

TWIN CITIES 1961 - 1962

Evening  
and Special  
Classes

GENERAL EXTENSION DIVISION

UNIVERSITY OF MINNESOTA

# UNIVERSITY OF MINNESOTA

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## GENERAL EXTENSION DIVISION

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Evening and Special Classes, Huntington Miller, 54 Nicholson Hall; Associate Director, Albert M. Fulton, 56 Nicholson Hall  
Municipal Reference Bureau, Orville Peterson, 15 Walter Library  
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University Program Service, James S. Lombard, 229 Northrop Memorial Auditorium

The Committee on Student Scholastic Standing of the General Extension Division consists of the following: Huntington Miller, *chairman*; Harold J. Alford, Albert M. Fulton, F. Lloyd Hansen, Gilford W. Remington, and Eleanor M. Salisbury, *secretary*.

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## Registration Office Hours) 14

**Fall Semester** (September 11 to 20, 1961) and **Spring Semester** (January 29 to February 7, 1962).

*Campus Office:* 57 Nicholson Hall (southeast entrance), University of Minnesota, Minneapolis 14; Federal 8-8791. Monday through Friday, 12:30 to 4:30 and 5:30 to 8 p.m.; Saturday, 9 a.m. to 1 p.m.

*Minneapolis Office:* 690 Northwestern Bank Building, Marquette Avenue and Sixth Street South, Minneapolis 2; Federal 2-0624, Monday through Friday, 12 noon to 8 p.m.; Saturday, 9 a.m. to 1 p.m.

*St. Paul Office:* 555 Wabasha Street (second floor), St. Paul 2; Capital 2-6175, Monday through Friday, 12 noon to 8 p.m.; Saturday, 9 a.m. to 1 p.m.

**Fall Quarter** (September 11 to 20, 1961), same as Fall Semester 1961. All offices.

**Winter Quarter** (December 26, 1961, to January 5, 1962), regular office hours for all offices. (See regular office hours.) In addition, St. Paul office, January 2 to 4, open from 5 to 8 p.m.

**Spring Quarter** (March 19 to 30, 1962), regular office hours for all offices. (See regular office hours.) In addition, St. Paul office, March 26 to 30, open from 5 to 8 p.m.

## Regular Office Hours

*Campus Office:* 57 Nicholson Hall (southeast entrance), University of Minnesota, Minneapolis 14; Federal 8-8791. Monday through Thursday, 8 a.m. to 12 noon and 1 to 8 p.m.; Friday, 8 a.m. to 12 noon and 1 to 5 p.m. (during Christmas recess, December 18 to 29, 1961, and the spring recess, March 19 to 23, 1962, the campus office will close Monday through Friday at 5 p.m.); closed Saturday. During the summer recess, the office is open Monday through Friday only, from 7:45 a.m. to 12 noon and from 12:45 to 4:30 p.m.

*Minneapolis Office:* 690 Northwestern Bank Building, Marquette Avenue and Sixth Street South, Minneapolis 2; Federal 2-0624. Monday through Friday, 8 a.m. to 1 p.m. and 1:45 to 4:45 p.m.; closed Saturday. This office may be closed without notice for short periods of time during the summer.

*St. Paul Office:* 555 Wabasha Street (second floor), St. Paul 2; Capital 2-6175. Monday through Friday, 8 a.m. to 12:30 p.m. and 1:30 to 5 p.m.; closed Saturday. This office may be closed without notice for short periods of time during the summer.

# Calendar ) 14

## Evening and Special Classes—Twin Cities Area ) 12

### Academic Year, 1961-62 ) 10

Registration for all classes must be made during the official registration periods designated in this calendar. Most classes are a semester in length. Some parallel the quarter system. Others carry special dates. *However, all credits are quarter credits.*

*Classes will not meet on holidays listed in this calendar.*

### Fall Semester ) 10

September 11	Monday	Fall Semester registration begins. Special registration hours listed on page 4.
September 20	Wednesday	Last day for registration and payment of tuition. Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee.
September 25	Monday	Fall Semester classes begin. All offices resume regular office hours listed on page 4.
October 12	Thursday	Columbus Day, holiday.
November 11	Saturday	Veterans Day, holiday.
November 23	Thursday	Thanksgiving Day, holiday.
December 16	Saturday	Christmas recess begins.
December 25	Monday	Christmas Day, holiday.
January 1	Monday	New Year's Day, holiday.
January 2	Tuesday	Classes resume.
January 29	Monday	Spring Semester registration begins.
January 29 to February 2		Final examination period.
February 3	Saturday	Fall Semester classes close.

### Spring Semester

January 29	Monday	Spring Semester registration begins. Special registration hours listed on page 4.
February 7	Wednesday	Last day for registration and payment of tuition. Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee.
February 12	Monday	Lincoln's Birthday, holiday.
February 13	Tuesday	Spring Semester classes begin. All offices resume regular office hours listed on page 4.
February 22	Thursday	Washington's Birthday, holiday.
April 20	Friday	Good Friday, holiday.
May 30	Wednesday	Memorial Day, holiday.
June 4 to 8		Final examination period.
June 9	Saturday	Spring Semester classes close.

### Fall Quarter

September 11	Monday	Fall Quarter registration begins. Special registration hours listed on page 4.
September 20	Wednesday	Last day for registration and payment of tuition. Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee.
September 25	Monday	Fall Quarter classes begin. All offices resume regular office hours listed on page 4.
October 12	Thursday	Columbus Day, holiday.
November 11	Saturday	Veterans Day, holiday.
November 23	Thursday	Thanksgiving Day, holiday.
December 11 to 15		Final examination period.
December 16	Saturday	Fall Quarter closes.

### Winter Quarter

December 25	Monday	Christmas Day, holiday.
December 26	Tuesday	Winter Quarter registration begins. Regular office hours all offices listed on page 4.
January 1	Monday	New Year's Day, holiday.
January 2	Tuesday	Winter Quarter classes begin.
January 5	Friday	Last day for registration and payment of tuition. Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee.
February 12	Monday	Lincoln's Birthday, holiday.
February 22	Thursday	Washington's Birthday, holiday.
March 12 to 16		Final examination period.
March 17	Saturday	Winter Quarter closes.

### Spring Quarter

March 19	Monday	Spring Quarter registration begins. Regular office hours all offices listed on page 4.
March 26	Monday	Spring Quarter classes begin.
March 30	Friday	Last day for registration and payment of tuition. Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee.
April 20	Friday	Good Friday, holiday.
May 30	Wednesday	Memorial Day, holiday.
June 4 to 8		Final examination period.
June 9	Saturday	Spring Quarter closes.

### Special Terms

The opening and closing dates of any class taught on a special term basis are listed below the description of each class. Registration for these classes should be made during regular office hours at any office during the week before and the week during which these classes begin. Late fee goes into effect at midnight Friday of the week the class begins. Mail registrations postmarked after midnight must include late fee.

Department of ) 18 Bern G.M. d

# Evening and Special Classes ) 30 Bern Med

Twin Cities Area ) 10

(An index will be found on pages 149-150-151)

## INTRODUCTION ) 12 Gothic # 25

The General Extension Division is organized to enable Minnesotans to use University facilities to their advantage.

The specific purpose of the Department of Evening and Special Classes is to supplement the full-time programs of instruction offered students in day residence on its campuses by providing various kinds of educational opportunities, formal and informal, for citizens, young and old, who are not able to make education their chief occupation. The department's programs and courses reflect the programs and general educational objectives of the University. They are planned particularly to help citizens toward more satisfying and useful lives.

The instructional staff for the evening classes is drawn chiefly from full-time members of the various faculties of the University, teaching their regularly assigned courses or in their particular field of specialization. The rest of our instructors, selected from business and industry, with the approval of the University department concerned with the subject area, are chosen for their teaching ability.

Most evening classes are held on the Minneapolis Campus of the University. A few are scheduled on the St. Paul Campus. A number of art classes are offered at and in co-operation with the Minneapolis School of Art, Walker Art Center, and the St. Paul Gallery. An Extension Center in St. Paul, with classroom facilities, schedules many classes. The downtown Minneapolis office serves as a registration office.

This bulletin is assembled in (four) major sections. The first section describes Certificate Programs of the General Extension Division. The second section lists and outlines Degree Programs of the University available through the General Extension Division. The third section includes general information, registration regulations, special information for veterans, and special services for all evening class students. The fourth section describes the special Liberal Arts Programs of the Division. The fifth section or main body of the bulletin lists the course offerings under six headings: Agriculture, Arts and Sciences, Business Administration, Education, Engineering and Technical Sciences, and Recreation. Quarter class listing, St. Paul Extension Center class listing, faculty, index, and maps are found at the back of the bulletin.

# I. EXTENSION CERTIFICATE PROGRAMS

12 g # 25

Students not certain they can devote the time necessary to earn a college degree are urged to consider seriously a certificate program. These programs are generally regarded by both business and industry as valuable professional and technical preparation for employment and promotion in areas requiring extensive knowledge. With careful planning a certificate can be, if the student wishes, a stepping stone to a degree.

Seventeen intensive certificate programs in the areas of liberal arts, business administration, and engineering science (for engineers and technicians) are conducted by the General Extension Division. These programs may be completed entirely in the Evening and Special Classes Department. The curriculums are described in detail in the following pages.

Certificate programs are designed specifically for the part-time student. They consist of degree credit classes or a combination of degree and certificate credit classes. Certificate credit classes are college level in quality and represent an accelerated and specialized approach in subject matter in the areas represented. They are not, however, transferable to a degree program.

Senior certificates of 90 or more credits represent 2 years of college work, frequently at Upper Division level, and are equivalent to the Associate degree offered by many institutions. Junior certificates are equivalent to 1 year of college work at Lower Division level.

Work on a certificate may be done in evening classes, correspondence study, day school, summer session, or any combination of these. A student may also transfer credit from other accredited institutions of higher learning, although a minimum of 25 per cent of credits required for any certificate must be earned at the University of Minnesota. Core requirements must be completed by all applicants; the courses need not, however, be taken in order, except as prerequisites make it necessary.

Upon completion of a specified program with at least a C average the student is awarded a certificate. Senior certificates are dated and awarded at the regular University commencement exercises three times during the academic year. All other certificates are dated as of a University commencement date and mailed to the student.

A student interested in pursuing a certificate program is urged to complete an *Application for Admission to Certificate Programs* at the earliest possible time so proper counseling can be given. Advice and information about the various programs, including transfer of credits, may be secured from any member of the Committee on Student Scholastic Standing. A copy of *Procedures for Obtaining a General Extension Division Certificate* is available at any General Extension Division office.

Students who have completed the required work and are expecting to receive a certificate must file a *Certificate Completion* form at the beginning of the term in which the certificate is to be awarded.

Both the *Application for Admission to Certificate Programs* and the *Certificate Completion* forms are available at any General Extension Division office.



## Liberal Arts Certificate) 12

The program of the Liberal Arts Certificate is offered to students who wish an introduction to a liberal arts education. It is the equivalent of 1 full-time year of university level study. With careful planning, the Certificate may constitute the freshman year of a degree program in arts or business fields.

(45 credits)

*Students transferring credits to this certificate program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.*

### English requirement:

Engl 1B-2B-3B; or Comm 1-2-3; or exemption

**Spread Requirement (18 credits):** at least 6 credits in each of the following fields:

**Humanities:** English composition (beyond Freshman English) or literature, fine arts, foreign languages, humanities, philosophy, speech

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

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

**Concentration Requirement:** At least 12 credits in 1 subject, or in approved related liberal arts subjects, in addition to the credits earned in that subject under the spread and English requirements above.

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

## Interior Design Certificate

The Interior Design Certificate is awarded upon successful completion of a program of courses in interior design and related fields. A student holding the Certificate will have a background indicating proficiency in the field of home furnishings or as a junior decorator in a studio or store.

6 (45 credits)

*Students transferring credits to this certificate program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota, including the 4 courses in interior design.*

### Core Requirement:

Art 83A—Interior Design I

Art 84A—Interior Design II

Art 103A—Seminar in Interior Design I

Art 104A—Seminar in Interior Design II

Layout for Interior Design I or Home Design and Planning

Art 1—Introduction to Art

Psy 1A—Application of Psychology to Living

Engl 1B—Freshman English; or Review of Business English

Business Correspondence

**Spread Requirement:** not more than 2 courses in at least 3 of the following groups, to total 18 credits; courses subject to approval of the certificate program adviser, Mrs. Lewis, telephone FEderal 8-8791 or WEst 8-3431.

1. History of Art, Art Appreciation

2. Use of Color, Layout for Interior Design II, Color Photography

3. Ceramics, Sculpture, Weaving

4. French, Humanities, Psychology

## Public Administration Certificate

Planned for officers and employees of national, state, and local government, and for those preparing for careers in public service, the Public Administration Certificate program has three purposes. It is intended to provide an understanding of the fundamentals of public administration and an opportunity to study in detail some of the problems and techniques of administration. It may also supplement the in-service training programs of government agencies. In addition, it enables each student to carry out an individual program of study designed to fit his needs.

(45 credits)

*Students transferring credits to this certificate program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits in public administration courses at the University of Minnesota.*

### Core Requirement:

Pol 1-2—American Government and Politics  
Pol 60—Organization and Management

Pol 62—Public Personnel Administration  
Pol 63—Public Financial Administration

### Spread Requirement: at least 15 credits in the following courses:

Pol 58—Governmental Accounting  
Pol 61—Municipal Law and Administration  
Pol 64—Employee Training Techniques  
Pol 66—Problems of Public Administration  
Pol 67—Administrative Analysis  
Pol 68—Administrative Communication  
Pol 69—Problems in Tax Administration

Pol 73—City and County Planning  
Pol 76—Business and Government  
Pol 77—Administrative Regulation  
Pol 78—Administrative Responsibility  
Jour 78—Public Relations  
BA 5—Elements of Statistics

### Concentration Requirement: at least 15 credits in 1 of the following fields or in any approved combination thereof to make a minimum of 45 credits for the certificate:

Accounting  
Child Development  
Economics and Business Finance  
Engineering  
Industrial Relations  
Insurance  
Nursing Education

Political Science  
Psychology  
Recreation Leadership  
Social Work  
Sociology  
Transportation

## Secretarial Certificate

The Secretarial Certificate is awarded to those who, in addition to the necessary skills and experience in typewriting and shorthand, have completed a selection of courses appropriate to a background in business administration, such as needed for qualifying for Certified Professional Secretary examinations. Candidates for the certificate must take a test in transcription under the supervision of the secretarial faculty in the School of Business Administration.

(45 credits)

*Students transferring credits to this certificate program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.*

### Core Requirement:

Review of Business English and Business Correspondence; or Comp 58, Business Reports and Letters

Econ 1-2—Principles of Economics  
BA 24-25—Principles of Accounting  
BA 36—Office Procedures

BA 58, 88—Business Law  
BA 79A-79B—Administrative Secretarial Studies

BA 99—Office Management—Management of Administrative Services  
Psy 1-2—General Psychology

### Electives: additional courses selected from the following or other approved courses to make a minimum of 45 credits.

BA 5—Elements of Statistics  
BA 26—Principles of Accounting  
BA 53—Risk Management and Insurance

Econ 67—Money and Banking  
BA 78, 98—Business Law

## Industrial Relations Certificate

This program of study is arranged and co-ordinated by the Industrial Relations Center of the University. It is designed to provide professional training in the field of industrial relations and in the use of specialist techniques, and to assist industrial relations personnel to keep abreast of current developments in the profession. Training in this program is valuable in providing an entry into the profession, and completion of the certificate requirements may be regarded as an indication of technical competence in the field.

(46 credits)

*Students transferring credits to this certificate program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits in industrial relations courses at the University of Minnesota.*

### *Core Requirement:*

Econ 1-2—Principles of Economics  
 BA 52—Modern Industrial Relations: Labor Marketing  
 BA 72—Modern Industrial Relations: Manpower Management  
 Econ 172—Public Policy: Labor Relations  
 Econ 182—Economic Security  
 Psy 1-2—General Psychology  
 Psy 4-5—Introductory Laboratory Psychology  
 Psy 122-123—Vocational and Personnel Psychology

One course from the following:  
 Survey of Current Problems in Industrial Relations  
 BA 182B—Intermediate Manpower Management  
 BA 262-272-282—Graduate Topics in Industrial Relations

One course from the following:  
 BA 142—Settlement of Industrial Relations Disputes  
 Econ 152—Labor Movements  
 Econ 162—Union Government and Policies

### *Electives (any two courses from the following):*

BA 50—Production Management  
 BA 99—Office Management—Management of Administrative Services  
 Pol 64—Employee Training Techniques  
 Pol 68—Administrative Communication  
 Psy 125-126—Psychology of Individual Differences  
 Psy 144-145—Abnormal Psychology  
 Soc 120—Social Psychology  
 Soc 146—Industrial and Occupational Sociology

Supervision I, II, III  
 Economics of Collective Bargaining  
 Problems of Union Administration  
 Personnel Methods  
 Human Relations  
 Methods Engineering  
 Work Measurement  
 Industrial Engineering and Management  
 Layout Engineering and Materials Handling Systems

*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.

## Business Administration Certificates

These certificate programs have been approved by the School of Business Administration and arranged under the supervision of members of the faculties concerned. They are designed to present integrated, high quality, university-level courses of study of shorter length and scope than the full 4-year degree programs. They are designed especially for students who wish to obtain a general grounding in the basic principles and theories of business administration and for those who want training or an opportunity for advancement in some specific field of business.

It is possible for a student to move from a course of study for a certificate into a planned program leading to a bachelor of science in business or bachelor of science in economics degree. *Anyone who contemplates such a long-range objective, however, should consult an evening class adviser before proceeding further so as to avoid any loss of credits or possible future rejection from the degree program.*

### Junior Business Administration Certificate

This certificate, requiring the satisfactory completion of 45 credits of course work, is the equivalent of 1 academic year of full-time study. It offers a firm grounding in most of the basic fields of business administration. All of the credits received in completing the Junior Certificate are automatically credited toward a Senior Certificate and represent half of its required work load.

(45 credits)

*Students transferring credits from other institutions to this certificate program must take a minimum of 18 credits, including 12 credits in economics or business administration courses, at the University of Minnesota.*

#### Prebusiness Requirement:

Engl 1B-2B-3B; or Comm 1-2-3; or exemption  
Econ 1-2—Principles of Economics  
BA 5—Elements of Statistics  
BA 24-25-26—Principles of Accounting

ITM 11—College Algebra and Trigonometry I;  
(or) Math 10—College Algebra;  
(or) Math 7—College Algebra;  
(or) equivalent

#### Core Requirement (12 credits): 4 courses selected from the following:

BA 50—Production Management  
BA 51—Business Statistics  
BA 52—Modern Industrial Relations: Labor  
Marketing  
BA 53—Risk Management and Insurance  
BA 54—Transportation I: Principles  
BA 56—Corporation Finance  
BA 57—Principles of Marketing  
BA 58—Business Law: Contracts

BA 60—Business Policy and Management  
Control  
Econ 65—Intermediate Economic Analysis:  
The Firm  
Econ 66—Intermediate Economic Analysis:  
Income and Employment  
Econ 67—Money and Banking  
Econ 69—Government Regulation of Business

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

### Senior Business Administration Certificate

The Senior Business Administration Certificate is a continuation of the Junior Certificate: expanding the core and spread requirements to provide a broader base of general knowledge and an opportunity for specialization. The completion of the certificate requirement of 90 credit-hours represents the equivalent of 2 academic years of full-time university-level study. The course program may be considered to be roughly that of the sophomore and junior years of a 4-year degree program with particular emphasis on the basic principles and theories of business administration.

(90 credits)

*Students transferring credit from other institutions to this certificate program must take a minimum of 30 credits, including 18 credits in economics or business administration courses, at the University of Minnesota.*

**Prebusiness Requirement:**

Engl 1B-2B-3B; or Comm 1-2-3; or exemption  
 Econ 1-2—Principles of Economics  
 BA 5—Elements of Statistics  
 BA 24-25-26—Principles of Accounting

ITM 11—College Algebra and Trigonometry I;  
 (or) Math 10—College Algebra;  
 (or) Math 7—College Algebra;  
 (or) equivalent

**Core Requirement (18 credits):** 6 courses selected from the following:

BA 50—Production Management  
 BA 51—Business Statistics  
 BA 52—Modern Industrial Relations: Labor  
     Marketing  
 BA 53—Risk Management and Insurance  
 BA 54—Transportation I: Principles  
 BA 56—Corporation Finance  
 BA 57—Principles of Marketing  
 BA 58—Business Law: Contracts

BA 60—Business Policy and Management  
     Control  
 Econ 65—Intermediate Economic Analysis:  
     The Firm  
 Econ 66—Intermediate Economic Analysis:  
     Income and Employment  
 Econ 67—Money and Banking  
 Econ 68—Elements of Public Finance  
 Econ 69—Government Regulation of Business

**Electives in Business Administration and Economics:** at least 12 additional credits in courses in business administration and economics (i.e., courses listed on pages 95 to 113 of this bulletin). These may be selected from the core group above.

**Other Electives:**

- A. Satisfactory completion of the prebusiness degree requirements in either social sciences, natural sciences or humanistic courses (see items 4, 5, and 6 on page 27).
- B. Additional courses approved by the Committee on Student Scholastic Standing to make a minimum of 90 credits for the Certificate. Students contemplating continuing toward a degree from the School of Business Administration should select electives which could become part of the degree program. These students are therefore urged to complete the prebusiness requirements (see page 27).

## Accounting Certificates

The courses required for the Senior Accounting Certificate provide very nearly the same background in accounting practice and theory as is available to students who graduate with a 4-year degree with specialization in this field. The full program forms a sound background for the continuation of independent study in preparation for the Certified Public Accountant examinations.

The Junior Accounting Certificate program is of value to individuals in junior accounting positions in industry; to management personnel who are required to deal with common finance and accounting data; and to businessmen who wish to have a basic grounding and understanding of the elementary principles of accounting and corporation finance.

### Junior Accounting Certificate

(45 credits)

*Students transferring credits to this certificate program from other institutions accredited by the University of Minnesota must take a minimum of 15 credits in accounting courses at the University of Minnesota.*

#### Requirements:

Engl 1B-2B-3B—Freshman English  
Econ 1-2—Principles of Economics  
BA 56—Corporation Finance

BA 24-25-26—Principles of Accounting  
BA 105A-B-C—Intermediate Accounting  
BA 115A-B—Cost Accounting

### Senior Accounting Certificate

(90 credits)

*Students transferring credits to this certificate program from other institutions accredited by the University of Minnesota must take a minimum of 27 credits in accounting courses at the University of Minnesota.*

#### Requirements:

Engl A-B-C, or 1A-2A-3A, or 1B-2B-3B, or  
Comm 1-2-3  
Comp 27—Advanced Writing  
ITM 11-12—College Algebra and Trigonometry I-II; or Math 10 and 40  
BA 24-25-26—Principles of Accounting  
BA 105A-B-C—Intermediate Accounting  
BA 115A-B—Cost Accounting  
Four additional accounting courses numbered  
100 or above  
BA 56—Corporation Finance  
Econ 1-2—Principles of Economics  
BA 5—Elements of Statistics  
BA 51—Business Statistics  
BA 58—Business Law: Contracts  
BA 78-88—Business Law, or approved substitutions in industrial management or industrial engineering

#### Two courses from the following:

BA 50—Production Management  
BA 52—Modern Industrial Relations: Labor  
Marketing  
BA 53—Risk Management and Insurance  
BA 54—Transportation I: Principles  
BA 57—Principles of Marketing  
Econ 65—Intermediate Economic Analysis:  
The Firm  
Econ 66—Intermediate Economic Analysis:  
Income and Employment  
Econ 67—Money and Banking  
Econ 68—Elements of Public Finance  
Econ 69—Government Regulation of  
Business

## Management of Administrative Services Certificates

The Management of Administrative Services Certificate program has been developed by the General Extension Division in co-operation with the School of Business Administration and the National Office Management Association.

