

3/19/53

~~Hold at least till 7:00~~  
~~before calling~~

3/19/53

*The Bulletin*

*of the*

UNIVERSITY

OF

*General Extension Division*

MINNESOTA

*Extension Classes*

1952-1953

## CALENDAR

1952			
September	15	Monday	Fall registration begins
September	27	Saturday	Last day for registration without late fee
September	29	Monday	Fall quarter and semester classes begin
October	11	Saturday	Last day for transfer without late fee
December	20	Saturday	Christmas recess begins. Fall quarter closes
December	22	Monday	Winter quarter registration begins
1953			
January	5	Monday	Classes resume. Winter quarter begins
January	26	Monday	Second semester registration begins
February	6	Friday	Fall semester closes
February	7	Saturday	Last day for registration without late fee
February	9	Monday	Spring semester begins
February	21	Saturday	Last day for transfer without late fee
March	16	Monday	Spring quarter registration begins
March	21	Saturday	Winter quarter closes
March	30	Monday	Spring quarter begins
June	5	Friday	Spring semester closes
June	13	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 2 for registration regulations.**

### EXTENSION OFFICES

**Minneapolis Campus:** Ground floor, southeast entrance, Nicholson Hall, University of Minnesota, Lincoln 8791, Midway 3965

**Minneapolis (Downtown):** 690 Northwestern Bank Building, Marquette Avenue and Sixth Street South, Main 0624

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

**Duluth:** 504 Alworth Building, 7-1317

### SPECIAL OFFICE HOURS

**Campus Office:** September 15 through September 27 and January 26 through February 7: **weekdays**, 12:30 to 8:15 p.m.; **Saturdays**, 9:00 a.m. to 1 p.m.

**Minneapolis office:** September 15 through September 27 and January 26 through February 7: **weekdays**, 12:00 to 8:15 p.m.; **Saturdays**, 9:00 a.m. to 1:00 p.m.

**St. Paul Office:** September 15 through October 4 and January 26 through February 14: **weekdays**, 12:00 to 8:15 p.m.; **Saturdays**, 9:00 a.m. to 1:00 p.m.

### REGULAR OFFICE HOURS

**Campus Office:** Monday through Thursday, 8:00 a.m. to 8:15 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.

**Special summer hours or closings may be in effect from June 1 to September 15. Consult offices for schedules.**

## BOARD OF REGENTS

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

## ADMINISTRATIVE OFFICERS

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Richard R. Price, M.A., Ed.D., Director of University Extension Emeritus  
Huntington Miller, B.A., LL.B., Assistant Dean and Chairman of Committee on Student Scholastic Standing  
Albert M. Fulton, Ph.M., Head of Extension Veterans' Affairs  
Fred E. Berger, B.A., Manager of Minneapolis Extension Office  
Robert P. Boyle, B.S., Manager of St. Paul Extension Office  
William A. Porter, M.A., Manager of Duluth Extension Office  
Eleanor M. Salisbury, M.A., Assistant to the Dean

## EXTENSION SERVICE HEADS AND DIRECTORS

Audio-Visual Extension Service, Erwin C. Welke, 230 Northrop Memorial Auditorium  
Center for Continuation Study, Fred E. Berger, 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, 1 Eddy Hall  
State Organization Service, William C. Rogers, 104 Third Temporary, South of Mines

# 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 3.

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 3. See page 6 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 semester and the first two weeks of a quarter or special term, subject to certain regulations and fees as set out below. No registrations will be accepted thereafter without special permission of the Committee on Student Scholastic Standing and consent of the instructor.

#### 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 of \$2 through the first week of classes and \$3 thereafter. 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 a semester or quarter. 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 a class term without special permission of the Committee on Student Scholastic Standing.

## 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 one of the Extension Division offices. **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 class offerings are changed or canceled by the Extension Division, or in certain cases upon certification of the instructor (see Eligibility, page 2).

**Partial refunds**, in accordance with general university regulations, will be made for all other cancellations which occur during the first half of the class term, 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 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 Committee on Student Scholastic Standing.

## 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

### All Veteran Students

**It is mandatory, under present Veterans Administration regulations, that veterans be enrolled continuously during each regular school year until their eligibility is exhausted.**

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 establishment 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.

**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 one of the General Extension Division offices. **No registration by mail will be accepted from any veteran.** There are no exceptions to this rule.

### **New Extension Veteran Students**

Veterans under P.L. 346 using their educational benefits for the first time at the University of Minnesota must, when registering for Extension classes only, present a valid Certificate of Eligibility. 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 Extension Veteran Students**

Veterans enrolled in Extension classes under P.L. 346 during the spring 1952 quarter or semester need not secure additional authorization for enrollment in fall 1952 quarter or semester classes **provided** at least one class was completed in the spring 1952, with the following exception: Veterans enrolled in Extension classes on the authority of an Authorization for Related Instruction while basically enrolled at an educational institution other than at the University of Minnesota must present a new Authorization for Related Instruction at each registration. On-the-job trainees under P.L. 346 must present a new Authorization for Related Instruction at each registration period unless the Authorization on file specifically provides for supplemental training during the period in which the on-the-job trainee desires to register. Rehabilitation veterans under P.L. 16 must present a Letter of Authorization at each time of registration. **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 presented, or now on file.**

### **Basically Enrolled Day School Veteran Students**

Veterans enrolled in day school on the Minneapolis Campus and/or the St. Paul Campus under P.L. 346 may enroll for Extension classes without additional authorization from the Veterans Administration **provided** such classes are required or necessary to the completion of their educational objective or educationally desirable at the time of requested enrollment. **University regulations require all day school students to secure written permission from their dean or chairman of Committee on Student Scholastic Standing in order to register for Extension classes.** Veterans enrolled for supplemental training in day school who are basically enrolled at an educational institution other than the University of Minnesota or enrolled as on-the-job trainees under P.L. 346 on the authority of an Authorization for Related Instruction are not eligible to register for Extension classes. Rehabilitation veterans under P.L. 16 cannot register for Extension classes without a Letter of Authorization.

Day school veteran students must, at time of registration for Extension classes, present VA Form 7-1907c-1 (purple ditto) which confirmed previous day school registration.

### **Former Basically Enrolled Day School Veteran Students**

Veterans using educational benefits under P.L. 346 who have previously submitted valid Certificates 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 an undergraduate degree from the University of Minnesota, provided they have satisfied the regulations established by the July 25, 1951 deadline. No former basically enrolled day school veteran previously registered for supple-

mental training at the University of Minnesota under an Authorization for Related Instruction or a Letter of Authorization is eligible to enroll for Extension classes without new authorization from the Veterans Administration. **Veterans who have been dropped or placed on probation by the University of Minnesota cannot register for Extension classes without permission from the Committee on Student Scholastic Standing of the school or college in which they were previously enrolled.** All former basically enrolled day school veteran students who believe themselves eligible to enroll for Extension classes in the fall 1952 should, at the time of registration, present the last VA Form 7-1907c-1 (purple ditto) received.

### **Cancellation of Classes by Veterans**

In addition to the regulations governing cancellations listed on page 3 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.** 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 the regulation will be personally liable for payment for such materials.

### **Failure of Veterans Administration to Approve Payment for Registrations**

The United States Veterans Administration makes the regulations which govern the conditions under which veterans may be authorized to pursue educational or vocational training. The University of Minnesota accepts only those Extension registrations which, in the opinion of the Veterans' Office, have been properly authorized by the United States Veterans Administration. However, because of differences in interpretation of the regulations and procedures affecting education and training entitlement, Extension registrations have occasionally been ruled invalid and reimbursement for the costs billed subsequently refused by the United States Veterans Administration. **Therefore, in the event the United States Veterans Administration rules a veteran Extension registration invalid, the General Extension Division has no recourse other than to bill the veteran personally for such tuition, fee, book, supply, and equipment costs as may have been incurred.**

### **Change in Training Institution**

Veterans Administration regulations state that all requests for change in training institutions must be made while the veteran is still attending classes or when in an authorized interrupted status. The forms necessary to request such change can be secured from the Veterans' Office, General Extension Division.

### **Use Your Veterans' Office**

Regulations and procedures of the Veterans Administration governing educational training, have become too technical and complicated for individual interpretation. It is strongly recommended that veterans consult with the Veterans' Office, General Extension Division, Room 56, Nicholson Hall, Minneapolis Campus, Lincoln 8791 or Midway 3965 promptly on all problems affecting their present or future enrolment under the G.I. Bill. This office has been delegated the responsibility of aiding veterans in the use of their G.I. Benefits. **Do not hesitate to use the services of the Veterans' Office whenever your educational and training benefits are involved.**

## **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 9). A few class listings are daggered ( $\dagger$ ), 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 canceled 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 2 for special refund or transfer privileges in such cases.

### Daggered ( $\dagger$ ) 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 Committee on Student Scholastic Standing 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 Committee on Student Scholastic Standing.

**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 Committee on Student Scholastic Standing.

**Residence**—Credits earned in undergraduate Extension classes in Minneapolis, St. Paul, and Duluth are "resident" credits, subject to the regulations of the school or college concerned.

**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 Cities area, and taught by regularly approved members of the graduate faculty (for this information, consult the chairman of the Committee on Student Scholastic Standing. Petition to transfer is limited to credits earned in Extension classes since September, 1943. Such transfer of credits will not give residence credit. (See box on page 54 for information on advanced engineering degree.)

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 normally 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 except upon special action of the Committee on Student Scholastic Standing. 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; a student who receives a failure in a continuation class may not 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 approximately 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, at \$14, including 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.

### **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.

## **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 Committee on Student Scholastic Standing in the 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 Committee on Student Scholastic Standing.

Every effort will be made to have an adviser on duty at the 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 an interdepartmental 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 some 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. The major portion of the requirements for the master of science in engineering degree (Plan A) may be earned through Extension classes. For further information concerning this program, consult the Office of the Assistant Dean. (See box on page 54.)

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 Committee on Student Scholastic Standing 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 (see page 12), 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 Committee on Student Scholastic Standing. Certificates are awarded to students who complete with a C average any of the following programs of study:

### LIBERAL EDUCATION CERTIFICATE

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 Committee on Student Scholastic Standing to make a total of **45 credits** for the certificate.

### BUSINESS ADMINISTRATION CERTIFICATES

#### Junior Certificate

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. 24-25-26 Principles of Accounting

Spread requirement: at least one 3-credit course in any three of the following fields:

Business Administration: B.A. 89 Production Management  
 Distribution: Advertising, Marketing and Merchandising, Traffic and Transportation  
 Economics and Finance  
 Industrial Relations  
 Business Law: B.A. 52, 53, or 56

## EXTENSION CLASSES

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

Accounting	Insurance
Advertising	Marketing and Merchandising
Economics and Finance	Real Estate
Industrial Management	Traffic and Transportation
Industrial Relations	

Electives: additional courses approved by the Committee on Student Scholastic Standing to make a total of **45 credits** for the certificate.

**Senior Certificate**

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. 24-25-26 Principles of Accounting  
 Econ. 73 Manpower Economics and Labor Problems

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

Accounting	Insurance
Advertising	Marketing and Merchandising
Economics and Finance	Real Estate
Industrial Management	Traffic and Transportation
Industrial Relations	

Electives: additional courses approved by the Committee on Student Scholastic Standing to make a total of **90 credits** for the certificate.

**INDUSTRIAL RELATIONS CERTIFICATE**

Core requirement:

Econ. 6-7 Principles of Economics  
 Econ. 73 Manpower Economics and Labor Problems  
 Econ. 162 Labor Movements  
 Econ. 164 Labor Legislation: Collective Bargaining  
 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: additional courses selected from the following or other approved courses to make a total of **45 credits**.

Econ. 166 Settlement of Industrial Disputes  
 \*B.A. 86 Office Management  
 B.A. 89 Production Management  
 Psy. 119 Psychology of Personality  
 Psy. 125-126 Psychology of Individual Differences  
 Psy. 144-145 Abnormal Psychology  
 \*Soc. 120 Social Psychology  
 Wage and Salary Administration  
 Elements of Supervision  
 Advanced Supervision  
 Work Simplification  
 Work Measurement and Production Standards  
 Industrial Plant Layout  
 Elements of Union Administration  
 Personnel Methods  
 Wage and Salary Stabilization Programs  
 Econ. 169 Labor Legislation: Economic Security

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.

\* Offered only by correspondence study.

**GENERAL ENGINEERING CERTIFICATES**

**Junior Certificate**

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 Committee on Student Scholastic Standing to make a total of **45 credits** for the certificate.

**Senior Certificate**

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 Committee on Student Scholastic Standing to make a total of **90 credits** for the certificate.

**INDUSTRIAL ENGINEERING CERTIFICATES**

**Junior Certificate**

Core requirement:

- Comp. 4 or Business English
- M.&M. 11 College Algebra
- M.&M. 12 Trigonometry
- D.&D.G. 1-2 Engineering Drawing
- Machine Tool Operation I
- Econ. 6-7 Principles of Economics
- B.A. 89 Production Management
- Work Simplification
- Work Measurement and Production Standards

Electives: additional courses may be selected from the list of requirements or recommended electives listed under senior certificate provided that sufficient courses are taken to make a total of **45 credits** for the certificate.

**Senior Certificate**

Core requirement:

- Business English and Correspondence, or
- Comp. 4-5-6 or exemption
- M.&M. 11 College Algebra
- M.&M. 12 Trigonometry
- M.&M. 13 Analytic Geometry
- D.&D.G. 1-2 Engineering Drawing
- D.&D.G. 3 Descriptive Geometry
- Machine Tool Operating I
- Econ. 6-7 Principles of Economics
- Econ. 73 Manpower Economics and Labor Problems
- B.A. 167 Introduction to Industrial Relations
- Econ. 5 Elements of Statistics, or
- Basic Industrial Statistics I
- B.A. 89 Production Management
- Production Planning and Control
- Work Simplification
- Work Measurement and Production Standards
- Industrial Plant Layout
- Elements of Quality Control
- Manufacturing Cost Analysis

**EXTENSION CLASSES**

Electives: additional courses may be selected in other fields approved by the Committee on Student Scholastic Standing to make a total of **90 credits** for the certificate. The following courses are recommended:

Psy. 1-2 General Psychology  
B.A. 133 Standard Cost Accounting  
Elements of Supervision  
Wage and Salary Administration  
D.&D.G. 52 Alignment Charts  
Industrial Safety and Hygiene  
Beginning Practical Speech Making  
Basic Salesmanship  
Motion Picture Photography

**CORRESPONDENCE STUDY COURSES**

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

## 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 5:50 and 6:10 p.m.

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

The recreational and economic importance of the common types and breeds of light horses. Includes discussions of origin, development, characteristics, and gaits of each breed. Actual practice in judging, estimating age, identifying, and evaluating unsoundness. Discussions on feeding and care of horses. No prerequisite.

##### Spring 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.

##### Spring Semester

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

#### A.H. 10 Selection and Utilization of Meats. 3 credits. \$15 plus \$2 laboratory fee.

A course dealing with the major phases of meat and meat products which includes the sources, buying and selling, grading and classification, the identification, nutritive value, cutting and cooking of meats. This course also deals with the preservation and storage of meats including the aging, curing, smoking and freezing of meats. No prerequisite.

##### Fall Semester

T 7:00 Meat Shop, St. Paul Campus, Aunan.

#### 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 businessman, 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 prerequisite.

##### 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 prerequisite.

##### 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, insect, disease control. Also a survey of all the plants recommended for Minnesota gardens and yards. No prerequisite.

**Spring Semester**

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

**ANTHROPOLOGY****1 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 readings 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 Ford 50

**113 The Character of Culture. 3 credits. \$15.**

A more advanced course in cultural anthropology. Explores the relations between culture, social structure, and personality. Case-study analysis of a few specific societies, nonliterate and modern. The problem of cultural change. The special problems raised in anthropological approach to large-scale civilizations.

**Spring Semester**

T 8:05 Ford 50

**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.

**1 Introduction to Art. 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 principles involved in their creation, and recognition of the place of art in its social setting. Particular emphasis will be given to original works of art in the Walker Art Center and the Minneapolis Institute of Arts. No prerequisite.

**Fall Semester**

T 7:30 Walker Art Center, Arnason

**\*20-21-22 First Year Drawing and Painting. 2 credits each semester. \$15 plus \$2 laboratory fee.**

Introduction to materials and techniques; still life, figures, and landscape. No prerequisite. Sections limited to thirty students.

**Fall Semester**

T 7:00 Main Engineering 417, Doseff  
T 7:00 Jones 200B, Arnest  
Th 7:00 Main Engineering 417, Young

**Spring Semester**

T 7:00 Main Engineering 417, Doseff  
T 7:00 Jones 200B, Arnest  
Th 7:00 Main Engineering 417, Young

**\*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**

M 7:00 Main Engineering 417, Doseff

**Spring Semester**

M 7:00 Main Engineering 417, Doseff

**\*44 General Crafts. 3 credits. \$15 plus \$5 laboratory fee.**

An introductory survey of particular craft techniques such as leather work, simple metal work, bowl making and plaster construction. Problems of the course involve typical craft projects for each material. Emphasis is placed upon original design. No prerequisite.

**Fall Semester**

T 7:00 Jones 2

**Spring Semester**

T 7:00 Jones 2



**\*60-61-62 Second Year Drawing and Painting.** 2 credits each semester. \$15 plus \$2 laboratory fee.

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**

T 7:00 Jones 200B, Arnest

**Spring Semester**

T 7:00 Jones 200B, Arnest

**68 Modern Art: Contemporary Art in Europe and America.** 3 credits. \$15.  
**Note:** Properly qualified students may register for **Art 156** for graduate credit. Consult chairman of Art Department.

A study of the development of painting, sculpture, and architecture in Europe and the United States during the twentieth century. Prerequisite: Art 1 or consent of instructor.

**Spring Semester**

T 7:30 Walker Art Center, Eitner

**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 65 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 8:05 Nicholson 209, Lewis

Th 6:20 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.

**Fall Semester**

W 6:20 Nicholson 209, Lewis

**Spring Semester**

T 6:20 Nicholson 209, Lewis

W 6:20 Nicholson 209, Lewis

**\*90-91-92 Beginning Printmaking.** 2 credits per semester. \$15 plus \$5 materials fee.

An introductory course to printmaking emphasizing the various techniques employed in the medium, such as etching, engraving, aquatint, soft ground, mezzotint, and woodcuts. A survey of technical and esthetic influence and directions of old and ancient masters will be offered in conjunction with the studio class. 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 \$5 laboratory fee.

Introduction to materials, forming methods, and production processes. Model making by hand and machine methods. Problems in product design, such as dinnerware. Experience in industrial methods of forming, such as slip casting, jiggering, and pressing. Fundamentals of pottery including handbuilding and wheel throwing. No prerequisite.

**Fall Semester**

M 6:20 Jones 10, Frazier

**Spring Semester**

M 6:20 Jones 10, Frazier

**103 Seminar in Interior Design.** Will be offered in fall 1953.

**\*140-141-142 Contemporary Jewelry Design.** 3 credits each semester. \$15 plus \$7.50 laboratory fee.

In the development of contemporary jewelry, the student learns the basic processes of soldering, forming, forging, engraving, chasing, and repoussé. Prerequisite: consent of instructor. Sections limited to twenty students.

**Fall Semester**

Th 6:20 Jones 11, Morton

**Spring Semester**

Th 6:20 Jones 11, Morton

**Art Ed. 17-19 Survey of Art.** See page 20.

**Architectural Drafting.** See page 55.

**Production Illustration.** See page 55.

**Industrial Design.** See page 55.

**Gardening and Landscaping.** See page 13.

**Modern Home Planning.** See page 26.

**Photography.** See page 32.

The following courses will be given at the Minneapolis School of Art, 1952-53. Registrations for these courses will be taken only at one of the Extension offices.

**\*15A-B Lettering.** 2 credits each semester. \$11.25.

The study and practice of free and constructed lettering. Special emphasis is placed upon the relationship of lettering to all other visual elements which make up a total composition or layout. No prerequisite.

<b>Fall Semester</b>		<b>Spring Semester</b>	
M 7:00	Mpls. School of Art 111, DeCosse	M 7:00	Mpls. School of Art 111, DeCosse

**\*20A-B Basic Drawing.** 4 credits each semester. \$22.50.

Emphasis is placed on the basic principles of perspective drawing and composition. Some life drawing is included in the class. A wide variety of media is used. No prerequisite.

<b>Fall Semester</b>		<b>Spring Semester</b>	
MTh 7:00	Mpls. School of Art 206, Mousseau	MTh 7:00	Mpls. School of Art 206, Mousseau

**\*21A-B Life Drawing.** 2 credits each semester. \$11.25.

Drawing and composition from the nude figure. Special emphasis on surface anatomy and shape characteristics of the individual model. No prerequisite.

<b>Fall Semester</b>		<b>Spring Semester</b>	
W 7:00	Mpls. School of Art 205, Olsen	W 7:00	Mpls. School of Art 205, Olsen

**\*22A-B Still Life Painting.** 2 or 4 credits. \$11.25 or \$22.50. (see note)

This is an introductory class in oil painting designed to acquaint the student with the medium and its uses. Emphasis is placed upon craftsmanship and the basic principles of picture making. There are assigned problems in color harmony, tone relationship and shape organization. Prerequisite: Drawing 20 or equivalent. **Note:** Students may register for 2 or 4 credits. If enrolling for 2 credits, they may elect the evening of their choice; for 4 credits, classes meet two evenings a week.

<b>Fall Semester</b>		<b>Spring Semester</b>	
M 7:00	Mpls. School of Art 202, Havens	M 7:00	Mpls. School of Art 202, Havens
W 7:00	Mpls. School of Art 202, Havens	W 7:00	Mpls. School of Art 202, Havens

**\*50A-B Painting II.** 2 or 4 credits each semester. \$11.25 or \$22.50. (see note in 22A-B.)

This painting class follows the still life class, 22A-B. A class in oil composition with continued stress on tone relationship and shape organization. Prerequisite: 22A-B.

<b>Fall Semester</b>		<b>Spring Semester</b>	
W 7:00	Mpls. School of Art 207, Ryan	W 7:00	Mpls. School of Art 207, Ryan
Th 7:00	Mpls. School of Art 207, Ryan	Th 7:00	Mpls. School of Art 207, Ryan

**\*61A-B Life Painting.** 4 credits each semester. \$22.50.

An oil painting class designed to cause the student to see and use natural forms in pictorial organization. Form and form relationships are shown as they occur in the human figure. Prerequisite: 22A-B.

<b>Fall Semester</b>		<b>Spring Semester</b>	
MW 7:00	Mpls. School of Art 204, Quick	MW 7:00	Mpls. School of Art 204, Quick

**\*62A-B Watercolor Painting.** 2 credits each semester. \$11.25.

A broadly designed class in watercolor painting covering a wide range of subject material. Prerequisite: Drawing 20.

<b>Fall Semester</b>		<b>Spring Semester</b>	
Th 7:00	Mpls. School of Art 202, Havens	Th 7:00	Mpls. School of Art 202, Havens

**\*74A-B Fashion Illustration. 2 credits each semester. \$11.25.**

Specialized fashion illustrations in black and white from the costumed model. Class is designed for students wishing to enter newspaper and magazine fashion illustration fields. Prerequisite: Drawing 20 or 21.

**Fall Semester**

M 7:00 Mpls. School of Art 105, Peterson

**Spring Semester**

M 7:00 Mpls. School of Art 105, Peterson

**\*75A-B Commercial Art. 2 credits each semester. \$11.25.**

An introduction to the problems of the commercial art field. The organization and composition of visual elements as used in newspaper, magazine, poster and brochure presentation are stressed. Prerequisite: Drawing 20 or 21 and 74.

**Fall Semester**

Th 7:00 Mpls. School of Art 111, Elstead

**Spring Semester**

Th 7:00 Mpls. School of Art 111, Elstead

**\*110A-B Life Drawing. 2 credits each semester. \$11.25.**

A class designed to acquaint the student with the relationships between abstract and realistic forms as related to those observed shapes in the human figure. Prerequisite: Drawing 21.

**Fall Semester**

Th 7:00 Mpls. School of Art 205, Olsen

**Spring Semester**

Th 7:00 Mpls. School of Art 205, Olsen

The following courses will be given at the St. Paul Art Gallery, 1952-53. Registrations will be taken only at one of the Extension offices.

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

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

**Fall Semester**

Th 7:00 St. P. Gallery

Lab. T 7:00 St. P. Gallery

**Spring Semester**

Th 7:00 St. P. Gallery

Lab. T 7:00 St. P. Gallery

**\*33 Textile Design: Weaving. 2 credits. \$15 plus \$2 laboratory fee.**

Basic course in Textile Design and construction offering explorations in texture, color and spacing and experience in all the processes involving the two-harness loom, including the designing and weaving of the finished fabric. No prerequisite.

**Fall Semester**

M 7:00 St. P. Gallery, Kolb

**Spring Semester**

M 7:00 St. P. Gallery, Kolb

**\*34 Textile Design: Weaving. 2 credits. \$15 plus \$2 laboratory fee.**

Continuation of the beginning course (33 Textile Design: Weaving) into four-harness weaving including the designing and weaving of the finished fabric.

**Fall Semester**

M 7:00 St. P. Gallery, Kolb

**Spring Semester**

M 7:00 St. P. Gallery, Kolb

**\*35 Textile Design: Weaving. 2 credits. \$15 plus \$2 laboratory fee.**

Extension of 34 Textile Design: Weaving, with emphasis on the designing and weaving of four-harness overshot patterns. Prerequisite: Textile Design 34 or equivalent.

**Fall Semester**

T 7:00 St. P. Gallery, Kolb

**Spring Semester**

T 7:00 St. P. Gallery, Kolb

**\*60-61-62 Second Year Drawing and Painting. 2 credits each semester. \$15 plus \$2 laboratory fee. Second Year Drawing and Painting Laboratory. 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**

W 7:00 St. P. Gallery

Lab. T 7:00 St. P. Gallery

**Spring Semester**

W 7:00 St. P. Gallery

Lab. T 7:00 St. P. Gallery

**\*89 Textile Design: Weaving. 2 credits. \$15 plus \$2 laboratory fee.**

Advanced weaving with explorations in areas to be determined by the student in consultation with instructor. Prerequisite: Textile Design 35 or equivalent.

**Fall Semester**

T 7:00 St. P. Gallery, Kolb

**Spring Semester**

T 7:00 St. P. Gallery, Kolb

**\*93-94-95 Ceramics.** 2 credits each semester. \$15 plus \$5 laboratory fee. **Ceramics Laboratory.** 2 Extension credits. \$10.

Introduction to materials, forming methods, and production processes. Model making by hand and machine methods. Problems in product design, such as dinnerware. Experience in industrial methods of forming, such as slip casting, jiggering, and pressing. Fundamentals of pottery including handbuilding and wheel throwing. No prerequisite.

Fall Semester			Spring Semester		
W 7:00	St. P. Gallery, Kolb		W 7:00	St. P. Gallery, Kolb	
Th 7:00	St. P. Gallery, MacKenzie		Th 7:00	St. P. Gallery, MacKenzie	
Lab. M 7:00	St. P. Gallery, MacKenzie		Lab. M 7:00	St. P. Gallery, MacKenzie	

**\*97 Textile Design: Fabric Decoration.** 2 credits. \$15.

Basic course in fabric decoration involving design for and execution of the design in the media of block-printing, stenciling, and batik on fabric. No prerequisite.

Fall Semester		Spring Semester	
Th 7:00	St. P. Gallery, Kolb	Th 7:00	St. P. Gallery, Kolb

## 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 Committee on Student Scholastic Standing.**

**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 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 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 \$5 laboratory fee.

Lectures, demonstrations, and laboratory exercises are employed for instruction in the morphology, physiology, taxonomy, and ecology of bacteria. The practical applications of these fundamental principles in other phases of science and industry are emphasized. 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, Lindorfer

## 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			Spring 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	

† See Information, page 6.

**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

**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

**61-62† Elementary Organic Chemistry.** 4 credits. \$20.

Discussion of important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. Laboratory work includes the preparation of typical substances. Prerequisite: 12-15 credits in chemistry.

**Fall Semester**

61 Lect. T 7:00 Chemistry 225, Richter  
Lab. Th 7:00 Chemistry 390, Richter

**Spring Semester**

62 Lect. T 7:00 Chemistry 225, Richter  
Lab. Th 7:00 Chemistry 330, Richter

**Practical Laboratory Instrumentation.** 4½ Extension credits. \$22.50 plus \$2.50 laboratory fee.

An elementary course designed to cover the principles of operation and maintenance of colorimeters, spectrophotometers, nephelometers, fluorometers, pH meters, and other electronic and optical instruments used in analytical and research laboratories. Simplified theory and the practical aspects of maintenance and repair are stressed. Typical circuits are analyzed and explained. The course is divided between lecture and laboratory. Seventeen 3-hour meetings. No prerequisite.

**Fall Semester**

T 6:20 Physics 145, Edmondson

**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. Prerequisite: Psychology 1-2.

**Spring Semester**

M 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 8:05 Folwell 101, Cummings

**Spring Semester**

T 6:20 Folwell 101, Deno

**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 6:20 Folwell 101, Brieland

† See Information, page 6.

**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**

M 8:05 Folwell 105, Deno

**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**

M 8:05 Folwell 105, Deno

**143 Problems of Mental Deficiency.** 3 credits. \$15.

Diagnosis, care, training, social, educational and vocational problems, legal aspects. Prerequisite: 12 credits in psychology, educational psychology or sociology.

**Fall Semester**

T 6:20 Folwell 101, Deno

**166 Maturity and Aging.** 3 credits. \$15.

Developmental changes in the aging and the aged. Care of old persons in modern society; vocational, educational, recreational and housing problems. Prerequisite: 12 credits in psychology, education or sociology.

**Spring Semester**

M 6:20 Folwell 101, Brieland

**EDUCATION****Art Education****17 Pictorial Expression for Elementary Education.** 3 credits. \$15.

One of the three courses which together provide a streamlined background survey of art in life and education. Approximately half lecture and half laboratory experiences to prepare the average elementary teacher to appreciate and use art. Approaches to materials, techniques, and ideas important to children's art expression, its relationship to adult expression, and its significance in educational growth. No prerequisite.

**Spring Semester**

W 6:20 Jones 109, Gayne

**19 Functional Arts and Crafts for Elementary Education.** (See 17.) 3 credits. \$15.

Influence of art on modern life approached through typical opportunities for integrated experiences. Centers of interest include clothing, architecture and interior design, community planning, commercial and industrial design, puppetry, dramatics, intercultural relations, holiday projects, etc. No prerequisite.

**Fall Semester**

W 6:20 Jones 109, Gayne

**81 Puppetry in Education.** 3 credits. \$15 plus \$1.50 materials fee.

The use of various forms of simple puppetry as a teaching technique with emphasis on problems of motivation and correlation with school subjects. Construction, manipulation, and stage techniques approached as they relate to typical elementary and secondary school situations. Repeated spring semester. No prerequisite.

**Fall Semester**

Th 6:20 Jones 109, Page

**Spring Semester**

Th 6:20 Jones 109, Page

**Curriculum and Instruction****152 Adjustment of Schools to Individual Differences.** 3 credits. \$15.

The adaptation of the school, the curriculum, and classroom procedures to the abilities and interests of the pupils. Prerequisite: 10 credits in education.

**Spring Semester**

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

### ✓ Educational Psychology

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

A survey, evaluation and application of the research work bearing on the teaching of the elementary school subjects: reading and expression in the fall semester; spelling, arithmetic and the information and appreciation areas in the spring semester. Prerequisite: Education 55B or 71C or equivalent.

**Fall Semester**

113-114 Th 6:20 St. P. Ext. Center 206,  
Van Wageningen

**Spring Semester**

114-115 Th 6:20 St. P. Ext. Center 206,  
Van Wageningen

**183 Education of Gifted Children.** 3 credits. \$15.

A study of the abilities, potentialities and characteristics of intellectually gifted children. Prerequisite: Education 55B or 71C or equivalent.

**Fall Semester**

M 6:20 N.W. Bank 690, Van Wageningen

### 2. History of Education

**90-91 Problems and Techniques of Intergroup Education.** 3 credits each unit. \$15.

These courses have two main objectives: (1) to inquire into the kinds of information and attitudes of mind a student, whether as teacher or as citizen, should possess in order to live happily and usefully in a democratic society; (2) to provide an opportunity for students to familiarize themselves with the techniques of intergroup education adapted to classroom use. Panels, films, exhibits, recordings, etc., are employed for concrete illustration. **Not offered in Twin Cities 1952-53.**

### / 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 Owre 111, Grainger

**Spring Semester**

M 5:00 Owre 111, Grainger

**62 Introduction to Personnel Work in Nursing.** 3 credits. \$15.

An introduction to the principles, techniques, and application of the personnel point of view to nursing through consideration of such topics as psychological principles; the nature, measurement, evaluation, and recording of individual differences in intelligence, special abilities, motivation, and personality; and study of counseling techniques appropriate for the nursing staff and faculty to use. Open to graduate nurses.

