acting.** 3 credits (see below). \$15 plus \$1 laboratory fee.

A course designed both for the amateur actor who needs to gain experience and background for pursuing future theatrical work and for the playgoer who wishes through a practical working knowledge of acting techniques to enhance his appreciation and enjoyment as a spectator of theatrical productions. Creative and technical approaches; the art of pantomime; principles of stage technique and voice; exercises and projects in characterization. Students are eligible for try-out in acting and constructive phases of University Theatre activities. No prerequisite. Qualified students may receive credit in Speech 32; consult instructor at opening class.

Fall Semester

Th 6:20 Nicholson 3rd Floor, Turner

Advanced Acting. 3 Extension credits or 3 credits in Speech 78 (see below). \$15 plus \$1 laboratory fee.

A course designed for those who have had some training or experience in acting and wish to improve their skills. Emphasis is upon the study of characterization, various styles of acting, and the principles of stage technique. Exercises and projects in the presentation of scenes from great plays. Qualified students may receive credit in Speech 78; consult instructor at opening class.

Spring Semester

Th 6:20 Nicholson 3rd Floor, Graham

Radio Drama. See page 34.**81 Interpretative Reading.** See Speech, page 40.

BUSINESS CLASSES

ACCOUNTING

The Accounting Process I, Introduction. 3 Extension credits. \$15.

A course designed for those in business and professional life who wish to understand accounting methods, terminology and concepts of financial and cost reports, income taxation, and other accounting applications without emphasis on technical bookkeeping procedures. Cash and accrual accounting, significance of "reserves," depreciation bases, inventory valuations of "Lifo" and "Fifo," working capital, net income, and surplus concepts. No prerequisite.

Fall Semester

M 6:20 McKnight Bldg. 250, Reighard

The Accounting Process II, Analysis and Control. 3 Extension credits. \$15.

A continuation of Accounting Process I or for those with a good bookkeeping or elementary accounting background. Accounting analysis involved in partnership and corporate transactions with equity owners, "good will" concepts, change of business form, financial policies disclosed by the "Fund or Working Capital Statement." Accounting control methods of elementary budgeting and variation analysis methods.

Spring Semester

M 6:20 McKnight Bldg. 250, Reighard

Econ. 22-23† Principles of Accounting. 4 credits each semester. \$20.

Principles of accounting based on text and requiring preparation of problems and sets outside the class period—the full first year university course in accounting. Classes meet for approximately 2½ hours. No prerequisite.

Fall Semester

22 M 6:20-8:45 Vincent 306, Sevenich
M 6:20 St. P. Ext. Center 218, Mont-
gomery
T 6:20 Vincent 115
W 6:45 McKnight Bldg. 250
Th 6:20 St. P. Ext. Center 218, Mont-
gomery

Spring Semester

23 M 6:20-8:45 Vincent 306, Sevenich
M 6:20 St. P. Ext. Center 218, Mont-
gomery
T 6:20 Vincent 115
W 6:45 McKnight Bldg. 250
Th 6:20 St. P. Ext. Center 218, Mont-
gomery

Econ. 22-23 Combined. 8 credits. \$20 each unit.

This course offers both Econ. 22 and 23 units complete in one semester, eight weeks for each, two classes per week. Classes meet for approximately 2½ hours. Registration and fees accepted for combined course, or for single units provided Econ. 22 or B.A. 54 has preceded Econ. 23.

Spring Semester

MF 6:20 Vincent 309, Lund
MF 6:30 St. P. Ext. Center 216, Creviere

B.A. 130 Cost Accounting Survey. 3 credits. \$15.

A general survey of cost accounting from the point of view of the executive who must use cost information in the conduct of his business. This course may substitute for B.A. 152 Cost Accounting as prerequisite for B.A. 153. Prerequisite: Econ. 23.

Fall Semester

T 6:20 Vincent 309, Ostlund

B.A. 139 Analysis of Financial Statements. 3 credits. \$15.

Second year course for students concerned with credit and investment analysis and for stockholders. The content and methods of this course are supplementary to and not included in B.A. 150-151; all three units should be taken by accounting majors. Analysis of statements of operation and financial condition of commercial, industrial, public utility and railroad companies. Prerequisite: Econ. 23.

Spring Semester

T 6:20 Vincent 113, Nelson

B.A. 150-151† Intermediate Accounting. 3 credits each semester. \$15.

Second year accounting (with B.A. 139, which see) for students intending to specialize in accounting. Standard text and problems designed to build on principles of the first year course, developing accepted accounting practices in valuation and amortization procedures, determination of periodic income and stockholders' interest. Partnership, consolidated statement and reorganization accounting problems, estates and trusts. Prerequisite: Econ. 23 or equivalent with consent of instructor.

Fall Semester

150 M 6:20 Vincent 301, Heilman
T 6:20 St. P. Ext. Center 216, Rotzel
W 6:20 Vincent 301, Lund

Spring Semester

151 M 6:20 Vincent 301, Heilman
T 6:20 St. P. Ext. Center 216, Rotzel
W 6:20 Vincent 301, Lund

† See Information, page 7.

B.A. 152-153† Cost Accounting. 3 credits each semester. \$15.

Cost accounting with text, laboratory set and problems, requiring outside preparation, covering job order and process cost procedures and theory. With special permission students may substitute B.A. 152 for B.A. 130 to meet core group requirements. Prerequisite: Econ. 23 or equivalent with instructor's consent.

Fall Semester		Spring Semester	
152 M 6:20	Vincent 115, Rotzel	153 M 6:20	Vincent 115, Rotzel
T 8:05	St. P. Ext. Center 216, Tuttle	T 8:05	St. P. Ext. Center 216, Tuttle

Advanced Cost Accounting A-B. 3 Extension credits each semester. \$15.

The design and installation of a modern accounting system; the makeup of various forms for use in the system—purchase orders, receiving slips, invoices, requisitions, shop tickets, etc.; design and ruling of books of original entry; ledgers of various kinds. Prerequisite: see instructor.

Fall Semester		Spring Semester	
A W 6:20	St. P. Ext. Center 216, Tuttle	B W 6:20	St. P. Ext. Center 216, Tuttle

B.A. 133 Standard Cost Accounting and Distribution Costs. 3 credits. \$15.

Methods of standard costs; meaning of standards; setting of standards for materials, labor and overhead; analysis of and accounting for variations; development and application of standards to distribution as well as to production activities. Prerequisite: B.A. 130 or B.A. 153 or consent of instructor.

Fall Semester		Spring Semester	
W 8:05	St. P. Ext. Center 216, Tuttle	W 6:20	Vincent 115, Rotzel

B.A. 118 Auditing Procedure. 3 credits. \$15.

An introduction to auditing procedure with the preparation of a coordinated set of working papers and related statements, from ledgers, journals, original documents. A course prerequisite to B.A. 135, Auditing and Public Accounting. Prerequisite: B.A. 151 or 139.

Fall Semester	
Th 6:20	Vincent 306, Reighard

B.A. 135 Auditing and Public Accounting. 3 credits. \$15.

Preparation of audit reports from working papers; development of accepted auditing procedures under S.E.C. and A.I.A. releases; consideration of C.P.A. auditing problems and special case studies. Prerequisite: B.A. 118.

Spring Semester	
Th 6:20	Vincent 306, Reighard

B.A. 134 Income Tax Accounting I-II. 6 credits. \$30.

First eight weeks, 3 credits; second eight weeks, 3 credits for extension certificate. Students must register for both I and II.

Application of income tax laws to various business conditions; possible errors in preparation of income tax reports; state and federal problems. Classes meet once a week for three hours and twenty minutes. Prerequisite: B.A. 151 or consent of instructor.

September 26-November 16		November 21-February 1	
I M 6:20	St. P. Ext. Center 216, Daly	II M 6:20	St. P. Ext. Center 216, Daly
W 6:20	Vincent 306, Nelson	W 6:20	Vincent 306, Nelson

B.A. 143 Tax Accounting Problems. 3 credits. \$15.

Special tax problems of corporation; administration of income taxes, amended returns; court appeals; state income taxes and allocation of income; social security, estate and gift taxes. Prerequisite: B.A. 134, or consent of instructor.

Spring Semester	
W 6:20	Vincent Hall 306, Nelson

B.A. 180A Accounting Topics—Budgetary Control. 3 credits. \$15.

Budget systems in business-type and kinds; profit and cost trends; profit engineering; budget administration, committees, etc.; budget reports and statements—form, content, and use; problem studies, solutions; recent developments in foundations for budgetary control. Prerequisite: see instructor.

Fall Semester	
W 6:20	Vincent 115, Rotzel

B.A. 181A Senior Topics—Advanced Accounting Problems. 3 credits. \$15.

A sequence course following courses B.A. 150-151. Students who possess considerable accounting experience may also be admitted at the option of the instructor. Designed to meet the needs of advanced students, professional accountants, and comptrollers; concerned primarily with the analysis of accounting problems and their solution; representative problems from various state C.P.A. examinations. Qualified students may receive credit in B.A. 181A.

Fall Semester		Spring Semester	
M 8:05	Vincent 115, Rotzel	T 8:05	St. P. Ext. Center 218, Rotzel

† See Information, page 7.

Industrial Engineering Accounts and Accounting I-II. 3 Extension credits each semester. \$15.

Management accounts from the standpoint of the "management engineer." Analysis of accounts to set forth the interrelationship—both manufacturing and commercial—of (a) fixed cost (b) variable cost (c) profitless point (d) volume (e) mixture or proportions of merchandise and (f) the resulting profit and/or loss. Of the greatest importance in drafting a plan for satisfactory operations or installing an efficient cost accounting or budgetary control program. Profitgraphs and charting of interrelated factors. Recommended for comptrollers, chief accountants, and students who have completed the course in Budgetary Control. A treatise, reading and problem work assignments. Prerequisite: see instructor.

Fall Semester

I W 8:05 Vincent 115, Rotzel

Spring Semester

II W 8:05 Vincent 115, Rotzel

ADVERTISING**B.A. 88 Elementary Advertising.** 3 credits. \$15.

Covers two important phases of advertising: the place of advertising in business and advertising procedure. Attention to planning an advertising campaign, including market research, appropriations, choice of media, scheduling, preparation of copy, and layout. Prerequisite: Economics 6-7, Psychology 1-2, 56, and B.A. 77, Marketing.

Spring Semester

T 6:20 Vincent 205, Lewis

Advertising Practice. 3 Extension credits. \$15.

An orientation course in advertising embracing all phases of advertising procedure. Includes a study of: the structure of the advertising agency business; the workers in advertising and what they do; consumer, market and product research; selection of media; preparation, testing, and coordinating of advertising; advertising appropriations; and planning of an advertising campaign. Various case histories in advertising presented in class sessions; also numerous factors relating to the knowledge test section of the annual AAAA examination will be discussed. No prerequisite.

Fall Semester

M 6:20 Nicholson 111, Greenwood

The Creation of Advertising. 3 Extension credits. \$15.