These university-level certificate programs are designed especially for those management employees who have not received such training in schools of business or commerce, in order to assist them in becoming more competent in their present positions and to improve their opportunities for advancement.

### Junior Management of Administrative Services Certificate

In addition to the granting of the Junior Certificate by the General Extension Division on completion of the prescribed program, the student is entitled to the N.O.M.A. Associate in Management of Administrative Services Certificate.

(45 credits)

*Students transferring credits from other institutions to this certificate program must take a minimum of 12 credits, including 6 credits in economics or business administration courses, at the University of Minnesota.*

#### Core Requirement:

Review of Business English; or Business Correspondence; or Engl 1B; or Comm 1; or exemption  
Econ 1-2—Principles of Economics  
BA 5—Business Statistics

BA 24-25-26—Principles of Accounting  
BA 58—Business Law: Contracts  
BA 99—Office Management—Management of Administrative Services  
Psy 1-2—General Psychology

*Electives:* additional courses to be selected from the list of requirements for the senior certificate to make a minimum of 45 credits for the certificate.

## Evening and Special Classes

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### Senior Management of Administrative Services Certificate

In addition to the granting of the Senior Certificate by the General Extension Division on completion of the prescribed program, the student is entitled to the N.O.M.A. Fellow in Management of Administrative Services Certificate.

(90 credits)

*Students transferring credits from other institutions to this certificate program must take a minimum of 24 credits, including at least 12 credits in economics or business administration courses, at the University of Minnesota.*

#### Core Requirement:

Review of Business English and Business Correspondence; or Engl 1B-2B-3B; or Comm 1-2-3; or exemption  
Econ 1-2—Principles of Economics  
BA 5—Business Statistics  
BA 24-25-26—Principles of Accounting  
BA 52—Modern Industrial Relations: Labor Marketing

BA 58—Business Law: Contracts  
BA 99—Office Management—Management of Administrative Services  
Psy 1-2—General Psychology  
Comp 58—Business Reports and Letters (or) Communication in Management

#### Group Requirements:

Group I—at least three courses from the following:

BA 53—Risk Management and Insurance  
BA 54—Transportation I: Principles

BA 56—Corporation Finance  
BA 57—Principles of Marketing

Group II—at least six courses from the following:

BA 55C—Managerial Costs  
BA 55D—Analysis of Financial Statements  
BA 62—Human Relations in Industry  
BA 70—History of Management Thought  
BA 72—Modern Industrial Relations: Manpower Management  
BA 76—Finance Management  
BA 80—Administrative Practices  
BA 88—Business Law

BA 110—Systems and Procedures Analysis: Work Measurement; or equivalent  
BA 119—Business Communications and Correspondence Control  
BA 129—Records Administration  
BA 139—Analysis of Office Functions  
Psy 122-123—Vocational and Personnel Psychology

*Electives:* additional courses from the following list of courses or areas to make a minimum of 90 credits for the certificate.

BA 87—Credits and Collections  
BA 89B—Tabulating Equipment Applied to Business: Laboratory  
Supervision I, II, III  
Pol 64—Employee Training Techniques  
Pol 68—Administrative Communication  
Psy 156—Psychology of Advertising  
Accounting  
Business Finance  
Economics  
Industrial Management and Relations

Insurance  
Marketing  
Office Management  
Real Estate  
Sales Management  
Traffic  
English  
Humanities  
Social Science  
Speech



## Engineering Science and Engineering Technician Certificates

The technical progress of American industry has reached its high level of production through engineering teamwork. The engineering team is a three-part team:

- a. Engineers and scientists who formulate ideas and create new products and services.
- b. Engineering technicians who help develop, test and apply these ideas and creations.
- c. Skilled workers who make the products and perform routine services.

It is the responsibility of our colleges and universities to provide training opportunities for persons capable of becoming professional engineers, scientists and engineering technicians. Vocational and trade schools have the responsibility of training the skilled worker.

The Evening and Special Classes Department of the General Extension Division offers a variety of certificates for the part-time student who has the ability to carry college-level courses leading to a career both at the professional engineer and engineering technician level. Interested students should study these certificates carefully and select the program best suited to their interests, abilities, present or future employment and ultimate educational goals.

It is recognized that many capable students would like to complete an engineering degree. Such students should plan to complete the Senior Engineering Science Certificate and apply for admission to the Institute of Technology. Beginning in the fall, 1960, the Department of Evening and Special Classes started one third-year Upper Division class sequence each in the fields of electrical engineering and industrial engineering. It is hoped that such a class sequence will also be started in mechanical engineering in the near future. However, it must be remembered that most engineering curriculums are 5 years in length on a full-time basis. It is unlikely that it will be possible to complete any degree program entirely in the evening for some time to come.

For these reasons, part-time students are urged to consider seriously the Senior Engineering Technician programs. Our tremendous technological advancement since World War II has created a serious technical manpower shortage. Twin Cities industrial concerns constantly request engineering technicians. This is the type of training we strive to give through the Senior Engineering Technician Certificate programs.

Entrance into the Senior Engineering Science program or any of the Senior Engineering Technician programs is made upon completion of the Basic Engineering Science Certificate. An *Application for Admission to Basic Engineering Science Certificate Program* blank must be completed by the student when he begins the program. Although he will be permitted to make changes after securing the Basic Engineering Science Certificate, the *Application for Admission* information helps advisers to give more effective counseling. This blank is available at any General Extension Division office.

### **Basic Engineering Science Certificate**

The Basic Engineering Science Certificate program is designed to provide the student with the fundamentals of English, mathematics, drawing, and physics which will enable him to handle basic engineering drafting assignments in any engineering field and will give him the necessary background for more specialized or advanced study either as an engineer or as an engineering technician. *All classes in the Basic Engineering Science Certificate program carry degree credit, representing the first year of required course work for an engineering degree, and are transferable to the Institute of Technology when admission requirements are satisfied.*

Students who complete the Basic Engineering Science Certificate may plan to continue in either the Senior Engineering Science Certificate, or 1 of the 4 senior Engineering Technician Certificate programs, which are offered in the evening. Qualified students are urged to make application for admission to the Institute of Technology and, if possible, enroll in day school and work toward a degree in engineering.

The requirements for the Basic Engineering Science Certificate program are listed below. No electives or substitutions are permitted in this program, nor will any prerequisite be waived. Credits earned in correspondence study or day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing office of the University of Minnesota. Transfer of approved credits not to exceed 75 per cent will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

Prerequisite: high school graduate or equivalent, higher algebra, solid geometry, satisfactory completion of the English Placement Test and the Placement Examination in High School Algebra.

(52 credits)

ITM 11—College Algebra and Trigonometry I  
ITM 12—College Algebra and Trigonometry II  
ITM 13A—Calculus I: Analytic Geometry and  
Calculus

EG 14-15-16—Engineering Graphics  
Phys 11-12-13—General Physics  
GE 70—The Slide Rule  
Engl 1B-2B-3B—Freshman English

### Senior Engineering Science Certificate

This certificate is designed for students who have a professional engineering degree objective and who wish to continue working toward one of the engineering curriculums of the Institute of Technology. This approach involves interweaving into one expanding pattern the elements of basic science, engineering science, professional engineering work and design. To build the sound foundation required in engineering work the first 2 years of all engineering curriculums emphasize the basic sciences of mathematics, physics and chemistry.

Work in nontechnical and biological science electives is also required throughout the entire engineering program. This is intended to broaden viewpoints and to add perspective.

*All classes in the Senior Engineering Science Certificate program carry degree credit and are transferable to the Institute of Technology when admission requirements are satisfied.*

The requirements for the Senior Engineering Science Certificate program are listed below. No substitutions are permitted in this program, nor will any prerequisite be waived. Credits earned in correspondence study or day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing office of the University of Minnesota. Transfer of approved credits not to exceed 75 per cent will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

Prerequisite: completion of Basic Engineering Science Certificate.

(102 credits—includes 52 credits from Basic Engineering Science Certificate)

**Core Requirement:**

- |  |  |
|--|--|
| ITM 24A—Calculus II: Analytic Geometry and Calculus<br>ITM 25A—Calculus III: Analytic Geometry and Calculus<br>ITM 26A—Calculus IV: Analytic Geometry and Calculus | MM 27—Rigid-Body Mechanics I<br>Phys 14—Intermediate Physics<br>Phys 14A—Intermediate Physics Laboratory<br>Phys 50—Intermediate General Physics<br>Phys 50A—Intermediate Physics Laboratory<br>InCh 4-5—General Inorganic Chemistry |
|--|--|

**Spread Requirement:** a minimum of 6 credits from the following courses:

- |  |   |
|--|---|
| ITM 90—Elementary Engineering Statistics<br>MM 28—Rigid-Body Mechanics II<br>MM 40—Deformable-Body Mechanics I | MM 41—Deformable-Body Mechanics II<br>InCh 11—Semimicro Qualitative Analysis<br>OrCh 61-62—Elementary Organic Chemistry |
|--|---|

**Electives:** courses from nontechnical or biological science electives,†† or engineering Engl 85-86, or additional courses from the spread requirement to make a minimum of 102 credits, including those from the Basic Certificate.

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†† Institute of Technology nontechnical or biological science electives may be chosen from the following: Psy 1-2, 155; Biol 1-2; Econ 1-2, 172; BA 52; Pol 1-2, or 5, or A-B, 25; Soc 1-2, 14 or 104; SSci 1-2-3; Hum 51, 52, 53 or 21, 22, 23, or 71, 72, 73; Hist 20, 21, 22 or 79, 80, 81; philosophy; Engl 37, 38, 39; foreign language, except scientific language courses; religion.

### Senior Civil Engineering Technician Certificate

The Senior Civil Engineering Technician Certificate is a specialized program. It enables a student to continue the Basic Certificate work in mathematics and communication and to concentrate his civil engineering study in the areas of hydraulics, structural, or highways and pavements.

This program is not a short cut to a professional degree in civil engineering. It is designed to train engineering technicians capable of being the liaison between the civil engineer and the skilled worker. Degree credit classes may be transferred to a degree program.

The requirements for the Senior Civil Engineering Technician Certificate program are listed below. No substitutions are permitted in this program. Credits earned in correspondence study or day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing office of the University of Minnesota. Transfer of approved credits not to exceed 75 per cent will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

Prerequisite: completion of Basic Engineering Science Certificate.

(102 credits—includes 52 credits from Basic Engineering Science Certificate)

*Core Requirement:*

ITM 24A—Calculus II: Analytic Geometry and Calculus  
ITM 25A—Calculus III: Analytic Geometry and Calculus

MM 27—Rigid-Body Mechanics I  
Engl 85—Advanced Technical Communication  
CE 18-19—Surveying  
MM 40—Deformable-Body Mechanics I

*Concentration Option:* a student may select one of the following concentration sequences. No electives or substitutions permitted once a concentration has been selected.

**Hydraulics**

Hydr 103—Fluid Mechanics  
CE 160—Applied Hydraulics  
CE 161—Hydrology

CE 131—Structural Analysis  
CE 132—Structural Design

**Highways and Pavements**

CE 20—Surveying  
CE 141—Reinforced Concrete  
CE 142—Reinforced Concrete Design  
CE 144—Prestressed Reinforced Concrete

**Structural**

CE 31-32-33—Elementary Structural Analysis and Design  
CE 130—Statically Indeterminate Structures

*Electives:* courses from nontechnical or biological science electives†† to make a minimum of 102 credits, including those from the Basic Certificate.

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†† Institute of Technology nontechnical or biological science electives may be chosen from the following: Psy 1-2, 155; Biol 1-2; Econ 1-2, 172; BA 52; Pol 1-2, or 5, or A-B, 25; Soc 1-2, 14 or 104; SSci 1-2-3; Hum 51, 52, 53 or 21, 22, 23, or 71, 72, 73; Hist 20, 21, 22 or 79, 80, 81; philosophy; Engl 37, 38, 39; foreign language, except scientific language courses; religion.

### Senior Electrical Engineering Technician Certificate

The Senior Electrical Engineering Technician Certificate is a specialized program. It enables a student to continue the Basic Certificate work in mathematics, physics, and communication. It is designed to train engineering technicians capable of being the liaison between the electrical engineer and the skilled worker.

This program is not a short cut to a professional degree in electrical engineering; however, any degree credit classes may be transferred to a degree program.

The requirements for the Senior Electrical Engineering Technician Certificate program are listed below. No substitutions are permitted in this program. Credits earned in correspondence study or day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing office of the University of Minnesota. Transfer of approved credits not to exceed 75 per cent will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

Prerequisite: completion of Basic Engineering Science Certificate.

(102 credits—includes 52 credits from Basic Engineering Science Certificate)

#### Core Requirement:

ITM 24A—Calculus II: Analytic Geometry and Calculus

ITM 25A—Calculus III: Analytic Geometry and Calculus

MM 27—Rigid-Body Mechanics I

MM 28—Rigid-Body Mechanics II

Elements of Electric Circuits

Elements of Electric Machines and Control Systems

Elements of Electronics I-II

Engl 85—Advanced Technical Communication

Phys 14—Intermediate Physics

Phys 14A—Intermediate Physics Laboratory

*Electives:* courses from nontechnical or biological science electives†† to make a minimum of 102 credits, including those from the Basic Certificate.

†† Institute of Technology nontechnical or biological science electives may be chosen from the following: Psy 1-2, 155; Biol 1-2; Econ 1-2, 172; BA 52; Pol 1-2, or 5, or A-B, 25; Soc 1-2, 14 or 104; SSci 1-2-3; Hum 51, 52, 53 or 21, 22, 23, or 71, 72, 73; Hist 20, 21, 22 or 79, 80, 81; philosophy; Engl 37, 38, 39; foreign language, except scientific language courses; religion.

### Senior Industrial Engineering Technician Certificate

The Senior Industrial Engineering Technician Certificate is a specialized program. It enables the student to continue his Basic Certificate work in mathematics and communication. It is designed to train engineering technicians capable of being the liaison between the industrial engineer and the skilled worker.

This program is not a short cut to a professional degree in industrial engineering; however, any degree credit classes may be transferred to a degree program.

The requirements for the Senior Industrial Engineering Technician Certificate program are listed below. No substitutions are permitted in this program. Credits earned in correspondence study or day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing office of the University of Minnesota. Transfer of approved credits not to exceed 75 per cent will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

Prerequisite: completion of Basic Engineering Science Certificate.

(102 credits—includes 52 credits from Basic Engineering Science Certificate)

#### *Core Requirement:*

ITM 24A—Calculus II: Analytic Geometry and Calculus

ITM 25A—Calculus III: Analytic Geometry and Calculus

MM 27—Rigid-Body Mechanics I

MM 40—Deformable-Body Mechanics I

Engl 85—Advanced Technical Communication  
Industrial Engineering and Management

ITM 90—Elementary Engineering Statistics

*Concentration Requirement:* select at least 5 courses from the following industrial engineering courses:

Motion and Time Study  
Principles of Engineering Economy  
Introduction to Reliability  
Inventory and Production Control  
Statistical Quality Control

Manufacturing Cost Analysis  
Introduction to Operations Analysis  
Layout Engineering and Materials Handling  
Process Engineering

*Electives:* additional courses may be selected from the following suggested areas or courses to make a minimum of 102 credits, including those from the Basic Certificate.

Industrial Engineering  
Mechanical Engineering  
Electrical Engineering  
Mathematics  
Psy 1-2  
Supervision I, II, or III

Econ 1-2—Principles of Economics  
BA 52—Modern Industrial Relations: Labor  
Marketing  
BA 72—Modern Industrial Relations: Man-  
power Management

### Senior Mechanical Engineering Technician Certificate

The Senior Mechanical Engineering Technician Certificate is a specialized program. It enables the student to continue his Basic Certificate work in mathematics and communication. It is designed to train engineering technicians capable of being the liaison between mechanical engineers and the skilled worker.

This program is not a short cut to a professional degree in mechanical engineering; however, any degree credit classes may be transferred to a degree program.

The requirements for the Senior Mechanical Engineering Technician program are listed below. No substitutions are permitted in this program. Credits earned in correspondence study or day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing office of the University of Minnesota. Transfer of approved credits not to exceed 75 per cent will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

Prerequisite: completion of Basic Engineering Science Certificate.

(102 credits—includes 52 credits from Basic Engineering Science Certificate)

#### Core Requirement:

ITM 24A—Calculus II: Analytic Geometry and Calculus

ITM 25A—Calculus III: Analytic Geometry and Calculus

EG 21—Applied Graphics: Mechanical Engineering

MM 27—Rigid-Body Mechanics I

MM 40—Deformable-Body Mechanics I

Engl 85—Advanced Technical Communication

Instrumentation and Automatic Control

Energy Utilization and Transfer

Kinematics of Machinery I-II

*Electives:* at least one class from the list of courses below and courses from nontechnical or biological science electives†† to make a minimum of 102 credits, including those from the Basic Certificate.

Machine Design I-II

Refrigeration and Air Conditioning I-II

Servomechanisms

Tool Design

†† Institute of Technology nontechnical or biological science electives may be chosen from the following: Psy 1-2, 155; Biol 1-2; Econ 1-2, 172; BA 52; Pol 1-2, or 5, or A-B, 25; Soc 1-2, 14 or 104; SSci 1-2-3; Hum 51, 52, 53 or 21, 22, 23, or 71, 72, 73; Hist 20, 21, 22 or 79, 80, 81; philosophy; Engl 37, 38, 39; foreign language, except scientific language courses; religion.

## II. UNIVERSITY DEGREE PROGRAMS

It is possible through evening classes (sometimes in combination with correspondence study) to meet all of the requirements for the following regular University degrees: the Associate in Liberal Arts (A.L.A.), the Bachelor of Arts (B.A.), the Bachelor of Science in Business (B.S.B.), the Bachelor of Science in Economics (B.S.E.), and the Master of Business Administration (M.B.A.).

In addition to the above degrees, which may be taken in their entirety through the General Extension Division, courses are offered in other programs as well, approaching total requirements in varying measure in the professional and preprofessional areas: dentistry, education, engineering, law, medicine, nursing, pharmacy, etc.

As soon as a student has decided that he wishes to pursue a degree program, he should contact a member of the Extension Committee on Student Scholastic Standing, who will assist him in:

1. Determining the student's status in relation to the degree program;
2. Obtaining proper forms necessary to initiate admission, both to the University of Minnesota and to the college in which the student will be a degree candidate;
3. Program advising at the Lower Division level and securing an adviser at the Upper Division level in the appropriate college.

Degree candidates are warned that in addition to University residence requirements, which are met by attendance in evening classes, there are specific college residence requirements, which are met only by attendance in classes *following* formal admission to the college granting the degree. Therefore, a student considering a degree program *must* consult a member of the Scholastic Committee early in consideration of such a program.

Bulletins of the various colleges of the University can be obtained by telephoning FEederal 2-8158, Extension 6281, and asking for the Service Bureau.



## **Associate in Liberal Arts (A.L.A.)**

The associate in liberal arts degree indicates the successful completion of a 90-credit program devoted largely to general education. The program is basically equivalent to 2 regular academic years of study and is granted by the College of Science, Literature, and the Arts. Students find this degree desirable as an evidence of liberal arts achievement if they are transferring to a professional school. Extension students may be especially interested in the A.L.A. degree, both because it is more readily completed than the Bachelors' programs and the A.L.A. is a half-way point to many of the Bachelors' degrees. A student wishing to complete the A.L.A. degree through extension should talk with a member of the Extension Committee on Student Scholastic Standing as soon as he has made this decision.

Requirements for the A.L.A. degree are based on the Course Requirements for Admission to the Upper Division of S.L.A. From that list, these distribution requirements must be met: English (A), and at least 3 of the other 4—Foreign Language (B), Social Science (C), Natural Science (D), and Humanities (E). The student must complete 90 credits, at least 45 of which must be earned following admission to the College of Science, Literature, and the Arts. This constitutes the college residence requirement. Any or all of the first 45 credits may also be taken through correspondence courses.

A copy of the *Bulletin of the College of Science, Literature, and the Arts* is essential for the A.L.A. degree student. In addition, a copy of *Procedures for Obtaining the Associate in Liberal Arts Degree Through Extension* should be obtained from the Extension office.

## **Bachelor of Arts (B.A.)**

The bachelor of arts degree is granted by the College of Science, Literature, and the Arts through evening classes. Part of the degree program may also be met through correspondence courses, if desired, or with credits transferred from other accredited colleges and universities. A student wishing to complete the B.A. degree through extension should talk with a member of the Extension Committee on Student Scholastic Standing as soon as he has made this decision.

Candidates for the B.A. degree complete a minimum of 180 credits in the S.L.A. College. The first 90 credits are taken in the Arts College Lower Division; the final 90 are, for the most part, Upper Division courses. Listed here is the program followed while a student is in the Lower Division. When he has completed these requirements and is admitted to the Upper Division, he selects major and minor fields and concentrates his studies. In planning a Lower Division program, the student should fulfill whatever prerequisites may be required by his major.

A copy of the *Bulletin of the College of Science, Literature, and the Arts* is essential for the B.A. degree student. In addition, a copy of *Procedures for Obtaining the Bachelor of Arts Degree Through Extension* should be obtained from the Extension office.

## Evening and Special Classes

### 10 Course Requirements for Admission to the Upper Division for B.A. Degree

A. Freshman English: Engl A-B-C; or Engl 1A-2A-3A; or Engl 1B-2B-3B; or Comm 1-2-3; or exemption.

B. Foreign Language: From 0-15 credits according to the following schedule:

*Amount presented from high school*

None

1 year

2 years in 1 language

3 or more years in 1 language

2 years in each of 2 languages

*Additional amount required in college*

15 credits in 1 language

(a) 10 credits in same language or

(b) 15 credits in different language

(a) 5 credits in same language or

(b) 10 credits in different language

No college requirement if the high school work is validated by the appropriate college department

No college requirement if 1 language is validated at the 2-year level by the appropriate college department

C. Social Science: At least 15 credits in 2 or more of the following departments. At least 5 credits must be offered in any 1 department to count.

1. Anthropology

2. Economics and Business Administration (in B.A., only 1 and 5 accepted)

3. Geography

4. History

5. Political Science

6. Psychology

7. Sociology

8. Social Science (Interdisciplinary Programs)

D. Natural Science: At least 15 credits (of which a minimum of 8 must include laboratory††) from 2 or more of the following groups. At least 5 credits must be offered in any 1 department to count.

1. Biological sciences: biology, botany, psychology, zoology

2. Physical sciences: astronomy, chemistry, geology, physics, Physical World

3. Mathematics (except Y, 20, 21)

4. Orientation in the Natural Sciences (a student presenting credits in only NSci 1-2 must take his additional work in other than group D2)

E. Humanities: At least 15 credits from 2 or more of the following categories. At least 5 credits must be offered from any 1 category to count.

1. Art

2. English literature

3. Foreign literature

4. History

5. Humanities

6. Mathematics (except Y, T, C, 20, 21)

7. Music

8. Philosophy

9. Speech and theater arts (except 6, 6A, 9, 39)

F. Course in Health: PubH 2 or Pub H 3 or equivalent.

G. Electives: Additional credits to make a total of 90.

†† Introductory natural science courses which count toward the laboratory requirement are Biol 1-2; Bot 1-2-3; InCh 4-5, 24-25; Geol 1 with A, 2 with B, 8 with A, 23-24-25; NSci 4-5-6, 7-8-9; Phys 1-2-3 with 1A-2A-3A, 4-5-6, 7-8-9, 12-13; Psy 1-2 with 4-5; Zool 1-2-3, 14-15. Non-laboratory courses include Ast 11, 20; Bot 10, 12, 14; Geol 1, 2, 8; Math 6, T, 7, 10, 15-16, 40; NSci 1-2-3; Phys 1-2-3, 11; Psy 1-2.