**Fall Semester**

T 6:20 Owre 113, Johnston

**76 Guiding Student Experience in Patient Care.** 3 credits. \$15.

A course designed to study the assignment of students to patient care; the selection of patients for bedside teaching and the role of the graduate nurse in assisting students with patient care.

**Spring Semester**

T 6:20 Owre 113, Boyle and others

**85 Fundamentals of Nursing Service Administration.** 3 credits. \$15.

Study of principles of administration applied to the operation of nursing service in hospitals. Organization; administrative relationships; personnel policies, practices, relationships; staff education; income and expenditure, budgeting, salary schedules; public relations; records and reports.

**Fall Semester**

Th 6:20 Owre 113, Goodale

**105 Helping Students with Patient Teaching.** 3 credits. \$15.

A course primarily for teachers of basic nursing students. Problems met by students when teaching patients; the selection of first teaching experiences; the planning of teaching with students, and evaluation techniques to determine the effectiveness of patient-teaching by students. **This course does not carry graduate credit.** Prerequisite: 12 credits in education or nursing education or consent of instructor.

**Fall Semester**

T 6:20 Owre 111, Boyle and others

**Note**—Additional courses in the nursing field are listed under **Nursing**, page 30.

## 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 one of the following times and places.

**Fall Semester**

7:00	Tuesday, September 23	Room 211, Nicholson Hall
7:00	Tuesday, September 23	Room 206, St. P. Ext. Center
7:00	Wednesday, October 1	Room 211, Nicholson Hall

**Spring Semester**

7:00	Tuesday, February 3	Room 211, Nicholson Hall
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**Preparatory Composition. No credit. \$15.**

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

**Fall Semester**

Th	6:20	Folwell 209
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**Spring Semester**

Th	6:20	Folwell 209
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**Grammar Review. 3 Extension credits. \$15.**

A "refresher" course for those who need a quick and thorough review of grammar, mechanics, and usage. Includes theme writing. No prerequisite.

**Fall Semester**

T	6:20	Folwell 105, Miller
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**Spring Semester**

T	6:20	St. P. Ext. Center 204, Miller
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**Book Reviews. 2 Extension credits. \$10.**

A series of ten lectures on outstanding current books chosen because of literary value and contemporary interest. Recommended for individuals seeking a critical evaluation of recent books and for study groups needing guidance and preparation for discussion. Supplementary reading lists will be issued to students who wish to do extensive independent reading. Repeated spring semester.

**September 30-December 2**

T	6:20	Folwell 204, Livingston
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**February 10-April 14**

T	6:20	Folwell 204, Livingston
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**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**

4-5	M	6:20	Folwell 107, del Plaine
	T	6:20	St. P. Ext. Center 214, Gillette
	W	6:20	Folwell 205, Kaufman
5-6	W	6:20	Folwell 105, Bean

**Spring Semester**

4-5	W	6:20	Folwell 105, Bean
5-6	M	6:20	Folwell 107, del Plaine
	T	6:20	St. P. Ext. Center 217, Gillette
	W	6:20	Folwell 205, Kaufman

**Communications 1a-2a-3a. 3 credits each quarter. \$15.**

A practical course intended to prepare the student to meet more effectively the various vocational and social demands to write and talk to others and to receive communication from them. Constant practice in writing and speaking is uniquely based upon some understanding of how language functions to convey meaning. 1a: The fundamental patterns of meaning in English, word meaning, social meaning, good usage; 2a: the use of language to influence human behavior; 3a: mass communication of press, film, and radio, and how to receive it with critical discrimination. The sequence is accepted by the University as meeting all requirements which are satisfied by English 4-5-6 (Freshman Composition). Class meets for a period of 2½ hours each week. Prerequisite: Preparatory Composition or satisfactory score on English placement test, as explained above.

**Fall Quarter**

1a	T	6:20	Folwell 203, Allen
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**Winter Quarter**

2a	(same schedule as fall)
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**Spring Quarter**

3a	(same schedule as fall)
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**27-28-29 Advanced Writing. 3 credits each quarter. \$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. Advanced Writing 29 is a continuation of 27 and 28 for students who wish further opportunity to write, and includes readings from current writers with special attention to technique. Students may begin with either 28 or 27. Prerequisite: Composition 4-5-6, or consent of instructor.

**Fall Quarter**

27	T	6:20	Folwell 205, Rice
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**Winter Quarter**

28	(same schedule as fall)
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**Spring Quarter**

29	(same schedule as fall)
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**21-22-23 Introduction to Literature.** 3 credits each quarter. \$15.

A chronological study of English literature with its historical background. An introduction to types of literature and literary ideas. 21: The Renaissance and the Rise of Puritanism. Marlowe, Spenser, Bacon, Browne, Milton, and Bunyan; 22: The Restoration and the Eighteenth Century. Dryden, Pope, Swift, Addison and Steele, Johnson, Boswell, Fielding, and Sheridan; 23: The Romantic Movement and the Victorians. Wordsworth, Byron, Shelley, Keats, Lamb, Carlyle, Browning, and Arnold. Prerequisite: Composition 4-5-6 or exemption.

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
21 Th 6:20 Folwell 205, Gudas	22 (same schedule as fall)	23 (same schedule as fall)

**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 *Victory*, 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.

<b>Fall Semester</b>
W 6:20 Folwell 207, Rathburn

**58 Business Reports and Letters.** 3 credits. \$15.

Style, forms, and methods in business writing. Prerequisite: Freshman Composition 4-5-6, English A-B-C, or exemption from requirement.

<b>Fall Semester</b>
M 6:20 Folwell 6, Guthrie

**85 Present-Day English.** 3 credits. \$15.

Not a review of traditional "school grammar" nor a writing course, but a modern study of the living language designed to provide those insights that make for power and ease in the use of English. Attention will be given to how its words have developed in form and meaning, to its structural patterns, and to the principles of good usage in grammar and pronunciation as contrasted with notions of "correctness." Open to students with Senior College standing and to others by permission. Graduate credit available upon completion of special work.

<b>Spring Semester</b>
M 6:20 Folwell 204, Allen

**101-102 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.

<b>Fall Semester</b>	<b>Spring Semester</b>
101 T 6:20 Folwell 207, Macdonald	102 T 6:20 Folwell 207, Macdonald

**174 American English.** 3 credits. \$15.

The distinctive and separate development of the English language in America; differences in vocabulary and pronunciation between it and British English; cultural relationships; taboos; euphemisms, and coinages; regional speech in the United States, with special reference to Minnesota, through use of the unpublished collections of the Linguistic Atlas of the Upper Midwest. Experience in field work will be provided for qualified students. Open to students with Senior College standing and to others by permission.

<b>Fall Semester</b>
M 6:20 Folwell 204, Allen

**Nineteenth Century Russian Literature.** See page 29.

**FRENCH****1-2 Beginning French.** 3 credits each semester. \$15.

Grammar, pronunciation, reading, and practice in speaking. Where feasible, there will be one section emphasizing the conversational approach and one section the reading approach. No prerequisite.

<b>Fall Semester</b>	<b>Spring Semester</b>
1 W 6:20 Folwell 201, Sullivan	1 W 6:20 Folwell 202
	2 W 6:20 Folwell 201, 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.

<b>Fall Semester</b>	<b>Spring Semester</b>
3 M 6:20 Folwell 203, Butler	4 M 6:20 Folwell 203, Butler

**17a-b French for Graduate Students.** No credit. \$20.

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 201, Brackney  
17b M 6:20 Folwell 124, Pulleyn

**Spring Semester**  
17a M 6:20 Folwell 201, Pulleyn  
17b M 6:20 Folwell 102, Brackney

**54a-55a French Conversation.** 3 credits each semester. \$15.

Informal discussion of current affairs and everyday topics. Prerequisite: French 3-4, or consent of instructor.

**Fall Semester**  
54a W 6:20 Folwell 203, Nahas

**Spring Semester**  
55a W 6:20 Folwell 203, Nahas

**GEOGRAPHY****107 Geography of the Soviet Union.** 3 credits. \$15.

The character of and bases for the regional diversity of physical resources, population, agriculture, manufacturing, and transportation in the U.S.S.R. Prerequisite: 5 credits in geography or consent of instructor.

**Spring Semester**  
M 6:20 Ford 285, Borchert

**112 Geography of Western Anglo-America.** 3 credits. \$15.

A regional examination of the physical and human geographic patterns of the United States and Canada west of the eastern margins of the Great Plains. (Not open to students who have taken the old course 71.) Prerequisite: 5 credits in geography or consent of instructor.

**Fall Semester**  
M 6:20 Ford 285, 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, and other economic mineral resources. No prerequisite.

**Fall Semester**  
1 T 6:20 Pillsbury 210, Lewis  
A T 8:05 Pillsbury 22

*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, Lewis

**23 Mineralogy.** 3 credits. \$15.

A study of the physical and chemical characteristics of minerals; occurrence, genesis, and uses. Determinative work and identification of minerals by physical tests. No prerequisite.

**Fall Semester**  
Th 6:20 Pillsbury 110, White

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

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

**Fall Semester**  
1 M 6:20 Folwell 207, Menze  
2 M 6:20 Folwell 209

**Spring Semester**  
2 M 6:20 Folwell 207, Menze  
1 M 6:20 Folwell 209

**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**  
M 6:20 Folwell 206, Ramras

**Spring Semester**  
M 6:20 Folwell 226

**4 Intermediate German. 3 credits. \$15.**

Modern narrative prose. Prerequisite: German 3.

**Spring Semester**  
M 6:20 Folwell 206, Ramras

**17a-b German for Graduate Students. No credit. \$20.**

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 205, Downs  
17b M 6:20 Folwell 213, Wangsness

**Spring Semester**  
17a M 6:20 Folwell 213, Downs  
17b M 6:20 Folwell 205, Wangsness

**HEALTH****50 Personal and Community 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, 51, 52, 100 or General College 10C. No prerequisite.

**Fall Semester**  
T 6:20 Millard 129, Thomson

**75 Introduction to Environmental Sanitation. 3 credits. \$15.**

Principles of urban and rural sanitation relating to water, food, wastes, housing, air, insects, rodents. Prerequisite: 3 credits in public health.

**Spring Semester**  
T 6:20 Millard 129, Bond

**100 Elements of Preventive Medicine and Public Health. 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. This class meets for a 2½-hour period weekly. Prerequisite: 12 credits in biological science or consent of instructor.

**Fall Semester**  
T 6:20 Millard 214, Knudsen

**Industrial Safety.** See page 57.

**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**  
1 T 6:20 Ford 40  
W 6:20 St. P. Ext. Center

**Winter Quarter**  
2 (same schedule as fall)

**Spring Quarter**  
3 (same schedule as fall)

**20-21-22 American History** (or 59-60-61. See note below). 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.

*Note—Students wishing Senior College credit may register for History 59-60-61 with the approval of the instructor. Some additional work will be required for Senior College credit.*

Fall Quarter		Winter Quarter	Spring Quarter
20	M 6:20 Ford 40 Heiningner 21	21 (same schedule as fall)	22 (same schedule as fall)

**68-69 American History Since 1900.** 3 credits each semester. \$15.

A concentrated study of the social, political, economic, and cultural development of the United States since 1900 and of the rise of the United States as a world power. 68: The Spanish-American War and America's overseas empire; the rise of big business; problems of the city; the Progressive Era of Reform; America in the First World War; 69: Social and intellectual crises of the 1920's; prosperity and depression; the New Deal; the rise of organized labor; from isolation to intervention; the post-war scene. No prerequisite.

Fall Semester		Spring Semester
68	T 6:20 Ford 115, Chambers	69 T 6:20 Ford 115, Chambers

**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	Th 6:20 Ford 160, Bowditch	79b Th 6:20 Ford 160, Bowditch

**109-110 Europe in the Twentieth Century.** 3 credits each semester. \$15.

Course 109: 1900-1918; Course 110: 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 Ford 115, Deutsch	110 W 6:20 Ford 115, Deutsch

**118-119 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 United States 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 Ford 115, Deutsch	119 W 8:05 Ford 115, Deutsch

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

This is a nontechnical course prepared for those who plan to build, modernize, or redecorate their homes. 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	
W 8:05	Murphy Aud., Graffunder

## 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 the time of Voltaire to the present. The readings will include such authors as: for course I, Voltaire, Goethe, Paine, Rousseau, Burke, Tolstoi; for II, Dostoevski, Mill, Malthus, Marx, Ibsen, Zola, Flaubert. No prerequisite.

**Fall Semester**

1 M 6:20 Ford 80, Nelson  
Th 6:20 St. P. Ext. Center 217, Ames

**Spring Semester**

2 M 6:20 Ford 80, Nelson  
Th 6:20 St. P. Ext. Center 217, Ames

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

Science (especially the theory of evolution), religion, and humanism. Study and discussion of selected works by Matthew Arnold and T. H. Huxley; William James, *Essays in Pragmatism*; Nietzsche, *Thus Spake Zarathustra*; G. B. Shaw, *Back to Methuselah*; Turgenyev, *Fathers and Sons*; Thomas Mann, *The Magic Mountain*. No prerequisite.

**Fall Semester**

Th 8:05 Ford 20, Bryan

**Spring Semester**

Th 8:05 Ford 20, Bryan

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

Science (especially Freudian psychology and anthropology), humanism, and the theory and practice of communism, fascism, and liberal democracy in the modern age. Study and discussion of Lenin, *State and Revolution*; Koestler, *Darkness at Noon*; Freud, *Outline of Psychoanalysis*; Ortega y Gasset, *Revolt of the Masses*; Aldous Huxley, *Brave New World*, Kafka, *The Trial*. No prerequisite.

**Spring Semester**

Th 8:05 Ford 20, Bryan

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

Our cultural heritage from the civilizations of ancient Israel and Hellas. Readings from Homer, Aeschylus, Sophocles, Euripides, Thucydides, the Old Testament. No prerequisite.

**Fall Semester**

T 6:20 Ford 160, Ames

**Spring Semester**

T 6:20 Ford 160, Ames

**12 Roman and Medieval Heritage.** 3 credits. \$15.

A continuation of the Hebraism-Hellenism theme of European Heritage 11. Readings from Plato, Aristotle, Lucretius, Marcus Aurelius, Epictetus, Cicero, the New Testament, and St. Augustine. No prerequisite.

**Spring Semester**

T 6:20 Ford 160, Ames

## ITALIAN

**1a-2a Beginning Italian.** 3 credits each semester. \$15.

Conversational approach. No prerequisite.

**Fall Semester**

1a T 6:20 Fowell 201, Haigh

**Spring Semester**

2a T 6:20 Fowell 201, Haigh

## JAPANESE

See Linguistics, page 28.

## JOURNALISM

**55 Typography for Publications and Advertising.** 3 credits. \$15 plus \$5 laboratory fee.

Selection of typefaces for headline forms and text. Copy-fitting practice in design of type layouts. Practice in hand composition in typography laboratory. Class limited to 20 students. No prerequisite.

**Fall Semester**

Th 6:20 Murphy 315-320, Wilson

**65 Graphic Processes in Publication and Advertising.** 3 credits. \$15 plus \$5 laboratory fee.

Study of letterpress, offset, gravure and silk screen printing in publications and advertising. Preparation of copy for engravings. Laboratory projects. Class limited to 20 students. Prerequisite: 55 or consent of instructor.

**Spring Semester**  
Th 6:20 Murphy 105, Wilson

**73 Magazine Writing I.** 3 credits. \$15.

The theory and techniques of the nonfiction magazine article for general and specialized periodicals; subjects and materials, practice assignments, manuscript criticism, editorial principles, basic instruction for beginners. Repeated spring semester. No prerequisite.

**Fall Semester**  
Th 6:20 Murphy 311, Kahm

**Spring Semester**  
Th 6:20 Murphy 311, Kahm

**Magazine Writing II.** 3 Extension credits. \$15.

The writing of nonfiction articles for general and specialized periodicals; analysis of manuscript markets; study of magazine policies and practices; training in editing and marketing procedures; use of pictures. Prerequisite: Magazine Writing I or consent of instructor.

**Fall Semester**  
Th 8:05 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

## LIBRARY SCIENCE

**151 Invention and Spread of Printing.** 2 credits. \$10.

History of the development of printing and its spread to the end of the sixteenth century. No prerequisite. Twelve meetings.

**Fall Quarter**  
W 6:20 Library 5, Shove

**152 History of Printing to Modern Times.** 2 credits. \$10.

The development and spread of printing and the publishing industry, 1600-1900. Twelve meetings. No prerequisite.

**Winter Quarter**  
W 6:20 Library 5, Shove

## LINGUISTICS

**1-2 Beginning Colloquial Arabic.** 3 Extension credits each semester. \$15.

The course will include only the essentials of grammar with chief emphasis on pronunciation and practice in conversation. The Lebanese dialect will be stressed but others will be considered, such as Egyptian and Arabian. No prerequisite.

**Fall Semester**  
1 W 6:20 Folwell 104, Farah

**Spring Semester**  
2 W 6:20 Folwell 104, Farah

**3-4 Intermediate Arabic.** 3 Extension credits each semester. \$15.

This course is designed for students with some previous knowledge of Arabic. Attention will be given to grammar, literature, and newspaper reading in the language. Prerequisite: 1-2, or consent of instructor.

**Fall Semester**  
3 W 8:05 Folwell 104, Farah

**Spring Semester**  
4 W 8:05 Folwell 104, Farah

**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, Brower

**Spring Semester**  
2 M 6:20 Folwell 104, Brower

**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, Brower

**Spring Semester**  
52 M 8:05 Folwell 104, Brower

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

A beginning course with emphasis on reading. Comprehensive discussion of the Russian grammatical system, with special stress on the recognition of forms and the structure of the sentence. Interpretation and translation of easy texts. This course aims to give a general working knowledge of Russian and the basic preparation for reading tests required of graduate students in their specific fields. No prerequisite for 1. Prerequisite for 2: 1 or consent of instructor.

**Fall Semester**

1 M 6:20 Folwell 113, Niemi

**Spring Semester**

2 M 6:20 Folwell 113, Niemi

**Nineteenth Century Russian Literature.** 3 Extension credits. \$15.

The main currents of pre-Revolutionary Russian thought as represented in outstanding fictional and dramatic works by Gogol, Tolstoy, Turgenev, Dostoevsky, and Chekhov. This course will emphasize the esthetic, psychological and social themes of the Great Age of Russian literature. Readings will include *The Inspector General*, *Dead Souls*, *War and Peace*, *The Brothers Karamazov*, and *The Cherry Orchard*. Indispensable toward a full understanding of the position of Russia in the present-day world. No prerequisite.

**Fall Semester**

T 6:20 Folwell 209, Rosenfeld

**MATHEMATICS**

For all mathematics classes, see page 57.

**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 (G.C. 24A-B).** 3 General College or 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**

24A T 8:05 Nicholson 111, Hill

**Spring Semester**

24B T 8:05 Nicholson 111, Hill

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

A course in historical appreciation, designed to give an understanding of musical masterpieces as part of the general development of western culture from the crusades to the present day. The lectures include copious musical illustrations with emphasis on the style of the music itself rather than on theoretical questions. Parallels but does not duplicate Music 34-35-36 in the College of Science, Literature, and the Arts. No prerequisite.

**Fall Semester**

34-35 M 6:20 Scott Hall 104, Downes

**Spring Semester**

35-36 M 6:20 Scott Hall 104, Downes

**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**

40-41 T 7:30 Northrop Aud.

**Spring Semester**

41-42 T 7:30 Northrop Aud.

**43-44-45 University Chorus.** 1 credit each quarter. \$5.

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

**Fall Quarter**

T 7:00 Nicholson Aud.

**Winter Quarter**

(same schedule as fall)

**Spring Quarter**

(same schedule as fall)

## EXTENSION CLASSES

## 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 and Gunderson

**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. Class limited to 20 students. No prerequisite.

**Fall Quarter**

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

## / NURSING

**101 Nursing in Atomic Warfare.** 3 credits. \$15.

Nursing responsibilities in preparing community for atomic warfare and caring for patients in areas involved in atomic bombing. Registration restricted to graduate professional nurses.

**Spring Semester**

Th 6:20 Owre 113, Hanson and others

**104 The Nurse's Role in Maintaining Emotional Health.** 3 credits. \$15.

Study of the mental health principles and techniques involved in carrying out complete nursing care. Open to graduate nurses.

**Fall Semester**

W 6:20 Owre 113, Lediger

~~Additional~~ Additional courses in the field of nursing are listed under **Nursing Education**, page 21.

## / PARLIAMENTARY LAW

**Parliamentary Law.** 3 Extension credits. \$15.

Fundamental principles and practices of parliamentary law in organized meetings, especially for executive officers and members of organizations. The course is designed to equip the student to take an active and informed part in the organizations of which he is a part. By demonstration and laboratory techniques it will be possible for the students to actually participate in and conduct meetings in connection with the course. Topics to be considered will include formation of organizations, drafting of constitutions, duties of officers, motions, amendments, nominations and elections. Meets for two and one-half hours each week for twelve weeks. No prerequisite.

**Fall Quarter**

W 7:00 Ford 75, Miller

## 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 JohH 106, McHale

**Spring Semester**

M 6:20 JohH 106, McHale

**Efficient Reading.** 3 Extension credits. \$15 plus \$2 materials fee.

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 techistoscope 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 30. Repeated spring semester.

**Fall Semester**

T 6:20 Ford 80, Wright  
T 8:05 Ford 80, Wright  
W 6:20 Ford 80, Brown  
W 8:05 Ford 80, Brown  
Th 6:20 St. P. Ext. Center 216, Wright  
Th 8:05 St. P. Ext. Center 216, Wright

**Spring Semester**

T 6:20 Ford 80, Wright  
T 8:05 Ford 80, Wright  
W 6:20 Ford 80, Brown  
W 8:05 Ford 80, Brown  
Th 6:20 St. P. Ext. Center 216, Wright  
Th 8:05 St. P. Ext. Center 216, Wright



**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 8:05 Folwell 12, Nichols

**F.L. 1 Preparation for Marriage.** 3 credits. \$15 plus \$1 materials fee.

The course is designed to clarify what modern marriage requires of the individual and to help men and women gain a clearer picture of their own assets as marriage partners, through the discussion of such topics as values in family life today, problems of dating and courtship, selection of a marriage partner, marriage-adjustments, planning for the family, income management, and others. Special attention will be given to problems growing out of the present and continuing national emergency. Illustrative films and case materials are used. No prerequisite. Repeated spring semester.

**Fall Semester**

T 6:20 Johnston 126, Levine

**Spring Semester**

T 6:20 Johnston 126, Levine

**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**

T 6:20 Folwell 301, Hospers

**Spring Semester**

W 6:20 Folwell 301, 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. Repeated spring semester. No prerequisite.

**Fall Semester**

W 6:20 Folwell 301, Brodbeck

**Spring Semester**

M 6:20 Folwell 301, Terrell

**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**

M 6:20 Folwell 301, Terrell

**10 Science and Religion.** 3 credits. \$15.

An inquiry into the nature of science and religion as currently interpreted, with an attempt to find grounds of conflict and/or reconciliation. No prerequisite.

**Spring Semester**

Th 6:20 Folwell 301, Holmer

**59 Esthetics.** 3 credits. \$15.

An introduction to the philosophy of art. Among the issues discussed are the nature of the esthetic experience, of beauty, of artistic expression; the function of the arts, and the role of art in society. No prerequisite.

**Spring Semester**

T 6:20 Folwell 301, Hospers

**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: Thomas a Kempis' *Imitation of Christ*, Woolmann's *Journal*, Kierkegaard's *Thoughts on Crucial Situations*, Loyola's *Exercises*, and Calvin's *Sermons*. No prerequisite.

**Fall Semester**

Th 6:20 Folwell 322, Holmer

## PHOTOGRAPHY

Students in all photography classes must furnish their own cameras.

**Basic Photography I (Art 10).** 3 credits. \$15 plus \$5 laboratory fee.

A course for beginners, with little or no experience in photography. The course will include lectures and demonstrations dealing with basic photographic equipment and materials, general camera and darkroom techniques, history and criticism. There will be some laboratory work in use of the camera, in contact printing and enlarging. This class is of interest to people who need a working knowledge of photography in professions other than photography, and for those who want to know how to use a camera efficiently. No prerequisite. Repeated spring semester.

**Fall Semester**

M 6:20 Murphy 20, Liebling

**Spring Semester**

M 6:20 Murphy 20, Liebling

**Basic Photography II (Art 11).** 3 credits. \$15 plus \$5 laboratory fee.

A course for 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. Repeated spring semester. Prerequisite: Basic I or equivalent with instructor's consent.

**Fall Semester**

M 6:20 Murphy 20, Downs

**Spring Semester**

M 6:20 Murphy 20, Downs

**Color Photography I.** 3 Extension credits. \$15 plus \$5 laboratory fee.

A foundation course in the growing field of Color Photography, designed to provide you with practical knowledge and experience in basic color work. Course includes: (1) lecture demonstrations of equipment, color processes, and techniques; and (2) supervised camera assignments in the studio and on outdoor field trips. Experience or instruction in black and white photography is desirable, but not a prerequisite. Repeated spring semester.

**Fall Semester**

W 7:00 Wesbrook 3, Webb

**Spring Semester**

T 7:00 Wesbrook 3, Webb

**Color Photography II.** 3 Extension credits. \$15 plus \$5 laboratory fee.

A workshop course in which the student participates in supervised group projects. Course includes lecture demonstrations, field trips, and attention to such subjects as color portraiture, darkroom techniques, color experiments, and special problems. Prerequisite: Color Photography I.

**Spring Semester**

W 7:00 Wesbrook 3, Webb

**Motion Picture Production I.** 3 Extension credits. \$15 plus \$5 laboratory fee.

Designed to meet the needs of teachers interested in the visual field and 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. Enrollment limited to 25 students.

**Fall Semester**

Th 7:00 Wesbrook 3, Cain

**Motion Picture Production II.** 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 Production I or equivalent in experience with approval of instructor.

**Spring Semester**

Th 7:00 Wesbrook 3, Cain

## PHYSICS

**1-2†-3 Introduction to Physical Sciences.** 3 credits each quarter. \$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). Class meets for 2½ hours. Prerequisite: high school algebra and plane geometry.

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

1 T 6:20 Physics 168, Christensen 2 (same schedule as fall) 3 (same schedule as fall)

**1a-2a†-3a Introduction to Physical Sciences.** (With laboratory included.) 4 credits each quarter. \$25.

The complete sequence 1a-2a-3a fulfills the laboratory-science group requirement in S.L.A. Lecture group meets with class described above. Eight 2-hour laboratory periods scheduled for the quarter. Prerequisite: high school algebra and plane geometry.

**Fall Quarter****Winter Quarter****Spring Quarter**1a Lect. T 6:20 Physics 166  
Lab. T 9:00 Physics 153      2a (same schedule as fall) 3a (same schedule as fall)

† See Information, page 6.

## POLITICAL SCIENCE

**Note**—Qualified students may register for certain political science courses under a graduate course number (see double course headings below) provided they obtain instructor's permission and satisfactorily complete a certain amount of extra work under his supervision. Consult instructor or Committee on Student Scholastic Standing as to necessary qualifications and procedures.

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

All of us are aware of the impact of international events 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. No prerequisite.

**Fall Semester**

M 6:20 Ford 115, Christensen

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

Recognizing that the American citizen must have an understanding of our system of government and the tremendous part that government plays in our lives. 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. No prerequisite.

**Spring Semester**

M 6:20 Ford 115, Christensen

**7 Government and Politics of Western Europe.** 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 Ford 60, Turner

**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 of 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 Ford 180, Mills

**55 Government of the Soviet Union.**

**143 Government of the U.S.S.R. and Adjacent States.** } See note above.  
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.

**Spring Semester**

T 6:20 Ford 60, McClosky

**58 Governmental Accounting.** 3 credits. \$15.

A course in the principles and procedures of governmental accounting including: fund accounting; budgetary accounting as it relates to preparation and control of appropriation and program budgets, and control of periodic allotments; revenues, expenditures, assets and liabilities; account classification; organizational and administrative aspects including systems and simplification techniques; financial reporting; principles of governmental cost accounting. (See B.A. 158, page 45.) No prerequisite.

**Spring Semester**

Th 6:20 Ford 140, McGraw

† See Information, page 6.

- 60 Introduction to Public Administration.  
 131 Public Administration: Organization and Areas. } See note on page 33.  
 3 credits. \$15.

Forms and trends of public administration; working concepts of organization, with some attention to the sociology of organization; techniques of operations analysis; methods employed by administrators to achieve administrative objectives; controls over administration, including intervention by political parties and pressure groups.

**Fall Semester**

M 6:20 Ford 140, Warp

- 64 Employee Training Techniques. 3 credits. \$15.

Survey of methods used in analysis of work for training purposes, course construction, employee motivation, classroom and on-the-job presentation, development and use of instructional aids, and evaluation. Emphasizes application of techniques to public employee training programs; of special interest to government personnel technicians and training officers. Class limited to 25. Prerequisite: consent of instructor.

**Fall Semester**

W 6:20 Ford 140, Pieper

- 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.

**Spring Semester**

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

- 76 Business and Government.  
 126 Government and the Economic Order. } See note on page 33.  
 3 credits. \$15.

A survey of the impact of government on the American economy. Topics dealt with include factors conditioning the role of government, the problem of depressions, labor and government, government and agriculture, monopoly and giantism, public utility regulation, financial controls, conservation, public ownership, and national economic planning. Attention is focused on current major economic issues of national interest and public policy.

**Spring Semester**

M 6:20 Ford 75, Warp

- 84 International Organization I.  
 184 International Organization I. } See note on page 33.  
 3 credits. \$15.

Historical development of arbitration, administrative agencies, and conferences; the League of Nations; the United Nations and regional organizations. No prerequisite.

**Fall Semester**

M 6:20 Ford 160, Levi

- 85 Problems of World Politics.  
 195 Colonial Government and the Problems of Imperialism. } See note  
 3 credits. \$15. } on page 33.

Continuation of Political Science 25 which, however, is not prerequisite. Special attention to Southern Asia. No prerequisite.

**Spring Semester**

W 6:20 Ford 180, Mills

- 86 International Organization II.  
 185 International Organization II. } See note on page 33.  
 3 credits. \$15.

Organization and work of the specialized agencies of the United Nations: Educational, Scientific and Cultural Organization; Economic and Social Council; Trusteeship Council; Health Organization. International administration. No prerequisite.

**Spring Semester**

M 6:20 Ford 160, Levi

- 87 The Far East in International Relations.  
 191 Far Eastern Politics I. } See note on page 33.  
 3 credits. \$15.

Political development of China, Japan, and Korea, with emphasis on the period since World War I; Western-Asiatic diplomacy; current problems and military conflict in Asia.

**Spring Semester**

Th 6:20 Ford 115, Turner

- 98 U. S. Foreign Affairs Administration.**  
**175 Conduct of American Foreign Relations.** } See note on page 33.  
 3 credits. \$15.

Presidential powers in foreign affairs, organization and work of the Department of State and other principal foreign affairs agencies, participation in international agencies, the Foreign Service, overseas economic and military administration. No prerequisite.

**Fall Semester**

T 6:20 Ford 140, McLaughlin

- 99 U. S. Foreign Policy.**  
**176 Conduct of American Foreign Relations.** } See note on page 33.  
 3 credits. \$15.

The role and limitations of public opinion in foreign policy; contributions to the formation of foreign policy by interest groups, political parties, Congress and the Congressional committees, the President and executive agencies; problems in coordinated action and democratic control of policy. No prerequisite.

**Spring Semester**

T 6:20 Ford 140, McLaughlin

**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 Elementary Psychology A.

**Fall Semester**

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

**Spring Semester**

M 8:05 Nicholson 213, White  
 T 8:05 St. P. Ext. Center 206, White  
 Th 6:20 Nicholson 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**

1 W 6:20 Nicholson Aud., White  
 F 7:00 St. P. Ext. Center 206, White

**Spring Semester**

2 W 6:20 Nicholson Aud., 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**

4 W 8:05 Psychology 211, Rosen

**Spring Semester**

5 W 8:05 Psychology 211, Rosen

- 70 Principles of Psychological Measurement.** 3 credits. \$15.

Designed to present statistical methods necessary to the practical application of psychological concepts. Especially useful to persons who work with psychological tests or with any sort of objective evaluation technique. Special emphasis is given to psychophysical methods and to techniques of attitude scaling, directed toward the needs of persons engaged in analysis of public opinion or in market research. Topics discussed include presentation and arrangement of data, measures of central tendency and dispersion, attitude scaling techniques (including the Likert, Thurstone and Guttman methods), psycho-physical methods, sampling methods and problems of forecasting, tests of significance of differences, and correlation analysis. This course furnishes an excellent background for Psy. 167, Psychology of Attitudes and Public Opinion, offered spring semester.

**Fall Semester**

Th 6:20 Psychology 115, Dunnette

- 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 experiences in forming character. Prerequisite: Psychology 1-2.

**Fall Semester**

W 8:05 Psychology 115, Heron

† See Information, page 6.