A somewhat advanced course in planning, writing, and designing advertisements. Depending upon enrolment, emphasis will be placed on retail or agency-type problems—but both will be covered. Course to be taught by professional writers and artists, and assignments will involve practical problems in advertising creation of all kinds. Prerequisite: Advertising Practice, actual advertising experience, or consent of instructor.

Spring Semester

W 6:20 Murphy 302, Seehafer and others

97 Advertising Copy, Layout, and Typography. See Journalism, page 26.**87 Radio Advertising.** See Journalism, page 25.**BUSINESS ENGLISH****1 Business English.** 3 Extension credits. \$15.

A practical class for business people who recognize the value of good English in business and in general writing and conversation. Various kinds of business writing are studied with some attention to letter type; application of good grammar and correct forms in all business writing. Repeated spring semester. No prerequisite.

Fall Semester

T 6:20 St. P. Ext. Center 206, Gudas
T 8:05 Vincent 205, Haga
W 6:20 Vincent 205, Haga

Spring Semester

T 6:20 St. P. Ext. Center 206, Gudas
W 6:20 Vincent 205, Haga

2 Business Correspondence. 3 Extension credits. \$15.

A more advanced class with less emphasis on grammar and mechanics. Practical adaptation of successful letter writing to specialized correspondence under such headings as: executive, personnel, and financial problems. Each student will work out an individual communications project related to his own most imperative business needs. No prerequisite, but Business English or its equivalent is, for practical reasons, strongly recommended.

Spring Semester

T 8:05 St. P. Ext. Center 214, Gudas
W 8:05 Vincent 205, Haga

BUSINESS LAW**B.A. 51-52-53, 56 Business Law.** 3 credits each semester. \$15. (51 and either 52 or 53 must be completed before credit for degree or certificate is granted.)

Comprehensive course in the fundamental principles of law for the business and professional man. B.A. 51: contracts—formation, operation, transfer, discharge. B.A. 52: business

associations—nature, creation and terms of the relation, rights, and liabilities of the parties when doing business through agents, partnerships and corporations. B.A. 53: law of sales of goods under the Uniform Sales Act and law of commercial paper under the Uniform Negotiable Instruments Law. B.A. 56: nature and classification of real estate; deeds and conveyances; landlord and tenant; recording and abstracting; Torrens titles; liens and mortgages; wills, probating of estates, and duties of administrators and executors. Prerequisite: B.A. 51 must precede 52 or 53 unless the consent of the instructor is obtained for a different sequence.

Fall Semester				Spring Semester			
51	M	8:05	St. P. Ext. Center 206, Ackman	51	M	6:20	St. P. Ext. Center 206, Ackman
	W	6:20	Vincent 207, McClendon		W	8:05	Vincent 207, McClendon
52	M	6:20	St. P. Ext. Center 214, Ackman	52	M	8:05	St. P. Ext. Center 206, Ackman
	W	8:05	Vincent 207, McClendon		W	6:20	Vincent 207, McClendon
53	T	6:20	Vincent 207, McClendon	56	Th	6:20	Vincent 113, Maloney

Common Legal Problems. 3 Extension credits. \$15 plus \$1 materials fee.

A course in everyday legal principles for the layman who wishes more intelligently and efficiently to fulfill his place as a citizen; not a "business law" course. Any individual, whether married or single, housewife or businessman, is bound to come up against many legal problems in varied fields during a lifetime. In many cases these problems might never arise or might be considerably eased if the persons involved could anticipate them and know in advance what are the basic rights and liabilities and what steps should be taken to enforce or guard them, whom to consult, etc. This course will examine those everyday transactions which of necessity involve certain fundamental legal aspects; property rentals, leases, purchases and sales, building contracts and liens, mortgages and loans; rights and liabilities of master and servant, husband and wife, agents or partners; liability for accidents, negligence, trespass, etc.; handling of wills, estates, tax returns, etc.; and many similar common operations or relationships.

Fall Semester				Spring Semester			
W	6:20	Nicholson 107, Thorfinnson		W	6:20	Nicholson 100, Thorfinnson	
Th	6:20	St. P. Ext. Center 219, Riley		Th	6:20	St. P. Ext. Center 219, Riley	

Current Problems in Bankruptcy, Receivership and Reorganization. 3 Extension credits. \$15 plus \$1 materials fee.

Open to members of the legal profession. The course deals with the procedural and substantive aspects of the collection, administration and distribution of insolvent estates, with particular regard to the rights and remedies of secured and unsecured creditors under recent federal and state statutes and decisions.

Fall Semester			
W	4:20-6:00	Mpls. N.W. Bank Bldg. 690,	
		Riesenfeld	

ECONOMICS

Econ. 5 Elements of Statistics. 3 credits. \$15.

The principles of statistical methods applied to business; collection, tabulation, and interpretation of statistical data; averages, ratios, errors, index numbers, graphs, and charts. No prerequisite.

Fall Semester				Spring Semester			
W	6:20	Vincent 113, Cooke		W	6:20	Vincent 221	
Th	8:05	St. P. Ext. Center 217, Gaasedelen		Th	6:20	St. P. Ext. Center 204, Gaasedelen	

Econ. 6-7† Principles of Economics. 3 credits each semester. \$15.

Fundamental principles underlying the economic activities of society; utility and valuation; prices and the cost of production; the factors of production; division of labor and its relation to the development of industry; wages, rent, interest; capitalization, enterprise, business profits. Fundamental to the study of any business subject. No prerequisite.

Fall Semester				Spring Semester				
6	M	6:20	Vincent 205	6	T	8:05	Vincent 207	
	M	6:20	St. P. Ext. Center 219		7	M	6:20	Vincent 113
	T	8:05	Vincent 1		M	6:20	St. P. Ext. Center 214	
	W	6:20	Vincent 6		T	6:20	Vincent 207	
	Th	8:05	Vincent 207		W	6:20	Vincent 6	
7	T	8:05	Vincent 207		Th	8:05	Vincent 207	

Econ. 80-81† Intermediate Economic Analysis. 3 credits each semester. \$15.

A study of some of the more important theoretical problems of economics; competitive and monopoly prices; equilibrium prices and costs; theories of valuation of producers' goods; capital earnings and interest rates; profits. Prerequisite: Economics 6-7.

Fall Semester				Spring Semester			
80	Th	6:20	Vincent 205, Waite	81	Th	6:20	Vincent 205, Waite

† See Information, page 7.

B.A. 112 Business Statistics. 3 credits. \$15.

The technique of time series analysis; methods of determining normal or trend values; methods of measuring seasonal variation and adjustment of data for seasonal fluctuation; measurement of degree of relation between time series, graphically and by correlation technique; analysis and comparison of index numbers of local and national business conditions. Prerequisite: Econ. 5, or 14, or equivalent.

Spring Semester

Th 6:20 Vincent 207, Cooke

FINANCE**Econ. 3 Elements of Money and Banking. 3 credits. \$15.**

The nature and functions of money and credit; a study of commercial banking and the Federal Reserve System—their functions in private finance, ordinary governmental finance, and war finance. Machinery designed to control alternate periods of inflation and deflation; other types of financial institutions and security exchanges; changes in form and functions resulting from legislation or revised business practices. No prerequisite.

Fall SemesterM 6:20 Vincent 113, Stehman
Th 6:20 St. P. Ext. Center 204**Spring Semester**

W 8:05 Vincent 113

B.A. 58 Elements of Public Finance. 3 credits. \$15.

Public expenditures, revenues, debts, fiscal policy and financial administration. Special attention is given to tax principles, practices, burdens, and co-ordination of national, state, and local finance. Prerequisite: Economics 6-7.

Spring Semester

T 6:20 Vincent 6

Econ. 126 Economic Problems of Latin-America. 3 credits. \$15.

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. Prerequisite: Economics 6-7.

Fall Semester

T 8:05 Vincent 221, Myers

Econ. 127 Comparative Banking: South American Systems. 3 credits. \$15.

A study of the financial institutions of the principal countries of South America, with regard to development, functions, methods, and problems. Constant comparison is made with the system in the United States. Prerequisite: Economics 142.

Spring Semester

T 8:05 Vincent 221, Myers

Econ. 142 Monetary and Banking Policy. 3 credits. \$15.

The problems of a central bank and the theory of the value of money. Includes control of reserves, providing a scientific currency, regulation of credit, fluctuations of the general price level—their causes and possible reduction. Prerequisite: Economics 3 and 6-7.

Fall Semester

T 6:20 Vincent 221, Myers

Econ. 149 Business Cycles. 3 credits. \$15.

Analysis of factors involved in business fluctuations. Comparison of theories of the cause of prosperity and depression. Introduction to the statistical data and methods of business forecasting. Prerequisite: Econ. 141 or Econ. 142 or consent of instructor.

Spring Semester

T 6:20 Vincent 221, Myers

Econ. 155 Corporation Finance. 3 credits. \$15.

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. Prerequisite: Econ. 3 and 6-7.

Spring Semester

M 6:20 Vincent 6, Stehman

Fundamentals of Investment Banking I-II. 3 Extension credits each semester. \$15.

Classroom instruction supplemented by special lectures by men of experience in investment banking, commercial banking and other related fields. Course covers nature of various kinds of securities; statistical and investment analysis of securities; vocabulary and practices of the securities business; investment practices of various investor groups. No prerequisite.

Fall Semester

I M 6:20 Vincent 6, Power

Spring Semester

II M 6:20 Vincent 2, Power

INDUSTRIAL MANAGEMENT**B.A. 89 Production Management. 3 credits. \$15.**

Location and layout of industrial plants; types of operating organization; shop personnel; standards of operation; purchasing and inventory control; routing, scheduling, and dispatching of product; scientific management; practical problems in production control. (Same as Mech. Eng. 171.) Included in core group requirement for all candidates for a degree in business. Repeated spring semester. Prerequisite: Economics 6-7.

Fall Semester

M 6:20 Vincent 221, Immer

Spring Semester

M 6:20 Vincent 205, Immer

B.A. 170B Senior Topics: Plant Layout. 3 credits. \$15.

Study of principles of plant and office layout. Brief survey of methods and techniques employed. Problems taken from local companies. Repeated spring semester. Prerequisite: B.A. 89 or consent of instructor.

Fall Semester

M 8:05 Vincent 301, Immer

Spring Semester

M 8:05 Vincent 301, Immer

For Engineering classes in this field, see page 60.

INDUSTRIAL RELATIONS

See also Industrial Relations Classes, page 52 and Industrial Relations Certificate, page 11.

Econ. 161 Labor Problems and Trade Unionism. 3 credits. \$15.

Employment; hours; wages; extent and stronghold of unionism; open and closed shop; collective bargaining; industrial unrest; government regulation of labor disputes. Special emphasis on the current proposals for industrial recovery and the re-employment of labor. Prerequisite: Economics 6-7.

Fall Semester

T 6:20 St. P. Ext. Center 204, Fox

W 6:20 Vincent 1, Heneman

Econ. 162 Labor and Socialist Movements. 3 credits. \$15.