## **Bachelor of Science in Business (B.S.B.)**

## **Bachelor of Science in Economics (B.S.E.)**

The bachelor of science in business and the bachelor of science in economics (economics sequence) degrees are granted by the School of Business Administration through evening classes. A limited portion of either degree program may also be met through correspondence courses, if desired. A student wishing to complete either the B.S.B. or the B.S.E. degree through extension should talk with a member of the Extension Committee on Student Scholastic Standing as soon as he has made this decision.

Candidates for either degree complete a minimum of 180 credits, part of which may be earned in other accredited colleges or universities. Usually the first 90 credits involve the completion of certain prebusiness requirements through extension courses or while registered in the College of Science, Literature, and the Arts, or the Institute of Agriculture, or the Institute of Technology of the University of Minnesota. After completion of these requirements, it is necessary that formal application be made to the School of Business Administration for admission. Under any circumstances, a minimum of 45 credits must be earned after such application and admission.

Usually admission applications are evaluated under either Arts College or Institute of Technology prebusiness requirements as listed below.

### 10 *(Prebusiness Course Requirements in SLA for the B.S.B. and B.S.E. (economics sequence) Degrees*

1. **Business and Economics Courses:** BA 1, Business and the American Economy (not required for the B.S.E. and waived in the B.S.B. for all extension students); BA 24-25-26, Principles of Accounting; Econ 1-2, Principles of Economics; BA 5, Elements of Statistics (for which the mathematics requirement in item 3 below is a prerequisite). (All courses are 3 credits each in extension.)
2. **Freshman English:** Engl A-B-C; or Engl 1A-2A-3A; or Engl 1B-2B-3B; or Comm 1-2-3 or GC 31A-31B-31C or 31D with required score; or exemption.
3. **Mathematics:** Math 10, College Algebra, or ITM 11, or equivalent. Depending on background and ability, Math X and/or Math Y, or ITM 9, or Math 1 may be prerequisites for Math 10.
4. **Social Sciences:** 15 credits†† in each of 2 or more of the following departments, with at least 5 credits taken in each department to meet this requirement: anthropology, geography, history, political science, psychology, and sociology (except Soc 45). SSci 1-2-3 and 5 credits in 1 of the above departments will satisfy this requirement.
5. **Natural Science:** a minimum of 8 credits†† in a single natural science, with laboratory, selected from: biology, botany, chemistry, geology, physics, zoology, NSci 4-5-6 (Physical World). (Biol 1-2, InCh 4-5, Phys 11-12, or Geol 1-2, A-B, offered in evening classes, will meet this requirement.)
6. **Humanistic Courses:** 10 credits†† from 2 or more of the following categories with at least 5 credits taken in each category to meet this requirement: art, English literature, foreign literature, history, humanities, music, philosophy, speech and theater arts (except Spch 3, 6, 9, and 39), a foreign language.
7. **Electives**—to complete the minimum of 90 credits required for admission. (These may include some additional business or economics courses, although this is not recommended.) An over-all minimum grade average of C is also required for admission.
8. **Note:** Students planning to enter the accounting program are required to complete the following courses in addition to those specifically listed above: Comp 27, Math 40 or equivalent.

†† Courses in history may be used to satisfy the requirements in only one area; 4½ transfer credits will satisfy any 5-credit requirement.

## Evening and Special Classes

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### *Prebusiness Course Requirements in the Institute of Technology for the B.S.B. Degree (four-year engineering-business program)*

1. **Business and Economics Courses:** BA 1, Business and the American Economy (waived for all extension students); BA 24-25-26, Principles of Accounting; Econ 1-2, Principles of Economics; BA 5, Elements of Statistics (for which the mathematics requirement in item 3 below is a prerequisite). (All courses are 3 credits each in extension.)
2. **Freshman English:** Engl A-B-C; or Engl 1A-2A-3A; or Engl 1B-2B-3B; or Comm 1-2-3; or GC 31A-B-C or D with required score; or exemption.
3. **Mathematics:** ITM 11-12-13A-24A.
4. **Other specific requirements:**
  - EG 14-15-16, Engineering Graphics
  - Phys 11-12-13-14, General Physics
  - InCh 14-15 (4-5), General Inorganic Chemistry
  - ITM 92 and Met 56 (waived for extension students)
5. **Electives**—to complete a minimum of 92 credits, with an over-all minimum grade average of C.

### *Degree Requirements*

Other prebusiness programs are found in the *Bulletin of the School of Business Administration*, a copy of which is essential for the B.S.B. or B.S.E. degree student. A copy of *Procedures for Obtaining the Bachelor of Science in Business or the Bachelor of Science in Economics Degree Through Extension* should be obtained from the Extension office.

Specific degree requirements for either are listed in the *Bulletin of the School of Business Administration*. For the B.S.B. degree, in addition to the prebusiness requirements listed above, the student must complete 42 credit hours of specified "core group" courses, at least 18 credit hours of business and economics electives, and at least 9 credit hours of courses numbered 50 and above in a department outside the School of Business. An additional 9 credits of work in courses numbered 50 and above are also required. Graduation requirements include a minimum of 180 credits with a C average.

A student may receive the B.S.B. degree after completion of a special program in accounting. This involves 180 credits with a C average, and prebusiness requirements as listed above, including Comp 27 and Math 40 or equivalent. (IT prebusiness requirements listed above may also be used, including Comp 27 and ITM 24A.) Beyond prebusiness, specific accounting program requirements include 42 credit hours of "core group" courses, about 37 credits in additional accounting and business law courses, and 9 credits in courses numbered 50 and above in a department outside of the School of Business Administration.

A student may graduate under the requirements in effect at the time he is admitted to the School of Business Administration. Consequently, different requirements from those listed above may still be in effect for some students.

## **Master of Business Administration (M.B.A.)**

A master of business administration degree is being offered during evening hours by the Graduate School, in conjunction with the Department of Business Administration and the General Extension Division of the University of Minnesota.

This program is designed to broaden the individual's knowledge and understanding in the areas necessary to prepare professional managers for leadership responsibilities in their respective organizations. It consists of two parts. The candidate's background and academic preparation will determine whether he must take Part I; all candidates must complete Part II.

Part I of the program is designed to prepare the person with a nonbusiness undergraduate degree for advanced training in business administration. It has been developed expressly for the liberal arts, engineering, or similar nonbusiness undergraduate who desires to further his formal business education at the graduate level.

Part II of the program is designed for the candidate who holds a Bachelor's degree in business administration from the University of Minnesota or the equivalent degree from another institution.

Because of the maturity and experience of participants enrolled in both parts of the program, heavy reliance is placed on the case method and group conference techniques of instruction.

Participation in all or part of the program is open to any holder of a Bachelor's degree from a recognized college or university provided he has been admitted to the Graduate School of the University of Minnesota in accordance with Graduate School standards and policies. No transfer of graduate credit is permitted by the Graduate School. However, courses satisfactorily completed at other institutions may be used to meet some or all of the course requirements in Part I of the program.

Applications for admission will be considered individually by the Graduate Admissions Committee of the graduate faculty in the Department of Business Administration, which will recommend action by the Graduate School. *Because of enrollment limitations, it is unlikely that admission will be granted prior to fall 1962.* Applicants meeting admission requirements will be placed on a waiting list and will be notified as space becomes available.

A program administrator who is a member of the graduate faculty of the Department of Business Administration serves as program adviser and planner. He must approve the program of any student accepted for the M.B.A. degree.

Interested persons should write Co-ordinator for Curriculum Development, General Extension Division, 56 Nicholson Hall, University of Minnesota, Minneapolis 14, for a brochure describing this program in further detail. Kindly identify your company or employer.

### III. INFORMATION

12 g. # 25

#### GENERAL INFORMATION

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#### Admission Requirements

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There are no entrance or residence requirements for admission into the General Extension Division; however, for registration in specific programs or classes there may be prerequisite courses or experience. See Prerequisites, page 31. Service veterans may register under Public Laws 550 and 894. See Special Information for Veterans and Members of the Armed Forces, page 38.

A student who has had university or college work any place and who intends to work on a degree or certificate program should submit a transcript of his record to the secretary of the Committee on Student Scholastic Standing. This must be done at least 3 weeks in advance of the opening of a registration period if the student wants help in planning a program. Obtain transcripts from the registrar of an institution previously attended. Korean veterans, see page 38 for special instructions.

#### Credits

The credits listed in the class descriptions are quarter credits. However, most evening classes are of semester length.

All credits are clearly labeled as to use: "degree credit" means that a course carrying such a designation may be used on a degree program at the University of Minnesota, provided certain other conditions are met; "certificate credit" means that the course so marked may be used in appropriate Extension certificate programs (certificate credits usually are not usable in teacher certification); "entrance credit" designates a course which can be used to meet University admission requirements; "no credit" means that no credit is given for the course indicated, although grades may be assigned; "special class" means that the class carries no credit and no grades will be assigned.

Occasionally a course may carry less degree credit in evening classes than in day classes. If it carries the same course number as the day course, it will satisfy the same requirements met by the day course.

**Class Numbering**—Courses carrying degree credit are numbered as follows: Lower Division courses, numbered 1 through 49, are intended primarily for freshmen and sophomores; Upper Division courses, numbered 50 through 99, are intended primarily for juniors and seniors; courses numbered 100 through 199 are considered Upper Division and graduate level; courses numbered 200 and above are graduate level only. If you wish to take a course numbered 100 and above and get graduate credit for it, be sure to ask at the registration office for the appropriate form at the time of registration.

**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 a member of the Committee on Student Scholastic Standing of the General Extension Division.

**Established by Special Examination**—A student who, by independent study or by experience, has gained knowledge which is equivalent to that covered by a particular evening class may establish credit for such class by passing a special examination on the subject matter covered by the class, provided he is a University evening student at the time he takes the examination. A student may establish credit for work done at a non-accredited institution in the same way.

If a grade of C or better is earned in the examination, the course and the credit will be entered on the student's record; if the examining committee so indicates, the grade will also be entered. If a grade of C or better is not earned, no entry is made on the record. Credit by special examination is not residence credit.

The examination is administered by the department in which the course is offered. It may be a typical final examination, an oral test, written papers or projects, or any combination of these, or other work.

A student wishing to take a special examination should request a Special Examination Form at the campus office of the Extension Division. He will take the form to the department in which he expects to take the examination, where he will be advised as to the wisdom of his taking it. If it is determined that he should take an examination, he shall arrange the time for examining with the department concerned and pay a fee of \$5 to the General Extension Division. He may then take the examination.

**Residence**—Credits earned in undergraduate evening classes in Minneapolis, St. Paul, and Duluth are "residence" credits. They may be used to satisfy the residence requirements of the University of Minnesota. They do not, however, meet the residence requirements of individual colleges of the University, until a student who is working on a degree program is formally admitted to the college from which he expects to get a degree. See University Degree Programs, page 24.

**Graduate Credit**—A graduate student may, upon approval of his graduate adviser, petition the dean of the Graduate School to have transferred to his graduate record not more than 9 credits in courses taught by members of the graduate faculty and numbered 100 and above. A student registering for graduate credit must ask at the registration office for the appropriate special form at the time of registration. Upon completion of a course, the student must then initiate the petition to the dean of the Graduate School. Petition to transfer is limited to credits earned in evening classes since September, 1955. Such transfer of credits will not give graduate residence credit.

A master of business administration evening program is explained on page 29.

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

## **Prerequisites**

The purpose of a prerequisite is to establish who is eligible to register for the class. You will find the prerequisite of any class listed at the end of the class description. Usually there is no prerequisite for beginning classes. However, if these classes have two or more parts, these parts must be taken in sequence unless otherwise indicated. Most advanced classes do have prerequisites and cannot be carried satisfactorily unless the student has had the stated previous class(es) or their equivalent. In some instances, mature students who have had a reasonable equivalent of study, training, or experience related to the course desired may be exempted from the prerequisite by the instructor. In such instances the symbol # will appear in the prerequisite listing. If you are in doubt as to your qualifications for a course, but believe you are qualified, register for the course 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, your class card prop-

## *Evening and Special Classes*

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erly endorsed to this effect on the back, by the instructor, will permit you to transfer to another class or to cancel (see Cancellations and Refunds, page 37). A prerequisite course may not usually be taken for credit after the advanced course has been satisfactorily completed.

### **Grades**

There are four permanent passing grades, A (highest), B, C, and D (lowest), which are acceptable for the completion of a course.

There is a permanent grade of F (failure), indicating noncompletion or unsatisfactory completion of a course. A student who cancels officially or drops out of class after the mid-point of any semester, quarter, or special term and is failing at the time shall receive an F.

There is a temporary grade of I (incomplete), assigned when the instructor has insufficient information to permit a permanent grade. It indicates that some required work is unfinished or that the student, though officially registered, did not attend or left without officially canceling. An I which is not turned into a permanent grade within 1 year from the time it is assigned shall become an F at such time as the student indicates his intention of applying his credits to a degree or certificate or other University of Minnesota program, or of transferring his credits to another institution. An extension of time may be permitted for removal of an I grade upon recommendation of the instructor concerned and approval of the Extension Scholastic Committee. If an extension of time is granted, a special examination fee of \$5 will be required.

There is a symbol X, which may be reported in continuation courses in which a grade cannot be determined until the sequence is completed. Upon completion, a separate grade is submitted for each X.

There is a registration symbol W, indicating official cancellation without grade. This shall be assigned in all cases of official cancellation during the first half of any semester, quarter, or special term irrespective of the student's standing. After the mid-point, the W shall be assigned only if the student is not failing at the time of official cancellation.

There is a registration symbol V (visitor), indicating registration as an auditor or visitor.

**Grade Reports**—Reports of students' grades are sent them by the University Office of Admissions and Records, and cannot be furnished by the Extension offices. Students are asked to allow a month's time from the close of a term for the record office to get grades to them. A student who needs a grade sooner than that may leave a self-addressed postcard with his instructor, who will mail it to him as soon as his grade is determined. Students desiring complete transcripts of their records, see page 33.

**Grade Point Average**—For purposes of determining scholarship, grade points are assigned to the permanent grades as follows: A, 4 grade points; B, 3 grade points; C, 2 grade points; D, 1 grade point; F, 0 grade points. A student's scholastic average is determined by dividing the sum of grade points by the sum of credits attempted, both passed and failed.

For Extension certificates, grade points are used usually 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 evening classes who are seeking degrees should consult the bulletin of the college in which the degree is sought regarding the status of grade points in that college.



## Probation

Students taking classes for credit, *including all veteran students*, who consistently fail to maintain a C average, may be placed upon probation. This means that their registrations and work loads come under the surveillance 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 an *auditor* by writing "Aud." in the credit column of the registration form, or by asking his instructor to record him as an auditor not later than the *ninth* week of a semester class or the *sixth* week of a quarter class, provided he is doing passing work at the time of the request. Auditor's status carries no credit. One may not later take for credit a course which has been audited; exceptions to this ruling may be allowed upon consultation with an adviser in the college or school concerned. Auditors pay the same fee as other students. No *veteran* may audit any class under Public Law 550 or 894. No *military personnel* may audit any class under Off-Duty Academic Instruction or Tuition Assistance Programs.

These regulations apply to all classes listed in this bulletin.

## Transcripts

Extension students can secure transcripts showing all credits earned in evening classes by calling or writing Admissions and Records, University of Minnesota, Minneapolis 14; FEderal 2-8158, Extension 6397.

## Special Classes and Short Courses

In addition to the regularly scheduled classes found in this bulletin, the department offers a variety of special classes and short courses. They may be organized at any time of the year and may be of any duration.

## Faculty

The teaching staff for Extension classes is drawn primarily from the regular faculty of the University of Minnesota. In some instances faculty members from other institutions of comparable rank and specialists in professional and business fields may be used.

## Committee on Student Scholastic Standing

There is a Scholastic Committee in each college and school of the University and in the General Extension Division. It is a committee of the faculty, chaired by an administrative officer. Its purpose is to interpret and enforce regulations and to make exception to those regulations when they may do an educational disservice to the student. An Extension student working on a degree program must consult the Scholastic Committee of the college from which he intends to get his degree.

## Correspondence Study Courses

A large selection of correspondence study courses is available. Much of the work required for Extension certificates and for some University degrees may be earned through correspondence study. Bulletins are available from any Extension office or from

## ***Evening and Special Classes***

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Director, Correspondence Study Department, 254 Nicholson Hall, University of Minnesota, Minneapolis 14.

### **REGISTRATION REGULATIONS AND FEES**

The following regulations apply to veteran as well as nonveteran students, unless otherwise indicated. In addition, all service veterans and military personnel should read the Special Information for Veterans and Members of the Armed Forces section starting on page 38.

Any exception to the regulations governing registration will be allowed only upon personal interview with a member of the Committee on Student Scholastic Standing and will be subject to fees as determined by that committee.

Business firms may register their employees in evening classes by special arrangement with the General Extension Division. Registration materials and instructions should be requested from Associate Director, Department of Evening and Special Classes, General Extension Division, University of Minnesota, Minneapolis 14 (FEderal 8-8791).

### **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. There is an index at the back of the bulletin for your convenience.

The first line or two of the listing gives the abbreviated departmental prefix, the class number, if any, the title of the class, the number of credits and the kind of credit, and the tuition per term (semester, quarter, or special), plus special fees, if any. With a very few exceptions, all arabic-numbered listings are degree credit classes and are the same as those of corresponding day classes or have been approved for evening class use by the department concerned. Other classes are indicated as for certificate credit; any of these classes may be applicable toward an appropriate Extension certificate (see Credits, page 30).

The description of the course content follows. Such regulations as prerequisites, class size limitations, number of meetings, etc., will be found in the parenthetical statement following the course description. (See Prerequisites, page 31.)

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

*Classes listed in this bulletin may be canceled because of insufficient enrollment.*

### **Registration Periods**

All registrations should be made and fees paid during the official registration period for the term involved. Any registration, initial or added, made after the official registration period will be considered a late registration and subject to a late fee. (See Late Registrations and Additions, page 36.)

The dates for all registration periods are designated in the calendar, beginning on page 5. The registration hours for all periods at all offices are stated on page 4.

Korean veterans, military personnel, and all other students who plan to register under the authority or with the assistance of any federal, state, or foreign agency, military service, institution, company, scholarship, or loan fund must register in person in 56 Nicholson Hall on the Minneapolis Campus.

## **Symbols**

The following symbols will be used throughout the Course Offerings section of this bulletin and will carry no page footnote. Their explanation is as follows:

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order, unless otherwise indicated.
- Limited class. Registration must be made, individually, in person.
- † To receive credit, all courses listed before dagger must be completed.
- ‡ A sequence course, which may be taken out of order.
- § No credit is given if credit has been received for equivalent course listed after section mark.
- ¶ Means "concurrent registration in" (i.e., course must be taken simultaneously).
- ‡ Prerequisite may be equivalent experience, with consent of instructor.
- Course carries alternative numbers and may be taken at the level for which the student is qualified, provided consent of instructor is obtained, together with approval of the Committee on Student Scholastic Standing of the General Extension Division.

## **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 college office where he is basically enrolled. Ask for appropriate form at registration office.

A student who has been dropped from any unit of the University or placed on probation should clear with his College before registering for Extension classes.

## **Work Load**

Any person wishing to carry more than 12 credits must have permission from a member of the Committee on Student Scholastic Standing.

## **Discontinued Classes**

The General Extension Division, University of Minnesota, reserves the right to discontinue, postpone, split, or combine classes and to change teachers.

## **Tuition and Fees**

The tuition for each class is designated in the listing of the class in this bulletin. Special fees, such as laboratory and materials fees, may be added to the tuition for some courses. Fees do not cover books.

The full amount of the tuition and other special fees is payable at the time of registration. No arrangements for partial payment can be made. Checks or money orders must be drawn for the exact amount due and made payable to the University of Minnesota.

## ***Evening and Special Classes***

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Students in need of special financial assistance see Extension Student Loan Fund, page 41.

A student is not registered until his fees are paid.

### **Late Registrations and Additions**

All registrations, whether initial or added, received after the close of the registration period as designated in the calendar, pages 5 and 6, will be considered late registrations and will be subject to the late fee listed below:

Semester classes—first week \$3, second week \$5.

Fall Quarter classes—first week \$3.

Fall Special Term classes—first week \$3.

Winter and Spring Quarter classes—first week no late fee.

Winter and Spring Special Term classes—first week no late fee.

*Registrations after the late periods designated above are not encouraged and normally will not be permitted. If accepted they will be subject to a \$10 late fee*

The late fee applies whether a class carries degree credit, certificate credit, or no credit; it applies to special classes and it applies whether the student wants to audit or to take a class for credit. The time of registration by mail will be determined by the postmark.

These special fees are not included in the privileges of Public Laws 550 and 894, military personnel on Off-Duty Academic Instruction or Tuition Assistance Programs. They must be paid by the student personally.

*There are no exceptions to payment of late fees.*

### **Transfers**

Students may transfer without penalty through the first week of classes; there will be a fee of \$3 for transferring through the second week. However, transferring *into* Quarter or Special Term classes is not permitted after the first week of the term.

See also regulations concerning Limited Classes, below.

### **Limited Classes**

In order to supply the instruction or equipment needed in certain courses, some evening classes are limited to a specific number of students.

Registration in limited classes is subject to the following conditions:

1. Registration must be made individually, in person, at any Extension office.

2. No cancellation of registration with refund or transfer to another class will be considered after the close of the registration period, except for reasons beyond the control of the student. Normally this means illness, hospitalization, change in working hours, transfers out of town. Personal changes in plans or desires of a student are not deemed beyond his control. Permission to cancel with refund or transfer into another class must be made in writing. Supporting letters from student's doctor or employer must accompany all requests. The regular refund and/or transfer regulations (see below) will apply in all cases when requests are approved.

**Cancellations and Refunds**

For limited class regulations, see page 36.

Any student who drops out or wishes to drop out of classes is urged to make an official cancellation at once. By so doing he will receive a refund when *eligible* (see below) and will likewise insure the appropriate grade or symbol on his grade report. No grade is given when cancellations are made before mid-term. Such cancellations are designated with the symbol "W." However, if the date of cancellation is after the mid-term and the student is doing failing work he will receive a grade of "F." If he is doing passing work this cancellation will also be designated with the symbol "W."

No student is permitted to cancel the last 2 weeks of any quarter, semester, or special term. Official cancellation of registrations must be made in writing on official cancellation forms, at any Extension office. *No instructor is authorized to accept cancellation of any registration.* The effective date of cancellation will be the day on which the cancellation is received in any Extension office, regardless of the date of last attendance.

Refunds for canceled classes will be in accordance with the following schedule:

1. Full refund of all tuition and special fees when a class is canceled by the Extension Division; when the hour, day, or location of the class is changed by the Extension Division, after a student has registered in it; or when *in the opinion of the instructor*, the student does not have the necessary prerequisites or the class does not meet the student's needs or the student has already had the equivalent material in another class. In this case, the student should, *before the end of the second week of classes*:

- a. Ask the instructor for his copy of the student's class card with an appropriate statement on the back, endorsed by the instructor.
- b. Present this class card, together with the fee statement and application for cancellation, at any Extension office. *After the second week of classes the regular refund regulations will apply.*

2. For cancellation of classes before the opening date of each semester, quarter, or special term (except limited classes), a \$3 registration fee will be charged. The balance of the tuition and special fees will be refunded.

3. For cancellation of classes after the opening date of each semester, quarter, or special term, a partial refund of tuition and special fees will be made as follows (privilege fees for late registration, additions and transfers are not refundable):

	Semester	Quarter	Special Term
a. Refund during first week .....	75%	75%	75%
b. Refund during second week .....	75%	50%	50%
c. Refund during third week .....	50%	25%	25%
d. Refund during fourth week .....	25%	none	none
e. Refund during fifth week .....	none	none	none

The Department of Evening and Special Classes is a self-supporting unit of the University of Minnesota. Its classes are organized for those who request instruction. After the Department has thus accepted its obligation to conduct classes and to assume the instructional costs of a full semester, quarter, or special term *no refunds or readjustment of charges* can be made except in accordance with the above refund policy.