**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.

<b>Fall Semester</b>	<b>Spring Semester</b>
122 M 6:20 Psychology 211, Longstaff	123 M 6:20 Psychology 211, Longstaff

**125-126 Psychology of Individual Differences.** 3 credits each semester. \$15.

Asks how and why people differ. Deals with factors such as age, sex, race, heredity, and environment and how these are related to differences in ability and temperament. These differences are important in personnel work, vocational counseling, and in industrial relations. May be used for elective credit toward a Certificate in Industrial Relations. Prerequisite: Psychology 1-2.

<b>Fall Semester</b>	<b>Spring Semester</b>
125 T 6:20 Psychology 115, Jenkins	126 T 6:20 Psychology 115, Jenkins

**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.

<b>Fall Semester</b>	<b>Spring Semester</b>
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.

<b>Spring Semester</b>
Th 6:20 Psychology 115, Beldo

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

Here is practical "how to do it" instruction in writing for radio and television based upon long professional experience in both fields. Class operates like a "workshop" where both professionals and beginners can find real incentive to write. Students are given the fundamentals of writing for the ear (radio) and for both the eye and ear (TV); then they put these techniques into practical use by actually writing a full 17-week schedule of radio and TV scripts. 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. Students are urged to select script subjects that fit their particular interests or jobs. Each writer begins with short announcements; then progresses through various announcement forms into short and longer programs of drama, comedy, interviews, music, etc. You get practical advice on handling radio sound effects and music, and suggestions on how to make the television camera work most effectively for you. Constant survey and discussion of current radio and television with emphasis on new developments in each. Seventeen-week course is climaxed by an "audition" of selected work each semester. Particular scripts may be presented on KUOM or other suitable stations. Prerequisite: a good command of English, and a desire to write. Repeated spring semester.

<b>Fall Semester</b>	<b>Spring Semester</b>
T 6:20 Murphy 302, Weaver	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 attractive "audition" program each semester. Approved scripts frequently presented on KUOM or other suitable stations. Prerequisite: I to precede II, II to precede III when offered.

<b>Spring Semester</b>
T 6:20 Murphy 302, Weaver

† See Information, page 6.

**Speech 65 Radio and Television Speech.** 3 credits. \$15 plus \$1 laboratory fee.

Speech and psychology of radio and television; 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. Prerequisite: Speech 1-2, or consent of instructor.

**Fall Semester**

W 6:20 Station WCCO, Ziebarth

**Speech 66 Radio Drama.** 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.

**Spring Semester**

W 6:20 Murphy 302

**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 prerequisite. A health examination will be required in all Extension classes. Information about lockers and health examinations will be given at first class meeting.

**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 Semester**

T 5:30 Norris Gym. 60, Jaeger  
T 6:30 Norris Gym. 60, Jaeger

**Spring Semester**

T 5:30 Norris Gym. 60, Lampe  
T 7:00 Norris Gym. 60, Lampe  
W 6:15 Norris Gym. 60, Jaeger  
W 7:00 Norris Gym. 60, Jaeger  
Th 5:30 Norris Gym. 60, Tenney  
Th 6:15 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**

T 6:15 Norris Gym. 60, Lampe  
W 5:30 Norris Gym. 60, Jaeger  
Th 7:00 Norris Gym. 60, Tenney

**Swimming (Beginning and Advanced 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 will be given at the first class meeting. Sections limited to 30. Repeated spring semester.

**Fall Semester**

T 6:00 Norris Gym. 51, Larson  
T 7:00 Norris Gym. 51, Larson

**Spring Semester**

T 6:00 Norris Gym. 51, Larson  
T 7:00 Norris Gym. 51, Larson  
W 6:00 Norris Gym. 51, Tinker  
Advanced Beginning  
W 7:00 Norris Gym. 51, Tinker

**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**

W 6:00 Norris Gym. 51  
W 7:00 Norris Gym. 51

**Spring Semester**

W 6:00 Norris Gym. 58  
W 7:00 Norris Gym. 58

**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**

T 6:00 Norris Gym. 58  
T 7:00 Norris Gym. 58

**Spring Semester**

T 6:00 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. Tennis permits are necessary if university courts are used. Consult instructor.

**Spring Semester**

T 5:30 Norris Gym. 151, Hauptfuehrer

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

Group and individual instruction for those who have elementary skills. Practice on courts. Tennis permits are necessary if university courts are used. Consult instructor.

**Spring Semester**

T 6:20 Norris Gym. 151, Hauptfuehrer

**Activities Open to Children****Swimming for Girls. \$7.50 plus \$1.75 special fee.**

A course in swimming for girls between the ages of 6 and 12 years. The first meeting of the class will be given to health examination. 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****Beginners**

S 8:45-9:30 Norris Gym. 51, Lampe

**Advanced Beginners**

S 9:30-10:15 Norris Gym. 51, Lampe

**Intermediate Swimmers**

S 10:15-11:00 Norris Gym. 51, Lampe

**Spring Semester****Beginners**

S 8:45-9:30 Norris Gym. 51, Lampe

**Advanced Beginners**

S 9:30-10:15 Norris Gym. 51, Lampe

**Intermediate Swimmers**

S 10:15-11:00 Norris Gym. 51, Lampe

**Swimming for Boys. \$7.50 plus \$1.75 special fee.**

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 their 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

**Swimming for Boys and Girls. \$7.50 plus \$1.75 special fee.**

A course in swimming for children, beginners and intermediates, at least 6 years of age and at least 48 inches tall. Class and individual instruction. Students must bring a permit from their own doctors, and furnish their own suits and towels. Woolen suits not permitted.

**Fall Semester****Beginners**

S 9:00-9:45 Gymnasium,  
St. Paul Campus, Nowotny

**Advanced Beginners**

S 9:45-10:30 Gymnasium,  
St. Paul Campus, Nowotny

**Intermediates**

S 10:15-11:00 Gymnasium,  
St. Paul Campus, Nowotny

**Advanced Intermediates**

S 10:45-11:30 Gymnasium,  
St. Paul Campus, Nowotny

**Spring Semester****Beginners**

S 9:00-9:45 Gymnasium,  
St. Paul Campus, Nowotny

**Advanced Beginners**

S 9:45-10:30 Gymnasium,  
St. Paul Campus, Nowotny

**Intermediates**

S 10:15-11:00 Gymnasium,  
St. Paul Campus, Nowotny

**Advanced Intermediates**

S 10:45-11:30 Gymnasium,  
St. Paul Campus, Nowotny

**Activities Open to Men and Women****Badminton Club—for Men and Women. One period, 6 months, \$12.50.**

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 29 and continuing through March 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 9. Lessons or appointments with competent golf instructors in the golf gymnasium will be scheduled for Tuesday or Wednesday evenings February 9 to April 1. The last six meetings will be held, weather permitting, at the University Golf Course, where Mr. Bolstad will supervise the work. The outdoor schedule is adjusted to light. Students will furnish their own clubs.

#### Spring Semester

M 7:00 Physics Aud., Smith, Bolstad

#### Squash—for Men. One period, four months, \$7.00.

Class and individual instruction will be given to beginners. Scheduled play will be arranged for the more advanced. Play in addition to the class hour may be arranged with the instructor.

#### December 5-March 27

F 5:00 Cooke Hall—Stadium Courts, 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

T 8:05 Cooke Hall, Boyce

### RUSSIAN

See Linguistics, page 28.

### SCANDINAVIAN

#### 13-14 Beginning Danish. 3 credits each semester. \$15.

This course will be taught according to modern language teaching methods with emphasis on the oral approach. Its aim will be to enable the student to understand and take part in a simple conversation and to read a newspaper text. Attention will be given to individual requirements. No prerequisite.

#### Fall Semester

13 Th 6:20 Folwell 12, Aarsleff

#### Spring Semester

14 Th 6:20 Folwell 12, Aarsleff

#### 15-16 Intermediate Danish. 3 credits each semester. \$15.

This course is designed for students with some previous knowledge of Danish, whether acquired in last year's course in Beginning Danish or elsewhere. Equal attention will be paid to conversation and reading of modern Danish, primarily through recent newspaper and periodical texts. Attention will be given to individual requirements.

#### Fall Semester

15 Th 8:05 Folwell 12, Aarsleff

#### Spring Semester

16 Th 8:05 Folwell 12, Aarsleff

#### 17-18 Beginning Finnish. 3 credits each semester. \$15.

Intended for beginners with little or no previous knowledge of Finnish; stresses fundamentals of grammar, correct pronunciation, reading, practice in conversation and simple composition. No prerequisite.

#### Fall Semester

17 T 6:20 Folwell 102, Halonen

#### Spring Semester

18 T 6:20 Folwell 102, Halonen

#### 19-20 Intermediate Finnish. 3 credits each semester. \$15.

Grammar reduced to a minimum, emphasis on reading and conversation, some composition, readings from modern Finnish authors.

#### Fall Semester

19 Th 6:20 Folwell 102, Halonen

#### Spring Semester

20 Th 6:20 Folwell 102, Halonen

#### 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, Nelson

#### Spring Semester

2 W 6:20 Folwell 12, Nelson

#### 3-4 Intermediate 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.

#### Fall Semester

3 W 8:05 Folwell 12, Nelson

#### Spring Semester

4 W 8:05 Folwell 12, Nelson

## EXTENSION CLASSES

**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

**11-12 Advanced Swedish.** 3 credits each semester. \$15.

Designed for students who have had one year of Swedish or more, the course will include some review of grammar together with exercises in reading, writing, and speaking present-day Swedish.

**Fall Semester**  
11 T 8:05 Folwell 12, Gustafson

**Spring Semester**  
12 T 8:05 Folwell 12, Gustafson

## SOCIAL WORK

**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 Ford 150

**91A 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 Ford 150, Saloshin

**91B Interview Methods.** 3 credits. \$15.

A course designed for the further study of the interviewing method applied in fields involving human relations. This course is not designed for social workers but rather for other professional fields where interviewing is an important tool of service. Prerequisite: Social Work 91A.

**Spring Semester**  
M 6:20 Ford 150, Saloshin

**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**  
T 6:20 Ford 170

**Applied Psychoanalysis.** 3 Extension credits. \$15.

Classical and contemporary psychoanalytic contributions to anthropology, mythology, religion, sociology, and the arts will be studied from original sources in an objective fashion. Conducted along a seminar plan, this class aims to familiarize the student with psychoanalytic methodology and the results of its research into the respective fields. Should prove a valuable background to anyone interested in the humanities. Prerequisite: 6 credits in sociology, 6 credits in psychology, S.W. 176 or its equivalent. Limited to 20 students.

**Spring Semester**  
T 6:20 N.W. Bank Bldg. 690, Sukov

## SOCIOLOGY

**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 216, Mouratides  
Th 6:20 Ford 20, Taves

**Spring Semester**  
T 6:20 Ford 20, Mouratides

**49 Social Problems.** 3 credits. \$15.

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

**Spring Semester**

T 6:20 St. P. Ext. Center 214, Johnson  
Th 6:20 Ford 180, Taves

**141 The Family.** 3 credits. \$15.

The evolution of the family: development of family unity or disunity, the roles of the several members of the family, methods of investigation of the family. Prerequisite: Sociology 1 and 15 credits in social science.

**Fall Semester**

Th 6:20 Ford 140, Johnson

**145 Urban Sociology.** 3 credits. \$15.

An introduction to the study of the city as a social organization. Emphasis is given to the analysis of urbanism as a way of life, and to the relationship between spatial and social configurations. A brief research project under supervision, using material drawn from the Twin Cities is required. Prerequisite: Sociology 1 and 15 credits in social science.

**Fall Semester**

T 6:20 Ford 20

**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 202, Rundorff  
T 8:05 St. P. Ext. Center 204, Mousolite  
Th 6:20 Folwell 202, Dunkum

**Spring Semester**

1 Th 6:20 Folwell 203  
2 M 6:20 Folwell 202, Rundorff  
T 8:05 St. P. Ext. Center 204, Mousolite  
Th 6:20 Folwell 202, Dunkum

**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 204, Mousolite  
W 6:20 Folwell 202, Floripe

**Spring Semester**

4 T 6:20 St. P. Ext. Center 220, Mousolite  
W 6:20 Folwell 204, Floripe

**38-39 Spanish Shorthand.** 3 credits each semester. \$15.

Prerequisite: Spanish 53 or equivalent and typing.

**Fall Semester**

38 W 6:20 Folwell 102, Marban

**Spring Semester**

39 W 6:20 Folwell 102, Marban

**57-58 Commercial Spanish.** 3 credits each semester. \$15.

Commercial correspondence in Spanish, including the main parts of a Spanish letter, models of letters and commercial forms and documents, abbreviations used in Spanish correspondence and business vocabulary. Prerequisite: Spanish 3-4.

**Fall Semester**

57 T 6:20 Folwell 202, Cuneo

**Spring Semester**

58 T 6:20 Folwell 202, Cuneo

**140a-141a 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**

140a Th 6:20 Folwell 213, Irving

**Spring Semester**

141a Th 6:20 Folwell 213, 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, Fletcher  
W 6:20 St. P. Ext. Center 206, Bystrom  
2 M 6:20 Folwell 305, Paulson  
W 6:20 St. P. Ext. Center 206, Bystrom  
3 M 6:20 Folwell 305, Paulson  
W 6:20 St. P. Ext. Center 206, Bystrom

**Spring Semester**

1 M 8:05 Folwell 308, Fletcher  
W 6:20 St. P. Ext. Center 206, Bystrom  
2 M 6:20 Folwell 305, Paulson  
W 6:20 St. P. Ext. Center 206, Bystrom  
3 M 6:20 Folwell 305, Paulson  
W 6:20 St. P. Ext. Center 206, Bystrom

**Beginning Acting (Speech 32).** See Theater, page 42.

**Advanced Acting (Speech 76).** See Theater, page 42.

**Efficient Listening.** See page 31.

† See Information, page 6.

**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 5, Nichols  
T 6:20 Folwell 5, Fulton  
W 6:20 Folwell 5, Fulton  
Th 6:20 St. P. Ext. Center 219, Woods

**Spring Semester**

M 6:20 Folwell 5, Nichols  
T 6:20 Folwell 5, Fulton  
W 6:20 Folwell 5, Fulton  
Th 6:20 St. P. Ext. Center 219, 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 8:05 Folwell 8, Fulton

**Spring Semester**

W 8:05 Folwell 8, Fulton

**Efficient Listening.** See page 31.

**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 219, Dreher  
T 8:05 Folwell 113, Dreher

**Spring Semester**

T 6:20 St. P. Ext. Center 219, Dreher  
T 8:05 Folwell 113, Dreher

**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 219, Dreher  
T 8:05 Folwell 113, Dreher

## TEXTILES

See Business Classes, page 53.

**Textile Weaving.** See page 17.

## THEATER

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

This is a course designed to follow the creative work done in Beginning Acting as taught in 1950-51, although that work is not necessarily a prerequisite to the present course. Some attention will be given to all basic techniques including the art of makeup, although the primary emphasis will be upon technique of the body and will include pantomimic dance. Students are eligible for tryout in acting and constructive phases of University Theatre activities. No prerequisite. Qualified students may receive credit in Speech 33. Consult instructor at opening class.

**Fall Semester**

Th 6:20 Nicholson 3rd Floor, Moulton

**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, Moulton

**Radio Drama.** See page 37.

**Radio Writing.** See page 36.

## BUSINESS CLASSES

### ACCOUNTING

**Principles of Accounting (Econ. 24, 25, and 26)** is the first year introductory course based on standard college texts and laboratory materials. There is no prerequisite course for Econ. 24, but students should be capable of college level work. Students with some accounting background may be admitted with instructor's consent to Econ. 25 and 26.

**Econ. 24** covers the basic procedures of adjusting entries, work sheets, closing the books, preparation of statements, special journals and control accounts.

**Econ. 25** deals with the special problems of individual, partnership, and corporate accounts, with an introduction to manufacturing procedures.

**Econ. 26** is concerned with accounting principles as applied to inventory, valuations, accounting for corporate securities and funds, retained income, surplus, reserves, and analysis of financial statements.

These three courses correlate with the regular classes in the College of S. L. and A. in content and credit. To meet the needs of evening students the three courses are scheduled on three plans:

1. Regular semester class schedule, for 3 credits each semester

For students who wish regular class periods in order to take two classes the same evening or who prefer more time and less concentration in beginning an elementary technical study.

2. Quarter basis, 2½-hour classes, 3 credits each quarter

For students who wish to complete the entire course in one year of 3 quarters of 11 weeks each. Students who find this schedule too rapid are in a position to change to the semester basis.

3. Combined course, meeting twice weekly in 2½-hour sessions, spring semester only

For those who wish to concentrate on completion of the course in the spring semester, in order to begin advanced courses in the following fall semester.

**Note**—In registering, students are cautioned to observe under which plan the particular class is scheduled.

**Econ. 24-25 Principles of Accounting.** 3 credits each semester. \$15.

The first two units of the university course in accounting, on the semester basis. No prerequisite.

**Fall Semester**  
24 M 6:20 St. P. Ext. Center 218,  
Montgomery  
T 6:20 Vincent 301  
W 6:45 McKnight Bldg. 250

**Spring Semester**  
25 M 6:20 St. P. Ext. Center 218,  
Montgomery  
T 6:20 Vincent 301  
W 6:45 McKnight Bldg. 250

**Econ. 26 Principles of Accounting.** 3 credits. \$15.

Third unit of the three-term course on semester basis. May be followed by B.A. 65 in spring semester. Prerequisite: Economics 25.

**Fall Semester**  
T 6:20 St. P. Ext. Center 216, Creviere  
W 6:20 Vincent 301

**Econ. 24-25-26 Principles of Accounting.** 3 credits each quarter. \$15 each unit.

The first-year university course in accounting, quarter basis. Classes meet for approximately 2½ hours. No prerequisite.

**Fall Quarter**  
24 M 6:20-9:00 Vincent 301  
Th 6:20-9:00 St. P. Ext.  
Center 218,  
Montgomery

**Winter Quarter**  
25 (same schedule as fall)

**Spring Quarter**  
26 (same schedule as fall)

**Econ. 24-25-26 Principles of Accounting (Combined).** 9 credits. \$15 each unit.

This course offers Economics 24-25-26 complete in one semester, six weeks for each, two classes per week. Classes meet for 2½ hours. Registration and fees accepted for combined course, or for single units provided Economics 24 has preceded 25 and Economics 25 has preceded Economics 26.

**Spring Semester**  
MF 6:20 Vincent 309, Lund  
MF 6:20 St. P. Ext. Center 216, Creviere

**B.A. 65 Analysis of Financial Statements.** 3 credits. \$15.

A course in the use of financial statements by creditors, investors and executives. The material is approached from the viewpoint of the reader of statements, and is not concerned with accounting technicalities. Reports of commercial, industrial, public utility and railroad companies are used as basic material for the course. Prerequisite: Economics 23 or 26 or consent of instructor.

**Spring Semester**  
W 6:20 Vincent 2, Nelson  
W 6:20 St. P. Ext. Center 216

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

Second year accounting 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. Prerequisite: Economics 23 or 26 or equivalent with consent of instructor.

<b>Fall Semester</b>		<b>Spring Semester</b>	
150	M 6:20 Vincent 2, Heilman	151	M 6:20 Vincent 2, Heilman
	T 6:20 St. P. Ext. Center 218, Johnson		T 6:20 St. P. Ext. Center 218, Johnson
	W 6:20 Vincent 306, Lund		W 6:20 Vincent 306, Lund

**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: Economics 23 or equivalent with instructor's consent.

<b>Fall Semester</b>		<b>Spring Semester</b>	
152	T 8:05 St. P. Ext. Center 218, Tuttle	153	T 8:05 St. P. Ext. Center 216, Tuttle
	W 6:20 Vincent 307, Ostlund		W 6:20 Vincent 307, Ostlund

**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. 66 or 130 or B.A. 153 or consent of instructor.

<b>Fall Semester</b>		<b>Spring Semester</b>	
W 8:05	St. P. Ext. Center 214, Tuttle	T 6:20	Vincent 307, Ostlund

**Constructive Accounting.** 3 Extension credits. \$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**  
W 6:20 St. P. Ext. Center 214, Tuttle

**Accounting Systems.** 3 Extension credits. \$15.

Classification of industry according to types of accounting problems; special features of each, constructive, operative, interpretative features. Case method used. Prerequisite: Constructive Accounting.

**Spring Semester**  
W 6:20 St. P. Ext. Center 214, Tuttle

**B.A. 118 and B.A. 135 Auditing Procedure and Public Accounting.** 3 credits each semester. \$15 each semester. (Students completing both semesters may receive credit applicable toward a degree in the School of Business Administration.)

An introduction to auditing procedure with the preparation of a coordinated set of working papers based on examination of accounting and other records. The writing of short and long audit reports, development of auditing standards, S.E.C. and A.I.A. releases and audit case studies, C.P.A. examination questions in auditing. Prerequisite: B.A. 151, B.A. 65, or B.A. 139 for fall semester; B.A. 118 for spring semester, or consent of instructor.

<b>Fall Semester</b>		<b>Spring Semester</b>	
118	Th 6:20 Vincent 306, Reighard	135	Th 6:20 Vincent 306, Reighard

**B.A. 134 Income Tax Accounting.** 4 credits plus 2 Extension credits. \$30.

Application of income tax laws to and preparation of both state and federal returns for individuals, partnerships, and corporations. Class meets once a week for three hours and twenty minutes. Prerequisite: B.A. 151 or consent of instructor.

**Fall Semester**  
M 6:20 Vincent 309, Nelson  
W 6:20 St. P. Ext. Center 216, Daly

**B.A. 136 Controllership Function and Procedures.** 3 credits. \$15 plus \$1 materials fee.

Organization of and the administrative problems of the accounting system operation from a procedural point of view to insure integrity, accuracy, accountability and control in different lines of business activity. Prerequisite: Economics 23 or 26.

**Spring Semester**

M 6:20 Vincent 301, Wheeler

**B.A. 158 Governmental Accounting.** 2 credits plus 1 Extension credit. \$15.

Procedures and problems in accounting for government budgets, appropriations and funds. See Political Science 58, page 33.

**Spring Semester**

Th 6:20 Ford 140, McGraw

**B.A. 159 Advanced Accounting.** 3 credits. \$15.

Branch accounting, consolidated statements, estates and trusts, concerns in financial difficulties, and other specialized problems. Prerequisite: B.A. 151.

**Spring Semester**M 8:05 Vincent 301  
T 8:05 St. P. Ext. Center 218, Johnson**B.A. 180A Internal Auditing.** 3 credits. \$15.

This will be a comprehensive course in internal auditing taught primarily by members of the Twin Cities Chapter of the Institute of Internal Auditors. The principles of internal auditing, organization of the internal auditors' functions, and detailed discussion of the performance of particular activities will be covered. Prerequisite: B.A. 118 or consent of instructor.

**Fall Semester**

M 6:20 Vincent 207, Wheeler and others

**ADVERTISING****B.A. 188 Advertising.** See page 51.

For other advertising courses, see pages 27 and 51.

**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, Lippert  
T 8:05 St. P. Ext. Center 206, Lippert  
T 8:05 Ford 150, Haga  
W 6:20 Ford 150, Haga**Spring Semester**T 6:20 St. P. Ext. Center 206, Lippert  
W 6:20 Ford 150, 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, Lippert  
W 8:05 Ford 150, Haga**Business Reports (English 58).** See page 23.**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 senior 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		
51	M 8:05	St. P. Ext. Center 206, Moss
	W 6:20	Vincent 4, Ackman
52	M 6:20	St. P. Ext. Center 214, Moss
	W 8:05	Vincent 4, Ackman
53	T 6:20	Vincent 1, Thomas

Spring Semester		
51	M 6:20	St. P. Ext. Center 206, Moss
	W 8:05	Vincent 4, Ackman
52	M 8:05	St. P. Ext. Center 206, Moss
	W 6:20	Vincent 4, Ackman
56	T 6:20	St. P. Ext. Center 216, Leonard
	Th 6:20	Vincent 1, Maloney

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

A course in everyday legal principles for the layman who wishes more intelligently and efficiently to manage his own personal affairs and to fulfill his place as a citizen. 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 minimized 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 aspects in the following fields: Real property, rentals, leases, purchases and sales, building contracts and liens, mortgages and loans; handling of wills, estates and probate proceedings; tax returns; accidents, negligence, trespass and other torts, and liability for such torts; and contracts and sales. No prerequisite. Repeated spring semester.

Fall Semester	
W 6:20	Ford 20, Thorfinnson
W 6:20	St. P. Ext. Center 217, Riley

Spring Semester	
W 6:20	Ford 20, Thorfinnson
W 6:20	St. P. Ext. Center 217, Riley

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

Common Legal Problems I is not a prerequisite. The course will consider the following subjects with the same objective as in Common Legal Problems I: domestic relations, rights and liabilities of husband and wife, parent and child; rights and liabilities of master and servant, principal and agent, and partners; corporations and partnerships; sole proprietorships; crimes and prosecution of accused; negotiable instruments and banking; insurance; and adoption proceedings. Consideration will also be given to economic, business, and social legislation which necessarily affects the individual's legal rights, i.e., benefits under the Social Security Act, Railroad Retirement and Sickness Benefit Acts, Old Age Assistance legislation, Workmen's Compensation Act, etc.; the effects of State and Federal legislation on business management, employers, employees and the public; wage and price control; the Interstate Commerce Commission; State Public Service Commissions; and other governmental agencies. Repeated spring semester.

Fall Semester	
W 8:05	Ford 20, Thorfinnson
W 8:05	St. P. Ext. Center 217, Riley

Spring Semester	
W 8:05	Ford 20, Thorfinnson
W 8:05	St. P. Ext. Center 217, Riley

## ECONOMICS AND 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 Semester	
M 6:20	St. P. Ext. Center 217
T 6:20	Vincent 205

Spring Semester	
M 6:20	St. P. Ext. Center 217
Th 8:05	Vincent 113

### 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	
M 8:05	St. P. Ext. Center 216, Gaasedelen
W 6:20	Vincent 113

Spring Semester	
M 6:20	St. P. Ext. Center 214, Gaasedelen
Th 6:20	Vincent 113

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

Principles underlying economic activity, prices and the cost of production; the factors of production; division of labor and its relation to the development of industry; wages, rent, interest, profits; the level of national income and employment. No prerequisite.

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

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



**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 coordination of national, state, and local finance. Prerequisite: Economics 6-7.

**Spring Semester**

T 6:20 Vincent 113

**Econ. 64 Economics of Money and Banking. 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**

W 6:20 Vincent 205, Smith

**Econ. 73 Manpower Economics and Problems. See Industrial Relations, page 48.****B.A. 74 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: Economics 5, or 14, or equivalent.

**Spring Semester**

Th 8:05 Vincent 205, McKenna

**Econ. 75 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: Economics 3 and 6-7.

**Fall Semester**

T 6:20 Vincent 207, Sutton

**Econ. 80 Intermediate Economic Analysis: Income and Employment. 3 credits. \$15.**

The determinants of national income, employment, and the price level, with particular attention to aggregate consumption and investment. Prerequisite: Economics 7.

**Fall Semester**

Th 6:20 Vincent 205, Turnbull

**Econ. 81 Intermediate Economic Analysis: Firms and Households. 3 credits. \$15.**

The analysis of individual decision-making, by firms and households, under conditions of monopoly, competition, and monopolistic competition. Prerequisite: Economics 7.

**Spring Semester**

Th 6:20 Vincent 205, Turnbull

**Econ. 84 Comparative Economic Systems. 3 credits. \$15.**

Analyzes the meaning of planned, unplanned, centralized, and decentralized systems. Examines models of various types of economic systems. Compares the actual working of capitalism and socialism to the models. Prerequisite: Economics 7.

**Spring Semester**

T 8:05 Vincent 205, Benewitz

**Econ. 85 Government Regulation of Business. 3 credits. \$15.**

A general course on the economic aspects of legislation affecting the pricing process and the distribution of the national income; origins of limitations on free competition; regulation of public utilities, trusts and combinations, and "unfair competitive practices"; positive assistance to industrial groups. Prerequisite: Economics 7.

**Fall Semester**

Th 8:05 Vincent 2, Boddy

**B.A. 146 Investments. 3 credits. \$15.**

A general or "cross cut" survey of the external and internal factors influencing the prices of securities, and of the principles of an investment policy for the individual investor. Emphasis is placed upon objective analysis from source materials of factors explaining price differentiation. Prerequisite: Economics 75 or 155.

**Spring Semester**

T 6:20 Vincent 4, Sutton

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

Analysis of factors involved in business fluctuations. Comparison of theories of the causes of prosperity and depression. Introduction to the statistical data and methods of business forecasting. Prerequisite: Economics 141 or 64 or 142 or consent of instructor.

**Spring Semester**

W 6:20 Vincent 205, Smith

**Econ. 176 International Economics. 3 credits. \$15.**

An introduction to the techniques of international economic analysis. The approach, while primarily theoretical, will indicate the relevance of the theory to current problems. The balance of payments; the foreign exchanges; free trade versus protection; techniques of trade control; international commercial policies; contemporary international economic problems and institutions. Prerequisite: Economics 7.

**Spring Semester**

W 6:20 Vincent 205, Smith

**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 T 6:20 Vincent 6, Power

**Spring Semester**

II T 6:20 Vincent 6, Power

**INDUSTRIAL ENGINEERING**

See Engineering Classes, page 56.

**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**

T 6:20 Vincent 4, Mitton

**Spring Semester**

T 6:20 Vincent 306, Mitton

**B.A. 170 Methods Analysis and Work Measurement. 3 credits. \$15.**

Process and operation analysis, work simplification, motion study and micro-motion study principles and applications. Work measurement, job standardization, time study, motion-time analysis. Production standards and their application for planning and control purposes. Prerequisite: B.A. 89.

**Spring Semester**

T 8:05 Vincent 306, Mitton

**B.A. 184 Scientific Management in Industry. 3 credits. \$15.**

A study of the origin and development of the movement to apply the methods of science to the management of industrial enterprises; the effects upon individual plant management and the influence upon "rationalization" in industrial society. Prerequisite: B.A. 89 or concurrent registration.

**Fall Semester**

T 8:05 Vincent 4, Mitton

**INDUSTRIAL RELATIONS****Econ. 73 Manpower Economics and Labor Problems. 3 credits. \$15.**

This course deals with: (1) the marketing of manpower resources; (2) the institutional structure of labor markets; (3) economic and social problems arising out of labor marketing processes; (4) methods, procedures and proposals for solving these problems. Prerequisite: Economics 6-7.

**Fall Semester**

T 6:20 St. P. Ext. Center 217, Fox

W 6:20 Vincent 2, Heneman

**Econ. 162 Labor Movements. 3 credits. \$15.**

Presents an analysis of the development of labor movements in Europe and the United States. It provides an examination of the origins of labor movements, their growth, the problems faced under various sorts of governments, and an analysis of the economic and social consequences of these developments. Prerequisite: Economics 73 or 161.

**Spring Semester**

T 6:20 Vincent 2, Benewitz

**Econ. 164 Labor Legislation: Collective Bargaining.** 3 credits. \$15.

Analyzes (1) the interrelationships between the development of labor organizations and the techniques utilized by them in furthering their interests, and the actions and decisions of the executive, legislative, and judicial branches of the government, and (2) the economic and social implications of issues arising in this area. The subject matter covered ranges from an examination of applicable common law origins through the Labor-Management Relations Act of 1947. Prerequisite: Economics 73 or 161.

**Spring Semester**

M 8:05 Vincent 6, Cheit

**Econ. 166 Settlement of Industrial Disputes.** 3 credits. \$15.

This course is designed to include the following three major subject areas: (1) the nature and scope of industrial disputes; (2) the various methods utilized in the settlement of industrial disputes—self-resolution, mediation and conciliation, arbitration, etc.; and (3) the economic and social implications and consequences of industrial disputes. Prerequisite: Economics 73 or consent of instructor.

**Spring Semester**

W 8:05 Vincent 6, Turnbull

**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 73 or 161.

**Spring Semester**M 6:20 St. P. Ext. Center 204, Fox  
W 6:20 Vincent 113, Heneman**Psy. 122-123† Vocational and Personnel Psychology.** See page 36.**Psy. 125-126 Psychology of Individual Differences.** See page 36.**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 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 plus \$1 materials fee.

A general discussion of the basic principles of foremanship. Survey of the problems of industrial relations and personnel management met with in day-to-day supervision with emphasis on human relations. Practical aspects of such problems as the status of the supervisor, selection, induction and training of employees, merit rating, giving orders, quality and cost control and labor legislation affecting supervisors. Extensive use of the class discussion technique and training films. No prerequisite. Repeated spring semester.

**Fall Semester**Th 6:20 Vincent 6, Mahoney  
Th 6:20 St. P. Ext. Center 204, Kirchner**Spring Semester**Th 6:20 Vincent 6  
Th 6:20 St. P. Ext. Center 204, Maloney**Advanced Supervision.** 3 Extension credits. \$15.

Advanced supervision emphasizes techniques based upon the theory outlined in Elements of Supervision. It includes discussion of research in supervisory methods and practices and their relative success in application. Methods of supervisory training, morale measurement, job evaluation, job analysis, job classification, safety programs, wage and salary administration, labor legislation, principles of organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. Prerequisite: Elements of Supervision or consent of instructor.