Analysis of structure and operation of American labor unions. An interpretation of leading labor movements in Europe and the United States during the last century. Prerequisite: Economics 161 or consent of instructor.

Fall Semester

Th 8:05 Vincent 221, Hardin

B.A. 167 Introduction to Industrial Relations. 3 credits. \$15.

Evaluation of managerial policies and devices for the control of personnel; determination of labor needs; methods of dealing with workers; selective devices; training and safety programs; compensation; collective bargaining; governmental personnel programs. Prerequisite: Economics 161.

Spring Semester

T 6:20 St. P. Ext. Center 204

W 6:20 Vincent 113, Heneman

Psy. 122-123† Vocational and Personnel Psychology. 3 credits each semester. \$15 plus \$1 laboratory fee.

Deals with selecting, counseling, training, and maintaining an efficient labor force in industry. Theory and practice of giving, interpreting, and evaluating psychological tests and of interviewing; constructing and using rating scales; training, maintaining, and promoting employees. There will also be actual practice in the use of psychological tests. Not open for credit to those who have taken Psychology 160-161 for credit. Prerequisite: consent of instructor.

Fall Semester

122 M 6:20 Psychology 211, Longstaff

Spring Semester

123 M 6:20 Psychology 211, Longstaff

Elements of Supervision. See page 52.

Wage and Salary Administration. See page 52.

Survey of Current Problems in Industrial Relations. See page 52.

† See Information, page 7.

INSURANCE

Econ. 50 Insurance Principles. 3 credits. \$15.

Deals with the nature and measurement of risk and with the development and uses of personal, property, and liability insurance. Forms of protection; policy contracts; social insurance and government regulation. Special emphasis on property insurance. Prerequisite: Economics 6-7.

Fall Semester

T 8:05 Vincent 6, Graves

College of Life Underwriters Curriculum. In cooperation with the Minneapolis and St. Paul Chapters of the American College of Life Underwriters (C.L.U.).

This year the Extension Division is offering Part B, the General Education section, of the C.L.U. educational program, see listing below. Many of the regularly listed courses elsewhere in this bulletin may be of assistance to those who are preparing for examination on other parts of the curriculum. Full information on the American College of Life Underwriters study program may be obtained from the annual announcement of the College which is available at Extension offices or through the Minneapolis or St. Paul chapters of the Chartered Life Underwriters.

Minneapolis—M. J. Nolan, 500 First National Soo Line Building.
St. Paul—W. F. Stone, 1300 Pioneer Building.

C.L.U. General Education Part B, I-II. 3 Extension credits each semester. \$15.

This course is designed as preparation for the annual C.L.U. examination in Part B, General Education, as conducted by the American College of Life Underwriters. The fall semester, Unit I, will cover the field of economics while the spring semester, Unit II, will deal with government and sociology.

For information concerning the C.L.U. educational program and its requirements see notice above.

Fall Semester

I M 4:00 690 N. W. Bank Building
M 4:00 St. P. Ext. Center 219

Spring Semester

II M 4:00 N. W. Bank Bldg. 690
M 4:00 St. P. Ext. Center 219

Property and Casualty Insurance Curriculum. In cooperation with the American Institute for Property and Liability Underwriters, Inc.

The University of Minnesota cooperates with the American Institute for Property and Liability Underwriters, Inc. by offering an educational program that provides the basic courses needed by those who wish to take the institute's examinations for the Chartered Property Casualty Underwriter (C.P.C.U.) award. Complete details of this program of training are printed in the institute's annual announcements, copies of which may be obtained from the General Extension Division of the University of Minnesota. Following is an outline of the program, with a list of the appropriate courses offered by the General Extension Division.

Parts I-II Insurance Principles and Practices

See C.P.C.U. course listed below

Part III General Education
Economics
Government
Social Legislation
English

Econ. 6-7 Principles of Economics
Pol. Sci. 1-2 American Government
Econ. 164 Labor Legislation and Social Insurance
Grammar Review or Business English

Part IV Law

B.A. 51-52-53-56 Business Law (does not include Law of Negligence)

Part V Accounting and Finance
Accounting
Finance
Business Organization

Econ. 22-23 Principles of Accounting
Econ. 3 Elements of Money and Banking
B.A. 89 Production Management

C.P.C.U. Insurance Principles and Practices I-II. 3 Extension credits each semester. \$15.

An intensive course in the basic principles of property and casualty insurance, designed as preparation for examinations I and II for the Chartered Property Casualty Underwriter (C.P.C.U.) award offered by the American Institute for Property and Casualty Underwriters, Inc. The course will be conducted by a panel of instructors selected from practicing insurance men, coordinated and supervised by the University School of Business Administration. Prerequisite: acceptance of special registration application; consult any Extension office.

Fall Semester

I M 6:20 Nicholson 207,
coordinator, Graves

Spring Semester

II M 6:20 Nicholson 207,
coordinator, Graves

MARKETING AND MERCHANDISING

Basic Salesmanship. 3 Extension credits. \$15.

Principles underlying salesmanship—aspects of human relations, buying motives, pre-approach, approach, the interview, meeting objections, closing the sale, demonstration sales. Repeated spring semester. No prerequisite.

Fall Semester

M 6:20 Vincent 207, Faragher
W 6:20 St. P. Ext. Center 206, Faragher

Spring Semester

M 6:20 Vincent 207, Faragher

B.A. 68 Sales Management. 3 credits. \$15.

Organization and direction of sales methods and men from the sales manager's point of view; determination of selling policy; product and market research; sales planning and research; selection of distribution methods; sales campaigns and quotas; incentives and compensation for salesman; training in salesmanship; supervision and control. Case studies and discussions. Prerequisite: Economics 6-7.

Fall Semester

W 6:20 Vincent 221, Lewis

B.A. 69 Retail Store Management. 3 credits. \$15.

Organization; location, layout, and equipment; buying and sales budgets and sales planning; sales promotion; interior and window display; stock and expense control; finance and general policy; credits and collections; personnel; store operation and services. Case studies, problems, and discussions. Prerequisite: B.A. 77.

Spring Semester

W 8:05 Vincent 221

B.A. 76 Credits and Collections. 3 credits. \$15.

Study of the nature and types of credit and of credit instruments and agencies; qualifications and work of the credit manager; valuation and use of financial statements and credit reports; collection methods and correspondence; bankruptcy and adjustments; credit limits and control. Prerequisite: B.A. 77.

Fall Semester

Th 6:20 Vincent 113

B.A. 77 Survey in Marketing. 3 credits. \$15.

Survey course including descriptive analysis of (1) marketing institutions and their control; (2) market areas; (3) marketing costs; (4) the operation of supply and demand in marketing. Prerequisite: Economics 6-7.

Fall Semester

T 8:05 Vincent 113

B.A. 88 Elementary Advertising. See page 44.

For other Advertising Courses see pages 25, 26.

Management of a Small Retail Organization I-II. 2 Extension credits each term. \$10.

Intended primarily for those who now operate or are planning to operate a small retail organization, these two short courses of eight weeks each are especially designed to give intensive training with a minimum expenditure of time. The material is so arranged that either unit may be taken independently; the double course is recommended, however, for fullest advantage to the small business operator or planner. In both units a panel of selected speakers from various business fields will assist the instructor. Classes meet for 2 hours on Tuesdays through the dates indicated below.

Part I. Selecting a suitable store location; how to control the store's expenses; installing budgetary control; forecasting sales and costs; setting standards on selling and non-selling payroll. No prerequisite.

Part II. Need for merchandising policy; intelligent planning of sales promotion; what, where, when and how to buy for profit; proper computation of profits; developing a good selling force. No prerequisite.

September 27-November 15

I T 7:00-9:00 Vincent 4, Anderson

January 10-February 28

II T 7:00-9:00 Vincent 4, Anderson

G.C. 49A-B-C Retailing and Selling. 5 credits each quarter (classwork, 3 credits; work experience, 2 credits). \$15 plus \$1 materials fee.

Open to full-time store employees who can arrange to attend Monday morning lectures. Instruction in the field of retailing with salesmanship receiving the greatest emphasis. Other phases of merchandising covered will enable one to perform with greater understanding at various capacities in a retail business. The student may follow specific interests through directed studies. Assigned laboratory meetings include demonstrations, reports, group discussions, and observation trips into a variety of distributive businesses. Speakers from local stores, related businesses, and consumer groups provide current information and business contacts of importance. The three units should be taken in sequence but registration in any single unit may be approved by instructor. Prerequisite for all units: permission of instructor.

EXTENSION CLASSES

49A—Salesmanship; personnel policies; store system; consumer credit; stock control; distributive vocations.

49B—Historical background of retailing; types of retail outlets; store organization; non-selling activities in merchandising.

49C—Selling through promotion; display, advertising, store services; trends in retailing; merchandise research, labeling, standardization; consumer education; coordination of retail store activities.

Fall Quarter

Lect. M 9:00-10:00 a.m. Westbrook 103,
Determan
Lab. T 6:30-10:00 p.m. Westbrook 103,
Determan

Spring Quarter

Lect. M 8:00-9:00 a.m. Westbrook 103,
Determan
Lab. T 6:30-10:00 p.m. Westbrook 103,
Determan

Winter Quarter

(same as fall quarter)

Industrial Purchasing. 3 Extension credits. \$15.

A course designed for persons training for the position of purchasing agent for manufacturing and other large firms, public utilities, and institutions. Topics include organization of purchasing department, procurement procedures, purchasing sources, quality determination, inventory control, price policies and timing of purchasing. Text and case material. The instructor will be assisted by special speakers on key topics. No prerequisite.

Fall Semester

W 6:20 Vincent 4, Luther

Wholesale Credit and Collection Curriculum. In cooperation with the National Institute of Credit.

The University of Minnesota cooperates with the Minneapolis and St. Paul chapters of the National Institute of Credit in a program of educational training leading toward the awards of associate and fellow of the National Institute of Credit. The National Institute of Credit is the educational branch of the National Association of Credit Men. Course registrations may be made through the association office, 502 Thorpe Building, Minneapolis 2. Registration in the National Institute of Credit is required for credit toward awards of associate and fellow. Transfer credit may be applied for courses completed previously in recognized colleges up to 50 per cent of the requirements listed below.

The following program has been approved as fulfilling the requirements for awards of associate and fellow of the National Institute of Credit:

Classes in Association Curriculum*Associate Award*

Economics and Business Organization
Management Accounting
Credits and Collections
Business Writing

Fellow Program (in addition to courses above)

Credit and Commercial Laws
Effective Speaking and Service Selling
Credit Problems and Statement Analysis
Techniques of Supervision
Applied Psychology
Electives

Equivalent Extension Classes

Econ. 6-7 Principles of Economics
Econ. 22-23 Principles of Accounting
B.A. 76 Credits and Collections
1 Business English

B.A. 51-52-53 Business Law
Beginning Practical Speech, Salesmanship
Information on request
Elements of Supervision
Psy. 1a Application of Psychology to Living
Consult Institute offices.