Normally, it requires 3 weeks to process a request for a refund. All refund checks will be mailed to the student from the Business Office.

## **SPECIAL INFORMATION FOR VETERANS AND MEMBERS OF THE ARMED FORCES**

Regulations and information applicable to military personnel and veteran enrollment and educational training are published below. In addition, all military personnel and veterans are urged to familiarize themselves with the General Information and Registration Regulations and Fees sections of this bulletin. University regulations and procedures apply to all students unless stated to the contrary.

### **Military Personnel**

All branches of the Armed Services now provide Off-Duty Academic Instruction or Tuition Assistance Programs for military personnel on active duty. There are no application forms necessary for admission to the Evening and Special Classes Division. Under these programs, eligible military personnel may be entitled to payment of \$5 per quarter credit hour for approved classes. (All classes in this bulletin are quarter credit whether designated quarter or semester length.) The remaining tuition and all fees must be paid by military personnel. Interested members of the Armed Services are urged to contact the educational officer or commanding officer of their Command for proper authorization to participate in these programs. Written authorization designating classes and amount of tuition to be paid by Army, Navy, Air Force, or Marine Corps should be presented at time of registration, at which time payment of remainder of tuition and fees must be made. Military Personnel who do not have the necessary authorization at the time of registration will be required to pay in full for their registration. When the government authorization is received, a refund for the authorized amount will be made. Registration must be made in person at the Veterans Office, 56 Nicholson Hall, Minneapolis Campus, FEderal 8-8791.

### **World War II Veterans**

Educational benefits under P.L. 346 were terminated July 25, 1956.

### **State of Minnesota Department of Veterans Affairs**

World War II and Korean veterans, previously approved for tuition aid under State of Minnesota Department of Veterans Affairs, were allowed to continue their education through the fall of 1960 subject to availability of funds. No new applications will be accepted until and unless the State Legislature makes funds available for 1961.

### **Korean War Veterans**

A veteran who wishes to initiate his educational training, resume his educational training, or make changes in his educational training program under Public Law 550 is urged to keep the following information in mind: (a) A veteran initiating his training for the first time must be actually enrolled in and attending classes on or before his delimiting date, which date is 3 years from his date of separation from active duty. The Veterans Administration makes no exception to this rule. The mere registration for classes does not constitute initiation of a training program. (b) A veteran can interrupt his educational program for a period not to exceed 12 calendar months from the date of interruption. For veterans who interrupt their training before their "delimiting date" the allowable 12 months interruption is counted from the delimiting date. If and when the 12 months period ends during a vacation, recess, or other period where it is not possible to re-enter

school, the period may be extended to the first quarter, semester, or term thereafter without Veterans Administration approval. (c) Any veteran who has initiated his educational training and then decides that he would like to change his objective can do so without restriction if the change is requested and the new program initiated prior to his delimiting date. However, if he has not used his one change in objective, a new educational objective may be approved after his delimiting date provided it involves no material loss of time or credit. The Veterans Office, 56 Nicholson Hall, should be consulted regarding such a proposed change in objective.

**Registration**—All registrations by veterans must be made in person at the Veterans Office, 56 Nicholson Hall, Minneapolis Campus, FEderal 8-8791. No Korean veteran registration can be accepted at either the St. Paul or Minneapolis Extension offices. Consult the Registration section of this bulletin for exact dates.

**Original Certificate for Educational Training**—A veteran who has not applied previously for educational training under Public Law 550 should contact the Veterans Office, General Extension Division, 56 Nicholson Hall, for all information regarding his application, objectives, and registration at the University of Minnesota.

A Certificate for Education and Training filed with the General Extension Division can be used by the veteran until his educational objective has been reached or his entitlement exhausted, provided he does not attend any other educational institution.

**Supplemental Certificate for Educational Training**—The veteran who has previously used his educational benefits under P.L. 550 at some institution of higher learning other than the University of Minnesota is urged to contact the Veterans Office of General Extension Division for help in completing his application for additional training (VA Form 7-1995).

**Korean Veterans Previously Enrolled in the University of Minnesota**—Veterans previously enrolled at the University of Minnesota who wish to pursue the same objective may enroll in correspondence courses, evening or day time classes on the Minneapolis or St. Paul campuses or at UMD without penalty and without filing VA Form 7-1995 upon presentation of U of M Form A19a at time of registration. This form can be secured from the Veterans Office, within the University of Minnesota, which accepted your last registration under P.L. 550.

**Educational Requirements**—There are no special entrance or residence requirements for Korean veterans. See Admission Requirements, page 30. However, all veterans previously enrolled in day school, University of Minnesota, must present a transcript of credits at time of registration. Veterans from other institutions of higher learning should present a transcript of credits for evaluation at least 1 month before registration. Contact Veterans Office, 56 Nicholson Hall, FEderal 8-8791 for instructions.

**Tuition and Fees**—A veteran must pay personally at the time of registration the full amount of the tuition and other special fees for evening classes. This money will be refunded to the veteran by the Veterans Administration if the enrollment is for less than ½-time work load. If the enrollment is for more than a ½-time work load an educational allowance will be paid to the veteran. (See following chart, also Monthly Certifications section.)

The Veterans Administration will not refund the cost of books and supplies.

**Monthly Educational Allowance**—When a veteran enrolls for a minimum ½-time credit or credit equivalent work load in evening or day time classes he will be paid a monthly educational allowance on the basis of monthly certifications (see paragraph on Monthly Certifications). All entrance credit classes carry a credit equivalent for purposes of determining monthly educational or tuition refunds. Enrollment in correspondence

## Evening and Special Classes

courses does not entitle a veteran to a monthly educational allowance (see following section on Tuition Refund by the Veterans Administration).

The Veterans Administration classifies all credit work loads in terms of quarter-length classes. Most evening classes are a semester in length. For this reason misinformation, confusion, and misunderstanding have resulted in determining the credit work load of the veteran registered for evening classes.

The following chart shows how payments are determined by the Veterans Administration.

	Semester Classes (Minimum Credits)	Quarter Classes (Minimum Credits)	Educational Allowance		
			Single	One De- pendent	Two De- pendents
Full Work Load .....	21	14	\$110	\$135	\$160
$\frac{3}{4}$ Work Load .....	15	10	80	100	120
$\frac{1}{2}$ Work Load .....	10½	7	50	60	80

**Tuition Refund by the Veterans Administration**—When a veteran enrolls in correspondence courses or for less than a  $\frac{1}{2}$ -time credit or credit equivalent work load in either evening or day time classes, he will be refunded tuition and fees only. These refunds will be prorated monthly on the basis of monthly certifications (see paragraphs on Monthly Certifications).

**Satisfactory Completion of Classes**—A veteran must complete all classes in which he is enrolled and maintain a minimum grade average of C. (See Delinquent Attendance, below.)

**Delinquent Attendance**—Any veteran who fails to *officially* cancel his registration for any class in which he cannot continue will receive a grade of F (Fail) or I (Incomplete) whichever is appropriate. If the grade of F or I is received because of delinquent attendance or failure to take the final examination, the Veterans Office will automatically notify the Veterans Administration of the last day of attendance as stated by the instructor concerned. If the veteran has signed monthly certifications (VA Form 7-1996a) subsequent to that date, he will be required to make reimbursement for such overpayment of tuition refund or educational allowance as may be determined by the Veterans Administration.

**Monthly Certifications**—All refunds of tuition and fees and/or payments of educational allowances are paid monthly by the Veterans Administration directly to the veteran. These payments are made on the basis of joint monthly certification made by the veteran and the Veterans Office of the General Extension Division.

Veterans are strongly advised to remember that signing monthly certifications is not a mere perfunctory act. Since all monies paid a Korean veteran by the Veterans Administration are based on said monthly certification, a veteran is making a legal affidavit that he is still in attendance and completing assignments in all classes in which originally enrolled unless there has been an official cancellation submitted to the Veterans Office, 56 Nicholson Hall.

## Cancellations, Transfers, and Additions

Cancellation of any class, or transfer from or addition to an initial registration, must be made in person on official forms at the Veterans Office, 56 Nicholson Hall. *No instructor is authorized to accept cancellations.*



## Counseling

The Veterans Office, 56 Nicholson Hall, Minneapolis Campus, FEderal 8-8791, should be consulted on all problems related to Veterans Administration authorizations for educational training, transfers, interruptions, or cancellations, as well as Extension Division registration procedures.

# SPECIAL SERVICES FOR STUDENTS

## Program Advising and Personal Counseling

Members of the evening class 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. The Counseling Bureau's fee for regularly enrolled evening students is \$10.

During the special registration periods before the fall and spring semesters, advisers will be on duty from 1 to 4:30 p.m. and 5:30 to 8 p.m., Monday through Friday, and from 9 a.m. to 1 p.m. on Saturday in all Extension offices. No appointment is needed for advising during these hours.

There will be special meetings arranged at the beginning of each semester registration for students who may be candidates for degrees in the College of Science, Literature, and the Arts. Such students should request specific information about the meetings from any Extension office.

Program advisers from the College of Science, Literature, and the Arts, the College of Education, the School of Business Administration, and the Institute of Technology will be available in their offices on the University campus during specific evening and Saturday morning hours in the course of the special registration periods. A student wishing to see such an adviser should telephone the campus Extension office for information as to the schedule and *make an appointment*.

## Extension Student Loan Funds

Extension students who are able to demonstrate that attendance at the University would be very difficult without financial assistance are eligible for loans limited to \$50 a term or \$100 for the year from the Staff and Employees Extension Student Loan Fund. Applications for loans must be made not later than *1 week preceding* the beginning of the term in which the student desires to enroll. Inquiries concerning applications, eligibility, as well as attendant financial problems, may be made at any Extension office.

## Aids for Handicapped Students

"Rehabilitation funds" for the education of disabled persons are available through the State Department of Education. Applications for aid from these funds should be sent to the Division of Vocational Rehabilitation, State Office Building, St. Paul 1.

## ***Evening and Special Classes***

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### **English Classes for Foreign-Born Students**

The Department of Evening and Special Classes does not offer any special English classes for foreign-born persons. However, we are pleased to inform all persons concerned that beginning, intermediate, and advanced classes in everyday English, oral and written, are available at the International House, 183 W. Kellogg at Exchange, St. Paul, and at the Minneapolis Vocational Evening School, Minneapolis. Interested persons should call for further information as indicated below.

Mr. Russell Peterson, International House, St. Paul, Capital 2-1754.

Miss Marie Kallio, Minneapolis Vocational Evening School, Minneapolis, FEderal 2-0381.

### **University Library**

Evening 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 and hours are set forth in the *Library Handbook*, copies of which may be had at the Library circulation desk.

### **Coffman Memorial Union**

The facilities of the student union building are open to evening class students. The cafeteria on the ground floor is usually open in the evenings; hours are posted outside the door.

### **Convocations**

University convocations are open to the public. They are usually held on Thursday mornings at 11:30 in Northrop Memorial Auditorium.

### **University Theater, Artists Course, and Special Lectures**

Events of an educational and cultural nature are constantly being offered on the University campuses. Many of them are open to the student body and to the public without charge; for others there are admission charges. For information, telephone the University and ask for the Theater office, the Artists Course office, or the Department of Concerts and Lectures.

### **Minneapolis Symphony Orchestra**

Special rates for season tickets to the regular concert season are available to students registered for at least 5 credits in evening classes.

### **Athletic Facilities**

Recreational activities for men and women are listed in this bulletin. In addition, certain recreational facilities of the University may be used by Extension students on terms available on request from the evening class department or the departments concerned: men and women may use the golf course, the ice-skating rink, and the tennis courts; men may use the gymnasium and swimming pool.

### Season Athletic Tickets

Any student enrolled for at least 5 credits (not including audit registration) in evening classes which carry credit may purchase 1 student athletic season ticket at \$12. Married students may purchase a second season ticket, for use by *spouse only*, at \$16. All tickets are nontransferable. If classes are canceled, athletic tickets must be returned to athletic office. Tickets may be bought at the special student athletic ticket sale headquarters on campus the week before classes begin. The ticket sale schedule will be as follows:

Wednesday, September 27, 9 a.m.-4:30 p.m.

Thursday, September 28, 9 a.m.-9 p.m.

Friday, September 29, 9 a.m.-4:30 p.m.

Saturday, September 30, 9 a.m.-2 p.m.

Monday, October 2, 9 a.m.-9 p.m.

Tuesday, October 3, 9 a.m.-4:30 p.m.

All ticket sales will be held in Williams Arena Lobby. Reserved seat season tickets will be issued in Williams Arena Lobby on Thursday and Friday, October 5 and 6, from 9 a.m. to 4:30 p.m., and Saturday, October 7, from 9 a.m. to 2 p.m. Regulations governing purchase, transfer, and cancellation of these tickets are available on request to the Athletic Ticket office.

## IV. LIBERAL ARTS PROGRAMS

The General Extension Division of the University of Minnesota, recognizing that education is a continuing process, offers several liberal arts programs annually, designed especially for the inquiring adult. These programs are listed in a special bulletin, "Learning for 20th Century Living." A copy may be secured by writing to: Assistant to the Dean for Liberal Arts, 153 Nicholson Hall, University of Minnesota, Minneapolis 14. No phone calls, please.

### Lecture Series

Each year the General Extension Division brings some of the country's outstanding experts to the Twin Cities for discussions of subjects of general interest. Three such lecture series are planned for 1961-62. More complete announcements will be made at a later date. All lecture series are open to the public.

#### The Spirit of the 18th Century

This series of four lectures will be sponsored by the Minneapolis Institute of Arts in co-operation with the General Extension Division of the University. It will be held in the auditorium of the Institute on November 14, 21, and 28, and December 5. Fee for the series will be \$5; tickets to single lectures will be available at \$2 each, if space permits. Further information and/or tickets may be obtained by calling the Minneapolis Institute of Arts, FEderal 5-4256, or *by writing to*: Assistant to the Dean for Liberal Arts, 153 Nicholson Hall, University of Minnesota, Minneapolis 14, beginning October 23.

#### Chinese Backgrounds

Ten lectures exploring the early formation of Chinese culture will cover such topics as the origins of Chinese bureaucracy; Chinese relations with Central Asia; early painting and sculpture; and the philosophical implications of the Chinese language. The foremost scholars of ancient Chinese will be brought to the campus for this comprehensive series. The lectures will be held on Wednesday evenings, January 24 through March 28, at 8 p.m. on the campus of the University; the place will be announced later. General admission tickets are \$12. Educational admission tickets (faculty, teachers, and students) are \$7.50. All checks should be made payable to the University of Minnesota. No tickets for individual lectures will be sold. Tickets may be purchased beginning January 3 *by mail only*. Address: Lecture Series, 57 Nicholson Hall, University of Minnesota, Minneapolis 14. Information about the lectures is available by calling FEderal 8-8791, extension 47.

#### The Many Faces of Language: The World of English

The English language will be explored from six different approaches. Tentative titles are: Language and Behavior; Language and the Mind; English Through the Ages; English Is Where You Find It; English: Its World Future; and The Beauty of English. The lectures will be held on Wednesday evenings, April 18 through May 23, at 8 p.m. on the campus of the University; the place will be announced later. General admission tickets are \$10. Educational admission tickets (faculty, teachers, and students) are \$6.50. All checks should be made payable to the University of Minnesota. No tickets for individual lectures will be sold. Tickets may be purchased beginning March 28 *by mail only*. Address: Lecture Series, 57 Nicholson Hall, University of Minnesota, Minneapolis 14. Information about the lecture is available by calling FEderal 8-8791, extension 47.

### **Civil War Seminar**

The University of Minnesota, in co-operation with The Civil War Roundtable, will present the second annual Civil War Seminar on October 13 and 14 at the Center for Continuation Study. This seminar is open to the public. Fee: \$10. Registration may be made by calling FEderal 2-8158, extension 6764.

### **Neighborhood Seminars**

If 16 or more persons wish to organize a study and discussion group on a subject of mutual interest they may request the Extension Division to assist them in obtaining the services of qualified faculty members as instructors and discussion leaders. The group then meets in the homes of its members or in a convenient school or church.

Registration is through the General Extension Division with fees of about \$16 per person or \$24 per couple. Ordinarily there is no University credit. Further information may be secured by calling FEderal 8-8791, extension 47.

### **Seminars for Women**

As part of the Minnesota Plan for the Continuing Education of Women, the General Extension Division offers the three following seminars especially designed for the adult woman.

Meetings will be held on the University of Minnesota campus for a full morning every other week from October through June.

Tuition for each seminar is \$36. Registration in each is limited to 20 women. (The seminar *New Worlds of Knowledge* is closed for the year 1961-62.)

Women interested in these seminars should write Minnesota Plan for Continuing Education for Women, Room 106 Temporary South of Mines A, University of Minnesota, Minneapolis 14.

#### **New Worlds of Knowledge**

A liberal arts seminar for adult women. Assigned readings supplement class discussion of current critical thinking in selected areas of contemporary life. (Two or three residential meetings of a day and a half each will be held at the Center for Continuation Study where dormitory space is available.)

#### **The Arts of Reading**

The examination of texts through classroom discussion and written analysis, with the aim of developing skill in thinking, speaking, writing, and reading. The readings will be of intellectual and literary distinction or of historical importance. Principles of analysis will be taught and used in the discussion. The readings will be expository writing, short fiction, poetry, and drama. Literary and critical principles will be taught and used in discussion.

#### **Frontiers of 20th Century Science**

This liberal arts seminar on the physical sciences, the life sciences, and the medical sciences will concentrate on current professional questions and research as they affect the lives of all men. Prerequisite is either 2 years of college science or completion of *New Worlds of Knowledge*.

## V. COURSE OFFERINGS

### AGRICULTURE

*Students who travel by bus can reach the agriculture buildings on the St. Paul Campus by taking the intercampus buses that leave the Minneapolis Campus at 5:50 and 6:10 p.m.*

#### Horticulture

**Hort 10. Home Floriculture and Gardening.** 3 degree credits. \$27.

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. Although this course is especially designed for beginning gardeners, it is comprehensive enough to interest the advanced amateurs as well as professional gardeners. An opportunity for gardeners to participate actively in plant culture throughout the year. (No prerequisite)

##### *Fall Quarter*

T 6:20-8:50, Horticulture 102, St. Paul Campus,  
Phillips

**Hort 24. Home Landscaping Planning.** 3 degree credits. \$27.

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 Quarter*

Th 6:20-8:50, Horticulture 102, St. Paul Campus,  
Phillips

**Hort 25. Home Landscape Planting and Construction.** 3 degree credits. \$27.

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. 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. (No prerequisite)

##### *February 15 to April 26*

Th 6:20-8:50, Horticulture 102, St. Paul Campus,  
Phillips

**Hort 41. Horticultural Crop Judging.** 3 degree credits. \$27.

The course is designed for anyone interested in becoming a judge of horticultural produce or exhibits (other than arrangements). It should also be of special interest to vocational agricultural in-

Symbols explained on page 35.

structors or anyone connected with this type of work. Course will include selection of materials for and preparation of exhibits, as well as their evaluation and judging. (Prerequisite 1, 6 or #)

*Fall Quarter*

M 6:30-9:00, Horticulture 8, St. Paul Campus,  
Turnquist

**Hort 51. Garden Flowers and Home Gardening. 3 degree credits. \$27.**

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

*February 13 to April 24*

T 6:20-8:50, Horticulture 102, St. Paul Campus,  
Phillips

## **Soils**

**Soil 6. Garden and Turf Soils. 3 degree credits. \$27.**

A practical course in the use and management of garden soils. It offers complete discussion of soil properties such as texture, structure, drainage, organic matter content, and fertility as they relate to management practices such as use of lime, tillage, fertilizer use, and erosion control. Soil and fertility requirements of many garden plants will be discussed. The course is designed so that the beginner can understand the material, and so that the experienced gardener will obtain information that will be helpful to him. Soil properties will be observed in the laboratory by the individual students. (No prerequisite)

*Fall Quarter*

M 7:00-9:30, Soils 115, St. Paul Campus,  
Arneman

# ARTS AND SCIENCES ) 12 g #25

## Anthropology ) 12

**Anth 1A. Introduction to Anthropology: Prehistoric Man and Culture.** 3 degree credits. \$27.

Origins of man and development of modern races. Growth and differentiation of the cultures of man from the Dawn Stone Age of early glacial times through the Old and New Stone Ages to the dawn of civilization in the Bronze and Iron Ages. (No prerequisite)

*Fall Semester*

Th 8:10-9:50, Ford 120

**Anth 2A. Introduction to Anthropology: Cultural Anthropology.** 3 degree credits. \$27.

The varieties and range of human behavior as revealed through the study of primitive societies in all parts of the world. A scientific analysis of the way in which primitive men organize their lives, directed toward a deeper and broader understanding of human capacities and purposes. (No prerequisite)

*Spring Semester*

Th 8:10-9:50, Ford 120

**Anth 80. The American Indian.** 3 degree credits. \$27.

The peopling of North and South America. Physical and cultural characteristics of the tribes of the major culture areas. (No prerequisite)

*Spring Semester*

T 8:10-9:50, Ford 130

**Anth 165. Culture and Personality.** 3 degree credits. \$27.

Role of culture in the formation of personality. Problems of individual adjustments to the demand of culture. Psychological approach to culture. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

*Fall Semester*

T 8:10-9:50, Ford 150

## Art

**Art Education.** (See page 114.)

### Art History and Criticism ) 10

**Art 1. Introduction to Art. (\*\*Art 50)** 3 degree credits. \$27 plus \$1 laboratory fee.

A comprehensive survey of the main problems of meaning, form and style in the visual arts (architecture, sculpture, painting, the graphic arts and photography) of the various cultures and periods. The course attempts to enable students to interpret works of art critically by relating them to their geographic, historical and social origins, and by placing them within the proper phases in the evolution of art. The course touches on the main periods of art history and is designed to familiarize students with the critical and technical vocabulary used in the literature of art. (No prerequisite. Repeated winter and spring quarters)

*Fall Quarter*

Th 7:30-9:45, Jones 207b,  
Eitner

*Winter Quarter*

Th 7:30-9:45, Jones 207b,  
Eitner

*Spring Quarter*

Th 7:30-9:45, Jones 207b,  
Torbert

Symbols explained on page 35.



**Art 2. Great Masters and Works: Egypt to the Middle Ages.** 3 degree credits. \$27 plus \$1 laboratory fee.

A survey of the arts from the age of the pyramids to that of the cathedrals: Egypt and Mesopotamia, the classical art of Greece and Rome, the early church, the monasteries, the Gothic city. (Prerequisite: 1 or #)

*Fall Quarter*

T 7:30-9:45, Jones 207a

**Art 3. Great Masters and Works: Renaissance to the Twentieth Century.** 3 degree credits. \$27 plus \$1 laboratory fee.

A survey of the main artistic achievements of the Renaissance, the baroque and the rococo, and the main currents of 19th- and 20th-century art. Among the artists discussed will be Leonardo da Vinci, Michelangelo, Raphael, Titian, Dürer, El Greco, Rubens, Rembrandt, Chardin, Delacroix, Courbet, Monet, Cezanne, Van Gogh, Gauguin, Picasso, and Matisse. (Prerequisite: 1 or #)

*Winter Quarter*

T 7:30-9:45, Jones 207a, Eitner

**Art 50. Introduction to the Visual Arts.** 3 degree credits. \$27 plus \$1 laboratory fee.

*Fall Quarter—Winter Quarter—Spring Quarter*

See course description, day, time, place, and instructor as listed under Art 1.