**Fall Semester**Th 8:05 Vincent 6, Mahoney  
Th 8:05 St. P. Ext. Center 204, Kirchner**Spring Semester**W 8:05 Vincent 2, Mahoney  
W 8:05 St. P. Ext. Center 204

† See Information, page 6.

**Elements of Union Administration.** 3 Extension credits. \$15.

A general discussion of the basic principles of local union administration, as encountered by business agents, shop stewards, and local union officers. Includes discussion of techniques used in union government and administration, collective bargaining and grievance, union-member relations, union-community relations, shop rules, and union leadership. Survey of problems of industrial relations met in day-to-day union administration with emphasis on human relations. No prerequisite.

**Fall Semester**

M 8:05 Vincent 2, Cheit and Leonard

**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. Repeated spring semester.

**Fall Semester**

T 8:05 Vincent 205, Williams

**Spring Semester**

T 8:05 Vincent 6, Williams

**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: Collective Bargaining  
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. 24-25-26 Principles of Accounting  
Econ. 3 Elements of Money and Banking  
B.A. 89 Production Management

**C.P.C.U. Part I. Insurance Principles and Practices, A-B.** 3 Extension credits each semester. \$15.

An intensive course in the basic principles of property and casualty insurance, designed as preparation for examination I 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. A course in Part II will be offered in 1953-54. Prerequisite: At least three years' general experience or the equivalent in formal study and acceptance of special registration application; consult any Extension office.

**Fall Semester**

A M 6:20 Ford 120

**Spring Semester**

B M 6:20 Ford 120

**C.P.C.U. Part III. General Education, A-B.** 3 Extension credits each semester.

This course is designed as preparation for examination III for the Chartered Property Casualty Underwriter (C.P.C.U.) award. The subject matter covers Economics, Government and Social Legislation. Prerequisite: A basic collegiate course in both economics and government and acceptance of special registration application; consult any Extension office. Minimum registration of 25 students is required.

**Fall Semester**

A M 8:05 Ford 120

**Spring Semester**

B M 8:05 Ford 120

**C.P.C.U. Part IV. Law, A-B.** 3 Extension credits each semester. \$15.

This course is designed as preparation for examination IV for the Chartered Property Casualty Underwriter (C.P.C.U.) award. The subject matter covers: (1) General commercial law pertaining to: contracts, agency, partnerships, corporations, personal property, real estate and mortgages, negotiable instruments, bankruptcy, bailments, common and private carriers, negligence; (2) insurance law, including construction of insurance contracts. Minimum registration of 25 students is required. Prerequisite: consult any Extension office.

**Fall Semester**

A T 8:05 Ford 120, Peet

**Spring Semester**

B T 6:20 Ford 120, Peet

**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 D 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. Part D. Finance I-II.** 3 Extension credits each semester. \$15.

This course is designed as preparation for the annual C.L.U. examination in Part D, Finance, as conducted by the American College of Life Underwriters. The subject matter will cover such topics as: Corporation Finance, Banking and Credit, and Investments.

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

Fall Semester		Spring Semester	
I M 4:00	N.W. Bank Bldg. 690, Sutton	II M 4:00	N.W. Bank Bldg. 690, Sutton
M 4:00	St. P. Ext. Center 219, Wheeler	M 4:00	St. P. Ext. Center 219, Wheeler

**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, voice requirements, closing the sale. Repeated spring semester. No prerequisite.

Fall Semester		Spring Semester	
M 6:20	Ford 185, Stanchfield	M 6:20	Ford 185, Stanchfield
Th 6:20	St. P. Ext. Center 214, Stanchfield		

**Advanced Salesmanship.** 3 Extension credits. \$15.

Self-management, organizing and planning territorial work, sales routine and office correspondence, finding prospects and getting the interview, individual sales demonstrations, development of potential in the territory, use of advertising. Limited to 35. Prerequisite: Basic Salesmanship or consent of instructor.

Spring Semester	
Th 6:20	Ford 185, Stanchfield

**B.A. 113 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 salesmen; training in salesmanship; supervision and control. Case studies and discussions. Prerequisite: B.A. 77.

Fall Semester	
T 6:20	Vincent 113, Lewis

**B.A. 111 Purchasing.** 3 credits. \$15.

In this course the purchasing of materials, supplies, and equipment is considered as a major function in business. The basic principles of purchasing in industrial, governmental, and institutional organizations are examined. Topics covered include quantity and quality decisions, forward buying, evaluation of purchasing procedures, and pricing policies. Prerequisite: B.A. 77 or consent of instructor.

Fall Semester	
T 8:05	Vincent 113, Holloway

**B.A. 114 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	
M 6:20	Vincent 207, Canoyer

**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.

Spring Semester	
Th 6:20	Vincent 2

**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 6:20 Vincent 2, Holloway

**B.A. 188 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: Psychology 56 and B.A. 77, Marketing.

**Spring Semester**

T 6:20 Vincent 205, Lewis

**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.

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**

A Lect. M 9:00-10:00 a.m. Nicholson 122,

Determan

Lab. T 6:30-10:00 p.m. Nicholson 122,

Determan

**Winter Quarter**

B (same schedule as fall quarter)

**Spring Quarter**

C (same schedule as fall quarter)

For other advertising courses see page 27.

**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; principles of real estate management; ethics of real estate practice. A business course in real estate. Prerequisite: consult instructor.

**Spring Semester**

T 6:20 Vincent 1, 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 1, 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. No prerequisite.

**Spring Semester**

M 6:20 Vincent 113, Rice, coordinator

**Real Estate Financing and Insurance.** 3 Extension credits. \$15.

A study of financing methods and practice relating to conventional, F.H.A., V.A., and combination loans; secondary financing; special loans on leases, farms, industrial and commercial properties; and primary phases of insurance procedure in the average real estate office. No prerequisite.

**Fall Semester**

M 6:20 Vincent 6, Rice, coordinator

**Real Estate Law (B.A. 56 Business Law).** See Business Law, page 45.

**Planning Your Modern Home.** See page 26.

**Building Material Estimating.** See page 56.

**TEXTILES**

**Textiles.** 3 General College or Extension credits. \$15 plus \$2 materials fee.

A class for consumers and for those making or selling clothing and home furnishings. Woven and knitted fabrics of cotton, linen, wool, silk, rayon, and the new fibers; manufacturing and finishing processes; qualities, tests, uses, maintenance; explanation of technical terms and of characteristics determining comparative values; application to men's, women's, and children's apparel as well as to household items such as draperies, rugs, upholstery fabrics, blankets, linens. The content of the course is somewhat flexible depending upon the needs and interests of the students enrolled. No prerequisite.

**Fall Semester**

W 7:00 Ford 85

**TRAFFIC AND TRANSPORTATION**

**B.A. 71-174 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 174. Prerequisite: Economics 6-7.

**Fall Semester**

71 M 6:20 Vincent 1, Nightingale

**Spring Semester**

174 M 6:20 Vincent 1, Nightingale

**B.A. 180-181-I 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: B.A. 71-174.

**Fall Semester**

180-I M 8:05 Vincent 1, Nightingale

**Spring Semester**

181-I 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 and U. S. Supreme Court cases governing rail and highway transportation. 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. 71-174 and B.A. 180-I, or equivalent.

**Fall Semester**

I W 6:20 Vincent 6, Nightingale

**Spring Semester**

II W 6:20 Vincent 6, Nightingale

## ENGINEERING CLASSES

### GRADUATE EXTENSION PROGRAM IN ENGINEERING

The Institute of Technology, the Graduate School, and the General Extension Division, in cooperation with a group of industrial firms in the Twin Cities area, have inaugurated a program of evening classes designed to satisfy the major portion of the master of science degree requirements in the engineering field.

The Extension course offerings have been chosen from the group of basic scientific subjects upon which advanced study in engineering fields rests. Under degree Plan A, i.e., with thesis, an entire minor of nine credits in mathematics, and varying portions of the major in eight other fields may be completed through Extension work. The balance of the classes needed for the major remain to be taken over a period approximating one full-time quarter of day classes in length. Thesis work will be done in the usual manner under the supervision of the departmental adviser.

Only those students duly admitted to the Graduate School will be allowed to enroll in the classes specified for the advanced degree.

For further information about this special course, please contact the Office of the Assistant Dean, General Extension Division, Lincoln 8791 or Midway 3965.

### 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, flight theory, aircraft structures, power plants, civil air regulations, aircraft instruments, radio aids and related subjects. The primary objective of the course is to prepare pilots for the C.A.A. written examination for the commercial pilot rating, but the course also includes considerable preparation for the flight-instructor and instrument-rating examinations.

In each full course there are five "terms." Each term lasts five weeks, the class meeting on Tuesday and Thursday evenings, from 7:00 p.m. to 10:00 p.m., in Room 309 of the new Aeronautical Engineering Building on the Minneapolis Campus of the University. Instructor: Sam R. Hamilton.

- Term I:** Civil Air Regulations, Radio Aids and Instruments.  
Dates: September 16, 1952 through October 16, 1952.
- Term II:** Navigation and the Use of Computers.  
Dates: October 21, 1952 through November 20, 1952.
- Term III:** Meteorology.  
Dates: November 25, 1952 through December 25, 1952.
- Term IV:** Flight Theory.  
Dates: December 30, 1952 through January 29, 1953.
- Term V:** Engines and Aircraft.  
Dates: February 3, 1953 through March 5, 1953.

Another series will be run following that listed above if enrolment is sufficient; consult any Extension Division office.

A student may enter the course at the beginning of any term, and may enroll for only one term or for any combination of terms, according to his needs. The fee is \$17.25 per term, making a total of \$86.25 if all five terms are taken. The total cost of textbooks and materials for all five terms is approximately \$17.

Registration may be made through any of the General Extension Division offices, or through the instructor. For more detailed information call Mr. Hamilton at DE 2559.

### CIVIL ENGINEERING

#### Highways and Pavements I. 3 Extension credits. \$15.

An elementary course relating to economics, planning, design, construction, and maintenance of highways and pavements. Textbook assignments, lectures, and laboratory work. Prerequisite: a knowledge of elementary algebra is desirable.

##### Fall Semester

T 6:20 Experimental Engineering 110,  
Kersten

#### Highways and Pavements II. 3 Extension credits. \$15.

A continuation of course I. Textbook assignments, lectures, and laboratory work. Emphasis on bituminous materials and mixtures. Prerequisite: Highways and Pavements I.

##### Spring Semester

T 6:20 Experimental Engineering 110,  
Thomas

**Industrial Statistics I-II.** See Industrial Engineering, 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 7:00 Main Engineering 101, Palmer  
W 7:00 St. P. Ext. Center 218, Springer  
Th 7:00 Main Engineering 201, Bullen

**Spring Semester**

W 7:00 Main Engineering 101, Palmer  
W 7:00 St. P. Ext. Center 218, Springer  
Th 7:00 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 7:00 Main Engineering 101, Palmer  
W 7:00 St. P. Ext. Center 218, Springer  
Th 7:00 Main Engineering 201, Bullen

**Spring Semester**

W 7:00 Main Engineering 101, Palmer  
W 7:00 St. P. Ext. Center 218, Springer  
Th 7:00 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

**38 Reading Drawings. 2 credits. \$10.**

Completion of view and section problems, translation exercises, reading problems from commercial drawings. Bills of material, calculation of volumes and weights from drawings. Prerequisite: Drawing 1 or equivalent experience.

**Fall Semester**

W 7:00 Main Engineering 101, Palmer

**Spring Semester**

W 7:00 Main Engineering 101, Palmer

**55 Production Illustration I-II. 3 Extension credits or 2 Institute of Technology 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 Drawing and Descriptive Geometry 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 either semester, consult instructor.

**Fall Semester**

W 7:30 TSF 203, Doseff

**Spring Semester**

W 7:30 TSF 203, Doseff

**Architectural Drafting I-II-III-IV. 3 Extension credits each semester. \$15.**

A basic course for those needing training for work in architecture. In general the main objectives for each unit will be: I, Drafting techniques; II, Construction details, house plans; III, Pictorial presentation, perspective; IV, Calculations for beams, 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. 6 Extension credits each semester. \$30.**

Fundamental laws of direct-current circuits, the magnetic field and magnetic properties of iron and steel, induced and generated electromotive forces, electric fields. 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 Lect. T 7:00 Electrical Engineering 237,  
Cartwright  
Lab. Th 7:00 Electrical Engineering 107a

**Spring Semester**

II Lect. T 7:30 Electrical Engineering 237,  
Cartwright  
Lab. Th 7:00 Electrical Engineering 107a

**Elements of Electronics I-II.** 6 Extension credits each semester. \$30.

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 Lect. T 7:00 Electrical Engineering 138 II Lect. T 7:00 Electrical Engineering 138  
Lab. Th 7:00 Electrical Engineering 207c Lab. Th 7:00 Electrical Engineering 207c

**Spring Semester****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 computations. Drills on fundamental processes. No prerequisite.

**Fall Semester**

Th 7:00 Main Engineering 217, Fant

**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. This course is intended for the beginner who has no training or experience in reading blueprints or in estimating. Ability to use a slide rule is helpful but not necessary. No prerequisite.

**Fall Semester**

Th 8:05 Main Engineering 217, Fant

**INDUSTRIAL ENGINEERING****Production Planning and Control.** 3 Extension credits. \$15.

Modern methods for effectively coordinating manpower, materials and equipment with sales are presented. Principles and applications of systems for routing, scheduling, inventory control and determination of economic lot sizes are discussed with regard to specific industries. Students are invited to bring topics for discussion. No prerequisite.

**Fall Semester**

T 6:20 Mech. Engineering 106, Block

**Work Simplification (Motion Study).** 3 Extension credits. \$15 plus \$1 laboratory fee.

Men and women in all fields can apply the common sense principles of work simplification to eliminate unnecessary effort and waste motion. Lectures in the use of process charts, operation charts and micromotion study are followed by practice on laboratory problems. Class limited to 25 students accepted in order of registration. No prerequisite.

**Fall Semester**

W 7:00 Mech. Engineering 106, Block

**Work Measurement and Production Standards (Time Study).** 3 Extension credits. \$15 plus \$1 laboratory fee.

Measures of productivity for wage incentives, accounting, planning and labor relations are discussed in a series of lectures on principles and practice in time study, motion-time analysis, job standardization and maintenance of production standards. Laboratory periods are provided. Repeated spring semester. No prerequisite.

**Fall Semester**

M 7:00 Mech. Engineering 106, Cramolini

**Spring Semester**

M 7:00 Mech. Engineering 106, Block

**Industrial Plant Layout.** 4½ Extension credits. \$22.50 plus \$2 laboratory fee.

Lectures on the application of industrial engineering principles in simplifying and improving the layout of manufacturing plants, shops, and warehouses and in planning new layouts. Laboratory studies include the use of flow charts, the determination of equipment and space requirements, and the use of templates and scale models in planning new layouts. Students are invited to bring their own problems for laboratory analysis. Class limited to 25 students accepted in order of registration. Class meets for 2½ hours. Prerequisite: Work Simplification, concurrent registration or consent of instructor

**Spring Semester**

T 7:00 Mech. Engineering 106, Whitson

**Elements of Quality Control.** 5 Extension credits. \$25.

Determination of quality requirements and their relation to manufacturing costs. Establishment of quality control standards; inspection procedures and organization. Use of statistical sampling techniques and control charts for more effective inspection and reduction of costs. For those engaged in quality control and others such as production supervisors, plant managers, and design engineers who are concerned with quality problems. Prerequisite: consent of instructor.

**Fall Semester**

M 7:00 Main Engineering 104, McElrath

**Advanced Topics in Quality Control.** 5 Extension credits. \$25.

Additional topics in industrial sampling inspection methods including discussions of classification of defects, MIL-STD-105A, variables inspection. An introduction to applications of sequential sampling for attributes and measurements. Some industrial significance tests including elementary analysis of variance. Latest developments in Quality Control Techniques. Prerequisite: Elements of Quality Control; or Basic Engineering Statistics I; or Business Statistics 74; or consent of instructor.

**Spring Semester**

M 7:00 Main Engineering 104, McElrath

**Industrial Safety and Hygiene.** 3 Extension credits. \$15.

Major industrial hazards are reviewed and preventive measures are discussed. Safe practices in relation to production equipment, work procedures, storage and handling of materials, and the layout of industrial plants are studied. Consideration is given to the organization and administration of effective industrial safety and hygiene programs. Course is intended for production supervisors and engineers as well as those actively engaged in industrial safety work. Prerequisite: consult instructor.

**Spring Semester**

Th 6:20 Mech. Engineering 106, Kavanaugh

**MATHEMATICS AND MECHANICS****Basic Mathematics.** 4½ Extension credits. \$22.50.

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. Class meets for two sessions a week for twelve weeks. Repeated spring semester. Prerequisite: grade school arithmetic.

**Fall Quarter**

MTh 6:20 Main Engineering 203

**February 9-April 27**

MTh 6:20 Main Engineering 203

**Elementary Algebra I-III†** Credit toward entrance. \$15.

Elements of algebra to quadratic equations. No prerequisite.

**Fall Semester**

I Th 8:05 Main Engineering 205

**Spring Semester**

II Th 8:05 Main Engineering 205

**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 206, 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 206, Schuck

**Spring Semester**

M 6:20 Main Engineering 206, 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 106

M 7:00 St. P. Ext. Center 204

**Spring Semester**

Th 7:00 Main Engineering 227, Braden

**11 College Algebra.** 5 credits. \$25.

A review of fundamental operations, factoring, fractions, linear simultaneous equations including solution by determinants, exponents and radicals, complex numbers, and quadratic equations. Ratio, proportion, variation, binomial theorem, progressions, theory of equations and numerical solution of equations of higher degree, partial fractions and infinite series. Repeated spring semester. Prerequisite: higher algebra.

**Fall Semester**

M 7:00 Main Engineering 205

Th 7:00 Main Engineering 227

**Spring Semester**

M 7:00 Main Engineering 205

M 7:00 St. P. Ext. Center 219, Scott

**12 Trigonometry.** 5 credits. \$25.

Logarithms, trigonometric functions, plane right triangles, fundamental relations between functions, various formulas, identities and equations, graphical representation, inverse functions, oblique triangles, de Moivre's theorem. Introduction to spherical trigonometry and study of the right spherical triangle. Repeated spring semester. Prerequisite: College Algebra 11 or equivalent.

**Fall Semester**  
M 7:00 Main Engineering 227

**Spring Semester**  
Th 7:00 Main Engineering 206

**13 Analytic Geometry.** 5 credits. \$25.

Rectangular coordinate systems in a plane, locus and equation, study of the straight line and its equations, the conic sections, transformation of coordinates, polar coordinates, higher plane curves and various other topics in plane analytic geometry. Introduction to solid analytic geometry. Prerequisite: College Algebra 11 and Trigonometry 12 or equivalent.

**Fall Semester**  
T 7:00 Main Engineering 203

**Spring Semester**  
M 7:00 Main Engineering 215, Fischer  
Th 7:00 St. P. Ext. Center 214, Polansky

**24 Differential Calculus.** 5 credits. \$25.

Functions and limits, the derivative. Applications of the derivative to problems in rates, maxima and minima, inflections, curve tracing. Differentials, approximation with differentials, polar coordinates, parametric equations, curvature, indeterminate forms, partial differentiation, infinite series. Prerequisite: Analytic Geometry 13 or equivalent.

**Fall Semester**  
T 7:00 Main Engineering 215, Fischer

**Spring Semester**  
T 7:00 Main Engineering 203, Wilcox

**25 Integral Calculus.** 5 credits. \$25.

The integration of standard elementary forms, integration by various devices, the evaluation of constant of integration, the definite integral, areas, volumes, length of curve, area of surfaces, centroids, moments of inertia, fluid pressures, multiple integration with applications, infinite series and the expansion of functions. Prerequisite: Differential Calculus 24 or equivalent.

**Fall Semester**  
T 7:00 Main Engineering 227, Wilcox

**Spring Semester**  
T 7:00 Main Engineering 215, Fischer

**26 Technical Mechanics—Statics.** 5 credits. \$25.

The composition and resolution of force systems in a plane and in space; conditions for equilibrium of forces; applications to rigid bodies and structures; friction; centroids and center of gravity; moment of inertia. Prerequisite: Integral Calculus 25 or equivalent.

**Fall Semester**  
Th 7:00 Main Engineering 215, Fischer

**80 Elementary Differential Equations.** 3 credits. \$15.

A first course in ordinary differential equations. Equations of the first order and various degrees. Equations of higher order with particular attention to linear equations. Total differential equations and systems of equations; integration in series. Prerequisite: Integral Calculus 25 or equivalent.

**Spring Semester**  
W 6:20 Main Engineering 215, Fischer

**127 Technical Mechanics—Dynamics.** 5 credits. \$25.

The kinematics and dynamics of particles and rigid bodies. Translation; rotation; plane motion. The application of work-energy equations. Impulse and momentum; mechanical vibrations. Prerequisite: statics.

**Fall Semester**  
Th 7:00 Main Engineering 206, Wilcox

**Spring Semester**  
Th 7:00 Main Engineering 215, Fischer

**128 Strength of Materials.** 5 credits. \$25.

Mechanical and elastic properties of materials of construction; stresses and deformation in beams, shafts, and columns; stresses in statically indeterminate structures; combined stresses. Prerequisite: Integral Calculus and M&M 26, or equivalent.

**Fall Semester**  
M 7:00 Main Engineering 215, Fischer

**Basic Industrial Statistics I.** 5 Extension credits. \$25.

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 3 hours each week. Prerequisite: higher algebra or equivalent with consent of instructor.

**Fall Semester**  
W 7:00 Main Engineering 104, McElrath

**Basic Industrial Statistics II.** 5 Extension credits. \$25.

A continuation of Basic Industrial 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 3 hours each week. Prerequisite: Basic Industrial Statistics I; or Economics 5, Elements of Statistics; or B.A. 74, Business Statistics; or equivalent with consent of instructor

**Spring Semester**

W 7:00 Main Engineering 104, 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. Engineering 214, LaJoy

**February 12-April 30**

II Th 7:00 Mech. Engineering 214, LaJoy

**Mechanisms of Modern Automatic Machinery I-II.** 3 Extension credits each semester. \$15.

A course designed to give a fundamental background in mechanical movements. Part I includes a short historical resumé of inventions which have led to our present-day mechanization; a discussion of the modern components of machinery involved in industrial, automotive, and agricultural applications will follow, including toggle mechanism, quick-return mechanism, straight line motion, cams, gear trains, clamps, etc. Part II is a continuation of Part I with special emphasis on power transmission and mechanisms involved in packaging, vending, and conveying applications. In addition, some time will be devoted to complete analysis of mechanisms in general. Twelve 3-hour meetings. Prerequisite: consult instructor.

**Fall Quarter**

I W 7:00 Mech. Engineering 208, Baillif

**February 11-April 29**

II W 7:00 Mech. Engineering 208, Baillif

**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. Class limited to 20 students. Prerequisite: consult instructor.

**Fall Quarter**

W 7:00 Mech. Engineering 214, 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. Class limited to 20 students. Prerequisite: consult instructor.

**February 11-April 29**

W 7:00 Mech. Engineering 214, LaJoy

**Machine Tool Operation I-II.** 4½ Extension credits each semester. \$22.50 plus \$5 laboratory fee.

Lecture and laboratory covering the selection and use of jigs, fixtures, gauges, 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 24 students, accepted in order of registration. Prerequisite for Part II: previous semester's work or equivalent.

**Fall Semester** I M 7:00 Mech. Engineering 114, Crowder **Spring Semester** II M 7:00 Mech. Engineering 114, Crowder

**Tool Design I-II.** 4½ Extension credits. \$22.50 plus \$1 laboratory fee.

This course covers the analysis of piece part blue prints and of the best tools, machines and method of holding the work piece during the manufacturing operations. Estimating the machine production time for manufacture through the use of various types of jigs and fixtures. Design of the best type of jig or fixture for the manufacturing operation. Class limited to 24. Meets 2½ hours. Prerequisite: Machine Tool Operation II or equivalent.

**Fall Semester** I T 7:00 Mech. Engineering 325, Crowder **Spring Semester** II T 7:00 Mech. Engineering 325, Crowder

**Inventions and Patents.** 3 Extension credits. \$15.

A lecture course dealing with problems associated with inventions, their patenting, development, evaluation, and exploitation. Twelve 3-hour meetings. No prerequisite.

**Fall Quarter** T 7:00 Mech. Engineering 214, Kemler

**Tool and Gauge Inspection.** 4½ Extension credits. \$22.50 plus \$5 laboratory fee.

This course covers the mechanics of tool and gauge inspection such as the following: calibration, repair and adjustment of micrometers and dial indicators, measurement of gauges with supermicrometers and gauge blocks, checking of thread gauges and adjustment of thread ring gauges, measurement of drill jig hole locations, use of toolmaker's microscope, microprojectors to measure form tools, hardness testing and measurement of surface finishes with Brush Surface Analyzer. No prerequisite. Class limited to 24 students. Repeated spring semester. Meets 2½ hours.

**Fall Semester** Th 7:00 Mech. Engineering 155, Crowder **Spring Semester** Th 7:00 Mech. Engineering 155, Crowder

**Machine Design Drafting I-II.** 3 Extension credits. \$15.

Principles and objectives of machine design drafting. Reading of blueprints and standard drafting room techniques. Problems in design sketches, layouts, technical perspective and assemblies. Discussion of methods and objectives of empirical machine design. Special problems in the design of machines. Prerequisite: high school graduation. Twelve 3-hour meetings.

**Fall Quarter** I Th 7:00 Mech. Engineering 325, Palmer **February 12-April 30** II Th 7:00 Mech. Engineering 325, Palmer

**Press Working of Metals I-II.** 3 Extension credits each semester. \$15 plus \$1 materials fee.

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 Quarter** I M 7:00 Mech. Engineering 214 **February 9-April 27** II M 7:00 Mech. Engineering 214

**Fundamentals of Foundry Practice.** 4½ Extension credits. \$22.50 plus \$5 laboratory fee.

A lecture and laboratory course dealing with the molding techniques, core making, melting, and cleaning of ferrous and nonferrous castings. Engineering properties of castings, casting design, standard foundry material tests. Meets 2½ hours.

**Fall Semester** M 7:00 Mech. Engineering 102, Holtby

**Beginning Plastics.** 3 Extension credits. \$15 plus \$3 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. Engineering 114, Holtby

**Servomechanisms.** 3 Extension credits. \$15 plus \$5 laboratory fee.

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. Twelve 3-hour meetings.

February 11-April 29

W 7:00 Mech. Engineering 114, LaJoy

**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 Semester

I M 7:00 Mech. Engineering 314, Larsen

Spring Semester

II M 7:00 Mech. Engineering 314, Larsen

**Automotive Engines—Operation and Maintenance I.** 3 Extension credits. \$15 plus \$2 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 Semester

I Th 7:00 Mech. Engineering 321, Melby

**Aircraft Power Plants I.** 3 Extension credits. \$15 plus \$2 laboratory fee.

Basic theory of jet propulsion, gas turbines, and reciprocating engines. Engine types, construction, compressor and turbine configurations, and combustion and combustion chambers. Problems of lubrication, cooling and ignition. Performance and performance charts with relation to operating variables such as speed, temperature, pressure and altitude. Fuels, fuel specifications, metering systems and fuel controls.

Spring Semester

I W 7:00 Mech. Engineering 321, Murphy

**Heating, Ventilating, and Air Conditioning I-II†.** 4½ Extension credits each semester. \$22.50 plus \$2 laboratory fee.

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; 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

I W 7:00 Mech. Engineering 302, Borry

Spring Semester

II W 7:00 Mech. Engineering 302, Borry

**Heating, Ventilating, and Air Conditioning III-IV†.** 4½ Extension credits each semester. \$22.50 plus \$2 laboratory fee.

A continuation of Heating, Ventilating and Air Conditioning I-II with combined lecture and laboratory practice. The laboratory work will cover the use of scientific instruments for measurement of heating efficiency, adjustment of gas and oil burners for best operation, measurement of air flow and fan testing, performance testing of warm air, hot water and steam heating equipment, and demonstrations of other residential and industrial equipment. The lectures will cover subject matter related to the laboratory work and additional topics including fundamentals of air flow and pressure loss, duct design, psychrometrics, heat gains and cooling load calculations, physiological principles, humidification and dehumidification. Class limited to 20 students accepted in order of registration. Prerequisite: I-II or consent of instructor.