REAL ESTATE

The University of Minnesota cooperates with the National Association of Real Estate Boards and with the Real Estate Boards of St. Paul and Minneapolis in a program of educational training leading toward competence in the professional aspects of real estate practice. Instructing staff for each course will be made up of a number of practicing realtors in the Twin Cities. Coordinator for the Real Estate Boards: Bernard G. Rice, 612 National Building, Minneapolis.

Fundamentals of Real Estate Practice. 3 Extension credits. \$15.

Economic functions of the real estate business; fundamental practices of the real estate office and other realtors; real estate valuations; methods of appraising; ethics of real estate practice. A business course in real estate. Prerequisite: consult instructor.

Fall Semester

M 6:20 Vincent 2, Rice, coordinator

Real Estate Sales Brokerage. 3 Extension credits. \$15.

A study of the basic principles and practices involved in the conduct of real estate sales from beginning to end: evaluation, listing, advertising, contracts and leases, financing and taxes, property showing, selling techniques, code of ethics. No prerequisite.

Fall Semester

W 6:20 Vincent 2, Rice, coordinator

Real Estate Appraisal. 3 Extension credits. \$15.

Detailed consideration of principles and practices involved in appraising various types of real property for various purposes. Factors determining valuations; making and reporting appraisals. Appraisal procedures in various legal actions. Prerequisite: Fundamentals course.

Spring Semester

M 6:20 Vincent 221, Newcombe, coordinator

Real Estate Law (B.A. 56 Business Law). 3 credits. \$15.

Nature and classification of real estate; deeds and conveyances; landlord and tenant; recording and abstracting; Torrens titles; liens and mortgages; wills, probating of estates, and duties of administrators and executors. Prerequisite for credit in School of Business Administration: B.A. 53 Business Law.

Spring Semester

Th 6:20 Vincent 113, Maloney

Planning Your Modern Home. See page 24.

Building Material Estimating. See page 56.

TRAFFIC AND TRANSPORTATION**B.A. 71-72 Transportation: Services and Charges.** 3 credits each semester. \$15.

The rail, water, air, and highway transportation facilities, services, rates, and laws, and their relation to business establishments; problems in handling freight, express, and parcel-post shipments; scope, selection, and use of the facilities and services of common carriers; rate structures; problems involving freight classification and use of tariffs. 71 to precede 72. Prerequisite: Economics 6-7.

Fall Semester

71 M 6:20 Vincent 1, Nightingale

Spring Semester

72 M 6:20 Vincent 1, Nightingale

B.A. 180-181 Senior Topics: Transportation. 3 credits each semester. \$15.

Advanced study of tariffs and tariff construction, of rate structures, and of auxiliary services, including problems thereon. Analysis of important current cases and decisions affecting shippers and carriers. Prerequisite: 71-72.

Fall Semester

180 M 8:05 Vincent 1, Nightingale

Spring Semester

181 M 8:05 Vincent 1, Nightingale

Advanced Traffic and Transportation I-II. 3 Extension credits each semester. \$15.

Advanced study of state and federal regulatory laws governing rail and highway transportation. Detailed study of highway rates and problems. Attention to practice and procedure before rate and classification committees, state commissions, and the Interstate Commerce Commission. Preparation of informal, formal, and investigation and suspension cases before regulatory commissions. Prerequisite: B.A. 71-72 and B.A. 180 or equivalent.

Fall Semester

I T 6:20 Vincent 1, Nightingale

Spring Semester

II T 6:20 Vincent 1, Nightingale

INDUSTRIAL RELATIONS CLASSES

The Extension Division, in cooperation with the Industrial Relations Center of the University, offers a sequence of courses, leading to the award of a Certificate of Industrial Relations (see page 11 for certificate requirements). The classes offered this year by the Industrial Relations Center are listed in full detail below; it is hoped that these offerings may be expanded in future years. Other evening classes in economics, business administration, and engineering which are designated as certificate requirements are listed below by title only with cross reference to the pages elsewhere in this bulletin where their descriptions and schedules appear in detail.

Econ. 6-7 Principles of Economics. See page 45.

Econ. 161 Labor Problems and Trade Unionism. See page 47.

Econ. 162 Labor and Socialist Movement. See page 47.

B.A. 167 Introduction to Industrial Relations. See page 47.

Survey of Current Problems in Industrial Relations. 3 Extension credits. \$15.

Note—The content of this course changes each time it is given and as the course title indicates, deals with current materials. Hence, experienced industrial relations workers may wish to repeat this course at intervals.

A discussion workshop for advanced students concerned with sources of information about modern industrial relations concepts, policies and practices; the nature and operation of labor markets, collective bargaining, labor legislation and social insurance; selection and training, wages and hours, and other related topics. Each session will consist of a short lecture by a specialist in the specific topic under consideration, followed by a conference-type discussion period led by the guest speaker and the instructor. Course open to experienced union officers and business agents, personnel and industrial relations managers, and government officials doing industrial relations work. A limited number of students who cannot meet these requirements, but have successfully completed B.A. 167 (Personnel Administration), may also be admitted. Class will be limited to thirty and early registration is recommended. Prerequisite: consent of instructor.

Fall Semester

W 8:05 Vincent 2, Heneman and other members of Industrial Relations Center staff

Elements of Supervision. 3 Extension credits. \$15.

Descriptive analysis of various industrial relations techniques which are important in supervision; survey of the nature and levels of supervision, selection and training of foremen and supervisors, compensation of supervisors, organization of supervisors for collective bargaining, changing nature of the foreman's job, supervisory morale, and appraisal of supervisors' performance.

Fall Semester

Th 6:20 Vincent 6, Lindbom

Spring Semester

Th 6:20 Vincent 6, Lindbom

Wage and Salary Administration. 3 Extension credits. \$15.

Wage plans and wage policy; discussion of wage surveys, cost of living wages, job evaluation, family allowances, going wages, "fringe" items, bonus and incentive systems, wage laws, differentials, and labor costs. Prerequisite: B.A. 167.

Fall Semester

T 8:05 Vincent 2, Humphrey

Psy. 1-2 General Psychology. See page 33.

Psy. 4-5 Introductory Laboratory Psychology. See page 33.

Psy. 122-123 Vocational and Personnel Psychology. See page 33.

B.A. 89 Production Management. See page 47.

Psy. 144-145 Abnormal Psychology. See page 33.

Psy. 119 Psychology of Personality. See page 33.

Motion Study. See page 60.

Time Study. See page 60.

Plant Layout. See page 60.

Quality Control. See page 60.

ENGINEERING CLASSES

AERONAUTICAL ENGINEERING

Commercial Pilots' Ground School

The University Extension Division operates a Commercial Pilots' Ground School on a short course basis, designed to give prospective commercial air pilots thorough instruction in aerial navigation, meteorology, aircraft and flight theory, power plants, civil air regulations, aircraft instruments, radio aids, and related subjects. The primary purpose of the course is to prepare students for the C.A.A. written examination for the commercial pilot license.

In each full course there are five "terms." Each term lasts five weeks, the class meeting on Tuesday and Thursday evenings, from 7:15 p.m. to 9:45 p.m., in Room 105 Armory, on the Minneapolis Campus of the University. Instructor: Sam R. Hamilton.

First term: Civil Air Regulations, Radio Aids, Instruments and Parachutes. Dates: September 27, 1949-October 27, 1949.

Second term: Dead Reckoning and the Use of Computers. Dates: November 1, 1949-December 1, 1949.

Third term: Meteorology. Dates: December 6, 1949-January 5, 1950.

Fourth term: Aircraft Structures and Flight Theory. Dates: January 10, 1950-February 9, 1950.

Fifth term: Aircraft Engines and Propellers. Dates: February 14, 1950-March 16, 1950.

Another series will be run following those listed above if attendance warrants.

A student may enter the course at the beginning of any term. The fee is \$14.40 per term. A student may enroll for only one term, or for any combination of terms, according to his needs. The total cost of textbooks and computer for all five terms is approximately \$10.

Registration may be made through any of the General Extension Division offices.

AGRICULTURAL ENGINEERING

42A Art Metal Work. 3 credits. \$15 plus \$1 laboratory fee.

A course designed for persons interested in creating articles of permanent beauty and value from metals, including copper, pewter, brass, steel, aluminum, nickel silver and sterling silver. Forming of plates, bowls, and trays; use of jeweler's saw in pierced work; etching; soft soldering; making candlesticks; bookends; desk sets; lamps; bracelets. Students may choose project and kind of metal. Open to men and women. Class limited to 25. No prerequisite.

Fall Semester

W 6:20 Agricultural Engineering 20, 106,
Dent

42B Art Metal Work. 3 credits. \$15 plus \$1 laboratory fee.

Silver soldering; use of flat graver; embossing and chasing; making silver chains; forging spoons in copper and silver; coloring metals with chemicals and heat; high temperature enameling; use of oxyacetylene torch in annealing, brazing and welding; working in plastics; grinding and polishing semiprecious stones; silver plating. Open to men and women. This course may be taken either as a supplement to Agr. Eng. 42A or separately. Class limited to 25. No prerequisite.

Spring Semester

W 6:20 Agricultural Engineering 20, 106,
Dent

CIVIL ENGINEERING

Plain Concrete. 3 Extension credits. \$15.

Concrete materials and concrete mixtures. The course includes a study of concrete aggregate and cements, the design of concrete mixtures, the computation of batch weights, batch volumes, and concrete costs, and a study of air-entrained concrete with methods of measuring air in concrete. Laboratory experiments in concrete mixtures will be included with the class participating as a group. Prerequisite: a knowledge of elementary algebra and elementary physics is desirable.

Fall Semester

M 6:20 Experimental Engineering 215,
Thomas

Engineering Properties of Soils. 3 Extension credits. \$15.

A course intended for engineers and students who wish to become familiar with the basic principles of soil behavior, the terminology, the types of tests, and the application to practical problems. Origin and development of soils; their physical characteristics; and procedure of tests for their identification and suitability for use. Soil survey methods; field density tests; design of graded mixtures, soil stabilization, and theory of flexible base design. Prerequisite: consent of instructor.

Fall Semester

W 6:20 Experimental Engineering 215,
Kersten

Surveying I. 3 Extension credits. \$25.

Lectures and field problems in the use of the engineer's steel tape, transit and level, adjustment of instruments, computation and platting of field notes, determination of areas of tracts and computation of earthwork volumes. Prerequisite: trigonometry. The class meets 4 hours one night a week in drafting room.

Fall Semester

W 6:20 Main Engineering 217, Klingel
and Fant

Surveying II. 3 Extension credits. \$25.

Lectures and field problems in simple horizontal curves and vertical curves, setting slope stakes for earthwork, topographic mapping by transit and stadia surveys and determination of azimuth by solar observations. Prerequisite: Surveying I. The class meets 4 hours one night a week in drafting room.

Spring Semester

W 6:20 Main Engineering 217, Klingel
and Fant

Engineering Statistics I-II. See Mathematics and Mechanics, page 56.