**Art 66. Modern Art: Rococo, Neoclassicism, Romanticism.** 3 degree credits. \$27 plus \$1 laboratory fee.

A study of the art and decoration of France and England in the 18th and early 19th centuries: the rococo (Watteau, Boucher, Fragonard and Gainsborough), the neoclassical (David, Robert Adam, Reynolds) and the romantic (Delacroix and Turner). (Prerequisite: 1 or 50, or #)

*Fall Quarter*

M 7:30-9:45, Jones 207b, Waldfogel

**Art 67. Modern Art: Realism, Impressionism, Postimpressionism.** 3 degree credits. \$27 plus \$1 laboratory fee.

A study of the arts in the second half of the 19th century, including an intensive analysis of the development that links the realist movement (Courbet, Millet) with impressionism (Monet, Renoir, Sisley, Pissarro); the reaction against material realism in the work of the belated romantics, the neo-impressionists (Seurat), Manet, Degas, Cezanne, Gauguin, Van Gogh, Toulouse-Lautrec. Prerequisite: 1 or 50, or #

*Winter Quarter*

M 7:30-9:45, Jones 207b, Waldfogel

**Art 68. Modern Art: Contemporary Art in Europe.** 3 degree credits. \$27 plus \$1 laboratory fee.

A study of the main trends of 20th-century painting, sculpture and architecture. Among the movements intensively treated will be that of the Fauves (Matisse, Vlaminck, Derain, Dufy), the cubists (Picasso, Braque, Gris), the various expressionist currents. Attention will be given to main trends in modern architecture (Wright, the Bauhaus, Le Corbusier). Stress will be laid on the various forms of abstract and nonrepresentational art and on the abstract-expressionist current of the past decade. (Prerequisite: 1 or 50, or #)

*Spring Quarter*

M 7:30-9:45, Jones 207b, Waldfogel

Symbols explained on page 35.

## Evening and Special Classes

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**Art 138. Art in the United States.** 3 degree credits. \$27 plus \$1 laboratory fee.

Contemporary movements. The Armory Show and development of modern realism, expressionism, and abstraction. Frank Lloyd Wright and modern American architecture. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 9 credits in history of art, or 9 credits in literature or history, or #)

### Fall Quarter

T 7:30-9:45, Walker Art Center, Torbert

**Chinese Backgrounds.** (See page 44.)

**The Spirit of the 18th Century.** (See page 44.)

## Studio Courses

*All studio drawing and painting classes will meet for a 2½-hour period. Those who wish to receive degree credit in these courses will be expected to do some work outside of class—consult instructor. Unless otherwise indicated, 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.*

**Art 10. Basic Photography I.** (See page 79.)

**Art 11. Basic Photography II.** (See page 79.)

**\*Art 23-24-25. First Year Drawing and Painting.** 2 degree credits each semester. \$27 plus \$4 laboratory fee each semester.

An introduction to materials and techniques; still life, figures, and landscape. (No prerequisite for 23; for 24 and 25, #. Each section limited to 30 students)

### Fall Semester

T 6:20-8:50, Jones 10, Downs  
T 7:00-9:30, Walker Art Center  
Th 6:20-8:50, Jones 10, Downs

### Spring Semester

T 6:20-8:50, Jones 10, Downs  
T 7:00-9:30, Walker Art Center  
Th 6:20-8:50, Jones 10, Downs

**\*Art 30-31-32. Commercial Drawing.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

Elementary and advanced commercial art: design, lettering, layouts, posters in pen and ink, pencil, color, or other mediums. Solutions of practical problems stressed. (No prerequisite for 30; for 31 and 32, #. Class limited to 30 students)

### Fall Semester

M 7:30-10:00, Jones 104, Sutherland

### Spring Semester

M 7:30-10:00, Jones 104, Sutherland

**\*Art 45-94-95. Ceramics.** 2 degree credits each semester. \$27 plus \$5 laboratory fee each semester.

45: Ceramic processes. Introduction to building pottery by hand and forming on the potter's wheel. Experiments with decorative techniques on wet clay and on bisque fired pottery. Primarily concerned with pottery as a creative expression but includes technical considerations of clays, glazes, and kilns. (No prerequisite) 94-95: Ceramic design. Continuation of Art 45. Greater emphasis on wheel

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

throwing. Advanced design problems and an introduction to glaze and clay experimentation. Emphasis on the development of personal expression in ceramic medium. (Prerequisite: for 94, 45; for 95, 94. 45 and 94 will be given in one section in fall semester. Class limited to 20 students. 45, 94, 95 will be given in spring semester in one section, limited to 20 students)

<i>Fall Semester</i>	<i>Spring Semester</i>
(45 T 6:20-8:50, Holman 134, Hanson (94	(45 T 6:20-8:50, Holman 134, Hanson (94 (95

*Your attention is called to the Interior Design Certificate program; see page 9.*

**\*Art 83A. Interior Design I.** 3 degree credits. \$27 plus \$1 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. (No prerequisite. Each section limited to 50 students, accepted in order of registration. Repeated spring semester)

<i>Fall Semester</i>	<i>Spring Semester</i>
M 6:20-8:00, Nicholson 209, Lewis T 6:20-8:00, Nicholson 209, Lewis Th 6:20-8:00, Nicholson 209, Lewis	W 6:20-8:00, Nicholson 209, Lewis Th 6:20-8:00, Nicholson 209, Lewis

**Art 84A. Interior Design II.** 3 degree credits. \$27 plus \$1 laboratory fee.

Trends in decorative fabrics and floor coverings including new fiber combinations in curtain, drapery, upholstery fabrics are studied. How to estimate is explained. Major accessories such as picture selection, ceramics, and use of metals in interiors are important. Planning room color schemes and window-treatments are considered throughout the course. Talks by decorators from stores and studios and a field trip add interest. (Prerequisite: 83A)

<i>Spring Semester</i>	
M	6:20-8:00, Nicholson 209, Lewis
T	6:20-8:00, Nicholson 209, Lewis

**\*Art 103A-104A. Seminar in Interior Design.** 3 degree credits each semester. \$27 each semester.

A further expansion of subjects studied in Art 83A-84A. Students will work on individual projects under supervision. (Prerequisite: for 103A, 84; for 104A, 103A. Class limited to 25 students. No auditors)

*Note—Properly qualified students may register for graduate credit. Consult chairman of Art Department.*

<i>Fall Semester</i>	<i>Spring Semester</i>
103A W 8:10-9:50, Nicholson 209, Lewis	104A W 8:10-9:50, Nicholson 209, Lewis and Staff

**Art. Layout for Interior Design I.** 3 certificate credits. \$27.

This course will give experience in handling the tools and materials of drafting, and the use of design principles through drawing and perspective. Organization and content of layouts for interior design. Practice in doing plan view, simple perspective, elevation, etc., as helps in presenting ideas used in interior design. (No prerequisite. Repeated spring semester)

<i>Fall Semester</i>	<i>Spring Semester</i>
T 6:20-8:00, Jones 109, Hopkins	T 8:10-9:50, Jones 109, Hopkins

**Art. Layout for Interior Design II.** (Offered 1962-63)

Symbols explained on page 35.

## Evening and Special Classes

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### Art. Home Design and Planning. 3 certificate credits. \$27.

A review of residential planning and design techniques of historical styles and significant modern work. Emphasis on basic factors of functional and aesthetic components as effected through building technology. Consideration given to neighborhood and site planning, landscaping, interior design, modern concepts of family living, building materials and methods, climate control and conditioning, and building restrictions. Discussion of existing houses, apartments, two-family houses; their economics and planning techniques. (No prerequisite)

#### Fall Quarter

Th 6:20-8:50, Architecture 45, Gingold

### Art. Use of Color. 3 certificate credits. \$27.

Lectures and laboratory work demonstrating how color should and should not be used in public buildings and private residences. This course is designed to be of service to both the amateur home decorator and to the professional artist, architect, advertiser, or decorator. The course will deal with basic theory of color as well as problems in the use of color in architecture and interior design. (No prerequisite)

#### Spring Semester

T 6:20-8:00, Jones 109, Hopkins

## Courses at Minneapolis School of Art

*Registrations for University credit for these courses will be taken only at one of the Extension offices. The Minneapolis School of Art is located at 200 East 25th Street. Telephone number is FEderal 8-8759.*

### Art 15A-B. Lettering. 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

Study and practice of free and constructed lettering, special emphasis on the relationship of lettering to other visual elements in composition or layout. (No prerequisite)

#### Fall Semester

A Th 7:00-9:30, Mpls School of Art, DeCosse

#### February 5-June 1

B Th 7:00-9:30, Mpls School of Art, DeCosse

### Art 20A-B. Basic Drawing. 4 degree credits each semester. \$54 plus \$6 laboratory fee each semester.

Basic principles of perspective and composition, some life drawing. Variety of media. (No prerequisite)

#### Fall Semester

A MW 7:00-9:30, Mpls School of Art,  
Ratner

#### February 5-June 1

B MW 7:00-9:30, Mpls School of Art,  
Ratner

A TTh 7:00-9:30, Mpls School of Art,  
Youngquist

B TTh 7:00-9:30, Mpls School of Art,  
Youngquist

### Art 20A-B. Basic Drawing. 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

A beginning class meeting one evening a week. (No prerequisite)

#### Fall Semester

A M 7:00-9:30, Mpls School of Art, Bagley

B M 7:00-9:30, Mpls School of Art, Bagley

A T 7:00-9:30, Mpls School of Art,  
Dietrichson

B T 7:00-9:30, Mpls School of Art,  
Dietrichson

A Th 7:00-9:30, Mpls School of Art, Olsen

B Th 7:00-9:30, Mpls School of Art, Olsen

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

**Art 21A-B. Life Drawing.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

A beginning class in drawing and composition from the figure. (Prerequisite: 20A or B or #)

*Fall Semester*

A M 7:00-9:30, Mpls School of Art,  
Mousseau  
A Th 7:00-9:30, Mpls School of Art,  
Kappel

*February 5-June 1*

B M 7:00-9:30, Mpls School of Art,  
Mousseau  
B Th 7:00-9:30, Mpls School of Art,  
Kappel

**Art 22A-B. Still Life Painting.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

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: 20B)

*Fall Semester*

A T 7:00-9:30, Mpls School of Art, DeCosse

*February 5-June 1*

B T 7:00-9:30, Mpls School of Art, DeCosse

**Art 40A-B. Sculpture.** 4 degree credits each semester. \$54 plus \$6 laboratory fee each semester.

Figure modeling. (Prerequisite: 21B or #)

*Fall Semester*

A MW 7:00-9:30, Mpls School of Art

*February 5-June 1*

B MW 7:00-9:30, Mpls School of Art

**Art 50A-B. Painting II.** 4 degree credits each semester. \$54 plus \$6 laboratory fee each semester.

Intermediate to advanced oil painting, emphasizing first, organizational principles, then skill and techniques, using still life and the model. Individual development in various modes including the most contemporary. Attention throughout to the philosophical aspects of painting. (Prerequisite: 22B)

*Fall Semester*

A TTh 7:00-9:30, Mpls School of Art,  
Hendler

*February 5-June 1*

B TTh 7:00-9:30, Mpls School of Art,  
Hendler

**Art 54A-B. Life Drawing.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

Continuation of head and figure study; construction interpretation, movement. Figure composition. (Prerequisite: 21B)

*Fall Semester*

A W 7:00-9:30, Mpls School of Art,  
Mousseau

*February 5-June 1*

B W 7:00-9:30, Mpls School of Art,  
Mousseau

**Art 54C-D. Portrait.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

Head study, using various mediums, stressing discovery of each model's individual qualities. (Prerequisite: 21B)

*Fall Semester*

C Th 7:00-9:30, Mpls School of Art,  
Dietrichson

*February 5-June 1*

D Th 7:00-9:30, Mpls School of Art,  
Dietrichson

Symbols explained on page 35.

## Evening and Special Classes

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**Art 60A-B. Watercolor Painting.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

A broadly designed class covering a wide range of subject-matter. (Prerequisite: Art 20B or #)

*Fall Semester*

*February 5-June 1*

A W 7:00-9:30, Mpls School of Art, Bagley

B W 7:00-9:30, Mpls School of Art, Bagley

**Art 62A-B. Life Painting.** 4 degree credits each semester. \$54 plus \$6 laboratory fee each semester.

Form and form relationships as they occur in the human figure, designed to help the student see and use natural forms in pictorial organization. (Prerequisite: 21 and 22)

*Fall Semester*

*February 5-June 1*

A MW 7:00-9:30, Mpls School of Art, Quick

B MW 7:00-9:30, Mpls School of Art, Quick

**Art 74A-B. Fashion Illustration.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

Specialized fashion illustration in black and white from the costumed model, designed for students wishing to do newspaper and magazine work. (Prerequisite: 21)

*Fall Semester*

*February 5-June 1*

A T 7:00-9:30, Mpls School of Art, Teeple

B T 7:00-9:30, Mpls School of Art, Teeple

**Art 75A-B. Graphic Arts (Layout).** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

An advanced course, utilizing layout problems met in actual practice. Composition of visual elements as used in magazines, newspapers, posters, and direct mail pieces; study of principles of layout, movement, balance, emphasis, legibility, color values, lettering design and typographic styling. (Prerequisite: 20 or 21 and 15)

*Fall Semester*

*February 5-June 1*

A T 7:00-9:30, Mpls School of Art, Mason

B T 7:00-9:30, Mpls School of Art, Mason

## Courses at St. Paul Gallery and School of Art

*Registrations will be taken only at Extension offices. The St. Paul Gallery is located at 476 Summit Avenue. Telephone is CApital 5-9621.*

**Art 20C-D. Elements of Art.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

A series of experiments leading to a broad basic approach to art. Two- and three-dimensional elements of line, form, pattern, and color will be explored and related as principles of design. There will be field trips and visiting lecturers. (No prerequisite)

*Fall Semester*

*Spring Semester*

C T 7:00-9:30, StP Gallery, Jacob

D T 7:00-9:30, StP Gallery, Jacob

**Art 21A-B. Life Drawing.** 2 degree credits each semester. \$27 plus \$5 laboratory fee each semester.

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

*Fall Semester*

*Spring Semester*

A Th 7:00-9:30, StP Gallery, Kramer

B Th 7:00-9:30, StP Gallery, Kramer

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

**Art 23-24-25. First Year Drawing and Painting.** 2 degree credits each semester. \$27 plus \$5 laboratory fee each semester.

An introduction to a variety of art experiences in drawing and painting, through exploration with pencil, charcoal, water color and oil paints. In addition to creative expression from imaginative sources, the classes will provide the discipline of drawing directly from the model and still life. (No prerequisite)

*Fall Semester*

W 7:00-9:30, StP Gallery, Kramer

*Spring Semester*

W 7:00-9:30, StP Gallery, Kramer

**Art 40A-B. Ceramic Sculpture.** 2 degree credits each semester. \$27 plus \$5 laboratory fee each semester.

Creative three-dimensional design derived from animal, human, and abstract forms. Use of various colored clays and glazes. (No prerequisite)

*Fall Semester*

A W 7:00-9:30, StP Gallery, Lupori

*Spring Semester*

B W 7:00-9:30, StP Gallery, Lupori

**Art 45-94-95. Pottery Making.** 2 degree credits each semester. \$27 plus \$5 laboratory fee each semester.

Fundamentals of making pottery. Includes handbuilding, wheel throwing, decorative techniques in slip and glaze, glazing and firing. (No prerequisite. A time other than the regular class period will be made available for students to work in the Pottery Shop. Consult instructor)

*Fall Semester*

T 7:00-9:30, StP Gallery, Fontaine  
Th 7:00-9:30, StP Gallery, Fontaine

*Spring Semester*

T 7:00-9:30, StP Gallery, Fontaine  
Th 7:00-9:30, StP Gallery, Fontaine

**Art 49A-B. General Crafts—Jewelry Making.** 2 degree credits each semester. \$27 plus \$3 laboratory fee each semester.

Introduction to basic metal working techniques involved in the making of jewelry. Development of an understanding of the design problems related to the making of jewelry. Special emphasis placed upon individual solutions to problems of design and construction. Materials from which jewelry will be fashioned include silver, gem stones, copper, brass, wood, and other colorful, durable mediums. Class open to beginners and advanced students. Individual attention.

*Fall Semester*

A T 7:00-9:30, StP Gallery, Schmidt  
A W 7:00-9:30, StP Gallery, Schmidt

*Spring Semester*

B T 7:00-9:30, StP Gallery, Schmidt  
B W 7:00-9:30, StP Gallery, Schmidt

**Art 54C-D. Portraits (Painting and Drawing).** 2 degree credits each semester. \$27 plus \$5 laboratory fee each semester.

This class is for students who have had a sufficient background and command of drawing and painting to pursue the subject of portraits effectively. (Prerequisite: 21B, or #)

*Fall Semester*

C Th 7:00-9:30, StP Gallery, Haupers

*Spring Semester*

D Th 7:00-9:30, StP Gallery, Haupers

**Art 60-61-62. Second Year Drawing and Painting.** 2 degree credits each semester. \$27 plus \$5 laboratory fee each semester.

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: 25 or #)

*Fall Semester*

T 7:00-9:30, StP Gallery, LeSueur

*Spring Semester*

T 7:00-9:30, StP Gallery, LeSueur

Symbols explained on page 35.

## Evening and Special Classes

**Art. Color Control and Analysis A-B.** 2 certificate credits each semester. \$27 plus \$3 laboratory fee each semester.

This class is for students who would like to increase their knowledge of color, and for those who wish to develop a more full control of color. (Prerequisite: 20 or 23 or #)

*Fall Semester*

A W 7:00-9:30, StP Gallery, Haupers

*Spring Semester*

B W 7:00-9:30, StP Gallery, Haupers

**Art. Weaving I-II.** 2 certificate credits each semester. \$27 plus \$5 laboratory fee each semester.

A beginning course in design for the handloom. Experimentation with color, texture, and pattern. Materials to be used will be discussed at the first class session. (No prerequisite)

*Fall Semester*

I Th 7:00-9:30, StP Gallery, Ford

*Spring Semester*

II Th 7:00-9:30, StP Gallery, Ford

## Astronomy

**Ast 11. Descriptive Astronomy.** 3 degree credits. \$27.

The general principles and fundamental facts of astronomy, illustrated by 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. (No prerequisite)

*Fall Semester*

W 6:20-8:00, Physics 133

**Ast 13. Practical and Stellar Astronomy.** 3 degree credits. \$27.

Supplements Ast 11, which, however is not prerequisite. 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. Higher mathematics not necessary. (No prerequisite)

*February 7-June 6*

W 6:20-8:00, Physics 133

## Biology

**Biol 1-2. General Biology.** (Replaces Biol 1-2-3) 5 degree credits each semester (\$Bot 1-2-3, 4-5, Zool 1-2-3 or old 14-15, old NSci 7-8-9, old Biol 1-2-3). \$45 plus \$15 laboratory fee each semester.

Introduction to living things both plant and animal, and to the major biological concepts. Structure, function, classification, and evolution of organisms. (No prerequisite for 1; for 2, 1)

*Fall Semester*

1 MW 6:20-9:20, Zoology 313, Kerr

*Spring Semester*

2 MW 6:20-9:20, Zoology 313, Kerr

## Classics

**Clas 80. Classical Epic in Translation (Homer, Iliad, Odyssey; Vergil, Aeneid).** (\*\*Clas 180) 3 degree credits. \$27.

A study of the *Iliad* and *Odyssey* of Homer and the *Aeneid* of Vergil with attention to the cultural context of epic ("natural" or "artificial"), and heroic character, epic formulas and conventions,

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Symbols explained on page 35.



## Course Offerings—Arts and Sciences

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problems of structure and unity, and the epic tradition in European literature. (Prerequisite: 9 credits in English literature beyond Freshman English, or in foreign literature, or #)

### *Fall Quarter*

M 5:30-8:00, Folwell 102, Swanson

**Clas 81. Greek Tragedy in Translation (Aeschylus, Sophocles, Euripides). (\*\*Clas 181) 3 degree credits. \$27.**

Introductory lectures on the origin of drama as a distinct literary form, on the characteristics of Greek tragedy, and the ancient theaters and theatrical conventions. Careful discussion of about 12 of the tragedies. Major emphasis on understanding the problem posed in terms of the total cultural pattern of the time. (Prerequisite: 9 credits in English literature beyond Freshman English, or in foreign literature, or #)

### *Winter Quarter*

M 5:30-8:00, Folwell 102, Swanson

**Clas 82. Aristophanes and Roman Drama in Translation (Aristophanes, Menander, Plautus, Terance, Seneca). (\*\*Clas 182) 3 degree credits. \$27.**

Introductory material organized as in Clas 81, but with the emphasis on the tradition of comedy. Similar treatment of about 12 comedies and 3 Senecan tragedies. More attention to the influence of the Roman plays on later drama. (Prerequisite: 9 credits in English literature beyond Freshman English, or in foreign literature, or #)

### *Spring Quarter*

M 5:30-8:00, Folwell 102, Swanson

**Clas 180. Classical Epic in Translation (Homer, Iliad, Odyssey; Vergil, Aeneid). 3 degree credits. \$27.**

### *Fall Quarter*

See course description, day, time, place, and instructor as listed under Clas 80. Students wishing graduate credit should inquire at time of registration.

**Clas 181. Greek Tragedy in Translation (Aeschylus, Sophocles, Euripides). 3 degree credits. \$27.**

### *Winter Quarter*

See course description, day, time, place, and instructor as listed under Clas 81. Students wishing graduate credit should inquire at time of registration.

**Clas 182. Aristophanes and Roman Drama in Translation (Aristophanes, Menander, Plautus, Terance, Seneca). 3 degree credits. \$27.**

### *Spring Quarter*

See course description, day, time, place, and instructor as listed under Clas 82. Students wishing graduate credit should inquire at time of registration.

## Evening and Special Classes

### English

#### English Placement Tests

Admission to English classes (Engl 1B-2B-3B and Comm 1-2-3) is based on satisfactory score in the English Placement Test or satisfactory completion of Preparatory Composition. *Please note:* (a) If you are uncertain regarding your eligibility but desire to be enrolled, register for Engl 1B or Comm 1. (b) If you took the Placement Test in a Minnesota high school within the last 2 years, you must, at least 1 week before the first meeting of the class, contact the campus office of the General Extension Division giving your name, the name of your high school, and the date of your graduation. *You need not take the test again.* (c) If you have not taken the test, or if you took the test more than 2 years ago, report for testing at one of the following times and places.