Fall Semester

III T 7:00 Mech. Engineering 302,  
Whitnah

Spring Semester

IV T 7:00 Mech. Engineering 302,  
Whitnah**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; psy-

chrometry; 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**  
I Th 7:00 Mech. Engineering 302,  
Threlkeld

**Spring Semester**  
II Th 7:00 Mech. Engineering 302,  
Threlkeld

**Production Control.** See Production Planning and Control, page 56.

**Time Study.** See Work Measurement and Production Standards, page 56.

**Motion Study.** See Work Simplification, page 56.

**Engineering Plant Layout.** See Industrial Plant Layout, page 56.

**Elementary Quality Control.** See Elements of Quality Control, page 56.

**Industrial Safety and Hygiene.** See page 57.

### 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 the heat treatment of steel and correlation of properties with structure. Pyrometry, freezing of alloys, microstructures, the iron-carbon diagram, surface hardening, cast iron 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 W 7:00 Appleby 315, Jerabek

**Spring Semester**  
2 W 7:00 Appleby 315, Jerabek



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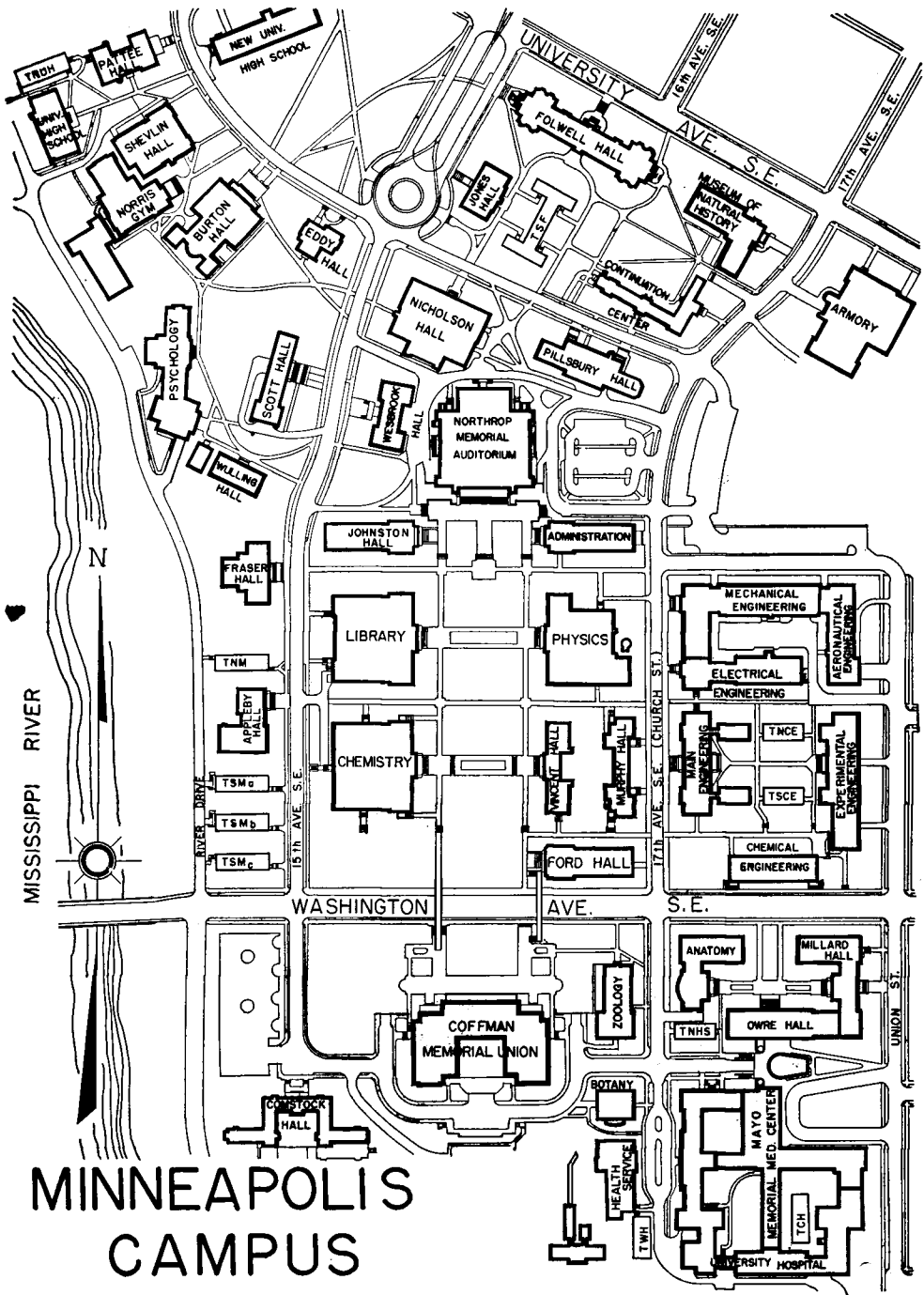
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## INDEX

	Page		Page
Accounting .....	43	Ceramics .....	15
Acting .....	42	Certificates, Extension .....	9
Additions and transfers .....	2	Chemistry .....	18
Advertising .....	52	Child Welfare .....	19
Aeronautical Engineering .....	54	Civil Engineering .....	54
Agriculture .....	13	Communications .....	22
Animal Husbandry .....	13	Correspondence Study .....	12
Anthropology .....	14	Credits .....	6
Arabic .....	28	Credits and Collections .....	51
Architecture .....	55		
Art .....	14	Daggered listings .....	6
Art Education .....	20	Danish .....	39
Astronomy .....	18	Degrees, University .....	8
Athletic facilities and tickets .....	8	Drama .....	37
Auditors .....	3	Drawing and Descriptive Geometry .....	55
		Drawing, General .....	14, 17
Bacteriology .....	18		
Book Reviews .....	22	Economics and Finance .....	46
Business Classes .....	43	Education .....	20
Business English .....	45	Electrical Engineering .....	55
Business Law .....	45	Employee Training Techniques .....	34
Business Reports .....	23	Engineering Classes .....	54
		English .....	22
Calculus .....	58	Business .....	45
Calendar .....	inside front cover	Composition .....	22
Campus map .....	68	Literature .....	23
Cancellations and refunds .....	3	Placement tests .....	22

	Page		Page
Esthetics .....	31	Painting .....	16
Ethics .....	31	Parent Education .....	19
Extension services and directors .....	1	Parliamentary Law .....	30
Faculty .....	63	Personal Orientation .....	30
Fashion Illustration .....	17	Personnel Work .....	49
Fees .....	2	Nursing .....	21
Finance .....	46	Philosophy .....	31
Finnish .....	39	Photography .....	32
Foundry Practice .....	60	Physics .....	33
French .....	23	Pilots' Ground School .....	54
Gardening .....	13	Plastics .....	60
General Classes .....	13	Political Science .....	33
General Crafts .....	14	Preparatory Composition .....	22
General Information .....	5	Printmaking .....	15
Geography .....	24	Production Control .....	56
Geology .....	24	Psychiatry .....	40
German .....	24	Psychoanalysis .....	40
Government and Politics .....	33	Psychological Measurement .....	35
Grades .....	7	Psychology .....	35
Graduate degrees .....	7	Child .....	19
Graduate Engineering Courses .....	54	Educational .....	21
Graphic Processes .....	28	Personnel .....	36
Health .....	25	Public Administration .....	34
Highways and Pavements .....	54	Public Health .....	25
History .....	25	Public Relations .....	28
Housing .....	26	Public Speaking .....	41
How to Study .....	30	Puppetry .....	20
Humanities .....	27	Purchasing .....	51
Industrial Engineering .....	56	Quality Control .....	56
Industrial Management .....	48	Radio and Television .....	36
Industrial Relations .....	48	Drama .....	37
Industrial Safety .....	57	Script Writing .....	36
Instrumentation, Practical Laboratory .....	19	Speech .....	37
Insurance .....	50	Reading, Efficient .....	30
Interior Decorating .....	15	Real Estate .....	52
International Organization .....	34	Recreation .....	37
Inventions and Patents .....	60	Registration regulations .....	2
Italian .....	27	Religious Classics .....	31
Japanese .....	28	Retailing .....	52
Jewelry Design .....	15	Romance Languages .....	23, 27, 41
Journalism .....	27	Russian .....	29
Labor Problems .....	48	Salesmanship .....	51
Latin America .....	41	Scandinavian .....	39
Legal Problems .....	46	Science and Religion .....	31
Lettering .....	16	Slide Rule, Use of .....	56
Library Science .....	28	Social Work .....	40
Linguistics .....	28	Sociology .....	40
Listening, Efficient .....	31	Spanish .....	41
Logic .....	31	Speech .....	46
Machine Design .....	61	Statistics .....	46
Magazine Writing .....	28	Business .....	47
Marketing and Merchandising .....	51	Industrial .....	58
Marriage, Preparation for .....	31	Swedish .....	40
Mathematics .....	57	Technical Mechanics .....	58
Meat Selection .....	13	Technology Classes .....	54
Mechanical Engineering .....	59	Television .....	36
Metallography .....	62	Textiles .....	53
Mineralogy .....	24	Theater .....	42
Minnesota, Government of .....	34	Time Study .....	56
Modern Art .....	15	Tool Design .....	60
Motion Study .....	56	Transportation .....	53
Music .....	29	Typography .....	27
Natural History .....	30	Union Administration .....	50
Norwegian .....	39	U. S. Foreign Affairs .....	35
Nursing .....	30	Veterans' information .....	3
Office and office hours .. inside front cover		Vocabulary Building .....	42
		Ward Administration .....	21
		Weaving, Textile .....	17



# MINNEAPOLIS CAMPUS



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**STUDY  
COURSES**

**1952-1953**

**THE *Bulletin* OF THE  
UNIVERSITY OF MINNESOTA**

*"It has been said that there are at least three soundly tested ways through which an individual may initiate his education—by direct contact with superior minds; by direct and reflective contact with the great minds of history, through books, music and art; by singular attention to a subject of study, prompted by intellectual curiosity and continued without coercion. Correspondence study embraces all three ways of initiating and sustaining an educational program. Direct communication between teacher and pupil, directed reading and reflection, careful and necessary organization of ideas, the stimulus to seek and systemize knowledge, the voluntary assumption of those restrictions necessary for concentrated study of the subject-matter area, meaningful enlightenment—all are a part of the correspondence method of learning by mail."*



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## INFORMATION

**Veterans**, see page 3.

**Service Personnel**, see page 7.

**Refunds**, see page 6.

**Index**, see page 61.

### **Am I Eligible to Take These Courses?**

The University's correspondence courses are open to everyone who can handle them successfully.

### **How Much Do They Cost?**

Most courses cost \$15. Some cost more or less than this amount, and some involve a small materials fee. The fees for each course are stated in the description of courses further on in this bulletin.

### **Does This Cost Include Books?**

No; you must buy your own books or borrow them from a library. Nor does the cost of the course cover apparatus such as a drawing set or slide rule.

To assist correspondence students, the Nicholson Hall Bookstore, University of Minnesota, has made special effort to stock books required in correspondence courses, and you will find an order blank in the course study guide. If you cannot locate the texts, write to the bookstore, or to the Correspondence Study Department.

The required texts are listed in the Introduction to the study guide.

### **When Can I Begin My Course?**

At any time. This is one of the great advantages of correspondence study.

### **How Long Will It Take Me to Finish the Course?**

No course of 3 credits or more should be completed in less than 6 weeks. Students, teachers, and others working against a deadline for the submission of credits must take full responsibility for arranging the work in such a manner as to allow ample time for completion, including the final examination.

Please note that we cannot guarantee prompt lesson service during vacations.

**Your registration is good for one year.** It is assumed that you will complete your course within twelve months. For valid reasons, one re-instatement for six months may be made for a \$2 fee; a second six-month extension will cost \$3.

### **What Is a Correspondence Course Like? How Does It Work?**

Each course is based on a study guide. The **study guide** begins with an introduction to the course. The **introduction** gives an overview of the course, tells you what books you need, and shows you how to do the work of the course. The remainder of the study guide is made up of the

lessons of the course. Each **lesson** includes a **study assignment**, **study notes** (and sometimes study questions), and a **written assignment**.

In general you proceed with each lesson as follows: first, read the study notes; next, do your study assignment in the textbook; last, prepare your written assignment and send it to the Correspondence Study Department at the University. Your instructor will read the written assignment and return it to you with his corrections and suggestions. After you complete all the lessons in this way you take the final examination.

### **Can Veterans Enroll under G.I. Bill of Rights?**

Registrations under Public Laws 16 and 346 will be accepted through January 31, 1953. At the time this bulletin is published correspondence work under Public Law 550 (Korean veterans) is uncertain. Write to the Correspondence Study Department for additional information.

### **What Are the Advantages and Disadvantages of Correspondence Study?**

The advantages: (1) You can start the course at any time. (2) You can work on it at your own convenience. (3) You can proceed swiftly or leisurely, as you prefer. (4) You don't have to come to the campus or waste time in travel. (5) You escape the nuisance of scribbling notes on classroom lectures; instead you receive your notes direct from your instructor, in carefully organized, permanent form. (6) You get individual attention from your instructor. (7) You get practice in digging out ideas, organizing them, and expressing them in writing.

The disadvantages: (1) Most correspondence students do not have full access to a university library. (2) Correspondence study is impersonal in that face-to-face relationships are absent. (3) It is a lonely job, lacking the stimulation of group study. (4) It requires more work and harder work than classroom study. (5) It is all too easy to put off doing your lesson "till tomorrow."

In summary, correspondence study is a waste of time and money for the shiftless, dilatory student. But for the serious student it offers a unique opportunity to work toward what has been well called the goal of all adult education, namely, the independent pursuit of learning.

### **Who Are the Instructors?**

Most of them are members of the university faculties; others are chosen from local professions and businesses because of special knowledge or experience. Instructors named in this bulletin will ordinarily teach as scheduled, but unforeseen difficulties may interfere with these assignments.

### **Where Can I Get Advice about a Program of Study?**

The Correspondence Study Department advisers will assist in the selection of individual courses and of programs of study leading to occupational objectives and Extension certificates. They also assist students to make contact with advisers in the various colleges of the University

for information on programs of study leading to degrees. When you write or call for such advice, give full information about your past training, educational experience and your objectives.

The Correspondence Study Department is a part of the General Extension Division. The division is housed in the east wing of Nicholson Hall on the Minneapolis Campus. The main office of the Correspondence Study Department is Room 251, east wing, Nicholson Hall. For telephone inquiries call LI 8791 or MI 3965.

### **How Do I Register for a Correspondence Course?**

Simply fill out the registration form and mail it to the Correspondence Study Department at the University, along with the fee indicated in the description of the course you want. **You will find a registration blank with this bulletin.** Payment should be made by postoffice or express money order, personal check, or draft; made out to the University of Minnesota; and drawn for the exact amount of the fee.

### **Are There Other Facts or Regulations Concerning Correspondence Courses Which I Might Want To Know?**

**Credits:** Most of the courses in this bulletin are listed for credit. This means credit towards a degree, subject to the limitations noted below. The credits are **quarter credits:** 3 quarter credits equal 2 semester credits or hours. A few courses are listed for "Extension credits only." This means that the credits earned in these courses cannot be applied toward a degree, but can be used to satisfy some requirements in the General Extension Division programs. (See page 8.) **Courses listed for "Extension credits only" cannot be used for teachers' certificates issued by the Minnesota State Department of Education.**

*For graduation from high school*—With the approval of the high school concerned, and subject to the regulations of your state department of education, certain correspondence courses may be used toward completion of the requirements for graduation from high school. Note, however, that the diploma is granted by the high school, not by the University. Correspondence courses which may be taken for high school credit are listed beginning on page 56.

*For entrance to the University*—Admission to the University is gained by graduation and certification from high school or by entrance examination; the entrance examination tests your aptitude for college work, not your recollection of subjects taken in high school. Each college of the University has its own entrance requirements, and these requirements are explained in the *General Information Bulletin* which is available from the Office of Admissions and Records. This means that a student who has been graduated and certified by a high school may still lack one or more high school courses which are required for entrance to the particular college of the University he wants to enter. He may take these courses by correspondence study. Courses of this type are listed beginning on page 56.

**Limitations:** Only a limited amount of credit, earned by means of correspondence study can be applied toward a degree. No college at the

University will grant a degree without at least one year (45 quarter credits) of residence study. Most correspondence study courses give credit that is ordinarily earned in the freshman and sophomore years.

Some colleges at the University have placed additional restrictions on the number of credits which may be earned toward a degree, as follows:

College of Science, Literature, and the Arts: Only 3 credits in the student's major sequence in courses numbered 50 or above.

School of Business Administration: Only 15 credits in courses numbered 50 or above.

Institute of Technology: (College of Engineering, Schools of Chemistry, Architecture, Mines and Metallurgy). For full credit:

Draw. 1-2-4 Engineering Drawing; Eng. Comp. 4-5-6 Freshman Composition; Math. 11 College Algebra; Math. 12 Trigonometry; Math. 13 Analytical Geometry; Math. 24 Differential Calculus; Math. 25 Integral Calculus; Math. 26 Technical Mechanics: Statics; Math. 127 Technical Mechanics: Dynamics; Math. 128 Strength of Materials; C.E. 146 Concrete and Concrete Materials; P.H. 3 Personal Health.

Required credits in Social-Humanistic Area may be satisfied by selecting correspondence courses in history, psychology, economics, philosophy, humanities, sociology, political science, and English. Consult the bulletin for the Institute of Technology or write to the Correspondence Study Department.

*Residence*—Correspondence study does not count as "residence" study.

*Graduate*—Correspondence study does not count toward graduate degrees.

**Degrees:** A student who wishes to become a candidate for a degree must meet the admission requirements of the University and the entrance and degree requirements of the college in which the degree is sought. The advisers in the department will assist the student to determine his status with regard to these requirements.

**Credit at other institutions:** A student who expects to apply credits earned in correspondence at the University of Minnesota towards an educational program in another university or college should determine the acceptance of such credits before registering. A large number of institutions accept correspondence courses for credit from accredited universities and colleges, but the amount, or maximum hours accepted toward a degree, varies with each institution. Some colleges or college departments have special limitations on the transfer of credits earned through correspondence. You should check the credit policy of the institution from which you expect to receive transfer credit.

**Examinations:** *To earn credit in a correspondence course the student must pass the final examination.* This examination should be written in the department's offices in Nicholson Hall on the Minneapolis Campus of the University. Students who are unable to come to the campus for their examination may write it in the downtown Extension Division offices in Minneapolis, St. Paul, or Duluth, or elsewhere under the super-

vision of the local school superintendent or principal. There is no charge for the examination provided it is written during the time the student's registration is in force.

You must request all examinations, including the final examination; they are not automatically sent to you. Your final grade will be determined, for the most part, by your achievement on the final examination. You will find additional instructions in your study guide.

**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 course to earn credit in it; nor may a student who receives a failure in a continuation course register for another part of such a course until the failure is made up.

**Honor points**—In correspondence courses, honor points are used only to ascertain whether a student has the C average required for all certificates; they are not used to reduce the number of credits required for a certificate. Correspondence students 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.

**Reports** of students' grades and credits are sent them by the university recorder and will not be furnished by the Correspondence Study Department except on request.

**Maximum load:** Correspondence students may not take more than two courses at the same time.

**Noncredit registration:** A student who does not want to do all the required work of a course may register as a noncredit student by writing "Noncredit" in the Credits column of the registration form. Noncredit students pay the same fees as credit students but earn no credit. Examinations are not required for noncredit students.

**Postage:** The student prepays postage on all mail sent to the University; mail sent from the University to the student is prepaid by the Correspondence Study Department.

**Refunds:** A student who wishes to discontinue his correspondence course may receive a partial refund, provided he makes application within **three months** from the date of enrolment, and that such application is made before he has completed one half of the total number of lessons in the course. Of the student's tuition fee, provided he is eligible for a refund, **one fifth of the total cost of the course and eighty cents for each lesson serviced are nonrefundable.**

**Transfer:** A student may transfer from one correspondence course to another within **six months** from the date of registration. The transfer fee is **two dollars**, together with the payment of **eighty cents** for each graded lesson. The remainder of the original fee paid will be credited toward the tuition fee of the new or substituted course. The new course must be completed within a year from the original registration, or reinstated. When a transfer is recommended by the department, only a charge for the correction of lessons will be made.

## THE GUIDE TO CORRESPONDENCE STUDY

The Correspondence Study Department as a part of the General Extension Division is a member of the National University Extension Association. Among other activities, this association publishes the *Guide to Correspondence Study*. This bulletin is designed to give ready reference to correspondence courses offered by 53 colleges, universities, and comparable educational agencies. There is a nominal cost for this publication which can be secured from the Secretary of the Association, Indiana University, Bloomington, Indiana.

### SPECIAL INFORMATION FOR SERVICE PERSONNEL

Two types of correspondence courses are available to men and women of the armed forces.

*Type 1*—Most of the courses in this bulletin are available to service personnel through cooperation between the University of Minnesota and the United States Armed Forces Institute. Write to USAFI, Madison 3, Wisconsin, or to the Correspondence Study Department for information.

*Type 2*—Any course in this bulletin is available to service personnel who pay the full fee as listed in the description of each course. Register through the Correspondence Study Department.

### 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 a combination of the two methods. Moreover, credits earned in resident classes, including the Summer Sessions, may be utilized.

Some of the advanced certificates cannot be earned entirely by correspondence courses listed in this bulletin. Students may, however, use credits earned from other approved Correspondence Study Departments or substitute or transfer resident credits from accredited institutions. At least 25 per cent of the credits needed for a certificate must be earned from the University of Minnesota.

For advice or information on programs of study leading to certificates, including permission for substitution and transfer of credits, write to the Correspondence Study Department. Certificates are awarded to students who complete with a C average any of the following programs of study:

### LIBERAL EDUCATION CERTIFICATE

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 Committee on Student Scholastic Standing to make a total of **45 credits** for the certificate.

### BUSINESS ADMINISTRATION CERTIFICATE

#### Junior Certificate (45 credits)

Core requirement:

Bus. Engl. 1ex, or Composition 4, or exemption by examination  
 B.A. 51 Business Law  
 Econ. 5 Elements of Statistics  
 Econ. 6-7 Principles of Economics  
 Econ. 24-25-26 Elements and Principles of Accounting

Concentration requirement: Additional courses totaling at least 9 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
or	
Insurance	

Electives: Additional courses approved by the Committee on Student Scholastic Standing to make a total of **45 credits** for the certificate.

#### Senior Certificate (90 credits)

Core requirement:

Bus. Engl. 1ex-2ex, or Composition 4-5-6, or exemption by examination  
 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. 24-25-26 Elements and Principles of Accounting  
 Econ. 73 Labor Problems and Trade Unionism

Concentration requirement: At least 18 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
or	
Insurance	

Electives: Additional courses approved by the Committee on Student Scholastic Standing to make a total of **90 credits** for the certificate.

### GENERAL ENGINEERING CERTIFICATES

#### Junior Certificate

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 Committee on Student Scholastic Standing to make a total of **45 credits** for the certificate.

### Senior Certificate

#### 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 Committee on Student Scholastic Standing to make a total of **90 credits** for the certificate.

## INDUSTRIAL ENGINEERING CERTIFICATES

### Junior Certificate

#### Core requirement:

Comp. 4 or Business English  
 M.&M. 11 College Algebra  
 M.&M. 12 Trigonometry  
 D.&D.G. 1-2 Engineering Drawing  
 Machine Tool Operation I  
 Econ.6-7 Principles of Economics  
 B.A. 89 Production Management  
 Work Simplification  
 Work Measurement and Production Standards

Electives: Additional courses may be selected from the list of requirements or recommended electives listed under senior certificate provided that sufficient courses are taken to make a total of **45 credits** for the certificate.

### Senior Certificate

#### Core requirement:

Business English and Correspondence, or  
 Comp. 4-5-6 or exemption  
 M.&M. 11 College Algebra  
 M.&M. 12 Trigonometry  
 M.&M. 13 Analytic Geometry  
 D.&D.G. 1-2 Engineering Drawing  
 D.&D.G. 3 Descriptive Geometry  
 Machine Tool Operating I  
 Econ. 6-7 Principles of Economics  
 Econ. 73 Manpower Economics and Labor Problems  
 B.A. 167 Introduction to Industrial Relations

## CORRESPONDENCE STUDY COURSES

Econ. 5 Elements of Statistics, or  
 Basic Industrial Statistics I  
 B.A. 89 Production Management  
 Production Planning and Control  
 Work Simplification  
 Work Measurement and Production Standards  
 Industrial Plant Layout  
 Elements of Quality Control  
 Manufacturing Cost Analysis

## INDUSTRIAL RELATIONS CERTIFICATE

## Core requirement:

Econ. 6-7 Principles of Economics  
 Econ. 73 Manpower Economics and Labor Problems  
 Econ. 162 Labor Movements  
 Econ. 164 Labor Legislation: Collective Bargaining  
 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: Additional courses selected from the following or other approved courses to make a total of **45 credits**.

Econ. 166 Settlement of Industrial Disputes  
 B.A. 86 Office Management  
 B.A. 89 Production Management  
 Psy. 119 Psychology of Personality  
 Psy. 125-126 Psychology of Individual Differences  
 Psy. 144-145 Abnormal Psychology  
 Soc. 120 Social Psychology  
 Wage and Salary Administration  
 Elements of Supervision  
 Advanced Supervision  
 Work Simplification  
 Work Measurement and Production Standards  
 Industrial Plant Layout  
 Elements of Union Administration  
 Personnel Methods  
 Wage and Salary Stabilization Programs  
 Econ. 169 Labor Legislation: Economic Security

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.

## COLLEGE COURSE§

(High school courses begin on page 56.)

### AGRICULTURE\*

Mykola H. Haydak, Ph.D., Associate Professor of Entomology and Economic Zoology

Harry W. Kitts, Ph.D., Associate Professor of Agricultural Education

Ralph E. Miller, M.S., Associate Professor School of Agriculture

Horace L. Thomas, Ph.D., Associate Professor of Agronomy and Plant Genetics

Truman Nodland, Ph.D., Assistant Professor of Agricultural Economics

Robert A. Phillips, B.S., Assistant Professor of Horticulture

Otto W. Swenson, Superintendent of Farm Grounds and Assistant Professor

Gladys Babcock, M.A., Instructor in Textiles

J. Grant Dent, Instructor in Agricultural Engineering

**Ag. 1 General Farm Crops.** In essence a survey course; it touches all the important phases of agronomy and gives specific practical information about many of them. This gives the student the basis for a more detailed study of certain crops or practices which are of particular importance to him. Although most illustrations are drawn from Minnesota agriculture, the course is broad in scope and will be useful to students anywhere in the north central United States, and to a lesser extent, anywhere in the world. The course offers carefully selected reading assignments and variability in the required written reports. No prerequisite.

16 lessons, 3 credits, \$15, Thomas

**A2 Forage Crops.** A course designed to give basic knowledge of the forage crops plus general information as to what crops to grow and how best to handle them to obtain the greatest returns. Some of the subjects taken up include seeding practices, grasses, clovers, alfalfa, pastures, crop rotation, hay making, silage, soybeans, and other miscellaneous forages. No prerequisite and no credit towards a degree.

16 lessons, 3 credits in School of Agriculture, \$15, Swenson

**A4 Beekeeping.** The aim of this course is to present information on the subject of beekeeping in such a way that those who have had no experience with bees can start with one or more colonies in the spring and carry on with them successfully; also, to present enough fundamental information on bees and modern beekeeping practices to enable those who have had a few years of experience to add to their knowledge and improve their methods. Some of the more important topics to be considered in the course are the study of the honey bee colony and of the individual bee, fundamentals of bee behavior, the value of bees in pollination, colony development, beekeeping equipment and practices, swarm

\* The courses are offered through the University Department of Agriculture in cooperation with the Agricultural Short Courses.

§ The letter "c" after the number of a course means that there is no parallel campus course or that the correspondence course is a material modification of the campus course for extension purposes.

control, package bees, supersedure, increase, queen rearing, apiary management, bee diseases and enemies and their control, methods of wintering, preparation of honey and wax for market. No prerequisite, and no credit towards a degree.

16 lessons, 3 credits in School of Agriculture, \$15, Haydak

**Ag. Econ. 80 Farm Accounting.** Forms and procedure for recording inventories, cash receipts and expenses, crop acreages and yields, feed consumed by livestock, family living secured from the farm, and other information concerning the farm business. Calculation of measures of farm earnings. No prerequisite.

16 lessons, 3 credits, \$15, Nodland

**Agricultural Education (Rural Education).** Kitts. See page 21.

**Home Economics (Textiles).** Babcock. See page 13.

**Horticulture (Landscaping).** Phillips. See page 41.

**Parliamentary Law.** Miller. See page 45.

**Ag. Eng. 42 Art Metal Work.** 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 plates, bowls, and trays; use of jeweler's saw in pierced work; etching; soldering; making candlesticks, book ends, desk sets, lamps, bracelets. No prerequisite.

16 lessons, 3 credits, \$15, Dent

### ANTHROPOLOGY

Robert F. Spencer, Ph.D., Assistant Professor of Anthropology  
Harold P. Winchester, B.A., Instructor in Anthropology

**40 Introduction to Anthropology.** Characteristics of human races; fossil men; prehistory. The life of primitive peoples; economic, religious, social activities, and other phases of culture. The bearings of anthropology on present-day thought and problems. No prerequisite.

27 lessons, 5 credits, \$25, Winchester

**80 The American Indian.** 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.

16 lessons, 3 credits, \$15, Spencer

### ART

Clifton Gayne, Jr., Ph.D., Professor of Art Education and Head, Department of Art Education

Leah M. Lewis, B.S., Assistant Professor of Art

Gladys Babcock, M.A., Instructor in Textiles

Mildred M. Page, M.Ed., Instructor in Art Education

Lucile S. Robinson, B.A., Instructor in Handcraft

**Art 4c Fundamental Experiences in Design.** The fundamental principles applied to a series of interesting and practical problems using a variety of techniques; a basic course that is useful in public school teaching and as a foundation for other art courses. No prerequisite.

16 lessons, 3 credits, \$15, Lewis

**Art 43Ac General Handcrafts.** A practical course which includes chip carving, block printing, stenciling, and puppets. Also included are projects and gift suggestions to be made from scraps of material such as paper, tin, yarn, and wire. The course is designed for teachers, occupational therapists, camp and playground workers, and home makers. No prerequisite.

16 lessons, 3 credits, \$15, Robinson

**Art 43Bc General Handcrafts—Textile Crafts.** A practical course in needle work and other textile crafts suitable for use in homes, schools, camps, playgrounds, social service, and for those interested in adult education. No prerequisite.

16 lessons, 3 credits, \$15, Robinson

**Art 83c Interior Design (Interior Decoration).** A study of traditional and modern furniture and how to combine various styles in today's homes. Additional subjects include floor treatment, coverings, wall treatment in its many phases, and how to build color schemes. Of interest to teachers, homemakers, and decorators. No prerequisite.

16 lessons, 3 credits, \$15, Lewis

**Art Ed. 19c Art Appreciation in Education.** An introductory survey of art to provide a background for personal growth and for effective cooperation in modern educational programs. The role of the artist, his ideas, materials, and technics will be examined in terms of his contributions to enriched living. Painting, sculpture, architecture, city planning, personal appearance, and industrial design are some of the specific areas studied in relation to current personal and social problems. Recommended for elementary school teachers but of general interest. Not open for credit to art majors or those who have completed Art Ed. 19. No prerequisite.

21 lessons, 4 credits, \$20 plus \$1.25 materials fee, Gayne

**Home Ec. 2c Introduction to Textiles.** A course for consumers and people in the field of merchandising. A study of textiles commonly used in clothing and home furnishings including fiber identification and properties, yarn and fabric construction, fabric finishing, determination of fabric quality in relation to use, and care of fabrics. No prerequisites.

16 lessons, 3 credits, \$15 plus \$1.50 for materials, Babcock

**Engineering Drawing.** See page 24.

**Art Metal.** See page 12.

## ASTRONOMY

Willem J. Luyten, Ph.D., Professor of Astronomy and Chairman, Department of Astronomy

**11 Descriptive Astronomy.** A descriptive course designed to give accurate general information regarding the solar system and the stellar

universe. It emphasizes the basic facts of the physical universe, rather than the technical details of the work of a professional astronomer. A small telescope or even a field glass will be helpful but not essential. No prerequisite.

27 lessons, 5 credits, \$25, Luyten

### • BUSINESS ADMINISTRATION

Carl L. Nelson, Ph.D., C.P.A., Professor of Accounting

Arthur M. Borak, Ph.D., Associate Professor of Economics

Ernestine C. Donaldson, M.A., Associate Professor of Business Administration

Herbert G. Heneman, Jr., Ph.D., Associate Professor of Economics

Edwin H. Lewis, Ph.D., Associate Professor of Economics and Marketing

Reuel I. Lund, Ph.D., C.P.A., Assistant Professor of Accounting

Ben B. Sutton, Ph.D., Assistant Professor of Economics and Finance

C. Arthur Williams, Jr., M.A., Assistant Professor of Economics and Insurance

Donald H. Bruer, LL.B., Instructor in Business Law

Clifford I. Haga, B.A., Instructor in English

Kalo E. Neidert, M.S.B.A., Instructor in Business Administration

Elvin L. Peterson, B.B.A., Instructor in Economics

Paul H. Randolph, M.A., Instructor in Business

Doris J. Foote, M.A., Teaching Assistant in Business

(For other business courses see page 19, Economics. For Salesmanship see page 51. For Industrial Supervision see page 55.)

N.B.—See page 5 for limitation on amount of credit earnable by correspondence courses for B.B.A. degree.

**1c Business English.** A practical course for people in business or those preparing to enter it. The ways of developing effective letter-writing habits are analyzed and presented in a study of diction, grammar, and the mechanics of letter forms. No prerequisite.

16 lessons, 3 Extension credits only, \$15, Haga

**51 Business Law—Contracts.** A course dealing with the basic law of contracts, the formation, operation, effect and discharge of contracts. Inasmuch as a knowledge of the general rules of contract law is fundamental to all work in business law, this course must precede Business Law 52, 53 and 56. No prerequisite.

16 lessons, 3 credits, \$15, Bruer

**52 Business Law—Agency, Partnerships, and Corporations.** The law of agency and a consideration of problems of partnerships and corporations, including business associations. The course includes a study of the nature, creation, and terms of relationships, and rights and liabilities of the parties when doing business through agents, partnerships, and corporations. Prerequisite: Business Law 51.

16 lessons, 3 credits, \$15, Bruer

**53 Business Law—Sales and Negotiable Instruments.** Law of sales of goods under the Uniform Sales Act and law of commercial paper under the Uniform Negotiable Instruments Law. Includes a study of negotiable

notes, checks, drafts, etc., and rights of parties thereto. Prerequisite: Business Law 51.

16 lessons, 3 credits, \$15, Bruer

**56 Business Law—Property Rights and Obligations.** Nature and classification of real and personal property; 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: Business Law 51.

16 lessons, 3 credits, \$15, Bruer

**58 Elements of Public Finance.** Government expenditures, revenues, and debts. This includes a study of the nature of public expenditures, various kinds of non-tax public revenues, various forms of taxation, shifting and incidence of taxation, budgetary and legislative control, and fiscal reforms. Prerequisite: Principles of Economics I.

16 lessons, 3 credits, \$15, Borak

**64c Operation of a Small Business.** A study of the practical problems of operating a small business and of the latest principles and practices used in their solution. Covers all phases of organization and management including: advertising, layout, financing, location, buying, pricing, personnel. Problems illustrated by actual cases. Emphasis on retailing. No prerequisite.

16 lessons, 3 credits in General College, \$15, Foote

**66 Cost Accounting.** The uses of cost information in modern industry, the accounting mechanism for costs, types of cost systems, the definition of cost terms; the use of the factory ledger; the accounting for materials, their purchase, storage, use, the stores ledger, and the calculation of materials costs; the accounting for labor with particular reference to applying labor costs to production; the accumulation and analysis of overhead and its application to product; cost reports and statements for the management. Prerequisite: Economics 23 or 26 or approximate equivalent.

16 lessons, 3 credits, \$15, Lund

**74 Business Statistics.** This course includes three applications of statistical techniques to business: (1) measurement of time series, (2) index numbers, and (3) statistical quality control. Prerequisite: Economics 5 or equivalent.

16 lessons, 3 credits, \$15, Randolph

**76 Credits and Collections.** The nature and types of credit instruments and agencies; qualifications and work of the credit manager; valuation and use of credit reports and financial statements; collection methods and correspondence; bankruptcy and adjustments; credit limits and control. Prerequisite: Principles of Economics I and II.

16 lessons, 3 credits, \$15, Neidert

**86 Survey of Office Management.** The office as a producing unit; organization and control of clerical services; selection of equipment and supplies; flow of work layout, and working conditions; office personnel; relation of the office to operating divisions; work simplification; scientific

management as applied to the office. Prerequisites for credit: Principles of Economics I and II.

16 lessons, 3 credits, \$15, Donaldson

**89 Production Management.** A survey course in the techniques of modern management of production. The basic principles of the techniques of scientific management are studied with particular emphasis on the need for the scientific method of approach to the solution of management problems. The following topics are considered: organization, the physical plant, product development, material control, quantity control, quality control, and production control. Prerequisite: Economics 6 and 7. Recommended to businessmen to whom it is open without prerequisites.

16 lessons, 3 credits, \$15, Peterson

**115 Life Insurance.** Nature, uses, and kinds of life insurance, and the fundamental principles involved in the measurement and underwriting of life risks. Prerequisite: Principles of Economics I and II.