DRAWING AND DESCRIPTIVE GEOMETRY**1 Engineering Drawing.** 3 credits. \$15.

Elements of drafting, geometry, sketching, lettering, dimensioning, conventions, working drawings, tracing. Repeated spring semester. No prerequisite.

Fall Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Ext. Center 218, Springer
Th 7:30 Main Engineering 201, Bullen

Spring Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Ext. Center 218, Springer
Th 7:30 Main Engineering 201, Bullen

2 Engineering Drawing. 3 credits. \$15.

Detail drawings, auxiliary views, sectional views, assembly drawings, tracing. Repeated spring semester. Prerequisite: Drawing 1 or consent of instructor.

Fall Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Ext. Center 218, Springer
Th 7:30 Main Engineering 201, Bullen

Spring Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Ext. Center 218, Springer
Th 7:30 Main Engineering 201, Bullen

3 Descriptive Geometry. 3 credits. \$15.

Elementary course in the methods of representation, correlated in part with analytical geometry. Graphical and algebraic solutions. Lectures, demonstrations, and drafting. Prerequisite: Drawing 2, Mathematics and Mechanics 11.

Fall Semester

W 7:00 Main Engineering 201, Quaid

20 Advanced Mechanical Drawing. 2 credits. \$10.

Working drawings, gearing, cams, developments, multiple auxiliary views, special projections. Prerequisite: Drawing 1.

Fall Semester

W 7:30 Main Engineering 201, Quaid

Spring Semester

W 7:30 St. P. Ext. Center 218, Springer

29 Aeronautical Drafting. 2 credits. \$10. Not offered 1949-50.**38 Reading Drawings.** 2 credits. \$10.

Calculations of areas, volumes, and weights from drawings. Tabulation of quantities. Problems concerned with fabrication, manufacture, and construction. Repeated spring semester. Prerequisite: Drawing 1 or equivalent experience.

Fall Semester

W 7:30 Main Engineering 101, Potter

Spring Semester

W 7:30 Main Engineering 101, Potter

52 Alignment Charts. 3 credits. \$15.

Design and construction of alignment charts for solving equations containing three or more variables using both uniform and functional straight line scales. Such charts are particularly useful in Engineering and other fields where problems of a recurrent nature occur. Prerequisite: Drawing 2, M.&M. 12, or permission of instructor.

Fall Semester

M 7:00 Main Engineering 201, Eggers

55 Production Illustration I-II. 3 Extension credits (see below). \$15.

Pictorial drawing as used in industry. Detail and assembly drawing in pictorial form by the use of isometric, oblique, axonometric, and prospective projection. Students may register for either I or II in either semester. Two university credits in D.&D.G. 55 may be granted for completion of I, consult instructor.

Fall Semester

W 7:30 TSF 203, Doseff

Spring Semester

W 7:30 TSF 203, Doseff

Industrial Design I-II. 3 Extension credits. \$15 plus \$2 materials fee.

This course takes up the fundamental principles of practical design, as applied to plastics, leather and other materials, used in the commercial field. It deals mostly with three-dimensional designs by carving or by modeling in plasticine, although it is preceded by study of two-dimensional design through drawing. No prerequisite. Students may register for either I or II in either semester, consult instructor.

Fall Semester
W 7:30 TSF 203, Doseff

Spring Semester
W 7:30 TSF 203, Doseff

118 Short Course in Curve Fitting. 3 credits. \$15.

The fitting of equations to experimental data and the determination of the constants involved by various graphical and algebraic methods including the method of "Least Squares." A practical course for engineers, scientists, and all others who deal with tests and the evaluation of the results obtained from tests. Prerequisite: Drawing 2, M.&M. 25, or permission of instructor.

Spring Semester
M 7:00 Main Engineering 201, Eggers

Architectural Drafting I-II-III-IV. 3 Extension credits each semester. \$15.

A basic course for those needing training for work in architecture. Drawing, layout, floor plans, materials, standards in construction, conventions, etc. Students may register for any unit in any semester, with consent of instructor.

Fall Semester
T 7:00 Main Engineering 201, Smalley
Th 7:00 St. P. Mechanic Arts 101, Smalley

Spring Semester
T 7:00 Main Engineering 201, Smalley
Th 7:00 St. P. Mechanic Arts 101, Smalley

ELECTRICAL ENGINEERING**Elements of Electric Circuits I-II.** 5 Extension credits each semester. \$25.

Fundamental laws of direct-current circuits, the magnetic field and magnetic properties of iron and steel, induced and generated electromotive forces, electric fields, storage batteries. Fundamental laws of AC circuits, complex representation of AC quantities, series and parallel AC circuits, polyphase AC circuits, power measurements in AC circuits. No prerequisite.

Fall Semester
I TTh 7:00 Electrical Engineering 237,
Cartwright

Spring Semester
II TTh 7:00 Electrical Engineering 237,
Cartwright

Elements of Electronics I-II. 5 Extension credits each semester. \$25.

Electronic emission, conduction through vacuums and gases; characteristics of vacuum tubes, of gas and vapor tubes, and of mercury pool tubes; amplifier circuits, trigger circuits, oscilloscopes, and control circuits; application of electronic devices to industry; electronic power devices. Prerequisite: 1-2 or equivalent in experience.

Fall Semester
I TTh 7:00 Electrical Engineering 138

Spring Semester
II TTh 7:00 Electrical Engineering 138

Elements of Electric Machinery I-II. 5 Extension credits each semester. \$25.

Theory of direct-current and alternating-current machinery. Study of operating characteristics. Elementary control equipment and maintenance. Prerequisite: Elements of Electric Circuits 1-2 or equivalent.

Fall Semester
I TTh 7:00 Electrical Engineering 321,
Fillmore

Spring Semester
II TTh 7:00 Electrical Engineering 321,
Fillmore

Fractional Horsepower Motor Assembly I-II. 3 Extension credits each semester. \$15 plus list of motor kit (approximately \$13.50).

Each member of the class will assemble a complete fractional horsepower AC motor. The assembly will be coordinated with a study and discussion of the various design problems. Upon completion of the motor assembly various performance tests will be made in the laboratory. The motor will be the property of the student. Prerequisite: consent of instructor.

Fall Semester
I W 7:00 Electrical Engineering 138

Spring Semester
II W 7:00 Electrical Engineering 138

GENERAL ENGINEERING**Use of Engineer's Slide Rule.** 1½ Extension credits. \$7.50.

Theory and computation practice necessary for those who wish to use the slide rule in ordinary office computations. Drills on fundamental processes.

Fall Semester
Th 7:00 Main Engineering 217, Klingel

Building Material Estimating. 3 Extension credits. \$15.

Training in reading detailed blueprints and estimating quantities of materials or cubic yardage in excavations; measurements, picking off blueprints, estimating and figuring total amounts of concrete, brick, timber, and all kinds of steel buildings.

Fall Semester

Th 8:05 Main Engineering 217, Klingel

MATHEMATICS AND MECHANICS**Basic Mathematics.** 3 Extension credits. \$15.

A practical course for shop men in industry or machine work, and for those who need an elementary background in mathematics. The work includes arithmetic through fractions, decimals, percentage; elementary geometry involving areas of plane figures, proportion, volumes and weights; elementary algebra; elementary trigonometry and logarithms. The course is also valuable as a refresher in elementary secondary mathematics. Repeated spring semester. Prerequisite: grade school arithmetic.

Fall Semester

W 6:20 Main Engineering 106, Laws

Spring Semester

W 6:20 Main Engineering 106, Laws

Elementary Algebra I-II†. Credit toward entrance. \$15.

Elements of algebra to quadratic equations. No prerequisite.

Fall Semester

I W 8:05 Main Engineering 106, Laws

Spring Semester

II W 8:05 Main Engineering 106, Laws

Plane Geometry I-II Combined. Credit: one entrance unit. \$30.

Elements of plane geometry, equivalent to one year of high school geometry; designed especially for those who wish to clear up their University of Minnesota entrance requirements. Two sessions a week.

Fall Semester

MW 6:20 Main Engineering 203, Schuck

Solid Geometry. Credit toward entrance. \$15.

Standard theorems and exercises; practice in special proofs and original exercises. Extra sessions arranged during fall quarter in order to complete a full course in a shorter period. Repeated spring semester. Prerequisite: plane geometry.

Fall Quarter

M 8:05 Main Engineering 203, Schuck

Spring Semester

M 6:20 Main Engineering 203, Schuck

9 Higher Algebra. 5 credits. \$25.

A review and collegiate treatment of the topics of elementary algebra, which is prerequisite. Not open for credit to those who present higher algebra for entrance to college in Institute of Technology. Repeated spring semester. Prerequisite: elementary algebra.

Fall Semester

M 7:00 Main Engineering 107, McElrath
M 7:00 St. P. Ext. Center 204, Polansky
Th 7:00 Main Engineering 107, Matson

Spring Semester

M 7:00 Main Engineering 107, McElrath
Th 7:00 Main Engineering 107, Matson

11 College Algebra. 5 credits. \$25.

Quadratic equations; logarithms; mathematics of investment; simultaneous quadratic equations; graphical representation; progressions; mathematical induction; binomial theorem; permutations; combinations; probability; determinants; theory of equations; partial fractions. Repeated spring semester. Prerequisite: higher algebra.

Fall Semester

M 7:00 Main Engineering 205, Braden
Th 7:00 Main Engineering 205, Wilcox

Spring Semester

M 7:00 Main Engineering 205, Braden
M 7:00 St. P. Ext. Center 204, Polansky
Th 7:00 Main Engineering 205, Smith

12 Trigonometry. 5 credits. \$25.

Logarithms and plane and spherical trigonometry. Repeated spring semester. Prerequisite: college algebra.

Fall Semester

M 7:00 Main Engineering 215
Th 7:00 Main Engineering 215, Scott

Spring Semester

Th 7:00 Main Engineering 215, Wilcox

13 Analytic Geometry. 5 credits. \$25.

Elements of plane analytical geometry including conic sections; brief introduction to solid analytical geometry. Prerequisite: trigonometry. Repeated spring semester.

Fall Semester

Th 7:00 Main Engineering 203, Smith

Spring Semester

Th 7:00 Main Engineering 203, Scott

† See Information, page 7.

24 Differential Calculus. 5 credits. \$25.

This is a first course in the differential calculus and deals with the fundamental concepts of limits and derivatives of functions, with applications in various fields. Prerequisite: analytic geometry.

Fall Semester

M 7:00 Main Engineering 106, Fischer
W 7:00 St. P. Ext. Center 219, Wilcox

25 Integral Calculus. 5 credits. \$25.

The fundamental methods and rules employed in the integration of functions, and applications to problems in physics and pure mathematics. Prerequisite: differential calculus.

Spring Semester

M 7:00 Main Engineering 106, Fischer
W 7:00 St. P. Ext. Center 219, Wilcox

26 Technical Mechanics—Statics. 5 credits. \$25.

This course deals with the principles of statics with particular reference to engineering applications. Prerequisite: integral calculus.