#### Fall Quarter

7:00 p.m. Thursday, September 14, Nicholson 211  
7:00 p.m. Tuesday, September 19, Nicholson 211  
7:00 p.m. Tuesday, September 19, StP Ext Center

#### Winter Quarter

7:00 p.m. Thursday, December 28, Nicholson 211  
7:00 p.m. Tuesday, January 2, Nicholson 211

#### Spring Quarter

7:00 p.m. Wednesday, March 21, Nicholson 211

### Literature

**Engl 1B-2B-3B. Freshman English.** 4 degree credits each quarter. \$36 each quarter.

A combined course in composition (9 cr) and literature (3 cr). It concentrates upon developing the student's skill in writing exposition, with an introduction to literary types as the chief means of providing subject matter for writing. It satisfies the group A requirement for graduation. (Prerequisite: Preparatory Composition or satisfactory score in English Placement Test, explained above)

#### Fall Quarter

1B T 6:20-9:50, Folwell 104  
W 6:20-9:50, Folwell 104  
F 6:00-9:30, StP Ext  
Center 3F

2B T 6:20-9:50, Folwell 107  
3B W 6:20-9:50, Folwell 107

#### Winter Quarter

1B T 6:20-9:50, Folwell 107  
W 6:20-9:50, Folwell 101  
F 6:00-9:30, StP Ext  
Center 3G

2B T 6:20-9:50, Folwell 104  
W 6:20-9:50, Folwell 104  
F 6:00-9:30, StP Ext  
Center 3F  
3B T 6:20-9:50, Folwell 102

#### Spring Quarter

1B W 6:20-9:50, Folwell 107  
2B T 6:20-9:50, Folwell 107  
W 6:20-9:50, Folwell 101  
F 6:00-9:30, StP Ext  
Center 3G  
3B T 6:20-9:50, Folwell 104  
W 6:20-9:50, Folwell 102  
F 6:00-9:30, StP Ext  
Center 3F

**Engl 37-38-39.‡ Modern Literature.** 3 degree credits each quarter. \$27 each quarter.

Intended for students in all departments and colleges, not particularly for English majors. Readings in 20th-century British and American fiction, drama, and poetry. Selected, arranged, and discussed—not to give a full historical survey—but to enhance the student's pleasure in, and understanding of, imaginative literature generally. Short critical papers are required and count in determining grades. 37: Short fiction. 38: Poetry and drama. 39: The novel since Thomas Hardy. (Prerequisite: C or 3A or 3B or Comm 1-2-3 or exemption from requirement)

#### Fall Quarter

37 W 6:20-8:50,  
Folwell 105

#### Winter Quarter

38 W 6:20-8:50,  
Folwell 105

#### Spring Quarter

39 W 6:20-8:50,  
Folwell 105

Symbols explained on page 35.

## Course Offerings—Arts and Sciences

Engl 55-56. Shakespeare. (Not offered 1961-62)

Engl 74. American Literature. 3 degree credits. \$27.

Henry Adams to the present. (Prerequisite: 3B or Comm 3 and 5 additional English credits; or C; or 5 credits in 21-22-23, and 72)

*Fall Semester*

M 6:20-8:00, Folwell 205

Engl 120-121. The Interpretation of Poetry. 3 degree credits each semester. \$27 each semester.

Certain technical aspects of poetry in relation to poetic meaning. 120: Analysis of a number of short poems. 121: Emphasis on Coleridge, Housman, Frost and Eliot. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 5 credits in literature in this department, exclusive of classics and C)

*Fall Semester*

120 Th 6:20-8:00, Folwell 102, Blum

*Spring Semester*

121 Th 6:20-8:00, Folwell 102, Blum

Engl 162. Milton. 3 degree credits. \$27.

The minor poems, *Areopagitica*, *Paradise Lost*, and *Samson Agonistes*. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 22 or 56)

*Fall Semester*

T 6:20-8:00, Folwell 205

Clas 80, 180. Classical Epic in Translation. (See page 56.)

Clas 81, 181. Greek Tragedy in Translation. (See page 57.)

Clas 82, 182. Aristophanes and Roman Drama in Translation. (See page 57.)

The Many Faces of Language: The World of English. (See page 44.)

### Composition

Engl 1B-2B-3B. Freshman English. (See page 58.)

Comm 1-2-3. Communication. (See page 68.)

Comp. Grammar Review. 3 certificate credits. \$27 plus \$1 materials fee.

An intensive step-by-step review of grammar (parts of speech, inflections, syntax), punctuation, and spelling for those who want a "refresher" before going into other English courses or who feel the need of a basic course in the fundamentals of English usage; designed to develop the ability to compose correct and effective sentences. (No prerequisite. Repeated winter and spring quarters)

*Fall Quarter*

T 6:20-8:50, Folwell 105,  
Alford

*Winter Quarter*

T 6:20-8:50, Folwell 105,  
Alford

*Spring Quarter*

T 6:20-8:50, Folwell 105,  
Alford

Symbols explained on page 35.

## Evening and Special Classes

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### Comp X. Preparatory Composition. No credit. \$27 plus \$1 materials fee.

Intensive drill on grammatical forms, structure, and theme writing. The regular sections are recommended for those whose primary need is organization and development of themes; any passing grade admits students to Engl 1B or Comm 1. (No prerequisite. Repeated winter and spring quarters)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
T	6:20-8:50, Folwell 113	T	6:20-8:50, Folwell 113	W	6:20-8:50, Folwell 113
W	6:20-8:50, Folwell 113	W	6:20-8:50, Folwell 113		
F	6:00-8:30, StP Ext Center 3E	F	6:00-8:30, StP Ext Center 3E		

### Comp. Writing Projects. 3 certificate credits. \$27.

A course for those who are interested in writing fiction or book-length nonfiction but who lack the necessary prerequisites for the advanced composition courses or are not interested in accumulating credits for a degree. Class discussion will center on the novel and short story, with reference to biography and other nonfiction forms as appropriate. There will be individual and group criticism of work in progress. Students may submit projects already begun or may develop new projects during the semester. (No prerequisite. Repeated spring semester)

<i>Fall Semester</i>		<i>Spring Semester</i>	
Th	6:00-7:40, StP Ext Center 3F, Alford	Th	6:00-7:40, StP Ext Center 3G, Alford

### Comp 27-28.† Advanced Writing. 3 degree credits each semester. \$27 each semester.

Offers training in the fundamentals of creative writing, through lectures and the criticism of manuscripts. 27: Deals with expository writing; articles, essays, criticism, etc. 28: Deals with description and narration. (Prerequisite: Engl 3B, or #)

<i>Fall Semester</i>		<i>Spring Semester</i>	
27	W 6:20-8:00, Folwell 209, Macdonald	28	W 6:20-8:00, Folwell 207, Macdonald

### Comp 58. Business Reports and Letters. (See page 100.)

### Comp 65. The Writing of Research Papers and Articles. 3 degree credits. \$27 plus \$10 special fee.

A course in scientific writing for students and professional people in the biological, physical, and social sciences, and for students in the humanities. The subjects treated are: the organization of data from observation and from printed sources; literature searching; abstracting; the development of a lucid, mature, articulate style; meeting the format requirements of specific types of publication. Students are encouraged to undertake investigations which are related to their professional interests. This is a tutorial course. The instruction is done almost entirely in individual conferences. (Prerequisite: Engl 3B or #)

<i>Fall Semester</i>	
Th	6:20-8:00, Johnston 105, Lufkin

### Comp 101-102. Seminar in Writing (Advanced Short Story). 3 degree credits each semester. \$27 plus \$10 special fee each semester.

For advanced and professional students who write with facility and desire personal direction. Criticism of manuscripts submitted. (Prerequisite: #)

<i>Fall Semester</i>		<i>Spring Semester</i>	
101	T 6:20-8:00, Folwell 103, Macdonald	102	T 6:20-8:00, Folwell 103, Macdonald

### Business English. (See page 99.)

### Engineering English. (See page 124.)

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Symbols explained on page 35.

## Family Studies

\*FamS 1. Preparation for Marriage and Family Living. 3 degree credits. \$27 plus \$1 materials fee.

This course is designed to assist individuals seeking self-understanding, mutually satisfying inter-personal relations, happy marriage and successful parenthood. These personal goals are worked toward through discussion and study about: personal growth and maturity; desirable mate qualities and selecting a marriage partner; purposes and problems of dating, courtship and engagement; family philosophy, religion, values, and planning; early marriage adjustments, child training and discipline, sex education, income management, problem solving and decision making. Integral parts of the course are: case studies, movies, and student discussion. Students are invited for discussion and personal or family counseling with the instructor. (No prerequisite. Class limited to 25 students)

Spring Semester

M 6:20-8:00, Johnston 105, Hansen

\*FamS 1A. Marriage and Parenthood. 3 degree credits. \$27 plus \$1 materials fee.

This course is designed to help individuals and couples achieve self-other understanding, happiness in marriage and success as parents. It focuses upon husband-wife and parent-child relations, with individual development and family unity as specific goals. These are worked toward through discussion and study of such important and practical issues as: self analysis, developmental tasks, team decision making and problem solving, family philosophy, religion, values, and planning; child training and discipline, sex education, communication, income management, marriage adjustments regarding money, sex, in-laws and children, etc., and general dynamics of family interaction. Integral parts of the course are: case studies, movies, and student discussion. Students are invited for discussion and personal or family counseling with the instructor. (No prerequisite. Class limited to 20 students)

Fall Semester

M 6:20-8:00, Johnston 106, Hansen

Child Development. (See page 115.)

## French

*There are 2 sequences of courses in beginning French from which the prospective student may choose the 1 best suited to his needs. 1C-2C-3C, Beginning French, carrying 5 degree credits per unit, comprises the regular standard course in first-year French. The principal aim is to provide a solid foundation for the comprehension of the written and spoken language. Sufficient training in grammar is included to enable the student to acquire elementary skills in conversation and composition. This sequence is recommended for those planning to continue the study of French or wishing to satisfy college language requirements. 1-2-3-4, Beginning French, carrying 3 degree credits per unit, is the same sequence of courses formerly listed in evening classes as: 1-2, Beginning French and 3-4, Intermediate French. This sequence is recommended for those who desire a general introduction to the language but who wish to proceed at a slower pace than that required for the standard 5-credit units, with more time for study and preparation.*

Fren 1C-2C. Beginning French. 5 degree credits each semester. \$45 each semester.

Grammar, pronunciation, reading, and practice in speaking. See note above. (No prerequisite for 1C; for 2C, 1C or evening course 2, or 1 year preparatory French)

Fall Semester

1C M 6:20-9:20, Folwell 204, Burks

Spring Semester

2C M 6:20-9:20, Folwell 204, Burks

Symbols explained on page 35.

## Evening and Special Classes

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**Fren 1-2. Beginning French.** 3 degree credits each semester. \$27 each semester.

Grammar, pronunciation, reading, and practice in speaking. See note above. (No prerequisite for 1; for 2, 1)

*Fall Semester*

1 W 6:20-8:00, Folwell 201, Sullivan  
2 W 6:20-8:00, Folwell 202

*Spring Semester*

1 W 6:20-8:00, Folwell 204  
2 W 6:20-8:00, Folwell 201, Sullivan

**Fren 3-4. Beginning French.** 3 degree credits each semester. \$27 each semester.

Reading from modern authors, review of essential grammar, emphasis on spoken French. Prerequisite: for 3, 2 or 1 year of preparatory French or #; for 4, 3 or #)

*Fall Semester*

3 M 6:20-8:00, Folwell 203, Falk

*Spring Semester*

4 M 6:20-8:00, Folwell 203, Falk

**Fren 17A-B. French for Graduate Students.** No credit. \$30 each semester.

Fundamentals of grammar; reading of appropriate prose. Prepares for examinations in French. (No prerequisite for 17A; for 17B, 17A or 2 years of French in high school or #)

*Fall Semester*

17A M 6:20-8:00, Folwell 201, Brackney  
17B M 6:20-8:00, Folwell 202

*Spring Semester*

17A M 6:20-8:00, Folwell 202  
17B M 6:20-8:00, Folwell 201, Brackney

**Fren 20. Introduction to French Literary Texts.** 3 degree credits. \$27.

Readings of modern masterpieces of French literature accompanied by discussions of literary problems and methods of literary analysis. (Prerequisite: 4)

*Fall Semester*

W 6:20-8:00, Folwell 203

**Fren 54-55. French Conversation.** 3 degree credits each semester. \$27 each semester.

Informal discussion of current affairs and everyday topics. (Prerequisite: 4 or #)

*Fall Semester*

54 W 6:20-8:00, Folwell 206

*Spring Semester*

55 W 6:20-8:00, Folwell 206

## Geography

**Geog 41. Geography of Primary Production.** 5 degree credits. \$45.

Introductory economic geography with special emphasis on commodities of commercial significance. Particular attention is given to the world pattern of raw material occurrence and production, as well as to the associated centers of industrial fabrication. (No prerequisite)

*Fall Semester*

W 6:20-9:20, Ford 285, Lukermann

**Geog 107. Soviet Union.** 3 degree credits. \$27.

Character of and bases for the regional diversity of physical resources, population, agriculture, manufacturing, and transportation in the U.S.S.R. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 10 credits of geography or #)

*Spring Semester*

M 6:20-8:00, Ford 285, Helin

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Symbols explained on page 35.

**Geol 112. Western United States.** 3 degree credits. \$27.

Regional analysis of the physical and human resources of western United States. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 10 credits of geography or #)

*Spring Quarter*

W 6:20-8:50, Ford 285, Mather

**Geology**

**Geol 1-2. General Geology.** 3 degree credits each semester. \$27 each semester.

1: Physical geology, which consists 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. 2: Historical geology, which is 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. (No prerequisite for 1; for 2, 1)

*Fall Semester*

1 T 6:20-8:00, Pillsbury 110, Sloan

*Spring Semester*

1 M 6:20-8:00, Pillsbury 110, Sloan  
2 T 6:20-8:00, Pillsbury 110, Sloan

**Geol A-B. General Geology Laboratory.** 2 degree credits each semester. \$18 each semester.

A: Physical laboratory, the physical properties of common minerals and rocks; interpretation of topographic maps. B: Historical laboratory, identification of fossils; interpretation of geologic maps. (Prerequisite: For A, 1 or 8 or ¶1; for B, A and 2, or A and ¶2)

*Fall Semester*

A T 8:10-9:50, Pillsbury 22

*Spring Semester*

A M 8:10-9:50, Pillsbury 22  
B T 8:10-9:50, Pillsbury 22

**German**

*There are 2 sequences of courses in Beginning German from which the prospective student may choose the 1 best suited to his needs. 1B-2B-3B, Beginning German, carrying 5 credits per unit, comprises a standard course in first-year German. The principal aim is to provide a solid foundation for the comprehension of the written and spoken language. Sufficient training in grammar is included to enable the student to acquire elementary skills in conversation and composition. This sequence is recommended for those planning to continue the study of German or wishing to satisfy college language requirements. 1-2-3-4, Beginning German, carrying 3 degree credits per unit, is the same sequence of courses formerly listed in evening classes as: 1-2, Beginning German and 3-4, Intermediate German. This sequence is recommended for those who desire a general introduction to the language but who wish to proceed at a slower pace than that required for the standard 5-credit units, with more time for study and preparation.*

**Ger 1B-2B. Beginning German.** 5 degree credits each semester. \$45 each semester.

Standard course in first-year German. See note above. (Prerequisite: No prerequisite for 1B; for 2B, 1B or former evening courses 1 and 2, or 1 year high school German)

*Fall Semester*

1B M 6:20-9:20, Folwell 209½, Ramras

*Spring Semester*

2B M 6:20-9:20, Folwell 107, Ramras

Symbols explained on page 35.

## Evening and Special Classes

### Ger 3B. Beginning German. 5 degree credits. \$45.

A continuation of the 5-credit sequence in Beginning German. (Prerequisite: 10 credits in Beginning German or #)

#### Fall Semester

M 6:20-9:20, Folwell 108

### Ger 1-2. Beginning German. 3 degree credits each semester. \$27 each semester.

The objectives of the course are to provide the foundation of a reading knowledge adequate for cultural or professional purposes; and to encourage an understanding of the nature of the language by systematic comparison between German and English. See note above. (No prerequisite for 1; for 2, 1)

#### Fall Semester

1 M 6:20-8:00, Folwell 209, Weiss  
1 Th 6:20-8:00, Folwell 209, F Wood

#### Spring Semester

1 M 6:20-8:00, Folwell 207, F Wood  
2 M 6:20-8:00, Folwell 209, Weiss

### Ger 3. Beginning German. 3 degree credits. \$27.

Readings from modern authors, review of essential grammar, with practice in spoken German. See note above. (Prerequisite: former evening course 2, or 1 year high school German)

#### Fall Semester

M 6:20-8:00, Folwell 108

### Ger 4. Beginning German. 3 degree credits. \$27.

Modern narrative prose. See note above. (Prerequisite: former evening course 3 or #)

#### Spring Semester

M 6:20-8:00, Folwell 108

### Ger 17A-B. German for Graduate Students. No credit. \$30 each semester.

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, 2 years German in high school, or equivalent)

#### Fall Semester

17A M 6:20-8:00, Folwell 107, Menze  
17B M 6:20-8:00, Folwell 105, C Wood

#### Spring Semester

17A M 6:20-8:00, Folwell 104, Menze  
17B M 6:20-8:00, Folwell 113, C Wood

## History

### Hist 1-2-3.‡ Civilization of the Modern World. (\*\*Hist 53-54-55) 3 degree credits each term. \$27 each term.

1. The rise of the European state system as framework within which Western civilization developed, and the economic, cultural, political, intellectual, and religious implications of the emerging system. 2: The struggle for control over the Western states system, and the emergence of liberal democracy in the modern world. 3: The impact of industrialism upon Western and world civilization in the 20th century. (Hist 2 and 3 will be offered at the St. Paul Extension Center on a semester basis, 1962-63) (No prerequisite)

#### Fall Semester

3 T 7:50-9:30, StP Ext Center 3G

#### Spring Semester

1 T 7:50-9:30, StP Ext Center 3G

#### Fall Quarter

1 W 6:20-8:50, Ford 115,  
Wright

#### Winter Quarter

2 W 6:20-8:50, Ford 115,  
Wright

#### Spring Quarter

3 W 6:20-8:50, Ford 115,  
Wright

Symbols explained on page 35.



**Hist 14-15-16.† History of Ancient Civilization.** (\*\*Hist 50-51-52) 3 degree credits each quarter. \$27 each quarter.

14: 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. 15: The history of the rise and flowering of the 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. 16: 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 A.D. 300). The three main topics to be considered are (a) the civilization of the ancient world at its peak, (b) the rise and flowering of Roman culture, and (c) 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, but it is suggested that 16 be preceded by 15, and 15 by 14 in order that student may acquire a background for following course)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
14	Th 5:30-8:00, Ford 115, Jones	15	Th 5:30-8:00, Ford 115, Jones	16	Th 5:30-8:00, Ford 115, Jones

**Hist 17-18-19.† History of Asia.** (\*\*Hist 59-60-61) 3 degree credits each quarter. \$27 each quarter.

A survey of the history of China, Japan, India, and southeast Asia from ancient times to the present. 17: Ancient history and culture of China, Japan, and India to A.D. 1200. 18: Asia A.D. 1200-1800: Chinese empire period; India: Muslim domination; Japanese feudalism; the beginning of Western influence. 19: Modern Asia: The impact of Europe, nationalism, post-World War II Asia. (No prerequisite)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
17	Th 5:30-8:00, Ford 180, Taylor	18	Th 5:30-8:00, Ford 180, Taylor	19	Th 5:30-8:00, Ford 180, Taylor

**Hist 20-21-22.† American History.** 3 degree credits each term. \$27 each term.

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)

<i>Fall Semester</i>			<i>Spring Semester</i>		
20	M 6:20-8:00, Ford 115, Beatty		21	M 6:20-8:00, Ford 115, Beatty	
<i>Fall Quarter</i>			<i>Winter Quarter</i>		
20	M 6:00-8:30, StP Ext Center 2A		21	M 6:00-8:30, StP Ext Center 2A	
<i>Fall Quarter</i>			<i>Spring Quarter</i>		
			22	M 6:00-8:30, StP Ext Center 2A	

**Hist 50-51-52.† History of Ancient Civilization.** 3 degree credits each quarter. \$27 each quarter.

*Fall Quarter (50)—Winter Quarter (51)—Spring Quarter (52)*

See course description, day, time, place, and instructor as listed under Hist 14-15-16. Courses in this sequence carry Upper Division credit. However, credits earned may not be used to satisfy the Upper Division requirement for students majoring in history.

**Hist 53-54-55.† Civilization of the Modern World.** 3 degree credits each term. \$27 each term.

*Fall Quarter and Spring Semester (53)—Winter Quarter (54)—  
Fall Semester and Spring Quarter (55)*

See course description, day, time, place, and instructor as listed under Hist 1-2-3. Courses in this sequence carry Upper Division credit. However, credits earned may not be used to satisfy the Upper Division requirement for students majoring in history.

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Symbols explained on page 35.

## Evening and Special Classes

**Hist 59-60-61.† History of Asia.** 3 degree credits each quarter. \$27 each quarter.

*Fall Quarter (59)—Winter Quarter (60)—Spring Quarter (61)*

See course description, day, time, place, and instructor as listed under Hist 17-18-19. Courses in this sequence carry Upper Division credit. However, credits earned may not be used to satisfy the Upper Division requirement for students majoring in history.

**Hist 81, 79. American History Since 1900.** 3 degree credits each semester. \$27 each semester.

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. 81: From 1932 to present. 79: Spanish-American War and America's overseas empire; the rise of big business; problems of the city; the Progressive Era of Reform; America in World War I. 81 completes the sequence 79-80-81. 79 begins the sequence again, which will be completed in 1962-63. (No prerequisite)

*Fall Semester*

81 Th 6:20-8:00, Ford 120, Noble

*Spring Semester*

79 Th 6:20-8:00, Ford 120, Noble

**Hist 86-87-88.† The American Colonies.** 3 degree credits each quarter. \$27 each quarter.

86: The European and English background, foundation of colonies, establishment of colonial institutions, 1607-1689. 87: The expansion of the colonies territorially, economically, and culturally, 1689-1750. 88: The colonies in the empire, imperial struggle and its aftermath in revolution and independence, 1750-1783. (No prerequisite)

*Fall Quarter*

86 W 5:30-8:00, Ford 170,  
Rutman

*Winter Quarter*

87 W 5:30-8:00, Ford 170,  
Rutman

*Spring Quarter*

88 W 5:30-8:00, Ford 170,  
Rutman

**Hist 90-91-92.† The American West.** 3 degree credits each quarter. \$27 each quarter.

Interpretation of American frontier from its establishment in the colonies to its disappearance as a factor in American life. 90: Colonial frontier. 91: Mid-America. 92: Far West. (No prerequisite)

*Fall Quarter*

90 M 5:30-8:00, Ford 130,  
Berkhofer

*Winter Quarter*

91 M 5:30-8:00, Ford 130,  
Berkhofer

*Spring Quarter*

92 M 5:30-8:00, Ford 130,  
Berkhofer

**Hist 94-95.† American Diplomatic History.** 3 degree credits each semester. \$27 each semester.

94: Period of national development, 1848-1898. 95: United States as a world power. (No prerequisite)

*Fall Semester*

94 M 8:10-9:50, Ford 115, Beatty

*Spring Semester*

95 M 8:10-9:50, Ford 115, Beatty

**Hist 100B-101B-102B.† History of Rome.** 3 degree credits each quarter. \$27 each quarter.

100B: The last century of the Roman Republic, 133-30 B.C. An analysis of the reasons for the disintegration of the Roman Republic from the time of the Gracchi to the defeat of Antony and Cleopatra; special attention will be paid to all aspects (political, cultural, economic, social) of the age of Cicero and Caesar. 101B: The principate (early Roman Empire), 30 B.C.-A.D. 285. The establishment of the empire by Augustus; developments in political, social, economic, cultural affairs under the early emperors, with special attention to the climax of ancient civilization in the A.D. second century. 102B: The decline and fall, A.D. 285 to the end of the Roman Empire. The development of the later Roman Empire, or autocracy, under Diocletian and Constantine; the triumph of Christianity. All phases of life and culture in this later period will be considered in detail: government,

Symbols explained on page 35.

## Course Offerings—Arts and Sciences

religious developments, art, law, literature, economics, society. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
100B T 5:30-8:00, Ford 130, Jones	101B T 5:30-8:00, Ford 115, Jones	102B T 5:30-8:00, Ford 115, Jones

**Hist 109-110.† Europe in the Twentieth Century.** 3 degree credits each semester. \$27 each semester.

109: The years 1900-1918. Background and causes of World War I; history of Europe during 4 years of war. 110: From 1918 to present. 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 World War II. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

<i>Fall Semester</i>	<i>Spring Semester</i>
109 W 6:20-8:00, Ford 155, Deutsch	110 W 6:20-8:00, Ford 155, Deutsch

**Hist 125B-126B-127B.‡ Modern Russia.** 3 degree credits each quarter. \$27 each quarter.

125B: The Reign of Nicholas II to 1914. 126B: 1914-1929: World War I, revolutions, civil war, new economic policy. 127B: The Soviet Regime from 1929 to the present. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
125B M 5:30-8:00, Ford 150, Stavrou	126B M 5:30-8:00, Ford 150, Stavrou	127B M 5:30-8:00, Ford 150, Stavrou

**Hist 125C-126C-127C.‡ The Modern Near East: The Balkans and the Arab World.** 3 degree credits each quarter. \$27 each quarter.