16 lessons, 3 credits, \$15, Williams

**116 Fire and Marine Insurance.** Nature of fire and marine risks and of the types of underwriters, forms of insurance contracts, analysis of policy provisions, and principles and methods of rate making. Prerequisite: Principles of Economics I and II.

16 lessons, 3 credits, \$15, Williams

**117 Casualty Insurance.** Types of coverage which have been developed in this field; analysis of policy provisions and treatment of the important factors involved in the making of rates for each of these types of insurance. Prerequisite: Principles of Economics I and II.

16 lessons, 3 credits, \$15, Williams

**118 Auditing and Public Accounting.** The purposes and principles of auditing. Auditing "from the records" and investigations by independent, internal and governmental auditors. Accounting principles, the S.E.C. and the verification and certification of published statements by public accountants. Specific procedures and particular working papers are interrelated by the audit of a laboratory set calling for actual examination of records and accounts, the preparation of complete working papers, and an audit report. Prerequisite: Economics 26 or approximate equivalent.

21 lessons, 4 credits, \$20, Lund

**134 Income Tax Accounting.** The application of the federal income tax law to individuals and corporations. The course begins with a consideration of what types of income are taxable and which are not. Consideration is then given to items which can be deducted from gross income. Exemptions and tax rates are then studied as the final step in calculation of tax. Practice is given in the preparation of returns. Prerequisite: Some knowledge of elementary accounting.

16 lessons, 3 credits, \$15, Nelson

**146 Investments.** Study of the principles of investment and their application to actual cases. Lessons developed out of concrete examples to develop critical appraisal of specific securities and add to working



knowledge of investment issues. Principal emphasis on the most important groups of securities—railroad, industrial, public utility, and governmental issues. Prerequisites: Elements of Money and Banking and Corporation Finance; recommended to businessmen to whom it is open without prerequisite.

16 lessons, 3 credits, \$15, Sutton

**150 Intermediate Accounting.** Tangible fixed assets (problems of valuation, retirement, and appraisal); intangibles; investments; liabilities; comparative statements; vertical and horizontal analysis; significance of per cents and ratios; analysis of working capital; age of accounts receivable; book value per share of stock; causes of change in gross profit; changes in manufacturing costs; distortion in ratios; profit and loss analysis; a statement of variation in net profit; causes of variations in profits; changes in quantity volume; the breakeven point; use of break-even computations in management; statement of application of funds; funds provided by profits; other sources of funds; and analysis of fixed asset and reserve accounts. Prerequisite for credit: Economics 26 or equivalent.

16 lessons, 3 credits, \$15, Lund

**167 Introduction to Industrial Relations.** Evaluation of managerial policies and devices designed to secure the cooperation and efficient participation of employees in business, industry, and government. Attention is directed especially to the determination of labor needs, job analysis and classification, methods of recruiting workers, selection devices, training and safety programs, service rating, employment stabilization, collective bargaining, and compensation. Prerequisite: Economics 73 or registration in this course.

16 lessons, 3 credits, \$15, Heneman

**188 Advertising.** A survey course of advertising principles and techniques as related to the product and its market including the uses of advertising media: newspapers, magazines, direct mail, display, radio and television, and basic layout and copy techniques used in the construction of advertisements. Prerequisites: Students who are candidates for a degree at the University of Minnesota are required to have B.A. 77, Survey of Marketing, and Psy. 56, Psychology of Advertising. Other students who have had business experience may have these prerequisites waived upon request.

16 lessons, 3 credits, \$15, Lewis

#### CHILD WELFARE

Mildred C. Templin, Ph.D., Associate Professor of Child Welfare  
 Pearl T. Cummings, B.S., Assistant Professor and Extension Worker,  
 Institute of Child Welfare

**1c Child Care and Training.** Physical growth and care of young children. Mental development, personality, and behavior. The management of young children. Establishing desirable habits. Play, toys, games, stories, and music. Intended primarily for parents and others who work

with young children. No prerequisite. Send registrations directly to the Institute of Child Welfare, University of Minnesota.

16 lessons, no credit, \$1, Cummings

**2c The Older Child and Adolescent.** Physical, intellectual, emotional, personality, and social development of older children and adolescents. The guidance, vocational and educational interests and the relations of sex, recreation and friends to the process of growing up are discussed. No prerequisite. Send registrations directly to the Institute of Child Welfare, University of Minnesota.

16 lessons, no credit, \$1, Cummings

**40 Child Training.** A brief survey of physical and mental development together with a discussion of the training of young children. Behavior problems in their various aspects, and the techniques of good and bad management are considered. Prerequisite: Psychology 1 and 2 or equivalent.

16 lessons, 3 credits, \$15, Templin

**50c The Guidance of Children's Interests.** Furthering the child's development by directing his natural activities and interests. Discussion of stories, music, art, and dramatics, as well as the use of tools, toys, and a variety of occupational materials. The value of play and activities initiated and carried out by the children. Prerequisite: Psychology 1 and 2 or equivalent.

16 lessons, 3 credits, \$15, Templin

**80 Child Psychology.** A survey of child psychology from infancy to adolescence. Development of motor skills, language, intelligence, emotional behavior, personality, social behavior, and character. Learning and adjustment. Of interest to the teacher, the general student, and parents. Prerequisite: Psychology 1 and 2 or equivalent.

16 lessons, 3 credits, \$15, Templin

**82 Later Childhood and Adolescence.** What it means to grow up; the effect of physical, mental, and emotional growth on the developing personality; guidance of youth's interests and social life—sex, recreation, friends, and vocation. Not open to those who have completed Psychology of Adolescence in the College of Education. Prerequisite: Psychology 1 and 2 or equivalent.

16 lessons, 3 credits, \$15, Templin

## CHINESE

Chang-Tsing Yang, Ph.D., Instructor in Chinese

**1c Beginning Chinese.** This course aims to provide a practical familiarity with the distinguishing features of the Chinese language so that the student may learn to read modern Chinese literature and easy Chinese newspaper articles; to speak Mandarin, the Chinese national language; to write Chinese characters; to compose simple essays and friendly letters; to translate from Chinese into English and vice versa.

A vocabulary of about one thousand of the most useful characters and compound words will be acquired. No prerequisite. Record available, 78 revolutions per minute.

16 lessons, 3 Extension credits only, \$15, Yang

### ECONOMICS

Herbert G. Heneman, Jr., Ph.D., Associate Professor of Economics

Reuel I. Lund, Ph.D., C.P.A., Assistant Professor of Accounting

Joseph R. McKenna, Ph.D., Assistant Professor of Economics

C. Arthur Williams, M.A., Assistant Professor of Economics and Insurance

Kenneth McCartney, M.A., Instructor in Economics

Paul H. Randolph, M.A., Instructor in Business

Harland G. Fox, B.A., Research Assistant in Industrial Relations

**3 Elements of Money and Banking.** An introduction to the study of modern financial institutions; the nature and functions of money, its types and methods of control; recent efforts to change and regulate the value of money; chief emphasis upon the American financial system, including the mechanism of the money market, investment banking, the functions of trust companies, savings institutions and commercial banks, the federal reserve system including recent modifications, and agricultural credit institutions. No prerequisite.

27 lessons, 5 credits, \$25, McCartney

**5 Elements of Economic Statistics.** A course in the elementary tools for the collection, analysis, and interpretation of statistical data in economics and business; the collection of material by mail, by interviewer, or from published sources; the use of tables, charts, and averages in economic analysis; the measurement of variation and association in statistical data, particularly with relation to the errors of sampling; the construction and use of index numbers in measuring cost of living, price levels, and production. The objective throughout is a reasonable familiarity with the basis for widely used statistical techniques. No prerequisite.

27 lessons, 5 credits, \$25, Randolph

**6 Principles of Economics I.** A course dealing with the underlying principles affecting the production and exchange of goods and services. Organization and regulation of production; the determination of costs and prices under conditions of competition and monopoly and public control of industry. No prerequisite.

27 lessons, 5 credits, \$25, McKenna

**7 Principles of Economics II.** A continuation of Principles of Economics I. Financial organization of society; the distribution of wealth and income; the economic significance of labor organization; labor legislation; socialism; taxation; foreign trade. Prerequisite: Principles of Economics I.

27 lessons, 5 credits, \$25, McKenna

**24 Elements of Accounting.** The form and content of financial statements; ledgers; debit and credit; journals; control accounts; special books; the trial balance; adjusting and closing entries; the work sheet; and the preparation of financial statements. Each lesson will include a reading assignment in a text and a number of problems to work. No prerequisite.

16 lessons, 3 credits, \$15, Lund

**25 Principles of Accounting I.** A large part of the course has to do with corporation accounting. Formation of a corporation; types of stock; opening entries; donated and other treasury stock; surplus; dividends; reserves; surplus statement; valuation of stocks and bonds. The remainder of the lessons will consider peculiarities of accounting for partnership. Prerequisite: Elements of Accounting or equivalent.

16 lessons, 3 credits, \$15, Lund

**26 Principles of Accounting II.** Accounting for manufacturing inventory methods; the job order method; process costs; departmental accounting; branch accounting; consolidated statements; funds statements; and an analysis and interpretation of financial statements. Each lesson includes problems which are to be worked and submitted by the student. A longer practice set is also assigned towards the end of the course. Prerequisite: Economics 25, Principles of Accounting I or equivalent.

16 lessons, 3 credits, \$15, Lund

**50 Insurance Principles.** 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: Principles of Economics I-II.

16 lessons, 3 credits, \$15, Williams

**73 Manpower Economics and Labor Problems.** This course deals with (1) marketing of manpower resources, (2) institutional structure of labor markets, (3) economic and social problems arising from labor marketing processes, (4) methods, procedures and proposals for solving these problems. Prerequisite: Principles of Economics I and II or equivalent.

16 lessons, 3 credits, \$15, Fox

**75 Corporation Finance.** A study of the organization and financial management of corporations, with reference to types of securities, conditions under which they should be issued, and facilities for marketing them. Prerequisite: Principles of Economics I and II, and Elements of Money and Banking.

16 lessons, 3 credits, \$15, Sutton

**164 Labor Legislation and Social Insurance.** A course dealing with selected aspects of labor legislation including background of modern labor legislation; minimum wage laws, hours legislation; labor injunctions; accident, health, old age, and unemployment compensation; state labor laws; labor arbitration. Discussion of Taft-Hartley Act, Railway Labor Act, National Labor Relations Act, Fair Labor Standards Act, Federal Social Security Act and other statutes and administrative rulings. Prerequisite: Economics 73.

16 lessons, 3 credits, \$15, Heneman

**Bookkeeping.** See page 56.

## EDUCATION

Julius M. Nolte, B.A., LL.B., Dean of General Extension and Professor  
George H. McCune, Ph.D., Professor of Social Studies  
Robert H. Beck, Ph.D., Associate Professor of General Education  
Donovan Johnson, Ph.D., Associate Professor of Education  
Harry W. Kitts, Ph.D., Associate Professor of Agricultural Education  
William H. Edson, Ph.D., Assistant Professor of Education  
Helen P. Mudgett, M.A., Assistant Professor of Intercultural Education  
Gordon Mork, M.A., Lecturer in Education  
William F. Ferguson, B.A., Mental Health Education Consultant, State  
Board of Health

**4c Introduction to Philosophy of Education.** A critical study of the crucial issues of contemporary education in the United States. An effort will be made to relate this study to the problems and issues that teachers are now facing in their day-by-day work with children. The central objective of this course is to help teachers to clarify their thinking in respect to role of the teacher and public school in present-day America. No prerequisite.

21 lessons, 4 credits, \$20, Beck

**Ag.Ed. 54 Rural Education and Community Leadership.** An appraisal of community educational agencies; the process of and responsibilities for community leadership; the role of the school in the rural community; coordination of the school with nonschool educational agencies. No prerequisite.

16 lessons, 3 credits, \$15, Kitts

**58 Psychology of Adolescence.** A study of changes characterizing the transition from childhood to adult life. Discussion of physical, mental, social, and emotional development during the adolescent years, with emphasis on the relation of this development to the problems of adolescents in our society. The influence of the secondary schools on good adjustment of adolescents, and implications for guidance during the period of secondary education. This course is listed in the *Bulletin of the College of Education* as Ed. Psy. 158; it is not open to those who have completed Child Welfare 82 or Child Welfare 132. Prerequisite: Ed. 55B or equivalent.

16 lessons, 3 credits, \$15, Edson

**60 Introduction to Measurement and Statistics.** A study of elementary statistical methods and their application to educational problems. The commonly used statistical terms and methods such as mean, median, mode, percentiles, graphs, standard deviation, correlation, standard scores, test analysis, and sampling theory are considered. An attempt is made to give the student some understanding of these terms, practice problems with educational data, and applications and interpretations of statistics. Emphasis is placed on the intelligent interpretation of statistical methods so that the student may plan studies and interpret results correctly.

16 lessons, 3 credits, \$15, Johnson

**65 Teaching of Science in the Elementary Schools.** This course is designed to acquaint the elementary school teacher with objectives, methods and materials of importance in the teaching of science to children. Special attention is given to developing understanding of science concepts and scientific method among children. Those phases of science content of importance in elementary education are identified and special attention is given to their explanation. No prerequisite.

16 lessons, 3 credits, \$15, Mork

**73 Educational Sociology.** General sociological principles and their application to the schools; the study of the community and the adjustment of the teacher to varying types of communities; factors in the development of personality and the relation of personality to the larger social group; a systematic survey of educative aspects of the home, church, recreation, industry, and community, as well as of the school; the problems of the place of education in social progress and the varying viewpoints. No prerequisite.

16 lessons, 3 credits, \$15, McCune

**77 Critical Issues in Modern Education.** The principal aim of the course is to answer the following: What are the outstanding points of view in education today? Such practical questions as discipline, freedom, indoctrination, teacher-pupil relations, progressive methods, will be treated as they relate to underlying theory; but the central objective will be to appreciate the crucial agreements and differences among leading thinkers in contemporary education. This course may be substituted for H.Ed. 76 or 176 in undergraduate curricula. Not open to students who have taken Ed. 4c, Hist.Ed. 76, or Hist.Ed. 176. Prerequisite: 6 hours in psychology.

16 lessons, 3 credits, \$15, Beck

**H.Ed. 92c Techniques of Intergroup Education for Rural Schools.** This course is designed to help rural teachers gain clearer insight into the need of their school-community for a better understanding, both of themselves and of others. No prerequisite.

11 lessons, 2 credits, \$10 (materials \$6.50), Mudgett

**94 Adult Education.** This course is a survey of the field of adult education. It provides an overview of history, purposes, and trends; agencies and areas; clientele and personnel, techniques, and materials. It is intended for persons who are now or expect to be employed in the field and for students of education who want their training to include a knowledge of the philosophy, organization, and operation of adult education. The course may be substituted for Ed.C.I. 104 in undergraduate curricula. No prerequisite.

16 lessons, 3 credits, \$15, Nolte

**129 Principles and Problems of Teaching Social Hygiene.** Prepared by Division of Public Health Education. A course for school administrators, teachers, youth recreational leaders, and social welfare workers. Includes the teaching of human reproduction, physical and emotional changes in adolescence, boy-girl relationships, choosing a mate, preparation for marriage, and relationships between members of the family.

Deals with special problems of teaching which arise when matters pertaining to sex are involved, with methods of adapting the teaching to different grade levels, with ways of incorporating these studies into various courses in the curriculum and with the use of different kinds of visual aids. This course may not be counted as a methods course for certification purposes. Prerequisite: 6 credits in the College of Education.  
16 lessons, 3 credits, \$15, Ferguson

### ENGINEERING

The Institute of Technology embraces the College of Engineering, the School of Architecture, the School of Chemistry, and the School of Mines and Metallurgy. See page 5 for limitation on amount of credit earnable by correspondence courses for Institute of Technology degrees.

Axel B. Algren, M.S.(M.E.), Professor of Mechanical Engineering  
George C. Priester, Ph.D., Professor and Head of Mathematics and Mechanics  
Robert Edward Summers, M.S.(M.E.), Dean of Admissions and Records and Professor  
Miles S. Kersten, Ph.D., Associate Professor of Civil Engineering  
Orrin W. Potter, M.S., Associate Professor of Drawing and Descriptive Geometry  
Theodor W. Thomas, M.S.(C.E.), Associate Professor of Civil Engineering  
Paul A. Cartwright, M.S., Assistant Professor of Electrical Engineering  
Immanuel C. Fischer, M.S., Assistant Professor of Engineering  
Walter O. Carlson, M.S.(M.E.), Instructor in Mechanical Engineering  
Ellis Peilen, B.S.(Aero.E.), Instructor in Engineering  
James K. Threlkeld, M.S.(M.E.), Lecturer in Mechanical Engineering

### AERONAUTICAL ENGINEERING

**1c Elementary Aeronautics.** This course offers the basic principles of aviation in an elementary way. History of aviation; the airplane and its parts; principles of aerodynamics; theory of flight; airfoils, slots, and flaps, aerodynamic resistance; stability and control; aircraft engine operation; propellers; jet propulsion; flight maneuvers; aircraft construction; seaplanes and flying boats; military and commercial aircraft applications; radio; accessories; instruments. No prerequisite is required although a knowledge of high school algebra will be helpful. (May be substituted for Aero.Eng. I. 3 credits in Institute of Technology.)  
16 lessons, 3 Extension credits only, \$15, Peilen

### CIVIL ENGINEERING

**54c Soils Engineering.** 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: One year of college mathematics desirable; consult instructor.

16 lessons, 3 Extension credits only, \$15, Kersten

**146 Concrete and Concrete Materials.** This includes a study of the materials from which concrete is made, methods of designing a concrete mixture, the principles of air-entrained concrete, methods of measuring and controlling the air content, the chemical constitution of cement, properties of concrete, the practical aspects of proportioning, mixing, placing, and curing concrete and other special related topics. Prerequisite: Knowledge of elementary algebra, physics, and chemistry. If credit is desired, prerequisite is Mathematics and Mechanics 128 or consent of instructor.

16 lessons, 3 credits, \$15, Thomas

#### DRAWING

**1 Engineering Drawing.** Elements of drafting including methods of representation, geometry, lettering, sketching, dimensioning, and working drawings. Prerequisite: Solid Geometry.

16 lessons, 3 credits, \$15, Potter

**2 Engineering Drawing.** Sections, auxiliary views, conventions, standards, tolerance dimensioning, working drawings, tracing. Prerequisite: Drawing 1.

16 lessons, 3 credits, \$15, Potter

**4 Freehand Lettering.** Practice in freehand commercial Gothic lettering, as used by draftsmen and engineers and in offices, stores, hospitals, libraries, schools, etc. No prerequisite.

6 lessons, 1 credit, \$5, Potter

#### ELECTRICAL ENGINEERING

**1c Elements of Electric Circuits.** 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.

16 lessons, 3 Extension credits only, \$15, Cartwright

**2c Elements of Electronics.** 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: Course 1c or equivalent.

16 lessons, 3 Extension credits only, \$15, Cartwright

**3c Elements of Electric Machinery.** Theory of direct-current and alternating-current machinery. Study of operating characteristics. Elementary control equipment and maintenance. Prerequisite: Course 1c or equivalent.

16 lessons, 3 Extension credits only, \$15, Cartwright

#### GENERAL ENGINEERING

**70 Slide Rule.** Practical course for engineers and office workers. Position of decimal point in computation stressed. No prerequisite.

6 lessons, 1 credit, \$5, Potter



**MATHEMATICS AND MECHANICS**

For additional credit courses in mathematics, see page 43.

**1c and 3c Basic Mathematics.** The two units in Basic Mathematics listed below are offered under the course names, Basic Mathematics Review I and Basic Mathematics Review II. These courses may be taken for review of high school mathematics through trigonometry, or they may be used as beginning courses in mathematics. They have been planned with several objectives in view: (1) To provide some appreciation and application of mathematics for those who are not planning to study more advanced work in mathematics, particularly courses above the high school level. (2) To provide a thorough review for students who find that they have forgotten much of the basic mathematics of high school level. (3) To provide a basic background for students planning to pursue more advanced courses in mathematics. There is no prerequisite for the first unit of these courses, except that it is expected that the student has a knowledge of grade school arithmetic. Courses **cannot** be used for credit toward teachers' certificates. See page 4.

**1c Basic Mathematics Review I.** A thorough review of grade school arithmetic; square and cube root. A good foundation in elementary algebra; the fundamental operations involving positive and negative numbers; fractions; the solution of simple equations and fractional equations; exponents; symbols of grouping; special products and factoring; and simplification of fractional expressions. No prerequisite.

16 lessons, 3 Extension credits only, \$15, Fischer

**3c Basic Mathematics Review II.** This course covers the material of the second semester of high school algebra and the numerical part (called mensuration) of plane and solid geometry, plus numerical trigonometry and logarithms. In algebra: simultaneous linear equations; exponents and radicals; solution of quadratic equations, irrational equations; ratio, proportion variation; graphical representation of statistical data and of equations; and the use of formulas. In geometry: formulas from plane and solid geometry and how to apply them. In trigonometry: logarithms and how to use them; the trigonometric functions; and solution of right and oblique triangles. Prerequisite: The equivalent of Basic Mathematics Review I.

16 lessons, 3 Extension credits only, \$15, Fischer

**2c Elementary Mechanics.** Short practical course in elementary mechanics for those who have not had calculus. Numerical and simple graphical calculations of the action of forces on machines. Components of forces; analysis of stresses in simple structure; centroids and moments of inertia of plane areas. Prerequisite: Basic Mathematics or equivalent.

16 lessons, 3 Extension credits only, \$15, Priester

**9c Higher Algebra.** Review of elementary algebra, linear equations, determinants, ratio and proportion, variation, quadratic equations, graphs, progressions, binomial theorem. Prerequisite: 1 year of elementary algebra.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Priester

**10c Solid Geometry.** Standard theorems and exercises. Practice in special proofs and original exercises to develop imagination and initiative. Prerequisite: Plane Geometry A-B or 1 year of high school plane geometry.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Fischer

**Note**—Courses 9c and 10c meet the entrance requirement in mathematics of the Institute of Technology.

**11 College Algebra.** Theory of quadratic equations, interpretation of complex results, graphical representation, indeterminate equations, ratio and proportion, variation, progressions, series, undetermined coefficients, binomial theorem, logarithms, theory of equations, Horner's method. Prerequisite: Course 9c.

27 lessons, 5 credits, \$25, Priester

**12 Trigonometry.** Computation by logarithms. Trigonometric functions, plane right triangles, reduction formulas, fundamental relations, addition formulas, double angles, half angles, identities and equations, inverse functions, oblique triangles, de Moivre's theorem, spherical right triangles. Prerequisite: Course 11.

27 lessons, 5 credits, \$25, Fischer

**13 Analytic Geometry—Plane and Solid.** Coordinate systems, locus and equation, straight line, circle, parabola, ellipse, and hyperbola. Transformation of coordinates and simplification of equations. Polar coordinates, higher plane curves, tangents, normals, empirical equations, and elementary solid analytic geometry. Prerequisite: Courses 11 and 12.

27 lessons, 5 credits, \$25, Fischer

**24 Differential Calculus.** Functions and limits, the derivative. Applications of the derivative to problems in rates, maxima and minima, inflections, curve tracing. Differentials, approximation with differentials, polar coordinates, parametric equations, curvature, indeterminate forms, partial differentiation, infinite series. Prerequisite: Analytical Geometry or equivalent.

27 lessons, 5 credits, \$25, Fischer

**25 Integral Calculus.** The integration of standard elementary forms, integration by various devices, the evaluation of constant of integration, the definite integral, areas, volumes, length of curve, area of surfaces, centroids, moments of inertia, fluid pressures, multiple integration with applications, infinite series and the expansion of functions. Prerequisite: Differential Calculus or equivalent.

27 lessons, 5 credits, \$25, Fischer

**26 Technical Mechanics: Statics.** Characteristics of a force, parallelogram law, moments, couples, resultant of a force system, equilibrium of a force system, friction, centroids, moments of inertia, catenary. Prerequisite: Integral Calculus.

27 lessons, 5 credits, \$25, Priester

**127 Technical Mechanics: Dynamics.** Force, mass acceleration, translation and rotation, gyroscope, governors, work, energy, power, conservation of energy, impulse, momentum, loss of kinetic energy, conservation of momentum. For those who wish to apply the principles of dynamics and kinematics to engineering problems. Prerequisite: Technical Mechanics: Statics.

27 lessons, 5 credits, \$25, Priester

**128 Strength of Materials.** Mechanical and elastic properties of materials of construction, beams, shafts, columns, combined stresses, hollow cylinder rollers, plates, curved bars, springs, dynamic stresses, true stresses. Prerequisite: Integral Calculus and Technical Mechanics: Statics.

27 lessons, 5 credits, \$25, Priester

#### MECHANICAL ENGINEERING

**1c Steam Power Plants I.** For boiler operators. Fuels, combustion, furnaces, steam generators, pumps, pipes and fittings. Boiler room practices. Properties of steam; boiler-water conditioning. Prerequisite: Proficiency in arithmetic.

16 lessons, 3 Extension credits only, \$15, Summers

**3c Air Conditioning.** A course designed to present the fundamentals of air conditioning to those interested in designing, installing, selling, or recommending the modern type of appliances for heating, cooling, humidifying, or otherwise conditioning the air for residences and other buildings. The subject matter of this course deals with the comfort conditions of the human body; the laws of temperature, pressure, humidity, etc.; calculation of heat transmission losses and heating loads; calculation of cooling loads including sensible heat load, effect of solar radiation, and latent heat load; humidification and dehumidification; air distribution and air motion; air duct design including pressure losses, friction losses, size of ducts, air velocities, and duct construction. Especial consideration has been given to the basic principles and their application to practical problems. Prerequisite: Elementary Algebra or permission of instructor.

16 lessons, 3 Extension credits only, \$15, Algren

**6c Heating and Ventilating.** A course arranged to present the fundamentals of heating and ventilating to those interested in designing, installing, selling, or recommending modern types of appliances for heating and ventilating residences and other types of buildings. The subject matter of this course deals with calculation of heat transmission losses and heating loads; psychrometry and humidification; radiators and boilers; fuels, combustion, and chimney; hot water and steam heating systems; gravity and forced air heating systems; ventilation standards and the design of ventilating systems. Prerequisite: Elementary Algebra or permission of instructor.

16 lessons, 3 Extension credits only, \$15, Algren

**16c Refrigeration.** This course is arranged to meet the demands of operating and design engineers as well as those employed in the sales, installation and servicing of refrigeration. It is a comprehensive study dealing with fundamental thermodynamics as applied to refrigeration;

theoretical cycles of compression machines; refrigerants and their properties; principles of refrigeration; condensers, evaporators, and coolers; refrigerants; piping and fittings; automatic refrigerating machines; water vapor refrigerating systems; adsorption and absorption machines; refrigeration in air conditioning; heat transfer and methods of calculating refrigeration load. Prerequisite: Elementary Algebra or permission of instructor.

16 lessons, 3 Extension credits only, \$15, Threlkeld

**17c Industrial Plant Layout.** This course is designed to present the fundamentals of layout work to those interested in improving existing plant layouts or designing new layouts. The purpose of all such work is to find the best possible way to produce industrial products.

Some of the problems covered are: plant location; building design and construction; material handling methods and equipment; safety considerations; service facilities; selection and purchase of equipment; tools of layout work; practical plant problem. The first section of the course deals with the theory involved and the last section gives the student an idea of the many problems encountered by means of a complete plant layout problem. No prerequisite.

27 lessons, 5 Extension credits only, \$25, Carlson

**18c Motion and Time Study Engineering.** One of the most necessary and most used branches of industrial engineering, this work is absolutely essential for efficient plant operation and accurate wage determination.

Beginning with the skeletal structure of the subject, which gives the student a firm grasp of the logical development of the subject matter, all phases are explained, first in terms of present practice, and then in terms of the most recently developed techniques.

Some of the topics covered are: the importance of motion and time study; the skeletal structure of methods analysis; process analysis; operation analysis; micromotion study; motion study problems; the skeletal structure of time study; breakdown of job into elements; determination of time consumed; job rating; personal, fatigue, and delay allowances; new techniques in the field; timing techniques for typical industrial operations; time study problems. No prerequisite.

27 lessons, 5 Extension credits only, \$25, Carlson

## ENGLISH

(For courses in humanities, see page 39.)

Mary C. Turpie, Ph.D., Assistant Professor of English  
 Helen Acker Anderson, M.A., Instructor in English  
 Ralph Haug, Ph.D., Instructor in English  
 Louise Klohn, M.A., Instructor in English  
 Agnes Macdonald, M.A., Instructor in English  
 Robert C. Rathburn, M.A., Instructor in English  
 Viva Stephenson, B.A., Instructor in English

## LITERATURE

**1c Freshman Literature I.** Intended for students who have had work in composition equivalent to that of English A-B-C, but who have not had the training in the reading of imaginative literature included in that course. This course carries credit for the work in literature of English A. It includes the study of drama (Shakespeare's *Romeo and Juliet*), the short story (six modern ones by Joyce, Mansfield, Hemingway, etc.), poetry (six narrative poems), and the novel (Conrad's *Heart of Darkness*). Prerequisite: Composition 4-5-6.

16 lessons, 3 credits, \$15, Anderson

**2c Freshman Literature II.** This course carries credit for the work in literature of English B. It includes the study of drama (Shakespeare's *Henry IV*), poetry (seven descriptive, dramatic, and lyric poems), and the novel (Butler's *The Way of All Flesh*). Prerequisite: Composition 4-5-6.

16 lessons, 3 credits, \$15, Anderson

**3c Freshman Literature III.** This course carries credit for the work in literature of English C. It includes the study of prose satire (Swift's *Gulliver's Travels*), poetry (five poems of various kinds including Coleridge's "The Rime of the Ancient Mariner" and Marvell's "To His Coy Mistress"), and the short story (four modern ones by Forster, Lawrence, Porter, and Welty). Prerequisite: Composition 4-5-6.

16 lessons, 3 credits, \$15, Anderson

**4c Masterpieces of World Literature.** A course for those who want to learn to read well, to raise the standard of their reading, and to acquaint themselves with the classics which everyone should know. The books on the reading list have been selected from the world's great stories and are treated in a way to help the reader discuss intelligently with others the problems of today. Of interest to prospective college students, club women, book reviewers, writers, teachers, and other professional people, as well as to homemakers and those in the business work who realize the opportunities that a command of reading and intelligent conversation has to offer. No prerequisite. Course cannot be used for credit toward teachers' certificates. See page 4.

12 lessons, 2 Extension credits only, \$10, Klohn

**\*21 Introduction to Literature I.** An intensive study of the leading writers of poetry and prose and of their historical background. The entire course of three terms begins with Marlowe and ends with Arnold. A knowledge of English history from Elizabeth to Victoria is required. The first term includes Marlowe, Spenser, Bacon, Browne, Milton, Bunyan, and Dryden. Prerequisite: Composition 4-5-6.

27 lessons, 5 credits, \$25, Anderson

\* Students may enter any course. Two courses are required as a prerequisite for a major sequence; the second and third are required for a teacher's certificate. † The material covered in Composition 4-5-6 and Freshman Literature I-II-III is equivalent to that given in classes in English A-B-C. Students completing these six courses through correspondence study will be entitled to 15 credits. No credit toward graduation is allowed for Freshman Literature I-II-III until Composition 4-5-6 is completed.

**\*22 Introduction to Literature II.** A continuation of 21. Addison and Steele, Swift, Pope, Fielding, Johnson, Boswell, and Sheridan. Prerequisite: Composition 4-5-6.

27 lessons, 5 credits, \$25, Anderson

**\*23 Introduction to Literature III.** A continuation of 22. Wordsworth, Lamb, Byron, Shelley, Keats, Carlyle, Browning, and Arnold. Prerequisite: Composition 4-5-6.

27 lessons, 5 credits, \$25, Anderson

**38 Twentieth-Century Literature II.** A survey of the main currents in contemporary poetry and drama. The course includes selections from the works of Hardy, Housman, Auden, Eliot, Pound, Stevens, Crane, Robinson, Frost, Yeast, Thomas, Cummings, Tate, O'Neill, Anderson, Rice, Saroyan, Williams, and Miller. The following texts will be used: Oscar Williams, *A Little Treasury of Modern Poetry* (Scribners, Revised Edition); Harlan Hatcher, *Modern American Drama* (Harcourt Brace, Revised Edition). Prerequisite: Composition 4-5-6.

16 lessons, 3 credits, \$15, Anderson

**39 Twentieth-Century Literature III.** 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.

16 lessons, 3 credits, \$15, Anderson

**52 The English Novel I.** The development of the novel from Defoe to Scott. Emphasis on the reading of a number of important novels and excerpts from others, supplemented by biographical and literary information obtained from a textbook and from one of the ordinarily accessible encyclopedias. Prerequisite: Composition 4-5-6, or exemption.

(Registrations not accepted 1952-53)

16 lessons, 3 credits, \$15, Rathburn

**53 The English Novel II.** Method as in Course 52, except that no excerpts will be read. The reading consists of *Bleak House*, *Vanity Fair*, *Jane Eyre*, *Wuthering Heights*, *Adam Bede*, *Barchester Towers*, *Mary Barton*, *Richard Feverel*. Prerequisite: Composition 4-5-6, or exemption.