Fall Semester

T 7:00 Main Engineering 106, Fischer

127 Technical Mechanics—Dynamics. 5 credits. \$25.

This branch of mechanics is developed to give the student a good foundation for solving engineering problems in dynamics. Prerequisite: statics.

Spring Semester

T 7:00 Main Engineering 106, Fischer

128 Strength of Materials. 5 credits. \$25.

Mechanical and elastic properties of materials of construction; beams, shafts, and columns; hollow cylinder rollers; plates, curved bars, and springs; combined stresses, dynamic stresses, and true stresses. Prerequisite: calculus and technical mechanics.

Fall Semester

Th 7:00 Main Engineering 106, Fischer

129 Fluid Mechanics (with laboratory). 5 credits. \$25.

Laws of equilibrium of fluids, flow through orifices and over weirs, pressure and flow through tubes and pipes, flow in conduits and rivers, dynamic pressure of water, elementary principles of turbines and pumps. Prerequisite: statics.

Spring Semester

Th 7:00 Main Engineering 104, Doeringsfeld

Basic Engineering Statistics I. 4½ Extension credits. \$22.50.

Principles of statistical methods applied to engineering and industrial problems; collection and interpretation of data, averages and measures of variation, charts and graphs, introduction to probability and sampling theory. The above concepts in statistics form the basis for Industrial Quality Control. Class meets for a period of 2½ hours each week. Prerequisite: Higher Algebra or equivalent with consent of instructor.

Fall Semester

W 7:00 Main Engineering 107, McElrath

Basic Engineering Statistics II. 4½ Extension credits. \$22.50.

A continuation of Basic Engineering Statistics I with accent on industrial applications covering: small sampling tests, elements of curve fitting, some aspects of tolerances, introduction to experimental design. Class meets for a period of 2½ hours each week. Prerequisite: Basic Engineering Statistics I or equivalent with consent of instructor.

Spring Semester

W 7:00 Main Engineering 107, McElrath

MECHANICAL ENGINEERING**Use of Mechanical Engineering Handbooks I-II.** 3 Extension credits each semester. \$15.

The purpose of this course is to train and acquaint those engaged in industrial work with the technical information readily available in the various mechanical engineering handbooks. Special emphasis is given to the application of handbook data and information to the solution of a wide variety of practical problems. The course includes a review of the various current mechanical handbooks and classification of these as to type of technical data. Typical problems involve standard specifications, design data, selection of mechanical equipment and other general mechanical subjects. It is an excellent refresher course for engineers and a practical basic course for others in the industrial field. Part II is a continuation of Part I in which more emphasis is given to the solution of comprehensive problems utilizing handbook information alone and the many shortcuts in problem solution

possible through the efficient use of handbook data are stressed. Twelve 3-hour meetings. No prerequisite.

Fall Quarter

I Th 7:00 Mech. Aero. Engineering C208, II Th 7:00

LaJoy

February 9-April 27

Mech. Aero Engineering C208,
LaJoy

Mechanics of Machinery I-II. 3 Extension credits each semester. \$15.

A course designed to give a fundamental background in mechanical movements. This includes four-bar linkages, drag-link, crank and slider, toggle mechanism, quick-return mechanism, straight-line motion, cams, gear trains, clamps, etc. Part II is a continuation of Part I and includes detailed work on velocity analysis and its relation to forces acting on various machine members during a complete cycle of operation. In addition, some time will be devoted to the study of accelerations and inertia forces of moving machine members and their relation to the complete force system. Twelve 3-hour meetings. Prerequisite: consult instructor.

Fall Quarter

I W 7:00 Mech. Aero. Engineering C207, II W 7:30

Larsen

February 8-April 26

Mech. Aero. Engineering C207,
Larsen

Instrumentation and Automatic Control I. 3 Extension credits. \$15 plus \$5 laboratory fee.

An elementary course planned to cover the principle of operation of the many instruments and automatic controls in commercial use today. Control instruments and control circuits will be studied in detail. Both electrical and pneumatic methods of obtaining control modes such as on-off or two-position response and throttling of modulating responses will be covered. The course will be divided between lecture and laboratory. In the laboratory students will be familiarized with the actual instruments and control circuits. This will be integrated with lecture work and control design problems. Twelve 3-hour meetings. Prerequisite: consult instructor.

Fall Quarter

W 7:00 Mech. Aero. Engineering C208,
LaJoy

Instrumentation and Automatic Control II. 3 Extension credits. \$15 plus \$5 laboratory fee.

This course is planned to cover more of the industrial instruments and automatic controls. The theory of control will be covered mathematically, descriptively and graphically. Basic modes of control built into commercial industrial controllers such as proportional, automatic reset and rate response will be covered in detail. Methods of obtaining these responses such as electrically, hydraulically or pneumatically will be analyzed. Typical industrial control circuits will be investigated. This will involve analysis of all component parts such as the process, measuring means, recording or indicating instrument, controller, and final control elements. Twelve 3-hour meetings. Prerequisite: consult instructor.

February 8-April 26

W 7:00 Mech. Aero. Engineering C208,
LaJoy

Machine Tool Operation I-II. 4½ Extension credits each semester. \$22.50 plus \$1 laboratory fee.

Lecture and laboratory covering the selection and use of jigs, fixtures, gages, and machine tools for the manufacture of a ½ H.P. electrical motor. Selection of the proper cutting tools and determination of the machine speeds for various materials. Preparation of manufacturing analysis and estimation of the machining time for the manufacture of metal products in small and large quantities. The laboratory project (ordinarily an electric motor) can be purchased at cost of material. Class limited to 20 students, accepted in order of registration. Prerequisite for Part II: previous semester's work or equivalent.

Fall Semester

I M 7:00 Mech. Aero. Engineering C107, II M 7:00

Crowder

Spring Semester

Mech. Aero. Engineering C107,
Crowder

Machine Tool Operation III. 4½ Extension credits. \$22.50 plus \$1 laboratory fee.

Lecture and laboratory covering the use of jigs, fixtures, gages and machine tools required to manufacture a 14x24-inch all geared head quick change gear box lathe. Class limited to 20 students accepted in order of registration. Prerequisite: Machine Tool Operation II or equivalent.

Fall Semester

W 7:00 Mech. Aero. Engineering C107,
Crowder

Machine Tool Operation IV. 4½ Extension credits. \$22.50 plus \$1 laboratory fee.

Lecture and laboratory covering the planning and set-up of turret lathes, gear hobbing machines, gear shapers, gear finishing machines, thread millers, thread grinders, and automatic screw machines to manufacture parts required to make a 14 by 24-inch all geared head quick change gear box lathe. Class limited to 20 students accepted in order of registration. Prerequisite: Machine Tool III or equivalent.

Spring Semester

W 7:00 Mech. Aero. Engineering C107,
Crowder

Tool Design I-II. 3 Extension credits each unit. \$15.

Analysis of piece parts and selection of proper tools and machines for the various operations. Determination of machining speeds and estimating the production time for various types of jigs and fixtures. Selection and design of the best type of jig, fixture, and special gages for the manufacture of the piece parts. Twelve 3-hour meetings. Prerequisite: Product Analysis 1 or Quality Control, or equivalent in shop experience.

Fall QuarterI T 7:00 Mech. Aero. Engineering C206,
Crowder**February 7-April 25**II T 7:00 Mech. Aero. Engineering C206,
Crowder**Press Working of Metals I-II.** 3 Extension credits each semester. \$15.

This is a design course dealing with: types of presses and their selection; preliminary steps in die engineering; specifications for selection of sheet materials and die steels; bending, forming, embossing, folding, shaving, burnishing, broaching and trimming dies; drawing dies; coining, swaging and cold sizing dies; temporary dies and low-cost tools for limited production; two-step die operations and progressive dies; assembly dies; considerations given to the press working of stainless steels, monel metal, and the non-metallic materials—fiber, rubber, and rawhide. Twelve 3-hour meetings.

Fall QuarterI M 7:00 Mech. Aero. Engineering C206,
Wolff**February 6-April 24**II M 7:00 Mech. Aero. Engineering C206,
Wolff**Servomechanisms.** 3 Extension credits. \$15.

An elementary course covering the basic principles of servomechanisms. A brief review will cover the necessary mathematics. Elementary control systems will be discussed as well as basic error-indicators or follow-up mechanisms, both mechanical and electrical. Detailed analysis will also be made of servo systems with various types of damping. Methods of obtaining desired types of damping and other required system characteristics will be discussed in detail. Prerequisite: mathematics through Calculus or the consent of the instructor. Repeated spring semester.

Fall SemesterW 7:00 Mech. Aero. Engineering C108,
Schlavone**Spring Semester**W 7:00 Mech. Aero. Engineering C108,
Schlavone**Machine Design I-II.** 3 Extension credits each semester. \$15.

Fundamental principles of design of machine elements: lubrication, theory and application; friction drives, shafts, screws, gears, belts, connectors, springs, flywheels, machine frames, shrink fits. Prerequisite: consult instructor.

Fall SemesterI M 7:00 Mech. Aero. Engineering C318,
Larsen**Spring Semester**II M 7:00 Mech. Aero. Engineering C318
Larsen**Automotive Engines—Operation and Maintenance I-II.** 3 Extension credits each semester. \$15 plus \$1 laboratory fee.

A study of construction and maintenance of principal engine parts, ignition systems, carburetors, lubricants, fuels, coolants, and anti-freezes in the automobile, truck, and bus engines of the gasoline type. No prerequisite.

Fall SemesterI Th 7:00 Mech. Aero. Engineering C318,
Melby**Spring Semester**II Th 7:00 Mech. Aero. Engineering C318,
Melby**Diesel Engines—Operation and Maintenance I-II.** 3 Extension credits each semester. \$15 plus \$1 laboratory fee.

A course in which particular emphasis is put on operation and maintenance problems. Principles of operation, typical construction, problems of fuels and lubrication and comparison with other types of power plants. No prerequisite.

Fall SemesterI T 7:00 Mech. Aero. Engineering C318,
Lindquist**Spring Semester**II T 7:00 Mech. Aero. Engineering C318,
Lindquist**Outboard Motors.** 3 Extension credits. \$15 plus \$1 laboratory fee.

Principles of the two cycle engine. Study of engine construction, materials, and general design features of typical models. Problems concerning power output, port timing, carburetion and ignition, exhaust muffling, general maintenance, and operation of the engine. No prerequisite.

Spring SemesterW 7:00 Mech. Aero. Engineering C318,
Murphy**Heating, Ventilating, and Air Conditioning I-II†.** 4½ Extension credits each semester. \$22.50.

A course designed to present the fundamentals of heating, ventilating, and air conditioning to those interested in designing, installing, selling, or recommending the modern type of appliances for heating, ventilating, and air conditioning installations. The subject matter of this course deals with terminology; heat transfer and heat transmission coefficients; all sources of heat loss from a structure; heating loads and heating costs;

† See Information, page 7.

determination of temperatures in various parts of a structure; vapor transmission problems; design of gravity and mechanical warm air heating systems; design of gravity and forced hot water heating systems; design of wet and dry panel heating systems; design of steam heating systems; fuels and combustion; and combustion equipment selection and controls. Class limited to 40 students accepted in order of registration. Prerequisite: high school mathematics or consent of instructor.