125C: From the Fall of Constantinople (1453) to the Treaty of Jassy (1792). 126C: From the Treaty of Jassy to the Congress of Berlin (1878). 127C: From the Congress of Berlin to the present. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
125C W 5:30-8:00, Ford 150, Stavrou	126C W 5:30-8:00, Ford 150, Stavrou	127C W 5:30-8:00, Ford 150, Stavrou

**Hist 136, 134. History of World War II.** 3 degree credits each semester. \$27 each semester.

136: Period 1942-1945. 134: 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. 136 completes the 134-135-136 sequence. 134 begins the sequence again. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

<i>Fall Semester</i>	<i>Spring Semester</i>
136 W 8:10-9:50, Ford 155, Deutsch	134 W 8:10-9:50, Ford 155, Deutsch

**Hist 139A. American History, 1880 to 1900.** 3 degree credits. \$27.

139A completes the sequence 137A-138A-139A. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

<i>Fall Semester</i>
M 6:20-8:00, Ford 170, Loehr

Symbols explained on page 35.

## Evening and Special Classes

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**Hist 146. American Economic and Social History.** 3 degree credits. \$27.

Colonial economic and social life from the beginning of settlement to the American Revolution. 146 begins the sequence 146-147-148. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

*Spring Semester*

M 6:20-8:00, Ford 170, Loehr

**Hist 146A-147A.† History of the South.** 3 degree credits each semester. \$27 each semester.

146A: Covers the period 1607-1840. 147A: Covers the period 1840-1890. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

*Fall Semester*

146A Th 8:10-9:50, Ford 115, Noble

*Spring Semester*

147A Th 8:10-9:50, Ford 115, Noble

**Chinese Backgrounds.** (See page 44.)

**Civil War Seminar.** (See page 45.)

**The Spirit of the 18th Century.** (See page 44.)

## Interdisciplinary Programs

### Communication

**Comm 1-2-3. Communication.** 4 degree credits each quarter. \$36 each quarter.

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. 1: The fundamental patterns of meaning in English, word meaning, social meaning, good usage. 2: The use of language to influence human behavior. 3: Mass communication of press, film, and radio, and how to receive it with critical discrimination. (Prerequisite: Preparatory Composition or satisfactory score on English Placement Test, as explained on page 58. Meets all requirements which are satisfied by Engl 1B-2B-3B, Freshman English, *except* in the Institute of Technology)

*Fall Quarter*

1 W 5:30-9:00, TNM 106

*Winter Quarter*

2 W 5:30-9:00, TNM 106

*Spring Quarter*

3 W 5:30-9:00, TNM 106

### Humanities

*Qualified students wishing to register for 52, 53, 54 are referred to the course descriptions of Hum 2, 3, 4; students registering under Upper Division numbers will be required to do extra work and perform at a higher level in examinations and papers. Likewise, qualified students wishing to register for Hum 61, 62, 63 are referred to the descriptions of Hum 11, 12, 13. Hum 51 is scheduled separately and can be taken only during fall semester.*

**Hum 1. Humanities in the Modern World I.** 3 degree credits. \$27.

An introduction to the study of the humanities in the modern world, including the old regime, the revolution, neoclassicism and romanticism, from about 1740 to 1820. Materials used are history,

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

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prose, criticism, literature, poetry, and art. Authors: Pope, Voltaire, Rousseau, Burke, Goethe, Tolstoy. See note at beginning of humanities section. (No prerequisite. Repeated spring semester)

*Fall Semester*

W 6:20-8:00, Johnston 114, Parker

*Spring Semester*

M 8:10-9:50, Johnston 113, Parker

*Fall Quarter*

T 5:30-8:00, Johnston 114, Siegelman

### Hum 2. Humanities in the Modern World II. (\*\*Hum 52) 3 degree credits. \$27.

The industrial revolution, liberalism and socialism, the psychology of individualism. Period covered is from 1776 to 1890. Authors: Carlyle, Mill, Marx, Smith, Malthus, Ibsen, Dostoyevsky. See note at beginning of humanities section. (No prerequisite. Repeated winter quarter and spring semester)

*Fall Semester*

M 6:20-8:00, Johnston 113, Wright

*Spring Semester*

W 8:10-9:50, Johnston 114, MacInnes

*Winter Quarter*

T 5:30-8:00, Johnston 114, Siegelman

### Hum 3. Humanities in the Modern World III. (\*\*Hum 53) 3 degree credits. \$27.

The impact of science and evolution; religion and morals in a changing world, from about 1840 to 1914. Authors: the evolutionists, Kierkegaard, Nietzsche, Chekhov, Thomas Mann. See note at beginning of humanities section. (No prerequisite. Repeated spring semester and spring quarter)

*Fall Semester*

W 6:20-8:00, Johnston 115, Amberg  
Th 6:00-7:40, StP Ext Center 3D, Swanson

*Spring Semester*

W 8:10-9:50, Johnston 122

*Spring Quarter*

T 5:30-8:00, Johnston 114, Siegelman

### Hum 4. Humanities in the Modern World IV. (\*\*Hum 54) 3 degree credits. \$27.

Civilization between two wars: the impact of psychoanalysis, communism, 20th century liberalism, new problems of human value and authority. Authors: Freud, Lenin, T. S. Eliot, Kafka, and others. See note at beginning of humanities section. (No prerequisite. Repeated spring semester)

*Fall Semester*

W 8:10-9:50, Johnston 114, Amberg

*Spring Semester*

Th 6:00-7:40, StP Ext Center 3E, Swanson  
Th 8:10-9:50, Johnston 122

### Hum 11. The Greek Heritage. (\*\*Hum 61) 3 degree credits. \$27.

Greece through the Peloponnesian War. Emphasizes Golden Age of Athens; tragic visions of the dramatists, classical art and architecture, Athenian democracy, concepts of reason and justice, Homer, Hesiod, the dramatists, Plato, Aristotle, Thucydides, and, in contrast, *The Book of Job*, Greek art and architecture. See note at beginning of humanities section. (No prerequisite)

*Fall Quarter*

Th 6:20-8:50, Johnston 115, Ames

### Hum 12. Roman and Medieval Heritage. (\*\*Hum 62) 3 degree credits. \$27.

Roman state. Hellenistic and Roman civilization. Epicureanism and Stoicism, Neoplatonism, Hebrew background and setting for Christianity. Christian doctrine, medieval society, faith, theocracy, Lucretius, Marcus Aurelius, Epictetus, New Testament, Augustine, church documents, Thomas Aquinas, Dante. Early Christian, Romanesque, and Gothic art. See note at beginning of humanities section. (No prerequisite)

*Winter Quarter*

Th 6:20-8:50, Johnston 115, Ames

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Symbols explained on page 35.

## Evening and Special Classes

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### Hum 13. The Renaissance and Reformation. (\*\*Hum 63) 3 degree credits. \$27.

The 14th-17th centuries. Rise of Italian communes, commercial life, banking; age of Lorenzo the Magnificent in Florence; ideal of beauty in art, politics, and morals; universal man. High renaissance and the power of Rome. Pietism and Reformation in Germany. Counter Reformation in Spain and France. Golden Age of Spain and beginnings of Age of Reason. Readings from Pico della Mirandola, Machiavelli, Castiglione, Luther, Calvin, Loyola, Montaigne, Pascal, Cervantes. Renaissance and baroque art and architecture. See note at beginning of humanities section. (No prerequisite)

*Spring Quarter*

Th 6:20-8:50, Johnston 115, Ames

### Hum 21. American Life. 3 degree credits. \$27.

The concept of individualism and the place of the individual in American society as recorded in history, social thought, literature, and the arts. Authors: Franklin, Emerson, Thoreau, Whitman, Twain, and others. Music of Charles Ives. Architecture of Frank Lloyd Wright. (No prerequisite)

*Fall Semester*

T 8:10-9:50, Johnston 115, Agee

### Hum 22. American Life. 3 degree credits. \$27.

The role of religious and philosophic attitudes in the formation of American beliefs. Authors: Roger Williams, Jonathan Edwards, William James, Veblen, Henry Adams, T. S. Eliot, and others. Selected religious painting, architecture, and music. (No prerequisite)

*Spring Semester*

T 8:10-9:50, Johnston 115, Agee

### Hum 51. Humanities in the Modern World. 3 degree credits. \$27.

Similar to Hum 1 but open only to students with the equivalent of 60 quarter credit hours in the Lower Division of SLA. Reading assignments heavier than in Hum 1, and term paper required.

*Fall Semester*

T 8:10-9:50, Johnston 106, MacInnes

## Personal Orientation

### \*PO 1. How to Study. 2 degree credits (see course description). \$27.

Practical assistance to the student in developing efficient methods of study and concentration, organizing material, preparing for examinations, and improving reading ability. Attention to the orientation of students in their attitudes and motivation, and the relation of these to satisfactory performance. (No prerequisite. Class limited to 20 students. Repeated spring semester. Students intending to use this course in a degree program should consult an adviser before registering)

*Fall Semester*

M 6:20-8:00, Johnston 307, Carlson  
M 8:10-9:50, Johnston 307, Carlson

*Spring Semester*

W 6:20-8:00, Johnston 307, Carlson  
W 8:10-9:50, Johnston 307, Carlson

Family Studies. (See page 61.)

## Social Science

*These courses provide a broad framework within which the student may develop an understanding of man, his institutions, ideas, and values. The courses are organized around central themes of human existence. Selections from the various social sciences as well as from the humanities are studied. All of the courses attempt to provide an integrated study of the factors, historical, political, economic, social, psychological, and*

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

*cultural—that influence and are influenced by man's conduct. Each course is organized around a basic theme.*

### **SSci 1. Introduction to Social Science. (\*SSci 51) 4 degree credits. \$36.**

*Personality* is the basic theme for SSci 1. The student is confronted with problems involved in developing a personality and he is introduced to different interpretations and concepts of personality. He studies personality as shaped by culture and society, and as a shaper of culture and society. Readings include selections from the works of Sigmund Freud, Jean Piaget, Clyde Kluckhohn, Henry Murray, Bronislaw Malinowski, Aristotle, Tolstoy, and others. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

W 5:45-8:00, TNM 107, Weinstein

#### *Spring Semester*

M 5:45-8:00, TNM 106

### **SSci 2. Introduction to Social Science. (\*SSci 52) 4 degree credits. \$36.**

*Work* is the basic theme for SSci 2. The student is introduced to the various ways of organizing the work process. He is shown the economic, sociological, and psychological implications of the ways in which work is organized. Many problems of a modern industrial economy and society are discussed, and alternatives are explored. Such problems as business cycles, automation, economic power and controls are considered. Readings include selections from the works of Plato, Frank Knight, George Orwell, C. Wright Mills, Paul Samuelson, Henry Dickinson, H. G. Wells, and Wilhelm Roepke. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

M 5:45-8:00, TNM 106, Uppal

#### *Spring Semester*

M 5:45-8:00, TNM 107, Uppal

### **SSci 3. Introduction to Social Science. (\*SSci 53) 4 degree credits. \$36.**

*Community* is the basic theme for SSci 3. The course centers on the ties that bind people to one another. Various concepts of community are examined; the student explores different ways in which men live together—their institutions, social classes, and groups. Throughout the course questions concerning social ideals are raised. The course enables the student to understand better his involvement and participation in various aspects of community life through a clarification of the basic issues of community. Readings include selections from the works of Ortega, Aldous Huxley, Robert Redfield, Louis Wirth, W. Lloyd Warner, Aristotle, Mussolini, Lenin, John Stuart Mill, Bertrand Russell, Reinhold Niebuhr, and others. (No prerequisite)

#### *Spring Semester*

W 5:45-8:00, TNM 107, Weinstein

### **SSci 51. Introduction to Social Science. 4 degree credits. \$36.**

#### *Fall Semester—Spring Semester*

See course description, day, time, place, and instructor as listed under SSci 1.

### **SSci 52. Introduction to Social Science. 4 degree credits. \$36.**

#### *Fall Semester—Spring Semester*

See course description, day, time, place, and instructor as listed under SSci 2.

### **SSci 53. Introduction to Social Science. 4 degree credits. \$36.**

#### *Spring Semester*

See course description, day, time, place, and instructor as listed under SSci 3.

### **Family Studies. (See page 61.)**

Symbols explained on page 35.

## Evening and Special Classes

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### Italian

**Ital 1A-2A. Beginning Conversational Italian.** 3 degree credits each semester. \$27 each semester.

Conversational approach. (No prerequisite for 1A; for 2A, 1A or #)

*Fall Semester*  
1A T 6:20-8:00, Folwell 201

*Spring Semester*  
2A T 6:20-8:00, Folwell 201

**Ital 3A-4A. Conversational Italian.** 3 degree credits each semester. \$27 each semester.

A continuation of Ital 1A-2A. (Prerequisite for 3A, 2A; for 4A, 3A)

*Fall Semester*  
3A W 6:20-8:00, Folwell 108, Pellegrini-Seim

*Spring Semester*  
4A W 6:20-8:00, Folwell 108, Pellegrini-Seim

### Journalism

**Jour 13. Introduction to Journalistic Writing.** 3 degree credits. \$27.

Lectures and assignments in journalistic media and audiences; fundamentals of fact-gathering and fact-writing for newspapers, broadcasting, and advertising. Adequate typing skill advisable for credit students. (Prerequisite: Engl 3B or #. Repeated spring semester)

*Fall Semester*  
W 6:20-8:00, Murphy 212, Finnegan

*Spring Semester*  
W 6:20-8:00, Murphy 212, Lindsay

**Jour 18. Principles of Advertising.** 3 degree credits. \$27.

The role and function of advertising in modern society. A survey of techniques and practices in creating advertising, emphasizing copy, research, and media fields. Problems and cases in advertising. (Prerequisite: 13 or #)

*Fall Semester*  
T 6:20-8:00, Murphy 311, Mindak

**°Jour 57. Layout and Typography for Publications and Advertising.** 3 degree credits. \$27 plus \$5 laboratory fee.

Planning the typography of display and text. Classification of type faces and historical development. Evaluation of type families. Practice in layout and paste-up. Copyfitting. Hand and photo composition in typography laboratory. (Prerequisite: 13 or 18 or #. Class limited to 20 students)

*Spring Semester*  
M 6:20-8:00, Murphy 315, Wilson

**°Jour 60. Graphic Processes for Publications and Advertising.** 3 degree credits. \$27 plus \$5 laboratory fee.

Study of letterpress, offset, gravure, and silk screen by lecture, demonstration, field trip, and movie. Evaluation of processes. Use of engravings, art, and illustration techniques. Significant graphic art developments. Practice in publication and advertising design. (Prerequisite: #. Class limited to 20 students)

*Fall Semester*  
M 6:20-8:00, Murphy 212, Wilson

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Symbols explained on page 35.



**\*Jour 69. Business News and Feature Writing.** 3 degree credits. \$27.

For persons in advertising or in specialized publications. Gathering material and writing of magazine articles, news stories, feature articles, and other types of copy. Analysis of audiences in the magazine and in the newspaper fields. (Prerequisite: Engl 3B or #. Class limited to 18 students)

*Fall Semester*

W 6:20-8:00, Murphy 302, Sittard

**Jour 78. Public Relations.** 3 degree credits. \$27.

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 #)

*Fall Semester*

Th 6:20-8:00, Murphy 308, Lindsay

**\*Jour 79. Advertising Copy Writing.** 3 degree credits. \$27.

Techniques of writing retail and national advertising copy. Application of psychological principles relating to approach, appeals, and response. Use of pretesting, posttesting and creative research findings. (Prerequisite: 18 or #. Class limited to 18 students)

*Spring Semester*

Th 6:20-8:00, Murphy 212

## Library Science

**Lib 50. History of Libraries and Librarianship.** 3 degree credits. \$27.

A survey of library development from ancient times to the present, with emphasis on library service in the United States in the 19th and 20th centuries. The characteristics and functions of libraries as social agencies. A prerequisite for graduate study. (No prerequisite)

*Spring Quarter*

TTh 4:30-5:45, Library 4A, Shove

**Lib 55. Library Administration.** 3 degree credits. \$27.

Principles of library administration, organization and management. A general course for all librarians; prerequisite for graduate study. (No prerequisite)

*Fall Quarter*

MW 4:30-5:45, Library 4A, Berninghausen

**Lib 62. Reference I.** 3 degree credits. \$27.

Intensive study of some 150 outstanding and useful reference books and tools most frequently used by students and librarians, landmark reference books, indexes, and periodical guides. The theory and practice of reference work is also considered. A prerequisite for graduate study. (No prerequisite)

*Winter Quarter*

TTh 4:30-5:45, Library 4A, Wezeman

**Lib 74. Library Materials in the Classroom.** 2 degree credits. \$18.

For College of Education students or postgraduates working for certification as school librarians. (No prerequisite)

*Winter Quarter*

MW 4:30-5:45, Library 4A, Zimmerman

## Evening and Special Classes

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### Lib 83. Cataloguing and Classification. 3 degree credits. \$27.

Basic principles of descriptive cataloguing, including rules of entry, subject headings and classification in libraries, for all types of libraries. A prerequisite for graduate study. (No prerequisite)

#### Fall Quarter

W 6:30-9:00, Library 4A, Simonton

### Lib 131. Public Library Extension and Development. 3 degree credits. \$27.

Larger units of service based upon county and multi-county patterns. Operation of federal and state aid programs. The legal basis for the larger units of service. Consideration of the financial, administrative, materials selection, and personnel problems involved. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 55 or #)

#### Spring Quarter

T 6:30-9:00, Library 4A, Wezeman

### Lib 176. Communication Media and the Library. 3 degree credits. \$27.

The process of communication, books, magazines, newspapers, television, radio, and the film in relation to libraries in society. Students wishing graduate credit should inquire at time of registration. (Prerequisite: #)

#### Winter Quarter

M 6:30-9:00, Library 4A, Berninghausen

## Liberal Arts Programs

See page 44.

## Mathematics (Science, Literature, and the Arts)

*The following mathematics courses are being offered for the benefit of prebusiness students and SLA nonmathematics majors only. They are not designed for the student who wishes to continue with Institute of Technology advanced mathematics courses or for SLA mathematics majors. If in doubt about your registration for mathematics courses please consult an adviser.*

### Placement Examination in High School Algebra

All students who wish to register for Math T, Trigonometry, and/or Math 10, College Algebra and Analytic Geometry, must fill out an Application for Admission at the time of registration. Only those students who have satisfactorily completed ITM 9, Higher Algebra, or its equivalent in high school or an institution of higher learning (not a trade school) and receive a satisfactory score in the Placement Examination in High School Algebra will be permitted to register. Under some conditions, a student is exempt from the Placement Examination. These conditions are stated in the Application for Admission.

If you have completed ITM 9, Higher Algebra, or its equivalent, register for Math T, Trigonometry, and/or Math 10, College Algebra and Analytic Geometry, and fill out the Application for Admission. If you are not exempt, take the Placement Examination on one of the dates listed below. You will be advised on or before the first meeting of the class in Math T, Trigonometry, and/or Math 10, College Algebra and Analytic Geometry, if you must transfer to ITM 9, Higher Algebra.

No student will be permitted to stay in Math T, Trigonometry and/or Math 10, College Algebra and Analytic Geometry, unless he has completed the necessary prerequisites and has passed or been excused from the Placement Examination in High School Algebra. After the first week of classes no registrations will be accepted and no transfers permitted except in instances in which the student is not qualified to continue. The Placement Examination will be given on the following dates:

#### Fall Semester

7:00 p.m., Friday, September 15, Nicholson 211

7:00 p.m., Wednesday, September 20, Nicholson 211

7:00 p.m., Wednesday, September 20, StP Ext Center 2E

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

### Spring Semester

7:00 p.m., Monday, February 5, Nicholson 211

7:00 p.m., Wednesday, February 7, Nicholson 211

7:00 p.m., Wednesday, February 7, StP Ext Center 2E

**\*Math T. Trigonometry.** (Open to prebusiness students and SLA nonmathematics majors only.) 3 degree credits. \$27.

A prebusiness course in analytic trigonometry emphasizing identities, equations, and properties of the trigonometric functions; right and oblique triangles without logarithmic computation. (Students who plan to take several courses in mathematics should begin with ITM 11, not Math T.) Prerequisite: plane geometry and either Y or ITM 9 or equivalent and satisfactory score on placement examination in high school algebra explained on page 74. Can be taken concurrently with 10. Limited to 35 students. Repeated spring semester)

### Fall Semester

M 6:20-8:00, Folwell 109

### Spring Semester

M 6:20-8:00, Folwell 109

**Math 10. College Algebra and Analytic Geometry.** (Open to prebusiness students and SLA nonmathematics majors only.) 5 degree credits. \$45.

A course for students requiring only some analytic geometry and college algebra without trigonometry, or whose background does not include logarithms. (Students who plan to take several courses in mathematics should register for ITM 11, not Math 10.) Functions and graphs, quadratic equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. (Prerequisite: Y or ITM 9 or equivalent and satisfactory score on placement examination in high school algebra explained on page 74. Repeated spring semester)

### Fall Semester

MW 6:20-7:45, Folwell 207

### Spring Semester

MW 6:20-7:45, Folwell 110

**\*Math 40. Introduction to Calculus.** (Open to prebusiness students and SLA nonmathematics majors only.) 5 degree credits. \$45.

A 1-semester course designed for those who wish a brief introduction to calculus which includes some integration. (Students planning to take more than 1 course in calculus in evening classes should not take Math 40 and must consult an adviser before registering.) Functions and limits, differentiation of algebraic, trigonometric, exponential, and logarithmic functions with applications to velocity and acceleration, maxima and minima, approximations by differentials. Integration with standard forms with application to area, volume, simple differential equations. (Prerequisite: 10 and either T or JT or equivalent, or ITM 11 and 12. Limited to 35 students)

### Spring Semester

MW 6:20-7:45, Folwell 202

## Music

### Applied Music

Individual instruction in music offered by the Department of Music is open to students not able to attend day classes by registration through the General Extension Division. Private lessons are given in piano, organ, voice, violin, trumpet, and all other orchestral instruments.

All applicants for applied music instruction must first, prior to the beginning of a quarter, obtain an *Approval for Registration Form* and fulfill any necessary audition requirements through the Department of Music, 107 Scott Hall. Time and place of lessons are also arranged through the Music office, and final examinations will be taken during day-time hours. The *Approval for Registration Form* must be presented by the student to an Extension Division office at the time of registration during the appropriate quarter registration period.

Symbols explained on page 35.

## Evening and Special Classes

The courses offered, and their fees, will be found in the program of classes for the College of Science, Literature, and the Arts in the *Class Schedule*. In addition to the regular tuition and fees, a \$4 registration fee will be charged for each quarter course. The usual fee for late registration will also be charged. For further information, consult any office of the General Extension Division or the office of the Department of Music.