16 lessons, 3 credits, \$15, Rathburn

**55 Shakespeare I.** Shakespeare's development as a dramatist. A careful study of the Comedies. Prerequisite: Composition 4-5-6, and 6 additional credits in English.

16 lessons, 3 credits, \$15, Stephenson

**56 Shakespeare II.** A continuation of Course 55, with emphasis on the Tragedies. Prerequisite: Composition 4-5-6 and 6 additional credits in English.

16 lessons, 3 credits, \$15, Stephenson

**73 American Literature I.** A survey of American literary development from the seventeenth century to the middle of the nineteenth. Prerequisite: Composition 4-5-6 and 6 additional credits in English.  
16 lessons, 3 credits, \$15, Turpie

**74 American Literature II.** A continuation of American Literature I. A survey of American literary development from Whitman to the present day. Prerequisite: Composition 4-5-6 and 6 additional credits in English.  
16 lessons, 3 credits, \$15, Turpie

**75 Chaucer.** Reading of selections from *The Canterbury Tales* (and of the following critical discussions: *Chaucer and His Poetry* by G. L. Kittredge). The emphasis of this course will be on content and literary forms. Only such attention as is necessary to illuminate the text and to make the reading easy and enjoyable will be given to the life, times, and language of Chaucer. Prerequisite: Composition 4-5-6 and 6 additional credits in English.  
21 lessons, 4 credits, \$20, Stephenson

#### COMPOSITION

**Preparatory English.** See page 57.

**Vocabulary Building.** See page 54.

**4 Composition IV.** Introduction to the college study of English composition: review of grammar; the writing, criticism, and revision of themes; study of models of contemporary English prose. Emphasis throughout on clarity and correctness, especially in the sentence. Composition 4-5-6 fulfills the freshman requirement. No prerequisite.  
16 lessons, 3 credits, \$15, Haug

**5 Composition V.** Continuation of Composition IV: the writing, criticism, and revision of themes; study and analysis of models of contemporary English prose; the preparation of research papers. Emphasis throughout on effectiveness (rather than mere correctness) in the sentence, and on coherence in the whole composition. Prerequisite: Composition 4.  
16 lessons, 3 credits, \$15, Haug

**6 Composition VI.** Continuation of Composition V, including themes and reading; but the emphasis throughout is on diction, the history of the English language, and the use of the dictionary. Prerequisite: Composition 5.  
16 lessons, 3 credits, \$15, Haug

**26c Scientific Writing.** Study of the more common forms and techniques used in presenting scientific and technical information. Emphasis throughout is on the inductive method. Prerequisite: English A-B-C or Composition 4-5-6 or exemption from requirement; a course in a natural science is desirable.

(Registrations accepted subject to availability of texts or revision.)  
16 lessons, 3 credits, \$15, Haug

**27 Advanced Writing I—Exposition.** Study and writing of essays with emphasis on structure and organization. The student is free to choose his own essay subjects. The course is intended to aid the student in working out individual problems. Prerequisite: English A-B-C or Composition 4-5-6 or exemption from requirement.

16 lessons, 3 credits, \$15, Haug

**28 Advanced Writing II—Narration and Description.** Study of principles of description and narration with analysis of specimens and exercises in writing. Prerequisite: Advanced Writing I.

16 lessons, 3 credits, \$15, Haug

**69 Short Story Writing I.** A basic study of short story technique, with emphasis on the student's completion of several original stories. Manuscripts will be carefully read, and suggestions for improvement will be offered. The textbook is the work of a successful author, and the stories studied illustrate a variety of writing methods. Prerequisites: Composition 4-5-6 and Advanced Writing 27-28.

16 lessons, 3 credits, \$15, Macdonald

**70 Short Story Writing II.** In this course the student should reap the benefits of what he has learned in Short Story Writing I. He will write four stories, in all approximately 10,000 words, and these stories will be carefully read and criticized. He will read a number of useful stories and consider such things as style, tone, pace, suggestion, and symbols. Prerequisite: Short Story Writing I.

16 lessons, 3 credits, \$15, Macdonald

**80c Independent Writing.** Specifically designed for advanced students. The student is given complete freedom; but assignments will be made and lesson material supplied from time to time. The instructor will criticize any writing which the student submits.

16 installments of a total of approximately 8,000 words. 3 Extension credits only, \$15, Anderson

## FRENCH

John M. Sullivan, M.A., Assistant Professor of Romance Languages

A French pronunciation record (78 revolutions per minute) prepared by the Romance Languages Department and the Correspondence Study Department may be purchased for \$1.50. Not required but advised.

**1 Beginning French I.** A course in the essentials of the French language; grammar, reading, pronunciation, easy composition. No prerequisite.

27 lessons, 5 credits, \$25, Sullivan

**2 Beginning French II.** A continuation of Course 1. Prerequisite: Course 1 or one year of high school French.

27 lessons, 5 credits, \$25, Sullivan

**3 Intermediate French I.** Review of grammar; composition; reading of representative authors. Prerequisites: Course 2 or two years of high school French.

27 lessons, 5 credits, \$25, Sullivan



**4 Intermediate French II.** A continuation of Course 3. Prerequisite: Course 3 or three years of high school French.

27 lessons, 5 credits, \$25, Sullivan

**53 Elementary French Composition.** Translations of passages of connected prose dealing with everyday life in France. Prerequisite: Course 4.

16 lessons, 3 credits, \$15, Sullivan

**63 Advanced French Composition.** A continuation of Course 53. It affords practical exercises in prose composition. Prerequisite: Course 53 or equivalent.

16 lessons, 3 credits, \$15, Sullivan

### GEOGRAPHY

Fred E. Lukermann, M.A., Teaching Assistant in Geography

**41 Geography of Commercial Production.** An introductory course in economic geography with special emphasis on commodities of commercial significance. Particular attention is given to the world patterns of raw material occurrence and production, as well as to the associated centers of industrial fabrication. No prerequisites.

27 lessons, 5 credits, \$25, Lukermann

### GEOLOGY

W. Charles Bell, Ph.D., Associate Professor of Geology

**8 Introductory Geology.** An introductory treatment of the materials of the earth and of geologic processes; principles of earth sculpture, glaciation, volcanic activity, mountain building, etc., as a key to the interpretation of the surface features and the history of the earth. No prerequisite.

27 lessons, 5 credits, \$25, Bell

### GERMAN

Lynwood G. Downs, Ph.D., Associate Professor of German

Edwin F. Menze, Ph.D., Assistant Professor of German

Herman Ramras, M.A., Assistant Professor of German

Gina Wangsness, M.A., Assistant Professor of German

A German pronunciation record (78 revolutions per minute) prepared by the German Department and Correspondence Study Department is available for \$1.50. Not required but advised.

**1 Beginning German I.** Grammar and easy composition. The course aims to give the student a knowledge of the elements of German grammar, the facility to read easy German, and to write simple German sentences. No prerequisite.

27 lessons, 5 credits, \$25, Downs

**2 Beginning German II.** A continuation of Course 1. Prerequisite: Course 1 or one year of high school German.

27 lessons, 5 credits, \$25, Downs

**3 Beginning German III.** Grammar and composition continued; selected readings in easy prose and verse. Prerequisite: Course 2 or two years of high school German.

27 lessons, 5 credits, \$25, Wangsness

**4 Intermediate German.** Selections from modern narrative and descriptive prose. Assigned outside readings and reports. Prerequisites: Courses 1, 2, and 3 or equivalent.

27 lessons, 5 credits, \$25, Wangsness

**24 Introduction to Chemical German.** Selections of simple chemical German prose. Vocabulary and grammatical exercises. No prerequisite.

16 lessons, 3 credits, \$15, Downs

**25-26 Chemical German.** Reading of works on chemistry. Vocabulary exercises. Prerequisite: Course 24, 1, or one year of high school German.

Course 25—16 lessons, 3 credits, \$15, Downs

Course 26—16 lessons, 3 credits, \$15, Downs

**33 Medical German.** This course is intended primarily for medical students. Articles on anatomy, biology, embryology, comparative anatomy, surgery, and other fields of medicine. Prerequisite: Course 3 or equivalent.

27 lessons, 5 credits, \$25, Wangsness

**50 Elementary Composition I.** A review of the fundamentals of German grammar with particular attention to the idioms and characteristics of conversational and written German. Prerequisite: Course 4 (Intermediate German).

11 lessons, 2 credits, \$10, Menze

**51 Elementary Composition II.** Translation and grammar review. Prerequisite: Course 50.

11 lessons, 2 credits, \$10, Menze

**52 Elementary Composition III.** Translation and writing of an original dialog. Prerequisite: Course 51.

11 lessons, 2 credits, \$10, Menze

**63 Drama I.** Study of the nineteenth-century drama in Germany. Selected plays of Hebbel, Hauptmann, or Sudermann, with assigned readings and reports. Open to those who have completed Courses 1, 2, 3, and 4.

24 lessons, 4½ credits, \$22.50, Ramras

**64 Drama II.** Study of the German drama of the eighteenth century and through the classic period. Selected plays of Lessing, Goethe, or Schiller, with assigned readings. Prerequisite as in Course 63.

24 lessons, 4½ credits, \$22.50, Ramras

## GREEK

William A. McDonald, Ph.D., Associate Professor of Classics

**1 Beginning Greek I.** Successful completion of Beginning Greek I and II should provide the familiarity with the language necessary to launch out (with a dictionary and a modicum of courage) on the reading of ancient Greek authors of moderate difficulty. From the very start, short

but authentic selections from the famous writers are read. A student should have no difficulty (other than new vocabulary) in reading the New Testament after Greek II.

27 lessons, 5 credits, \$25, McDonald

**2 Beginning Greek II.** (See above description)

27 lessons, 5 credits, \$25, McDonald

**3 Beginning Greek III.** Selections from Attic Prose. Prerequisite: Course 2.

27 lessons, 5 credits, \$25, McDonald

## HEALTH

Phillip D. Kernan, M.D., Assistant Professor of Public Health

Abraham B. Rosenfield, M.D., Lecturer in Public Health

**1c Maternal and Child Hygiene.** Prepared by the Division of Maternal and Child Health of the Minnesota Department of Health. The lessons emphasize maternal and child welfare, prenatal hygiene, care of the mother, common complaints and how to relieve and avoid them, preparation for confinement, after-care of the mother and the child, infant care and feeding, and later growth and development.

10 lessons, no credit, free to residents of Minnesota, Rosenfield

**P.H. 3 Personal Health.** Elementary principles of normal body function; predisposing and actual causes of disease; ways in which disease may be avoided. Open without prerequisite to those who have not taken Human Biology 10C in General College.

12 lessons, 2 credits, \$10, Kernan

**P.H. 50 Public and Personal Health.** Causes of diseases and of physical defects; fundamental principles and working methods of health conservation and disease prevention. Open without prerequisite to those who have not taken Courses 3, 4, or Human Biology 10C in the General College.

16 lessons, 3 credits, \$15, Kernan

## HISTORY

Tom B. Jones, Ph.D., Professor of History

Cyril Allen, Ph.D., Instructor in History

Roger D. Derby, Ph.D., Instructor in History

Clodaugh M. Neiderheiser, M.A., Instructor in History

Earl Spangler, M.A., Instructor in History

Mary White, B.S., Instructor in History

**1 Civilization in the Modern World I.** A survey of European history from 1500 to 1763. The emphasis is upon the rise of state. No prerequisite.

16 lessons, 3 credits, \$15, White

**2 Civilization in the Modern World II.** A survey of European history from 1763 to 1870. Emphasis is placed upon the struggle for control of the state. No prerequisite.

16 lessons, 3 credits, \$15, White

**3 Civilization in the Modern World III.** A survey of European history from 1870 to the present. Emphasis is placed upon impact of industrialism in nineteenth-century civilization and the development of the problems that have upset the world civilization in the twentieth century. No prerequisite.

16 lessons, 3 credits, \$15, White

**4 English History.** Conquest and settlement, the feudal age, foreshadowings of limited monarchy and popular government. No prerequisite.

16 lessons, 3 credits, \$15, White

**5 English History.** Tudors and Stuarts, parliament versus king, colonization. No prerequisite.

16 lessons, 3 credits, \$15, White

**6 English History.** The coming of democracy, Britain and Europe, Empire and Commonwealth. No prerequisite.

16 lessons, 3 credits, \$15, White

**7c Survey of Minnesota History.** The history of Minnesota from the explorers to the present with emphasis on the social, cultural, and economic, as well as the political history of the state. The state's racial composition and contributions, the rise of industries, the evolution of transportation and of farming, and changes in social and political attitudes are among the topics studied. Access to Folwell's *History of Minnesota* and the magazine *Minnesota History* will be required. Not open to those who have completed History 79. No prerequisite.

21 lessons, 4 credits, \$20, Neiderheiser

**8c The Foundations of Modern Civilization.** An insight into the development of human institutions and practices which comprise what is called modern civilization. A study of primitive man, civilizations of the Ancient Near East, Greece, and Rome; the decline of Rome, and, with it, ancient civilization in the West; the development of modern civilization which may be said to have been launched by 1500 A.D. Throughout the course, emphasis is placed on culture traits, such as religion, art, literature, science, economics, political institutions, and whatever else made up a civilization at a given time. Not open for credit to those who have completed History 1, 2, 3. No prerequisite.

21 lessons, 4 credits, \$20, White

**14 History of Ancient Civilization I.** A survey of the rise of civilization in the Ancient Near East from the earliest times to 500 B.C. Emphasis is placed upon the origin of culture and its development in complexity from the primitive to the civilized stage. Special attention is given to the civilizations of Babylonia, Egypt, Indus Valley, Syria, Palestine, and Crete. No prerequisite.

16 lessons, 3 credits, \$15, Jones

**14a Basic Readings in Ancient Civilization I.** An introduction to the literature of the Ancient Near East and its relation to the Old Testament. The reading will include translations of Babylonian and Egyptian epics, religious texts, folk tales, and public records, Assyrian, Hittite, and North

Syrian literature as well as the Greek epics will be included. Prerequisite: History 14 or concurrent registration.

12 lessons, 2 credits, \$10, Jones

**15 History of Ancient Civilization II.** The history of the rise and flowering of Greek civilization from the earliest times to the death of Alexander the Great in 323 B.C. Special emphasis is placed on Greek civilization in the fifth century (Age of Pericles) with attention to the political, social, literary, artistic, and philosophic achievements of that period. No prerequisite. (Note: the student will, however, find History 14 helpful in providing a background for the Greek period.)

16 lessons, 3 credits, \$15, Jones

**15a Basic Readings in Ancient Civilization II.** An introduction to the major authors of the classical Greek period. Selections from the poets, the dramatists, Herodotus, Thucydides, Xenophon, the orators Plato and Aristotle. Prerequisite: History 15 or concurrent registration.

12 lessons, 2 credits, \$10, Jones

**16 History of Ancient Civilization III.** The climax of ancient civilization during the Hellenistic Age (323-133 B.C.) and the Roman Imperial Period followed by the decline of Rome and of ancient civilization (to about 300 A.D.) The three main topics to be considered are (1) the civilization of the ancient world at its peak, (2) the rise and flowering of Roman culture, and (3) the reasons for the decline of ancient civilization. Special attention will be paid to political institutions, art, literature, economics and society, philosophy, and ancient science. No prerequisite. (Note: it is suggested that History 16 be preceded by History 14 and 15 in order that the student may acquire a background for the history of the Roman period.)

16 lessons, 3 credits, \$15, Jones

**16a Basic Readings in Ancient Civilization III.** An introduction to the literature of the Hellenistic and Roman periods. Selections from poetry, drama, history, biography, science, philosophy, oratory, and letters. The New Testament and early Christian writings will be considered in their relation to pagan literature. Prerequisite: History 16 or concurrent registration.

12 lessons, 2 credits, \$10, Jones

**20 American History I (1763-1840).** This course covers the period from 1763 to the close of the War of 1812, and includes the background of the Revolution, the war itself, and the formation of the national government, the growth of parties, and the conflicts over foreign policies, the development of democracy and of nationalism. No prerequisite.

16 lessons, 3 credits, \$15, Spangler

**21 American History II (1840-1877).** A survey of the development of the United States from the close of the War of 1812 to the close of the Civil War. Special emphasis upon the westward movement, the new democracy, the tariff and public land questions, sectionalism and slavery conflicts, and the background of the Civil War. Careful study of the social and economic changes of the period. No prerequisite.

16 lessons, 3 credits, \$15, Spangler

**22 American History III (1877 to present).** A survey of American history from the close of the Civil War to the entry of the United States into the Korean conflict. Special emphasis is laid on the economic changes of the period and their reaction upon politics. No prerequisite.

16 lessons, 3 credits, \$15, Spangler

**73c-74c-75c Survey of Latin-American History.** A survey of the historical evolution of the Latin-American countries from 1492 to the present time. The course is divided into three sections: 73c, Spanish and Portuguese exploration and settlement in the New World; 74c, The Wars for Independence and the nineteenth-century development of Latin America; 75c, The Twentieth Century. The course may be taken for credit in two ways: the whole sequence (73c-74c-75c) may be completed for 9 credits, or 75c (The Twentieth Century) may be taken separately for 3 credits. No prerequisite.

16 lessons, 3 credits each section, \$15 each, Allen

**79 History of Minnesota.** Minnesota's history since the coming of the French with primary emphasis on the period following statehood. The development of the state's principal industries, the growth of its cities, its racial composition, and its changes in social and political attitudes. Access to Folwell's *History of Minnesota* and the magazine *Minnesota History* will be required.

16 lessons, 3 credits, \$15, Neiderheiser

**100a Greek History I.** The history of Greece and the Aegean area from earliest times to 500 B.C. The following topics will be considered: the archeology of the prehistoric period with special emphasis upon Minoan and Mycenaean civilization and Troy; the rise of Greek culture (1000-750 B.C.); the rise of Sparta and Athens and the early development of Greek literature, art, and philosophy (700-500 B.C.). Prerequisite: 9 credits in history. Open to juniors and seniors without prerequisite.

16 lessons, 3 credits, \$15, Jones

**101a Greek History II.** The classical period of Greek civilization (500-362 B.C.). Main topics to be considered: the Persian Wars, the wars between Athens and Sparta, the Spartan and Theban attempts to establish Greek empires; Greek society and economics; classical art, architecture, literature (with special attention to the drama), and philosophy. Readings in translated sources. Prerequisite: History 100a. Open to juniors and seniors without prerequisite.

16 lessons, 3 credits, \$15, Jones

**102a Greek History III.** History of the Hellenistic phase of Greek civilization (362-146 B.C.). Greek history from the rise of Macedonia and Alexander the Great to the Roman conquest. Special emphasis upon art, architecture, literature, philosophy, and science. Prerequisite: History 101a. Open to juniors and seniors without prerequisite.

16 lessons, 3 credits, \$15, Jones

**100b Roman History I.** Rome and Italy from the earliest times to 133 B.C. Survey of Italian prehistory, the Roman monarchy, the establishment of the Roman Republic, and Roman expansion in the Mediter-

ranean area to 133 B.C. Archeological studies, the evolution of the Roman government, as well as economic and cultural developments, will be stressed. Prerequisite: 9 credits in history. Open to juniors and seniors without prerequisite.

16 lessons, 3 credits, \$15, Jones

**101b Roman History II.** The fall of the Roman Republic and the rise of the Empire (133 B.C. to 68 A.D.). Political, economic, and social factors. Attention to literature and general culture. Reading in the sources (in translation) will form part of the work. Prerequisite: History 100b. Open to juniors and seniors without prerequisite.

16 lessons, 3 credits, \$15, Jones

**102b Roman History III.** The flowering and decline of the Roman Empire (68 to 305 A.D.). The history of Roman civilization from Vespasian to the abdication of Diocletian. Prerequisite: History 101b. Open to juniors and seniors without prerequisite.

16 lessons, 3 credits, \$15, Jones

**125 Russian History I.** A survey of Russian history to the time of Peter the Great, including the origins of the Russian state, Kievan Russia, and the rise of Muscovy. Prerequisites: History 1, 2, and 3 or the equivalent.

16 lessons, 3 credits, \$15, Derby

**126 Russian History II.** This course covers the period from Peter the Great through the Crimean War and includes the study of the Europeanization of Russia and the crystallization of the Empire. Prerequisites: History 1, 2, and 3 or the equivalent.

16 lessons, 3 credits, \$15, Derby

**127 Russian History III.** A survey of the last years of the Russian Empire, the background of the revolution, and the establishment and history of the Soviet government. Prerequisites: History 1, 2, and 3 or the equivalent.

16 lessons, 3 credits, \$15, Derby

## HOME ECONOMICS

(See page 13.)

## HUMANITIES

Ralph G. Ross, Ph.D., Professor of General Studies

Isaac Rosenfeld, Assistant Professor of General Studies

**1 Humanities in the Modern World I.** The old regime, the revolution and Napoleon. Period: from about 1770 to about 1830. Authors: Voltaire, Rousseau, Burke, Paine, Goethe, and the poets. One historical novel, Tolstoy's *War and Peace*. No prerequisite.

16 lessons, 3 credits, \$15, Ross

**4 Humanities in the Modern World IV.** Civilization between two wars; the impact of psychoanalysis; a critique of communism; a prediction of the future. Period: from World War I to the present. Authors: Huxley, Bellamy, Freud, O'Neill, Lenin, Malraux, Koestler. No prerequisite.

16 lessons, 3 credits, \$15, Rosenfeld

### INTERIOR DECORATION

(See Art, page 12.)

#### ITALIAN

Emmert M. Brackney, Ph.D., Assistant Professor of Romance Languages

**1 Beginning Italian I.** Elements of pronunciation, grammar, and suitable readings. Emphasis upon accurate translation and composition. No prerequisite.

27 lessons, 5 credits, \$25, Brackney

#### JOURNALISM

Mitchell V. Charnley, M.A., Professor of Journalism (on leave 1952-53)

W. Edwin Emery, Jr., Associate Professor of Journalism

George S. Hage, B.A., Instructor in Journalism

Russell E. Hurst, B.A., Lecturer in Journalism

Truman Pouncey, M.A., Lecturer in Journalism

Carl K. Towley, B.A., Assistant Director of National Scholastic Press Association

**13 Newspaper Reporting I.** Study of the newspaper audience; structure and writing of the news story; study of news values; exercises in journalistic style; analysis of newspapers; news gathering and reportorial methods. Numerous writing assignments. Prerequisite: English Composition 4-5-6 or consent of instructor.

16 lessons, 3 credits, \$15, Charnley, Pouncey

**14 Newspaper Reporting II.** Continued study of the news gathering and of writing the "straight" news story; the human interest or feature story; analysis of newspapers; special types of reporting; advanced interviewing. Numerous writing assignments. Prerequisite: Course 13.

16 lessons, 3 credits, \$15, Charnley, Pouncey

**15 Newspaper Reporting III.** Study of newspaper law, including libel, rights of the press, study of "privilege," and other legal regulations affecting the press; advanced reporting; the interpretative story; the newspaper feature story. Numerous writing assignments. Prerequisite: Course 14.

16 lessons, 3 credits, \$15 Charnley, Pouncey

**68 Problems of Radio and Television Writing.** The purpose of this course is to give the student an introduction to the lines of experience in both major fields of broadcasting. More of the emphasis is placed on radio than on television as learning radio is good foundation for learning tele-



vision. The course starts with the simplest kind of radio writing and progresses by logical steps to more complex work. Numerous writing assignments are made, and optional exercises are provided for additional experience. Prerequisite: English 4-5-6 or consent of instructor.

16 lessons, 3 credits, \$15, Charnley, Hurst

**73 Newspaper and Magazine Articles I.** A study in the writing of factual and opinion articles, interviews and expository articles, both serious and feature, for newspapers and magazines. Main emphasis is laid on the journalistic type of article rather than the essay type. (Not open to those who have completed Journalism 69.) Prerequisite: Journalism 15.

16 lessons, 3 credits, \$15, Hage

**73c Newspaper and Magazine Articles II.** A continuation of Course 73, including a study of typical first-class magazines and newspapers, both of specialized and general interest, including trade publications. Prerequisite: Course 73.

16 lessons, 3 credits, \$15, Hage

**78 Public Relations.** A course in the techniques of interpreting business and industrial organizations, educational and scientific institutions, social welfare groups, government agencies and other organizations to the public through the press, radio, trade papers, magazines, pamphlets, circulars, bulletins, direct mail, etc. An analysis of the methods of using each of the media. Policy determinants in public relations. Prerequisite: Journalism 69 or 73 or consent of instructor.

16 lessons, 3 credits, \$15, Emery

**82 The Supervision of School Publications.** A practical consideration of the problems of the high school teacher, especially of the teacher who is inadequately prepared for such work, who supervises the newspaper, or yearbook. Editorial content; staff organization; editing; headlines; topography; make-up; business management; costs; lithography; engraving; photography and other subjects are considered. Access to *Scholastic Editor* is required. No prerequisite.

16 lessons, 3 credits, \$15, Towley

## LANDSCAPING

Robert A. Phillips, B.S., Assistant Professor of Horticulture

**Hort. 24 Home Landscape Planning.** A course for those who want to know how to plan the home grounds for greater use and enjoyment, with an introduction to the principles of landscape design, their use, and importance in the arrangement and decoration of the home grounds. This course will be an artistic approach to the problems and prospects of home landscaping. It will also serve as a background for the pursuit of the popular hobby of gardening. There will be an independent student project of planning either a hypothetical home plot or the home place of the student. In this project the student will be guided by the instructor. The course will give the home owner and others interested in home landscaping a practical program of study.

16 lessons, 3 credits, \$15, Phillips

### LATIN

Margaret M. Forbes, B.A., Instructor in Classics

The following courses represent a graded sequence completing Junior College requirements, or the equivalent of four years of high school Latin. The prerequisite for each course (except Course 1) is the course immediately preceding, or the equivalent credits.

**1 Beginning Latin I.** Basic vocabulary and grammar; practice in reading and writing Latin; workbook exercises; background readings in Roman life and history. No prerequisite.

27 lessons, 5 credits, \$25, Forbes

**2 Beginning Latin II.** A continuation of Course 1; similar in content and method on a more advanced level, leading from simplified Latin to prose, verse, comedy in the original Latin.

27 lessons, 5 credits, \$25, Forbes

**3 Intermediate Latin Reading.** Continuing from Courses 1 and 2, but shifting the emphasis to the reading of varied selections to introduce the student to Latin literature in general.

27 lessons, 5 credits, \$25, Forbes

**4 Selections from Latin Prose and Poetry.** Continuing from Course 3. A survey of Latin literature in selections from the more important writers.

27 lessons, 5 credits, \$25, Forbes

**5 Vergil's Aeneid.** Reading of selections from Books I-VI; background reading in Roman life and thought.

27 lessons, 5 credits, \$25, Forbes

**6 Cicero.** Reading of selections from the public addresses and letters of Cicero.

27 lessons, 5 credits, \$25, Forbes

### LIBRARY TRAINING

Joyce Davenport, M.A., Instructor in Library Training

**52 Descriptive Cataloging.** The forms and principles involved in making a dictionary card catalog. Based primarily on Aker's "Simple Library Cataloging." Directions for the use of printed cards prepared by the Wilson Company and the Library of Congress. No prerequisite. It is recommended that this course precede Course 54.

16 lessons, 3 credits, \$15, Davenport

**54 Elementary Classification and Subject Heading.** Based on the un-abridged edition of the Dewey Decimal Classification and Sear's "List of Subject Headings for Small Libraries." Aims to give an understanding of methods of classification and the principles of assigning subject headings to books in a library. Attention is given to modifications and adaptations useful in school or small public libraries. Includes use of Cutter-Sanborn author numbers and preparation of a shelf-list. No prerequisite.

16 lessons, 3 credits, \$15, Davenport

### MATHEMATICS

(For students who want credit in the College of Science, Literature, and the Arts)

Elizabeth Carlson, Ph.D., Associate Professor of Mathematics

Charles Hatfield, Ph.D., Assistant Professor of Mathematics

Ella Thorp, M.A., Assistant Professor of Mathematics

David Lewis, M.A., Instructor in Mathematics

**Engineering Mathematics.** See page 25.

**High School Mathematics.** See page 59.

**1 Higher Algebra.** A review and a collegiate treatment of the topics of elementary algebra for those who have had one year of elementary algebra. Open for credit to any student offering not more than one-half year of high school higher algebra for entrance.

27 lessons, 5 credits or 1 entrance unit, \$25, Carlson

**5 Solid Geometry.** Standard theorems and exercises. Practice in special proofs and original exercises to develop imagination and initiative. Prerequisite: Plane Geometry. *Acceptable for 3 credits in the College of Science, Literature and the Arts, provided special arrangements have been made at the time of registration.*

20 lessons, 3 credits or  $\frac{1}{2}$  entrance unit, \$19.50, Hatfield

**\*6 Trigonometry.** A beginning course of collegiate grade in plane trigonometry and logarithms. Solutions of triangles with applications to surveying and physics. Emphasis on properties of trigonometric functions, identities, and equations. Prerequisite: Mathematics 1, or high school higher algebra. § Students offering high school trigonometry for entrance will receive college credit.

27 lessons, 5 credits, \$25, Thorp

**7 College Algebra.** Quadratic equations, simultaneous quadratic equations, progressions, mathematical induction, the binomial theorem, permutations, combinations, probability, determinants, the theory of equations, infinite series, and partial fractions. Prerequisite: Mathematics 6 or registration and satisfactory progress in Mathematics 6.

27 lessons, 5 credits, \$25, Lewis

**\*8 Commerce Algebra.** Logarithms and selected topics in college algebra. A preparatory course for Mathematics 20. Prerequisite: Mathematics 1 or high school higher algebra. §

27 lessons, 5 credits, \$25, Thorp

**\*9c Logarithms.** Definition and fundamental properties of logarithms. Use of logarithms in computing. Prerequisite: Mathematics 1 or high school higher algebra.

6 lessons, 1 credit, \$5, Lewis

\* No student may receive credit for both Course 6 and Course 9c, or both Course 8 and Course 9c.

§ A substantial high school course in advanced algebra for one semester is sufficient. However, some students with less than one year of advanced high school algebra may prefer to take Mathematics 1 before 6 or 8.

**20 Mathematics of Investment.** The mathematical theory of simple interest, simple discount, compound interest and annuities certain. The applications deal with promissory notes, banking practice in the lending of money, the discharge of debts by periodic payments, depreciation funds, perpetuities, capitalization problems, and bonds. Prerequisite: Mathematics 6 and 7, or 7 and 9c, or 8, or 15 and 16.

27 lessons, 5 credits, \$25, Thorp

**30 Analytic Geometry.** The elements of plane analytic geometry including the geometry of the conic sections, with a brief introduction to solid analytic geometry. Prerequisite: Courses 6 and 7, or 15 and 16.

27 lessons, 5 credits, \$25, Carlson

**50 Calculus I.** Differential calculus. Limits, continuity, differentiation, maxima and minima, applications to geometry and physics, differentials, law of the mean, indeterminate forms, convergence of series, series expansion and partial differentiation. Prerequisite: Mathematics 30.

27 lessons, 5 credits, \$25, Hatfield

**51 Calculus II.** Integral calculus. Indefinite integrals, definite integrals, convergence of improper integrals, the definite integral as the limit of a sum, multiple integrals and applications to geometry and mechanics. Prerequisite: Mathematics 50.

27 lessons, 5 credits, \$25, Hatfield

**62 Theory of Equations I.** Complex numbers, the general solution of cubic and quartic equations, numerical solution of equations, and relations between algebraic equations and geometric constructions by ruler and compasses. Prerequisite: Mathematics 50.

16 lessons, 3 credits, \$15, Hatfield

**106 Differential Equations.** A problem course in the solution of ordinary differential equations, with the basic theory necessary for the development of the methods to be used. Prerequisite: Mathematics 51.

(Registrations accepted after July 1, 1953.)

16 lessons, 3 credits, \$15, Hatfield

## MUSIC

Mary E. Malcolm, M.A., Assistant Professor of Music

Paul Fetler, M.M., Instructor in Music

**4 Harmony I.** Intervals, triads, major and minor scales, the structure and progression of four-part chords based upon the triad and its inversions, partwriting, melody, harmonization, modulation, analysis.

16 lessons, 3 credits, \$15, Malcolm.

**5 Harmony II.** Continuation of Course 4 with the addition of non-harmonic tones and diatonic seventh chords.

16 lessons, 3 credits, \$15, Malcolm.

**6 Harmony III.** Continuation of Course 5 with the addition of chromatically altered non-harmonic tones, chromatically altered chords, and modes.

16 lessons, 3 credits, \$15, Malcolm.

**Note**—These three courses correspond to the written portion of Music Theory for resident students in the Department of Music, University of Minnesota.

**9c Counterpoint.** Counterpoint is the creative study of writing one or more independent melodies against each other in a strict style. Such a study is of great value in particular to the student of composition. This course is based directly on sixteenth-century polyphony. Works of Lassus and Palestrina are examined and the rules for writing formulated accordingly. This is an elementary course. The student learns the writing of good melodic lines and gradually continues with two-voice counterpoint. The writing of canon is an important part of this course. Prerequisite: a general knowledge of music theory.