Fall Semester	Spring Semester
I W 7:00 Mech. Aero Engineering C308, Borry	II W 7:00 Mech. Aero. Engineering C308, Borry

Heating, Ventilating, and Air Conditioning III-IV†. 4½ Extension credits each semester. \$22.50.

A continuation of Heating, Ventilating, and Air Conditioning I-II with special emphasis on air conditioning. The subject matter to be covered will include heat and thermodynamics, properties of air and water vapor mixtures, the psychrometric chart and its application to problems, physiological principles, the fundamentals of air flow and pressure losses, principles of air distribution, heat gains and cooling load calculations, air duct design, humidification and dehumidification, air cleaning devices, characteristics and selection of fans, noise and sound control, and vibration problems. Class limited to 40 students accepted in order of registration. Prerequisite: I-II or consent of instructor.

Fall Semester	Spring Semester
III T 7:00 Mech. Aero. Engineering C308, Anderson	IV T 7:00 Mech. Aero. Engineering C308, Anderson

Refrigeration I-II. 4½ Extension credits each semester. \$22.50.

An elementary course for those engaged in the design, construction, maintenance, manufacture, and sale of refrigeration equipment. Fundamental terms, concepts, definitions; basic refrigeration cycles including compression, steam jet and absorption refrigeration; compressors, evaporators, and condensers; refrigeration controls, thermostatic and automatic expansion valves, high and low side-float systems and capillary tubes; psychrometry; refrigerants; high, intermediate and low temperature applications of refrigeration; determination of cooling and refrigeration loads; calculation of heat transfer coefficients; laboratory demonstrations of refrigeration equipment. Prerequisite: consult instructor.

Fall Semester	Spring Semester
I Th 7:00 Mech. Aero. Engineering C308, Jordan	II Th 7:00 Mech. Aero. Engineering C308, Jordan

Production Control. 3 Extension credits. \$15.

Detailed study of basic principles underlying economical production of manufactured goods; production planning, routing, scheduling, dispatching, and follow-up. Relationship of various departments to production control. No prerequisite.

Fall Semester
T 6:20 Mech. Aero. Engineering C109, Imhoff

Time Study. 3 Extension credits. \$15 plus \$1 laboratory fee.

Detailed study of fundamental steps in time study procedure: breaking job into elements, performance rating, selection of elemental times, and allowances. Twelve 3-hour meetings. Repeated spring semester, beginning March 13. No prerequisite.

Fall Quarter	March 13-May 29
M 7:00 Mech. Aero. Engineering C109, Imhoff	M 7:00 Mech. Aero. Engineering C109, Imhoff

Motion Study. 3 Extension credits. \$15.

Study and application of principles of work simplification to manufacturing and other activities. Process charts, operation charts, and micromotion studies. Lectures are followed by laboratory problems. Class limited to 25 students accepted in order of registration. Twelve 3-hour meetings, beginning January 2. No prerequisite.

January 2-March 20
M 7:00 Mech. Aero. Engineering C109, Imhoff

Engineering Plant Layout. 4½ Extension credits. \$22.50 plus \$2 laboratory fee.

A study of plant design location and arrangements of departments and equipment to obtain orderly and economical flow of work through plant. Materials-handling methods and equipment. Lectures and laboratory. Class limited to 25 students accepted in order of registration. Class meets for 2½ hours. Prerequisite: Motion Study.

Spring Semester
T 7:00 Mech. Aero. Engineering C109, Imhoff

Elementary Quality Control. 4½ Extension credits. \$22.50.

Lectures and problems in the theory and applications of statistical quality control methods—use of control charts and sampling schemes. Standard deviation, theory of probability, grouped frequency distribution, normal distribution, significance of differences, con-

† See Information, page 7.

trol charts for average and dispersion, control charts for per cent defective, control charts for defects, tolerances, single and double sampling schemes, use of IQ charts. Class will meet for 2½-hour period. Prerequisite: consent of instructor.

Fall Semester

W 7:00 Mech. Aero. Engineering C109,
Scheele

Beginning Plastics. 3 Extension credits. \$15 plus \$2 materials fee.

A laboratory and lecture course dealing with the materials, equipment, and methods used in the fabrication of plastic products. No prerequisite.

Spring Semester

Th 7:30 Mech. Aero. Engineering C107,
Holtby

Petroleum Products and Testing I-II. 3 Extension credits each semester. \$15.

Testing of petroleum products—gasoline, kerosene, heating oil, diesel fuel oils, lubricating oils and residual oils. The tests will be accompanied by lectures covering methods of tests. For the spring semester, the lectures will include characteristics and properties of petroleum products; the significance of test results and their relation with behavior of petroleum products in service. Both semesters are necessary for complete results. No prerequisite.

Fall Semester

I T 7:30 Experimental Engineering 215,
Peterson

Spring Semester

II T 7:30 Experimental Engineering 215,
Peterson

METALLOGRAPHY

1-2 Metallography and Heat Treatment. 3 Extension credits each semester. \$15 plus \$2 laboratory fee.

A beginning course for those engaged in practical heat treatment, metal working, specification writing, buying or selling steel. Lectures and laboratory work in pyrometry, microscopic examination of metals, heat treatment of steel, case hardening, and specifications. Second semester: hardenability and weldability, hardenability tests, SAE alloy steels, tool and high speed steels, stainless steels, bearing metals, brasses, aluminum alloys. No prerequisite but 1 must precede 2 unless student has had experience in heat treatment.

Fall Semester

1 T 7:00 Appleby Hall 315, Jerabek

Spring Semester

2 T 7:00 Appleby Hall 315, Jerabek

MILLING ENGINEERING

100 Milling I: The Milling Process. 3 credits. \$15.

The theory, practice and problems of milling flour from wheat, including the preparation and use of flow charts, lectures and mill trips. No prerequisite.

Fall Semester

T 6:20 Nicholson 111, MacKenzie

Grain Marketing. 3 Extension credits. \$15.

Proposed course in futures and cash market operations in theory and practice. No prerequisite.

Fall Semester

Th 6:45 McKnight Bldg. 250, Cox and others

Products Control. 3 Extension credits. \$15.

Lecture and laboratory practice in flour mill products control procedures including dough testing, bread scoring and fragment count. Prerequisite: consent of instructor.

Spring Semester

Th 6:20 Nicholson 106, MacKenzie and
others

Grain Elevator Design. 3 Extension credits. \$15.

Design of the modern grain elevator; selection of site, arrangement of premises, construction and mechanical equipment. No prerequisite.

Spring Semester

T 6:20 Nicholson 101

Flour Milling Survey. 3 Extension credits. \$15.

This course will be organized as a lecture series combined with demonstrations, plant tours and films and is designed particularly for those connected with the industry in non-operating positions who wish to have a better over-all understanding of the flour milling process from farm to consumer. No prerequisite.

February 7-May 9

T 7:00-9:00 Nicholson 102, MacKenzie and
others

FACULTY

Immanuel C. Fischer, M.S., Assistant Professor of Engineering
Leah M. Lewis, B.S., Assistant Professor of Art
Clare L. Rotzel, B.C.S., C.P.A., Associate Professor of Accounting
Wendell White, Ph.D., Associate Professor of Psychology
Helen P. Mudgett, M.A., Assistant Professor of Intercultural Education

Note: Owing to uncertainties of some departments as to future staff and unavoidable last minute additions and changes, this list is necessarily incomplete.

Hans C. Aarsleff, Instructor in Scandinavian
Helen Acker, M.A., Instructor in English
Lauress Ackman, LL.B., Instructor in Business Law
Harold S. Adams, B.S., Lecturer in Public Health
James Aliferis, Ph.D., Associate Professor of Music
Cyril Allen, Ph.D., Assistant Professor of History
Harold B. Allen, Ph.D., Assistant Professor of English
Robert J. Ames, M.S., Instructor in General Studies
George E. Anderson, M.S.(M.E.), Instructor in Mechanical Engineering
Laird Anderson, B.A., Instructor in Business Administration
Theresa Ann Bell, M.S., Instructor in Physical Education
William C. Bell, Ph.D., Assistant Professor of Geology and Mineralogy
Robert L. Berg, B.A., Teaching Assistant in Geology
Mary Bermingham, B.S., Instructor in Physical Education
Marthe W. Blinoff, Agrégation d'Anglias, Instructor in Linguistics
Morgan Blum, M.A., Assistant Professor of English
John V. Borry, M.S.(M.E.), Instructor in Mechanical Engineering
Harlan Boss, B.S., Instructor in Architecture
John Bowditch III, Ph.D., Assistant Professor of History
Lloyd Boyce, Instructor in Physical Education
Rena Boyle, R.N., M.A., Instructor in Nursing Education
Emmert M. Brackney, M.A., Assistant Professor of Romance Languages
Charles M. Braden, B.S., Instructor in Mathematics and Mechanics
Walter J. Breckenridge, Ph.D., Director, Museum of Natural History
May Brodbeck, Ph.D., Instructor in Philosophy
James I. Brown, Ph.D., Associate Professor of Rhetoric
Paul W. Bullen, B.S., Assistant Professor of Drawing and Descriptive Geometry
Anna Buss, M.A., Instructor in Romance Languages
John W. Bystrom, M.A., Instructor in Speech
Theodore G. Caplow, Ph.D., Assistant Professor of Sociology
Paul A. Cartwright, B.E.E., Instructor in Electrical Engineering
Asher N. Christensen, B.A., Associate Professor of Political Science
Fritjof E. Christensen, M.A., Instructor in Physics
George P. Conger, Ph.D., Professor of Philosophy
Blaine M. Cooke, B.A., Instructor in Business Administration
Judith Couch, B.A., Teaching Assistant in General Studies
Donald W. Cowan, M.D., M.S., Assistant Professor of Public Health
Rex W. Cox, Ph.D., Assistant Professor of Agricultural Economics
Orville Creviere, Instructor in Accounting
Bert A. Crowder, B.S.(M.E.), Assistant Professor of Mechanical Engineering
Pearl T. Cummings, B.S., Instructor and Extension Worker, Institute of Child Welfare
James A. Cuneo, Ph.D., Assistant Professor of Romance Languages
Dennis D. Daly, Instructor in Accounting
Emily Dawson, B.A., Teaching Assistant in Political Science
Francis K. delPlaine, M.A., Assistant Professor of English
J. Grant Dent, Instructor in Agricultural Engineering
Evelyn Determan, B.S., Instructor in Retailing
Harold Deutsch, Ph.D., Professor of History
Harry A. Doeringsfeld, B.S., Professor of Mathematics and Mechanics
Ivan C. Doseff, B.S., Associate Professor of Drawing