16 lessons, 3 credits, \$15, Fetler

### NORWEGIAN

Pauline Farseth, B.A., Instructor in Scandinavian

**1 Beginning Norwegian I.** Complete survey of Norwegian grammar. Composition. Reading of easy prose. No prerequisite.

27 lessons, 5 credits, \$25, Farseth

**2 Beginning Norwegian II.** Study of short stories and Björnson's *En Glad Gut*. Reading and composition. Prerequisite: Course 1 or equivalent.

27 lessons, 5 credits, \$25, Farseth

**3 Intermediate Norwegian.** Continuation of Course 2. Based on Björnson's *Synnöve Solbakken*. Reading and composition. Prerequisite: Course 2 or equivalent.

27 lessons, 5 credits, \$25, Farseth

**Note**—Advanced courses in Norwegian literature are also available. Interested students should write to the Correspondence Study Department for information.

### PARLIAMENTARY LAW

Ralph E. Miller, M.S., Associate Professor in the School of Agriculture

**A41 Parliamentary Law.** Fundamental principles and practices of parliamentary law essential for conducting meetings and participating in community organizations. Particular emphasis is given to discussion of problems relative to federated clubs, P.T.A., Legion Auxiliary, extension organizations, farm organizations, such as: Grange, Farm Bureau, Farmers Union, 4-H clubs, and Future Farmers of America. Topics to be considered will include formation of organizations, drafting of constitutions, duties of officers, motions, amendments, nominations, and elections. No prerequisite.

12 lessons, 2 Extension credits only, \$10, Miller

### PHILOSOPHY

A. Carl Ahlén, Ph.D., Instructor in Philosophy

**1 Problems of Philosophy.** Is there any principle or set of principles in terms of which we can understand man, experience and the world? Does life have a meaning? What, if anything, can we know? What are good and evil? Is the nature of reality discoverable? How, if at all, are religion, science, art and politics interrelated? Attempts to answer these questions are considered. Proposed solutions by the world's great minds, ancient and modern, are examined. The student is encouraged to do critically reflective thinking of his own concerning these basic issues.

16 lessons, 3 credits, \$15, Ahlén

**2 Logic.** There is a difference between "straight" and "crooked" thinking. Logic is the study of these differences. What is a fallacy? How many pitfalls beset the attempt to think straight? When is a term properly defined? Why are sound definitions important? What is meant by a "syllogism"? What is meant by a "dilemma"? 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"? Logic is the systematic analysis of these and other related questions. The study of logic will show you what is involved in straight thinking. No prerequisite.

16 lessons, 3 credits, \$15, Ahlén

**3 Ethics.** A study of the principles and problems of right and wrong in human relationships. The course will include such topics as the following: The history of moral development, the ethical theories of classical philosophy, the problem of free-will, the nature of man, the ethical problem involved in international relations and in other social problems, the relationship of religion to ethics, and the problem of how to live effectively. The course should help the student to formulate his own concept of the good. No prerequisite.

16 lessons, 3 credits, \$15, Ahlén

### PHYSICAL EDUCATION COURSES FOR MEN

Ralph A. Piper, Ed.D., Professor of Physical Education

Hershel R. Giles, M.A., Assistant Professor of Physical Education

Maurice Ostrander, M.Ed., Assistant Professor of Physical Education

Gerald B. Fitzgerald, Re.D., Lecturer in Physical Education

**32 Introduction to Principles of Physical Education.** Principles and problems connected with the philosophy, organization, administration, program construction, and methods of teaching physical education. No prerequisite.

16 lessons, 3 credits, \$15, Ostrander

**49 Social Aspects of Leisure.** This course is designed to acquaint the student with leisure and recreation as basic forces in the social and economic structure of our society. It stresses the nature of leisure and recreation with particular reference to their relationships. Attention is

focused upon leisure and recreation as parts of daily living in our society and as products of our social progress. No prerequisite.

16 lessons, 3 credits, \$15, Fitzgerald

**56 Nature and Function of Play.** A fundamental background course for either recreation or physical education. Proceeds from an understanding of the biological play drive, theories and philosophies of play, to the place of play in the modern world and its function in building an integrated personality. Prerequisite: Psychology 1-2.

16 lessons, 3 credits, \$15, Giles

**57 Operation of Recreation Centers.** A course designed especially to aid the teacher of art, music, industrial or physical education who has been given the responsibility of assisting with, or directing, the summer recreation program. Programs, leadership, facilities and equipment, and problems of operation and administration. No prerequisite.

16 lessons, 3 credits, \$15, Fitzgerald

**63 Organization and Administration of Physical Education.** Problems of organization, administration, and supervision. Arrangement of programs in physical education activities. Discussion of place of athletics in the program; schedule making; construction, equipment, and care of gymnasiums and athletic fields. No prerequisite.

16 lessons, 3 credits, \$15, Piper

**83 Course in School Health Education: Method and Content,** listed below on this page, is open to both men and women.

#### PHYSICAL EDUCATION COURSES FOR WOMEN

Gertrude Baker, Ed.D., Director and Professor of Physical Education  
 Marjorie U. Wilson, Ph.D., Associate Professor of Physical Education  
 Eloise M. Jaeger, Ph.D., Assistant Professor of Physical Education  
 Helen Hauptfuehrer, M.A., Instructor in Physical Education

**82 Principles of Physical Education.** In this course principles of philosophy, curriculum, method, and evaluation are studied in the light of their psychological, biological, and social significance. No prerequisite.

16 lessons, 3 credits, \$15, Wilson

**Ed.T. 83 School Health Education: Method and Content.** Study of scope of field, principles underlying the development of a program, curricular suggestions on elementary and secondary level, methods and materials for teaching, steps in unit planning and evaluation of the instructional program. No prerequisite.

16 lessons, 3 credits, \$15, Hauptfuehrer

**84 The Physical Education Program in the Elementary and Secondary School.** Curricular problems in physical education are studied in relation to the best thinking in general education. Both elementary and secondary levels are considered but individual application may be made to a specific level. Prerequisite: Senior major or minor in physical education or consent of instructor.

16 lessons, 3 credits, \$15, Jaeger

**95 Administration of Physical Education.** Study of the care and use of facilities and equipment; organization of the physical education program from the standpoint of classification of the students, appraisal of activities, management of class with particular emphasis upon the program for girls and women. Relationship of the physical education program to the community. No prerequisite.

16 lessons, 3 credits, \$15, Baker

### PHYSICS

Joseph Valasek, Ph.D., Professor of Physics  
Fritjof E. Christensen, M.A., Instructor in Physics

**4c Elements of Mechanics.** Basic principles of mechanics such as Newton's laws of motion, conservation of energy and momentum. The solution of numerous problems will be required. The course prepares the student to continue with other courses in physics or engineering. Prerequisite: trigonometry and higher algebra (preferably college algebra).

16 lessons, 3 credits, \$15, Christensen

**29 Introduction to Meteorology.** Fundamental physical principles and first elements underlying meteorological study, weather map analysis and construction; also local meteorological observation. Prerequisite: algebra and high school physics.

16 lessons, 3 credits, \$15, Valasek

### POLITICAL SCIENCE

Asher N. Christensen, B.A., Professor of Political Science  
Lennox A. Mills, Ph.D., Professor of Political Science  
George Warp, M.A., LL.B., Associate Professor of Political Science  
John E. Turner, Ph.D., Assistant Professor of Political Science

**Citizenship.** See page 60.

**Civics.** See American Democracy, page 56.

**1 American Government and Politics I.** Every system of government operates upon the basis of certain fundamental principles and practices. These determine the general contours of the system. The objective of this course, therefore, is to acquaint the citizen with the fundamental principles and practices of the American system. Among the questions for consideration are: What is a constitution? How did the American Constitution come into being? How has it been adapted to changing economic and social conditions? What are the various units of government in the United States? What are their interrelationships? What rights do persons living in the United States possess? How are they protected? How can one play an effective role in government? What is public opinion? What is a political party? How are candidates for office nominated? Who controls elections? How is the electoral process regulated and administered? No prerequisite.

16 lessons, 3 credits, \$15, Christensen



**2 American Government and Politics II.** To comprehend government as a process, as something vital and alive, one needs to have an understanding of the nature of the governmental machine and of the various pressures—pushes and pulls—that are the “steam” which determines when, how, and for whom the machinery operates. This course, therefore, is designed to give the student a knowledge both of the formal legal structure and operation of the legislative, executive, and judicial departments of the government and the informal and extra-legal practices that determine its vital character. Among the problems considered are: What is the purpose of a legislature? Should we have unicameral or bicameral legislatures? Where and how does legislation originate? How is a bill passed? What is the effect of the lobby in American politics? How are presidents and governors chosen? Is the administrative branch of government properly organized? Do we need a further extension of the merit principle in the civil service? What is the role of the courts in the American system? What is the effect of judicial review? Do we need a judicial reform? No prerequisite.

16 lessons, 3 credits, \$15, Christensen

**3 American Government and Politics III.** The emphasis of this course is not upon 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.

16 lessons, 3 credits, \$15, Christensen

**7c Comparative European Governments.** This course deals with the governmental systems and politics of Great Britain, France, Soviet Russia, Germany and Sweden. Emphasis is placed on the institutional structures, political customs, ideologies, problems of administration, and crisis government. No prerequisite.

16 lessons, 3 credits, \$15, Turner

**10c Survey of American Government and Politics.** This course is designed to give the student an understanding of the fundamental principles and practices of national, state, and local government in the United States. It includes an analysis of constitutions and charters; citizenship; civil liberties; political parties and public opinion; legislative, executive, and judicial organization and procedures; and of the principal functions and activities of modern American government. No prerequisite.

21 lessons, 4 credits, \$20, Christensen

**25 World Politics.** (The world since 1914) The aim of this course is to explain the significance of contemporary events in Europe and the Far East by a study of their causes. The policies of the Great Powers, the influence of geographic position, the distribution of raw materials, accessi-

bility of foreign markets, imperialism, armaments and international organizations including the League of Nations and the United Nations. The effect of world events on American interests. No prerequisite.

16 lessons, 3 credits, \$15, Mills

**80 Principles of Public Administration.** This course concerns the activities of the people who administer our laws. Emphasis is on methods, theories and problems of organizing governmental administration and on the organization of people in administrative activities. Attention is paid to such problems as coordination of administrative groups and activities, relations between central offices and the field and the problems of inertia and incentive in administration. No prerequisite.

16 lessons, 3 credits, \$15, Warp

### PSYCHOLOGY

Wendell White, Ph.D., Associate Professor of Psychology

**1c Application of Psychology to Living.** 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.

16 lessons, 3 credits, \$15, White

**†1 General Psychology I.** The study of the beginnings of behavior, its development, and the factors that influence its development. Methods of investigation. Individual differences. No prerequisite.

16 lessons, 3 credits, \$15, White

**†2 General Psychology II.** Further study of some of the topics taken up in General Psychology I, and orientation of the student to problems of psychology in general. Prerequisite: General Psychology I.

16 lessons, 3 credits, \$15, White

**Child Psychology.** See page 18.

**Psychology of Adolescence.** See page 21.

**Social Psychology.** See page 52.

### READING

Louise Klohn, M.A., Instructor in English

**1c Home Reading Course.** The eight lessons in this course provide eight lists of books on subjects of current interest, such as science, history, sociology, fine arts, government, etc. The student reads at least two books from each list and reports on them. The aim is to follow a systematic plan of reading that will help the average person to become better informed. The course is particularly designed for members of the Federation of Women's Clubs who are anxious to qualify for the Epsilon Sigma Omi-

cron reading award. Course is available on an individual lesson basis. Write for introduction that will give topic for each lesson. No prerequisite and no credit toward university degree or certificate programs.

8 lessons, \$8, or \$1 per lesson, Klohn

## ROMANCE LANGUAGES

(See pages 32, 40, 53.)

### RUSSIAN

Pearl C. Niemi, Ph.D., Assistant Professor of Russian

**1 Beginning Russian I.** A course preparing for a reading and writing knowledge of the Russian language. The students will be acquainted with the Russian script; pronunciation; the essentials of grammar; translations from Russian and into Russian; interpretation of easy Russian short stories. No prerequisite.

27 lessons, 5 credits, \$25, Niemi

**2 Beginning Russian II.** After fulfilling the requirements of the course, the students will be able to read, with a dictionary, any kind of Russian texts—newspapers, professional literature, fiction. A fair ability of written expression should be achieved. Prerequisite: Course 1.

27 lessons, 5 credits, \$25, Niemi

### SALESMANSHIP

Steele S. Stanchfield, B.A., Instructor in Business

**1c Salesmanship.** Elementary course in the art and techniques of effective salesmanship. Major emphasis placed on practical aspects with various case histories presented.

16 lessons, 3 Extension credits only, \$15, Stanchfield

## SCANDINAVIAN LANGUAGES

(See pages 45, 55.)

### SOCIOLOGY

Elio Monachesi, Ph.D., Professor and Head of Sociology

Nicos Mouratides, M.A., Instructor in Sociology

Caroline B. Rose, M.A., Instructor in Sociology

**1 Introduction to Sociology.** A study of the characteristics of human group life. An analysis of the factors associated with the development of human group life and man's social environment; the structure of the social environment and its influence upon the individual's behavior; 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 disorganiza-

tion. This course is intended to introduce the student to the fundamental concepts of sociology and to give him a better understanding of the contemporary social order. No prerequisite.

27 lessons, 5 credits, \$25, Monachesi

**2 Intermediate Sociology.** A study of personality, human behavior, group interaction, social institutions and social change, with special reference to contemporary American conditions. The problem of individual adjustment in a complex society is explored, and a large section of the course is devoted to a detailed consideration of the color-caste system and its impact upon minorities. Prerequisite: Sociology 1.

16 lessons, 3 credits (an additional 2 credits will be allowed on completion of a satisfactory term paper), \$15 or \$25, Mouratides

**14 Rural Sociology.** A study of rural society, dealing with the relationships of rural and urban individuals and groups. A presentation of such factual data as may be considered fundamental to the understanding of the problems of rural life. Prerequisite: Sociology 1 or permission of instructor.

16 lessons, 3 credits, \$15, Mouratides

**49 Social Problems.** A study of factors underlying the inability of many individuals and groups to satisfy their basic wants within the framework of existing social institutions; a consideration of individual and institutional limitations giving rise to such problems as juvenile delinquency, criminality, mental illness, industrial strife, family discord, and community disorganization. Prerequisite: Sociology 1 or consent of instructor.

16 lessons, 3 credits, \$15, Rose

**120 Social Psychology.** An analysis of the social aspects of personality growth and personality interaction. Personality motivation and adjustment in the group situation. Prejudice, public opinion, propaganda, leadership are analyzed. Psychological aspects of social problems such as personality disorganization, crowd behavior, social control, family adjustment, and war. Prerequisite: Courses 1 and 15 credits in social science, education, philosophy, psychology, or child welfare.

16 lessons, 3 credits, \$15, Rose

**123 Interaction of Racial and Cultural Groups in America.** A consideration of historical and psychological factors in group prejudice; the concept of minority group, Caucasoid immigrant groups; non-Caucasoid groups in the United States with special reference to the Negro; adjustment and action programs. Prerequisite: Courses 1 and 15 credits in social science, education, philosophy, psychology, or child welfare.

16 lessons, 3 credits, \$15, Rose

**141 The Family.** Origin of family life; variability and change of family institutions and mating customs; contemporary parent-child relationships; adolescence; mate finding; marital adjustments; divorce and other family problems; prediction of marital success; theories of family reform. Prerequisite: Sociology 1 or its equivalent.

16 lessons, 3 credits, \$15, Rose

## SPANISH

Emmert M. Brackney, Ph.D., Associate Professor of Romance Languages  
 James Cúneo, Ph.D., Associate Professor of Romance Languages

**Spanish Recordings.**

The Correspondence Study Department has available two records (78 revolutions per minute) in **Basic Spanish Pronunciation**.

Record No. 1. A ten-minute record giving the pronunciation of vowels, consonants, diphthongs and triphthongs. Voices: Profs. Cúneo and Willging. Price, \$3.

Record No. 2. A ten-minute record giving pronunciation exercises in Spanish with their English translation. Voices: Profs. Cúneo and Willging. Price, \$3.

Additional recordings are under consideration, especially those to teach students how to sing Spanish-American songs in the original language. Write to the Correspondence Study Department for further information. Tape recordings covering basic Spanish pronunciation, stress, linkage, etc., are available from State Department of Education, State Office Building, St. Paul 1. The Minnesota State Department of Education publishes a bulletin, "Tapes for Teaching."

**1 Beginning Spanish I.** Grammar and reading. In this course stress will be laid upon grammar, accurate translation, and composition. No prerequisite.

27 lessons, 5 credits, \$25, Cúneo

**2 Beginning Spanish II.** Continuation of Course 1, which is prerequisite.

27 lessons, 5 credits, \$25, Cúneo

**3 Intermediate Spanish I.** Review of grammar; composition, reading of modern Spanish text. Prerequisite: Course 2 or equivalent.

27 lessons, 5 credits, \$25, Brackney

**4 Intermediate Spanish II.** A continuation of Course 3 which is prerequisite.

27 lessons, 5 credits, \$25, Brackney

**7 Latin-American Culture (in English).** 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. Readings in English; Spanish not necessary. No prerequisite.

16 lessons, 3 credits, \$15, Cúneo

**52 Spanish Commercial Correspondence.** A course consisting of specialized material in Spanish commercial correspondence. It aims to give the student sufficient knowledge of commercial Spanish to enable him to understand and to handle commercial correspondence in Spanish. It includes the study of the main parts of a Spanish letter, the envelope, the

various kinds of Spanish commercial letters, models of letters and commercial forms, commercial documents, telegrams and cablegrams, Spanish abbreviations used in Spanish correspondence, and business vocabulary. The course is a part of a more complete course which includes the study of Spanish composition and the discussion of subjects closely related to the commercial activities such as Latin-American monetary units, banking organization and practices, and foreign trade. Prerequisite: Spanish 3. 27 lessons, 5 credits, \$25, Cúneo

**53 Elementary Spanish Composition.** Connected prose composition dealing with everyday life in Spain. The aim is the ability to write Spanish. Prerequisite: Course 4 or equivalent. 16 lessons, 3 credits, \$15, Cúneo

**60 Advanced Spanish Composition.** A continuation of Course 53 which is prerequisite. 16 lessons, 3 credits, \$15, Cúneo

### SPEECH AND THEATER ARTS

David W. Thompson, Ph.D., Associate Professor of Speech and Theater Arts

Kenneth L. Graham, Ph.D., Associate Professor of Speech and Theater Arts

Louise Klohn, M.A., Instructor in English

**1c Vocabulary Building.** A practical course designed to increase the student's speaking and reading vocabulary. The lessons and exercises will stimulate interest and afford practice in the proper use of words, provoke word collecting and suggest substitutes for overworked words. No prerequisite. Course cannot be used for credit towards a teacher's certificate. See page 4.

16 lessons, 3 Extension credits only, \$15, Klohn

**115 Playwriting.** Reading assignments as an introduction to dramatic form and content. Practice in writing dramatic plots, characters, themes and dialog. The writing exercises will include scenario, rough draft, and final revision of a one-act play (approximately fifteen typed pages or thirty minutes in playing time). Prerequisite: Speech 31 or permission of instructor.

16 lessons, 3 credits, \$15, Thompson

**180c Independent Playwriting.** Specifically designed for advanced students. The student is given complete freedom. Plays in any stage of development will receive detailed criticism. In addition all plays will be considered for production at the University Theatre. It is to the student's advantage that he submit a sample of his playwriting for the approval of the instructor before actually registering for this course.

16 lessons (two full-length plays or approximately the same amount of writing made up of shorter dramatic forms), 3 Extension credits only, \$15, Thompson

**184c Independent Playwriting for Children's Theatre.** The course is designed for advanced students who are interested in writing plays for child audiences. Long or short plays will be given detailed criticism. The student should submit a sample of his playwriting for approval of the instructor for registering for the course.

16 lessons (two full-length plays or approximately the same amount of writing made up of shorter forms), 3 Extension credits only, \$15, Graham

### SUPERVISION

Earl F. Cheit, LL.B., Industrial Relations Center

**1 Elements of Supervision.** A study of the basic principles of foremanship. Survey of the problems of industrial relations and personnel management met with in day-to-day supervision with emphasis upon human relations. Practical aspects of these problems are emphasized. Included is a coverage of selection, induction and training of employees, status of supervisors, merit rating, giving orders and labor legislation affecting the supervisor's job. No prerequisite.

16 lessons, 3 Extension credits only, \$15, Cheit

### SWEDISH

Alrik Gustafson, Ph.D., Professor of Scandinavian and Chairman, Department of Scandinavian

**7 Beginning Swedish I.** Grammar and composition; selected readings in easy prose and verse. No prerequisite.

27 lessons, 5 credits, \$25, Gustafson

**8 Beginning Swedish II.** A continuation of Course 7, which is prerequisite.

27 lessons, 5 credits, \$25, Gustafson

**Note**—Courses in intermediate and advanced Swedish and Swedish literature are also offered. Interested students should write to the Correspondence Study Department for information.

## HIGH SCHOOL COURSES

(For courses in agriculture, see page 11.)

### AMERICAN DEMOCRACY

Kopple Friedman, Ph.D., Instructor in Civics

#### 1 Problems of American Democracy.

Part A. This course is equivalent to the first semester of what is customarily offered as the social studies course in the twelfth grade. It is intended to provide the basis for an intelligent approach to problems of American life, mainly of a civic or political nature. Emphasis is placed on the relation of these problems to the individual. No prerequisite.

20 lessons, ½ entrance unit, \$19.50, Friedman

Part B. This course is equivalent to the second semester of what is customarily offered as the social studies course in the twelfth grade. It is devoted to problems of American life, particularly of a social and economic nature. No prerequisite.

20 lessons, ½ entrance unit, \$19.50, Friedman

### BOOKKEEPING

Reuel Lund, Ph.D., Assistant Professor of Accounting

1 **Bookkeeping.** The form, content, and purpose of various types of bookkeeping records; the adaptation of the information in the records to its utilization in financial statement; and the form, content, and interpretation of financial statements; the application of record keeping to a few common types of business enterprise. No prerequisite.

20 lessons, ½ entrance unit, \$19.50, Lund

### ENGLISH

Stanley B. Kegler, M.A., Instructor in English

Louise Klohn, M.A., Instructor in English

#### 1 English: Ninth Grade English.

Part A. This course is equivalent to the first semester of high school Language Arts at the ninth grade level. It is designed for those who wish to obtain a background for further study in literature and language, and for those who do not have at present an adequate mastery of the field. The objective of the course is to relate the student's own experiences to those experienced by others, as revealed through literature. The basic materials of the course are literary, but discussion questions based upon the selections will provide adequate opportunity to master certain writing skills. No prerequisite.

20 lessons, ½ entrance unit, \$19.50, Kegler

Part B. This course is a continuation of Part A, and is equivalent to the second semester of ninth grade English. Readings from various materials with discussion questions and composition exercises are closely related in the course. Prerequisite: English 1-A or equivalent.

20 lessons, ½ entrance unit, \$19.50, Kegler



**2 English: Tenth Grade English.**

Part A. This course is equivalent to the first semester of high school English at the tenth grade level. It is intended to deal with problems concerning youth in the home and in the community. By reading the literature selections and participating in the discussions by means of the written assignment, you will have an opportunity to study people in a variety of situations. These problems may not be yours, but you will note some similarities. One of the objectives is to gain a better understanding of the people in the world in which we live. The course is based on literature, but is actually a combination of literature and composition. The two are well coordinated so the reading selections provide the basis for assignments in composition. No prerequisite except ninth grade English or equivalent.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Kegler

Part B. This course is a continuation of Part A, and is equivalent to the second semester of tenth grade English. Literature again is emphasized, but composition is an essential part of the course. No prerequisite except the equivalent of first semester tenth grade English.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Kegler

**3 English: Eleventh Grade English.**

Part A. This course is equivalent to the first semester of high school English at the eleventh grade level. It is based on a study of literature and attempts to discover how our nation developed from a primitive wilderness to a world power in less than 400 years. Emphasis is placed on literature, but ample opportunity is given to study grammatical forms, to develop your vocabulary and to organize and express your ideas in written English. No prerequisite except tenth grade English or equivalent.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Kegler

Part B. Equivalent to the second semester of eleventh grade English. This is continuation of Part A.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Kegler

**4 English: Twelfth Grade English.**

Part A. This course is equivalent to the first semester of high school English for the senior year. It will introduce the student to the literature written by many great authors around the world. The emphasis is placed upon the British writers whose influence on our culture has often been direct and well known. The student will read stories, plays, poems, essays, and other types of literature that have left their imprint upon our culture and have affected our ways of thought and behavior. The student will have an opportunity to develop standard English and the reasons for its grammar forms.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Kegler

Part B. A continuation of Part A. Equivalent to the second semester of high school English for the senior year.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Kegler

**Preparatory English.** A course in the simple fundamentals of correct English, intended to give additional drill to high school graduates who need further preparation for college English. No prerequisite.

12 lessons, no credit, \$10, Klohn

**FRENCH**

- 1 **Beginning French I.** 1 entrance unit. See page 32.
- 2 **Beginning French II.** 1 entrance unit. See page 32.
- 3 **Intermediate French I.** 1 entrance unit. See page 32.
- 4 **Intermediate French II.** 1 entrance unit. See page 33.

**GERMAN**

- 1 **Beginning German I.** 1 entrance unit. See page 33.
- 2 **Beginning German II.** 1 entrance unit. See page 33.
- 3 **Beginning German III.** 1 entrance unit. See page 34.

**HISTORY**

George McCune, Ph.D., Professor of Social Studies

1 **American History.** Similar to the course usually given in the fourth year of high school.

Part A. The settlement and growth of the colonies in America; the development of friction between colonies and homeland leading to the Revolution; the Constitution—its framing and operation; political history, 1789 to the present, with emphasis on the growth of democracy in government. No prerequisite.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, McCune

Part B. Economic development of the United States—agricultural development and problems; the Industrial Revolution in America; the growth of big business; relations between government and business; the development of American ways of life—customs, thought, and culture; America's foreign relations and foreign policy, 1789 to the present; problems of the United States today. No prerequisite.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, McCune

2 **World History.** Corresponds to the second or third year of high school course. Survey of the development of civilization from prehistoric man to the present. Part A through 1815, stresses oriental, Greek, Roman, and medieval civilizations, the Reformation, rise of national states, colonial rivalry, the French Revolution, Napoleon and the Congress of Vienna. Part B stresses the Industrial Revolution, modern democracy in the various countries of Europe, imperialism, World War I, postwar problems and social, economic, and political conditions of the world today. No prerequisite.

Part A, 20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, McCune

Part B, 20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, McCune

## LATIN

- 1 **Beginning Latin I.** 1 entrance unit. See page 42.
- 2 **Beginning Latin II.** 1 entrance unit. See page 42.
- 3 **Intermediate Latin Reading.** 1 entrance unit. See page 42.
- 4 **Selections from Latin Prose and Poetry.** 1 entrance unit. See page 42.

## MATHEMATICS

George C. Priester, Ph.D., Professor and Head Mathematics and Mechanics  
Immanuel C. Fischer, M.S., Assistant Professor of Engineering

1 **Elementary Algebra A.** A beginning course. Treats positive and negative numbers; addition, subtraction, multiplication, and division of monomials and polynomials; simple equations in one unknown quantity; elementary special products and factoring; highest common factor and lowest common multiple. Prerequisite: common school arithmetic.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Fischer

2 **Elementary Algebra B.** Treats addition, subtraction, multiplication, and division of fractions including complex fractions; equations in one unknown quantity which involve fractions; graphical representation; simultaneous equations of the first degree; square roots and quadratic surds; quadratic equations in one unknown quantity. Prerequisite: Course 1.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Fischer

3 **Plane Geometry A.** The work of this course is elementary geometry. Rectilinear figures and the circle, with the miscellaneous original exercises and some elementary construction problems. Prerequisite: Courses 1 and 2.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Fischer

4 **Plane Geometry B.** This course treats proportion, similar triangles, proportional properties of line segments, proportional properties of chords and secants, trigonometric ratios, areas of polygons, regular polygons and circles. Prerequisite: Course 3.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Fischer

9c **Higher Algebra.** Review of elementary algebra, linear equations, determinants, ratio and proportion, variation, quadratic equations, graphs, progressions, binomial theorem. Prerequisite: one year of elementary algebra.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Priester

10c **Solid Geometry.** Standard theorems and exercises. Practice in special proofs and original exercises to develop imagination and initiative. Prerequisite: Plane Geometry A or B or one year of high school plane geometry.

20 lessons,  $\frac{1}{2}$  entrance unit, \$19.50, Fischer

**Note**—Courses 9c and 10c meet the entrance requirements in mathematics of the Institute of Technology.

**NORWEGIAN**

- 1 **Beginning Norwegian I.** 1 entrance unit. See page 45.
- 2 **Beginning Norwegian II.** 1 entrance unit. See page 45.
- 3 **Intermediate Norwegian.** 1 entrance unit. See page 45.
- 4 **Advanced Norwegian.** 1 entrance unit. See page 45.

**SPANISH**

- 1 **Beginning Spanish I.** 1 entrance unit. See page 53.
- 2 **Beginning Spanish II.** 1 entrance unit. See page 53.
- 3 **Intermediate Spanish I.** 1 entrance unit. See page 53.
- 4 **Intermediate Spanish II.** 1 entrance unit. See page 53.

**SWEDISH**

- 7 **Beginning Swedish I.** 1 entrance unit. See page 55.
- 8 **Beginning Swedish II.** 1 entrance unit. See page 55.
- 9 **Intermediate Swedish.** 1 entrance unit. See page 55.

**CITIZENSHIP**

John M. Huebner, B.A., Instructor in Citizenship

**Citizenship.** This is a course given by the Extension Division of the University of Minnesota in cooperation with the public schools and the Immigration and Naturalization Service. It is intended to assist the foreign-born applicant for citizenship in acquiring a better understanding of the American Constitution and Government. It is primarily designed for the rural alien to whom a class in such citizenship instruction is not available. Enrolment is limited to applicants for naturalization. All persons wishing to enroll should write to the Educational Service Office, Room 919 New Post Office Building, Chicago 7, Illinois.

21 lessons, no credit, \$4, Huebner

## INDEX

	Page		Page
Accounting .....	15, 16, 19	Income Tax Accounting .....	16
Administrative officers .....	1	Indian, American .....	12
Admissions .....	1	Industrial Relations .....	10, 17, 55
Adult Education .....	22	Institute of Technology .....	5, 23
Advertising .....	17	Insurance .....	16, 20
Agriculture .....	11	Interior Decoration .....	13
Ancient Civilization .....	36	Investments .....	17
Anthropology .....	12	Italian .....	40
Art Metal Work .....	12	Journalism .....	40
Astronomy .....	13	Labor Problems and Legislation .....	20
Beekeeping .....	11	Landscape Planning .....	41
Bookkeeping .....	56	Latin .....	42
Books .....	2	Latin America .....	39, 53
Business Administration .....	14	Library Science .....	42
Business English .....	14	Literature .....	29
Business Law .....	14	Logic .....	46
Business Statistics .....	15, 19	Mathematics .....	25, 43
Certificates .....	8	Measurement .....	21
Change of registration .....	6	Minnesota History .....	36, 39
Child Welfare .....	17	Music .....	44
Chinese .....	18	Norwegian .....	45
Composition .....	31	Office Management .....	15
Counterpoint .....	45	Parliamentary Law .....	45
Creative Writing .....	31, 40, 54	Philosophy .....	46
Credit, university .....	4, 5	Physical Education .....	46
Drawing, Mechanical .....	24	Physics .....	48
Economics .....	19	Playwriting .....	54
Education .....	21	Political Science .....	48
Educational Statistics .....	21	Production Management .....	16
Electronics .....	24	Psychology .....	50
Engineering .....	23	Public Administration .....	50
English .....	28	Radio and Television Writing .....	40
Entrance credit .....	4, 5	Reading .....	29, 50
Ethics .....	46	Recordings .....	18, 32, 33, 53
European Governments .....	49	Refunds .....	4
Examinations .....	5	Roman History .....	38
Extension credits .....	4, 5	Russia, History of .....	39
Fees .....	2	Russian .....	51
French .....	32	Salesmanship .....	51
Gardening .....	41	Short Story Writing .....	32
Geography .....	33	Social Hygiene .....	22
Geology .....	33	Social Insurance .....	20
German .....	33	Sociology .....	51
Government .....	48	Spanish .....	53
Greek .....	34	Speech .....	54
Greek History .....	38	Supervision .....	55
Handcrafts .....	13	Swedish .....	55
Harmony .....	44	Textiles .....	13
Health .....	35	Theater Arts .....	54
High school subjects .....	56	Time and Motion Study .....	28
History .....	35	Vocabulary Building .....	54
Home Economics .....	13	World Politics .....	49
Humanities .....	39		

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