Lynwood G. Downs, Ph.D., Associate Professor of German
 Helen T. Dreher, B.S., Instructor in Vocabulary Building
 Dorothy Dyer, M.A., Assistant Professor of General Studies
 Samuel Eddy, Ph.D., Associate Professor of Zoology
 Henry C. T. Eggers, Ph.D., Professor of Drawing and Descriptive Geometry
 Alf I. Eikaas, Instructor in Scandinavian
 W. Edwin Emery, Jr., Ph.D., Assistant Professor of Journalism
 Keith Engar, M.A., Instructor in Speech
 Jesse E. Fant, B.C.E., Instructor in Civil Engineering
 Reginald G. Faragher, B.A., Instructor in Salesmanship
 Herbert Feigl, Ph.D., Professor of Philosophy
 Donald Ferguson, M.A., Professor of Music
 Jacques A. Fermaud, Ph.D., Associate Professor of Romance Languages
 Robert L. Fillmore, B.S.(E.E.), Instructor in Electrical Engineering
 Harland G. Fox, B.A., Research Assistant in Industrial Relations
 Newell O. Gaasedelen, B.B.A., Instructor in Business Administration
 Clifton A. Gayne, Jr., Ph.D., Professor of Art Education
 Charles W. Goulding, M.A., Senior Student Counselor
 Carl Graffunder, M.Arch., Assistant Professor of Architecture
 Kenneth L. Graham, Ph.D., Assistant Professor of Speech
 Margaret F. Grainger, M.A., Assistant Professor of Nursing Education
 Richard A. Graves, M.A., Assistant Professor of Economics and Insurance
 Charles L. Greenwood, B.A., Instructor in Advertising
 John W. Gruner, Ph.D., Associate Professor of Geology
 Fabian Gudas, B.A., Instructor in Business English
 Thor W. Gullickson, Ph.D., Professor of Dairy Husbandry
 Harvey L. Gunderson, B.A., Museum Assistant
 Alik Gustafson, Ph.D., Associate Professor and Chairman, Department of
 Scandinavian
 Clifford I. Haga, B.A., Instructor in Business English
 Sam R. Hamilton, B.E.E., M.A., Aeronautical Ground Instructor
 Frank Hansen, M.A., Instructor in Child Welfare
 Harold B. Hanson, M.D., Instructor in Psychiatry
 Einar J. O. Hardin, M.A., Research Assistant, Industrial Relations Center
 Alfred L. Harvey, Ph.D., Associate Professor of Animal Husbandry
 Helen P. Hauptfehrer, M.A., Instructor in Physical Education
 Donald Heath, M.Arch., Assistant Professor of Architecture
 Ernest A. Heilmann, Ph.D., Professor of Accounting
 Herbert G. Heneman, Ph.D., Assistant Professor of Economics
 Charles S. Hensley, M.A., Instructor in Literature and Writing
 William T. Heron, Ph.D., Professor of Psychology
 Wesley N. Herr, Ph.D., Assistant Professor of Chemistry
 Gerald Hill, B.A., Assistant Professor of General Arts
 Paul L. Holmer, Ph.D., Assistant Professor of Philosophy
 Fulton Holtby, M.S.(M.E.), Associate Professor of Mechanical Engineering
 Johns Hopkins, A.I.B., Consultant Designer
 John Hospers, Ph.D., Assistant Professor of Philosophy
 John L. Imhoff, M.S.(M.E.), Instructor in Mechanical Engineering
 John R. Immer, M.S., Assistant Professor of Economics and Business Admin-
 istration
 Thomas B. Irving, Ph.D., Assistant Professor of Romance Languages
 John Irwin, Ph.D., Associate Professor of Speech
 Paul S. Ivory, M.A., Instructor in Music and Music Education
 Eloise M. Jaeger, M.Ed., Assistant Professor of Physical Education
 George J. Jennings, B.S., Instructor in Geography
 William Jensen, M.A., Instructor in Journalism
 Henry S. Jerabek, Ph.D., Assistant Professor of Metallography
 Clarence A. Johanson, B.A., Instructor in Sociology
 Ruth V. Johnston, M.A., Assistant Professor of Nursing
 Howard Jones, M.A., Instructor in English
 Robert L. Jones, M.A., Teaching Assistant in Psychology
 Richard C. Jordan, Ph.D., Professor of Mechanical Engineering
 Harold Kahm, Instructor in Journalism
 Miles S. Kersten, Ph.D., Associate Professor of Civil Engineering
 Thomas R. Klingel, B.C.E., Associate Professor of Civil Engineering

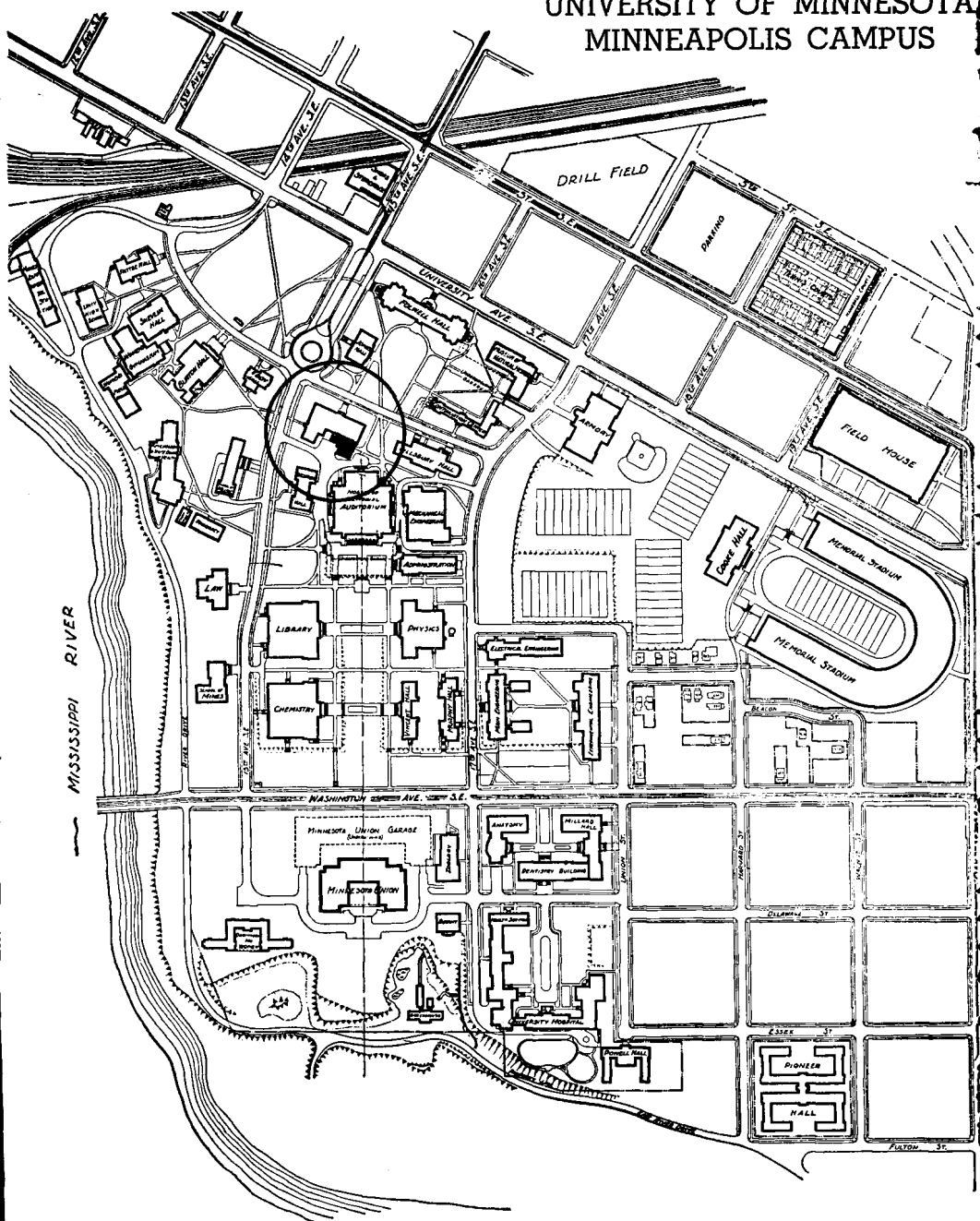
Gisela Konopka, M.S.F.A., Assistant Professor of Social Work
 Millard H. LaJoy, M.S.(M.E.), Associate Professor of Mechanical Engineering
 Otis M. Larsen, M.S.(M.E.), Assistant Professor of Mechanical Engineering
 Louraine S. Larson, B.S., Instructor in Physical Education
 Leonard S. Laws, M.A., Assistant Professor of Mathematics and Mechanics
 Alice M. Lewis, B.A., Instructor in English
 Edwin H. Lewis, Ph.D., Associate Professor of Economics and Marketing
 Theodore R. Lindbom, B.S., Research Assistant, Industrial Relations Center
 Robert M. Lindquist, M.S.(M.E.), Instructor in Mechanical Engineering
 Hyman S. Lippman, M.D., Ph.D., Clinical Associate Professor of Pediatrics
 and Psychiatry
 Ray Livingston, M.A., Instructor in Humanities
 Howard P. Longstaff, Ph.D., Professor of Psychology
 Robert E. Luckey, M.A., Instructor in Romance Languages
 Reuel I. Lund, Ph.D., C.P.A., Assistant Professor of Accounting
 Rodney F. Luther, M.B.A., Instructor in Economics
 Willem J. Luyten, Ph.D., Professor of Astronomy
 Alixandria MacKenzie, B.F.A., Instructor in Art
 John M. MacKenzie, M.M.E., Assistant Professor of Mechanical Engineering
 Warren MacKenzie, Instructor in Art
 Malcolm S. MacLean, Jr., B.A., Instructor in Journalism
 George Maloney, LL.B., Instructor in Business Law
 Douglas Marshall, Ph.D., Associate Professor of Sociology
 Don A. Martindale, Ph.D., Assistant Professor of Sociology
 Charles E. Matson, B.Ch.E., Instructor in Mathematics and Mechanics
 J. Steward McClendon, LL.B., Instructor in Business Law
 Herbert McClosky, Ph.D., Assistant Professor of Political Science
 Gayle McElrath, M.S., Assistant Professor of Mathematics and Mechanics
 Charles H. McLaughlin, LL.B., M.A., Associate Professor of Political Science
 Earl E. Melby, B.M.E., Instructor in Mechanical Engineering
 Margarita Mills, M.A., Instructor in Romance Languages
 Theodore D. Montgomery, M.B.A., Instructor in Accounting
 Robert E. Moore, Ph.D., Assistant Professor of English
 Peter Mousolite, Ph.D., Instructor in Romance Languages
 Thomas E. Murphy, M.S.(A.E.), Assistant Professor of Aeronautical Engineering
 Malcolm Myers, M.F.A., Assistant Professor of Art
 Walter R. Myers, Ph.D., Associate Professor of Economics and Finance
 Carl L. Nelson, Ph.D., C.P.A., Associate Professor of Accounting
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