**Mus. Enjoying Music.** No credit. \$18 each quarter.

Enjoying and understanding music heard in today's concert halls, theaters and homes. Various types, forms and styles of instrumental and vocal music, including symphony, opera, chamber music and solo works. Fall: baroque and classical periods. Winter: late classical and romantic periods. Spring: late romantic and modern periods. (No prerequisite)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
M	6:20-8:00, Scott 4, Ivory	M	6:20-8:00, Scott 4, Ivory	M	6:20-8:00, Scott 4, Ivory

**Mus. \*Piano Playing for Pleasure (Group Piano) I-IIa-IIb-IIc.** No credit. \$18 plus \$2 laboratory fee each quarter.

I: Introduction to music, using the keyboard to reveal its basic characteristics. (No prerequisite. Each section limited to 20 students) IIa-IIb-IIc: Designed for those who wish to develop a broad understanding of music and keyboard skill. (Prerequisite: for IIa, some kind of musical background, or ♯; for IIb, IIa; for IIc, II b, or ♯. Each section limited to 20 students)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
I	T 6:20-8:20, MusEd 103, Duckworth	I	T 6:20-8:20, MusEd 103, Duckworth	IIa	T 6:20-8:20, MusEd 103, Duckworth
IIa	Th 6:20-8:20, MusEd 103, Duckworth	IIb	Th 6:20-8:20, MusEd 103, Duckworth	IIc	Th 6:20-8:20, MusEd 103, Duckworth

**Mus 1A. Introduction to Music.** 3 degree credits. \$27.

Basic elements of music, such as notation and characteristics of musical tone, fundamental musical concepts of rhythm, melody, harmony, polyphony, form; demonstrated by recordings and performance of music of all types in Western civilization. (No prerequisite)

*Fall Semester*  
M 6:30-8:30, Scott 104, Houle and Staff

**Mus 40-41-42. University Symphony Orchestra.** 1½ degree credits each semester. \$13.50 each semester.

Standard orchestral literature performed. Open to players of orchestral instruments from Twin Cities area. Those enrolled with consent of chairman of Music Department are given the opportunity of rehearsing with the University Symphony and participating in three annual concerts given in Northrop Auditorium. (Prerequisite: ♯)

<i>Fall Semester</i>		<i>Spring Semester</i>	
40-41	T 7:00-9:30, Northrop Aud, Oberg	41-42	T 7:00-9:30, Northrop Aud, Oberg

**Mus 43. University Chorus.** 1 degree credit each quarter. \$9 each quarter.

Performances of major symphonic-choral works with the Minneapolis Symphony Orchestra, University Symphony Orchestra, and University Concert Band. (Students may register only with ♯)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
T	7:30-9:30, Nicholson Aud	T	7:30-9:30, Nicholson Aud	T	7:30-9:30, Nicholson Aud

Symbols explained on page 35.

## Course Offerings—Arts and Sciences

**Mus 73-74-75. Introduction to Opera.** 2 degree credits each quarter. \$18 plus \$1 materials fee each quarter.

Designed to give an understanding of classical and romantic opera; centered on the weekly broadcasts of the Metropolitan Opera Company, and important presentations in the Twin Cities including Minneapolis Symphony Orchestra performances, St. Paul Civic Opera productions, and the spring season of the Metropolitan in Northrop Auditorium. (No prerequisite. For nonmusic majors)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
73 W 6:20-8:00, Scott 4, Knowles	74 W 6:20-8:00, Scott 4, Knowles	75 W 6:20-8:00, Scott 4, Knowles

**Mus 134-135-136. History of Church Music.** 2 degree credits each quarter. \$18 each quarter.

Trends. Relationship of music to various theologies and liturgies. (Prerequisite: 36 or #)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
134 T 6:20-8:00, Scott 104, Riedel	135 T 6:20-8:00, Scott 104, Riedel	136 T 6:20-8:00, Scott 104, Riedel

**Mus 147-148-149. Opera Production.** 3 degree credits each semester. \$27 plus \$4 laboratory fee each semester.

Student is given opportunity to prepare and perform operatic roles both standard and contemporary. A union of musical and dramatic interpretation is emphasized. In addition to ensemble work scheduled private instruction is given. All projects and roles will be sung in English. (Prerequisite: auditions)

*Note—Class meets on Monday and Thursday. The Thursday meeting is a coaching session arranged with instructor; attendance is not obligatory.*

<i>Fall Semester</i>	<i>Spring Semester</i>
147-148 M 6:20-8:00, MusEd 204, Knowles Th 3:30-5:00, MusEd 204, Knowles	148-149 M 6:20-8:00, MusEd 204, Knowles Th 3:30-5:00, MusEd 204, Knowles

## Natural History

\***NatH. Birds of Minnesota.** Special Class. \$27.

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. Class limited to 20 students)

<i>Spring Semester</i>
Th 6:20-8:00, Museum of Natural History 309, Breckenridge, Gunderson

\***NatH. Wild Game of Minnesota.** Special Class. \$18.

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. (No prerequisite. Class limited to 20 students)

<i>Fall Quarter</i>
W 6:20-8:00, Museum of Natural History 309, Gunderson

Symbols explained on page 35.

## Evening and Special Classes

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### Nursing Administration

**°NuAd 85. Fundamentals of Nursing Service Administration.** 3 degree credits. \$27.

Principles of administration applied to nursing service; organization; administrative relationships; personnel policies, practices, relationships; staff education; income and expenditure, budgeting, salary schedules; public relations; records and reports. (Open to registered nurses. Class limited to 35 students)

*Spring Quarter*

T 6:00-8:20, Millard 118, Grainger

### Philosophy

*Philosophy courses with "A" following the course number are somewhat abridged counterparts of corresponding day school courses carrying more credits. They carry regular academic credit, but they will fulfill requirements for a major in philosophy only by special arrangement with the Department of Philosophy.*

**Phil 1A. Problems of Philosophy.** 3 degree credits. \$27.

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

*Fall Semester*

Th 6:20-8:00, Johnston 113, Raab

*Spring Semester*

Th 6:20-8:00, Johnston 113, Raab  
Th 7:50-9:30, StP Ext Center 2B, Magel

**Phil 2A. Logic.** 3 degree credits. \$27.

A study of the difference between logical and fallacious reasoning; the functions and uses of language; rules of good definitions and sound argument. (No prerequisite. Repeated spring semester)

*Fall Semester*

T 6:20-8:00, Johnston 115, Allen  
W 8:10-9:50, Johnston 115, Terrell

*Spring Semester*

T 6:20-8:00, Johnston 115, Allen  
Th 8:10-9:50, Johnston 114, Terrell

**Phil 3A. Ethics.** 3 degree credits. \$27.

An examination of the problems which arise when human beings attempt to think systematically about conduct and values (are there absolute standards?); the problem of free will; and a survey of historical views about the right and the good. (No prerequisite. Repeated spring semester)

*Fall Semester*

W 8:10-9:50, Johnston 113, Mason

*Spring Semester*

W 8:10-9:50, Johnston 113, Mason

**Phil 11A. World Religions.** 3 degree credits. \$27.

Selected passages from scriptures of five living world religions: Hinduism, Buddhism, Islam, Judaism, and Christianity. Attempts to describe convictions, ethics, practices, principal historical changes, and major cultural and social significance of each. (No prerequisite)

*Fall Semester*

Th 8:10-9:50, Johnston 113, Magel

**Phil 50A. Ancient Philosophy.** 3 degree credits. \$27.

The origin of Greek thought, from Thales to Aristotle, with special emphasis on Plato and Aristotle. (No prerequisite)

*Fall Semester*

W 6:20-8:00, Johnston 113, Mason

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Symbols explained on page 35.

**Phil 52A. Modern Philosophy.** 3 degree credits. \$27.

Rise and development of modern philosophy. The scientific revolution of Copernicus and Galileo; attempts at a new philosophy by Descartes, Leibniz, Locke, Berkeley, Hume; criticism of these earlier attempts by Kant and Hegel. (No prerequisite)

*Spring Semester*

W 6:20-8:00, Johnston 106, Mason

**Phil 154A. Elements of Symbolic Logic.** 3 degree credits. \$27.

Systematic introduction to modern logic. Topics include dimensions of language; calculus of propositions, classes, and relations; applications to foundations of mathematics. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2 or grade of B in 2A or #)

*Spring Semester*

M 6:20-8:00, Johnston 106, Brodbeck

## Photography

*Students in all photography classes must furnish their own cameras.*

**\*Art 10. Basic Photography I.** 3 degree credits. \$27 plus \$10 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 the 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. Limited to 20 students)

*Fall Semester*

M 6:20-8:00, Jones 2, Liebling

*Spring Semester*

W 6:20-8:00, Jones 2, Liebling

**\*Art 11. Basic Photography II.** 3 degree credits. \$27 plus \$10 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. (Prerequisite: Art 10 or equivalent with #. Repeated spring semester. Limited to 20 students)

*Fall Semester*

M 6:20-8:00, Jones 2, Liebling

*Spring Semester*

W 6:20-8:00, Jones 2, Liebling

**Phot. Color Photography I.** 3 certificate credits. \$27 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: (a) lecture demonstrations of equipment, color processes, and techniques; and (b) 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 6:20-8:00, Wesbrook 202, Webb

*Spring Semester*

T 6:20-8:00, Wesbrook 202, Webb

**Phot. Color Photography II.** 3 certificate credits. \$27 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 6:20-8:00, Wesbrook 202, Webb

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Symbols explained on page 35.

## Evening and Special Classes

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### Political Science

**Pol 1-2.† American Government and Politics: Parts I and II.** 3 degree credits each semester. \$27 each semester.

1: 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. 2: Recognizing that the American citizen must have an understanding of our system of government if he is to play an active and intelligent part in helping it meet the problems of the future, this course is designed to provide a description, analysis, and evaluation of the legislative, executive, and judicial branches of our government (national, state, and local) with special attention to current developments. (No prerequisite)

*Fall Semester*

1 M 6:20-8:00, Ford 155, Chase  
1 W 6:00-7:40, StP Ext Center 2G, Mitau

*Spring Semester*

2 M 6:20-8:00, Ford 155, Chase  
2 W 6:00-7:40, StP Ext Center 2G, Mitau

**Pol A-B.† The State in the Modern World.** 3 degree credits each semester. \$27 each semester.

An examination of principles, structure, and operation of the modern state. Emphasis on nation state; historical development; democratic government (United States, Great Britain); totalitarian government (Nazi Germany, Soviet Russia); conflict between states. (No prerequisite)

*Fall Semester*

A W 6:20-8:00, Ford 180, Sorauf

*Spring Semester*

B T 6:20-8:00, Ford 180, Sorauf

**Pol 25. World Politics.** 3 degree credits. \$27.

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

*Fall Semester*

Th 6:20-8:00, Ford 150, Rogers

**Pol 26. American Foreign Policy.** 3 degree credits. \$27.

An introduction to the institutions and processes which determine American foreign policy. Traditional and postwar foreign policies. (No prerequisite)

*Spring Semester*

Th 6:20-8:00, Ford 150, Rogers

**Pol 50. Political Behavior. (\*\*Pol 167)** 3 degree credits. \$27.

An introduction to political behavior, which considers such questions as the following: What are the main influences on the formation of political attitudes and opinions? What factors determine party preference and the outcome of elections? How are political leaders chosen and what distinguishes leaders from the led? What is the nature of organization and how does it affect political life in practice? What is the role of public opinion, campaigns, pressure groups, and the mass media in politics? (No prerequisite)

*Fall Semester*

T 8:10-9:50, Ford 185, Flanigan

**Pol 51. Political Behavior. (\*\*Pol 168)** 3 degree credits. \$27.

This course considers other political behavior topics not taken up in Pol 50. Special attention is given to psychological factors in politics; the influence of personality on political belief and affiliation;

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Symbols explained on page 35.



## Course Offerings—Arts and Sciences

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the sources of political "extremism" and deviation; role and personality factors influencing the behavior of legislators, judges, and administrators, etc. (No prerequisite)

*Spring Semester*

T 8:10-9:50, Ford 180, Flanigan

**Pol 52. American Political Parties. (\*\*Pol 137) 3 degree credits. \$27.**

Role and functions of the party in American government; party composition and organization; process of nomination and policy formulation; regulation of party organization and activities. (No prerequisite)

*Fall Semester*

M 8:10-9:50, Ford 120, Backstrom

**Pol 75. Local Government in the United States. (\*Pol 116) 3 degree credits. \$27.**

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

*Spring Semester*

M 8:10-9:50, Ford 170, Backstrom

**Pol 84. International Relations and Organization. (\*\*Pol 184) 3 degree credits. \$27.**

Fundamental principles. Development and conditions of success. United Nations and regional organizations. (No prerequisite)

*Fall Semester*

W 6:20-8:00, Ford 160, Levi

**Pol 90. American Political Thought. (\*\*Pol 160) 3 degree credits. \$27.**

From colonial times to present: Puritanism; Constitution; utopianism; Calhoun; history of anarchist, socialist, populist, and syndicalist thought; social Darwinism; conservatism; political thought in law and literature. (No prerequisite)

*Fall Semester*

Th 8:10-9:50, Ford 130, Cooperman

**Pol 92. Recent Political Thought. (\*Pol 162) 3 degree credits. \$27.**

Main currents from Marx to present; Marx, Marxism, and their critics; non-Marxist socialism; syndicalism; anarchism; Catholic and Protestant theories; conservatism; pacifism; political thought in law and literature. (No prerequisite)

*Spring Semester*

Th 8:10-9:50, Ford 130, Cooperman

**Pol 116. Local Government. 3 degree credits. \$27.**

*Spring Semester*

See course description, day, time, place, and instructor as listed under Pol 75. Students wishing graduate credit should inquire at time of registration.

**Pol 137. American Political Parties. 3 degree credits. \$27.**

*Fall Semester*

See course description, day, time, place, and instructor as listed under Pol 52. Students wishing graduate credit should inquire at time of registration.

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Symbols explained on page 35.

## *Evening and Special Classes*

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**Pol 160. American Political Thought.** 3 degree credits. \$27.

*Fall Semester*

See course description, day, time, place, and instructor as listed under Pol 90. Students wishing graduate credit should inquire at time of registration.

**Pol 162. Recent Political Thought.** 3 degree credits. \$27.

*Spring Semester*

See course description, day, time, place, and instructor as listed under Pol 92. Students wishing graduate credit should inquire at time of registration.

**Pol 167. Political Behavior.** 3 degree credits. \$27.

*Fall Semester*

See course description, day, time, place, and instructor as listed under Pol 50. Students wishing graduate credit should inquire at time of registration.

**Pol 168. Political Behavior.** 3 degree credits. \$27.

*Spring Semester*

See course description, day, time, place, and instructor as listed under Pol 51. Students wishing graduate credit should inquire at time of registration.

**Pol 184. International Relations and Organization.** 3 degree credits. \$27.

*Fall Semester*

See course description, day, time, place, and instructor as listed under Pol 84. Students wishing graduate credit should inquire at time of registration.

## **Public Administration Courses**

*Your attention is called to the Public Administration Certificate program; see page 10.*

**Pol 60. Organization and Management.** (\*\*Pol 131) 3 degree credits. \$27.

Study of administrative organization and management, emphasizing formal and informal organization structure, current reorganization theory, policy formulation, planning, decision-making, direction, and responsibility. (No prerequisite)

*Fall Semester*

T 8:10-9:50, Ford 130, Warp

**Pol 61. Municipal Law and Administration.** (\*\*Pol 121) 3 degree credits. \$27.

General principles of municipal administration; forms of administrative organization and control; the framework within which municipal government operates, including home rule charters and state statutes; liability of the municipality and its officers for wrongful acts; specific administrative services, such as personnel, budgeting and finance, research and planning, and public reporting. Emphasis is placed on Minnesota law and practice. (No prerequisite)

*Spring Semester*

W 6:20-8:00, Ford 185, Peterson

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

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**Pol 62. Public Personnel Administration.** 3 degree credits. \$27.

Development and significance of the public service; organization for personnel management; classification of positions; pay standardizations and administration; recruitment, examination, and placement; in-service training, evaluation of performance, conditions of employment; separation; human relations and morale; employee organization; obligations and responsibilities of public employees; retirement systems. (No prerequisite)

*Spring Semester*

T 6:20-8:00, Ford 130, Jackson

**Pol 66. Problems of Public Administration.** 3 degree credits. \$27.

Through the study of actual cases in administration, basic problems are identified and analyzed in the processes of organization, policy formulation, and program execution. (No prerequisite)

*Spring Semester*

T 8:10-9:50, Ford 150, Warp

**Pol 67. Administrative Analysis.** (\*\*BA 145C, Systems and Procedures, page 98) 3 degree credits. \$27.

A study of the techniques of analyzing the organization and methods of administrative agencies. Topics include organization surveys, work simplification, space and equipment layouts, evaluation of forms, preparation of procedural manuals, and problems of control, delegation, and co-ordination. (No prerequisite. Qualified students may register for BA 145C. Consult instructor)

*Spring Semester*

Th 6:20-8:00, Ford 185, Magraw

**Pol 73. City and County Planning.** 3 degree credits. \$27.

Purpose and nature of planning; organization of planning agencies; citizen participation in planning; the master plan; zoning; housing; urban redevelopment; fiscal planning, the capital budget and program; planning for various municipal functions; intergovernmental relationships in planning. (No prerequisite)

*Fall Semester*

W 6:20-8:00, Ford 185, Loeks

**Pol 121. Municipal Administration.** 3 degree credits. \$27.

*Spring Semester*

See course description, day, time, place, and instructor as listed under Pol 61. Students wishing graduate credit should inquire at time of registration.

**Pol 131. Public Administration.** 3 degree credits. \$27.

*Fall Semester*

See course description, day, time, place, and instructor as listed under Pol 60. Students wishing graduate credit should inquire at time of registration.

## Psychology

**Psy 1A. Application of Psychology to Living.** 3 degree credits. \$27.

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. (No prerequisite;

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Symbols explained on page 35.

## Evening and Special Classes

may be taken with the same satisfaction before or after Psy 1-2. Elective credit in SLA. Not to be confused with Elementary Psychology A. Repeated spring semester)

### Fall Semester

M 6:20-8:00, Nicholson 213, Kingsley  
Th 8:10-9:50, Nicholson 216, King

### Spring Semester

M 6:20-8:00, Nicholson 216, Kingsley  
Th 8:10-9:50, Nicholson 216, King

### Psy 1-2.† General Psychology. 3 degree credits each semester. \$27 each semester.

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 6:20-8:00, Nicholson Aud, Burriss  
1 Th 6:00-7:40, StP Ext Center, Koplín  
2 T 6:20-8:00, Nicholson 213, Meier

### Spring Semester

2 W 6:20-8:00, Nicholson Aud, Burriss  
2 Th 6:00-7:40, StP Ext Center, Koplín  
1 T 6:20-8:00, Nicholson 211, Meier

### \*Psy 4-5.† Introductory Laboratory Psychology. 2 degree credits each semester. \$27 each semester.

Experiments illustrating the subject matter of contemporary psychology. Included are human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. Supplies the laboratory science requirement in the Lower Division. (Prerequisite: 1-2 or ¶1-2. Sections limited to 36 students)

### Fall Semester

4 T 8:10-9:50, Psychology 211, Quiggle  
4 W 8:10-9:50, Psychology 211, Macker

### Spring Semester

5 T 8:10-9:50, Psychology 211, Quiggle  
5 W 8:10-9:50, Psychology 211, Macker

### Psy 70. Principles of Psychological Measurement. 3 degree credits. \$27.

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 psycho-physical 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. (Prerequisite: 2 or #)

### Fall Semester

Th 8:10-9:50, Johnston 106, Dawis

### Psy 119. Psychology of Personality. 3 degree credits. \$27 plus \$1 laboratory fee.

Personality growth, dynamics and variations viewed from an eclectic approach to developmental theories of intra-individual and interpersonal factors influencing character and personality from conception to maturity. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2)

### Spring Semester

W 6:20-8:00, Psychology 115, Gilbertstadt

### Psy 122-123.† Vocational Development and Personnel Psychology. 3 degree credits each semester, \$Psy 160. \$27 plus \$1 laboratory fee each semester.

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. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2)

### Fall Semester

122 M 6:20-8:00, Psychology 211, Longstaff

### Spring Semester

123 M 6:20-8:00, Psychology 211, Longstaff

Symbols explained on page 35.

## Course Offerings—Arts and Sciences

**Psy 125-126. Psychology of Individual Differences.** 3 degree credits each semester. \$27 each semester.

Quantitative studies of such factors as age, sex, race and nationality, physical traits, family heredity, and environment in the causation of individual differences in abilities and temperament. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2, 5, 70 or #; 125 must precede 126)

*Fall Semester*

125 T 8:10-9:50, Johnston 122, Dawis

*Spring Semester*

126 T 8:10-9:50, Johnston 122, Dawis

**Psy 144-145.† Abnormal Psychology.** 3 degree credits each semester. \$27 each semester.

Normal and abnormal behavior contrasted. Dynamics, and particularly the social determinants, of personality and maladjustments. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 9 credits in psychology, or 6 credits in psychology with either Zool 1-2-3 or 12 credits in social science)

*Fall Semester*

144 Th 6:20-8:00, Psychology 115, Stieper

*Spring Semester*

145 Th 6:20-8:00, Psychology 115, Stieper

**Psy 156. Psychology of Advertising.** 3 degree credits. \$27.

Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 2 and Econ 2)

*Spring Semester*

W 6:20-8:00, Johnston 122, Booman

## Public Health

**PubH 50. Personal and Community Health.** 3 degree credits (\$2, 3, 3A, 3B, 4, 5, 51, 52, 100, or GC 10C). \$27.

Fundamental principles of health conservation and disease prevention. (No prerequisite)

*Fall Semester*

T 6:20-8:00, Mayo 125, Thomson

**PubH 53. Introduction to Public Health.** 5 degree credits. \$45.

Occurrence and prevention of communicable, degenerative, and industrial diseases; protection of food, water, and milk; maternal and child health. (Prerequisite: 3 or 50 and course in bacteriology)

*Fall Semester*

T 7:00-9:30, St. Joseph's Nurses Home  
(Mary Hall), Schuman

## Scandinavian Languages

### Danish

**Scan 13-14. Beginning Danish.** 3 degree credits each semester. \$27 each semester.

This course is intended for students with little or no previous knowledge of the Danish language. It stresses the oral approach and reading selections of cultural value. (No prerequisite for 13; for 14, 13 or #)

*Fall Semester*

13 Th 6:20-8:00, Folwell 12, Landa

*Spring Semester*

14 Th 6:20-8:00, Folwell 12, Landa

Symbols explained on page 35.

## Evening and Special Classes

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### Finnish

**Scan 17-18. Beginning Finnish.** 3 degree credits each semester. \$27 each semester.

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 for 17; for 18, 17)

*Fall Semester*

17 T 6:20-8:00, Folwell 208, Halonen

*Spring Semester*

18 T 6:20-8:00, Folwell 208, Halonen

**Scan 19-20. Intermediate Finnish.** 3 degree credits each semester. \$27 each semester.

Designed for students with some theoretical and practical knowledge of Finnish. Review of grammar, emphasis on reading and conversation, some composition, readings from modern Finnish authors. (Prerequisite: for 19, 18; for 20, 19)

*Fall Semester*

19 Th 6:20-8:00, Folwell 208, Halonen

*Spring Semester*

20 Th 6:20-8:00, Folwell 208, Halonen

### Norwegian

**Scan 1-2. Beginning Norwegian.** 3 degree credits each semester. \$27 each semester.

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 for 1; for 2, 1)

*Fall Semester*

1 W 6:20-8:00, Folwell 12, Nelson

*Spring Semester*

2 W 6:20-8:00, Folwell 12, Nelson

**Scan 3A-4A. Readings in Norwegian Literature.** 3 degree credits each semester. \$27 each semester.

This course is designed for students who have completed Scan 4, but is open to anyone with a reading knowledge of Norwegian. Several works of classic Norwegian literature are given thorough study and there will be training in conversation and composition. (Prerequisite: 2 or #)

*Fall Semester*

3A M 6:20-8:00, Folwell 12, Nelson

*Spring Semester*

4A M 6:20-8:00, Folwell 12, Nelson

### Swedish

**Scan 7-8. Beginning Swedish.** 3 degree credits each semester. \$27 each semester.

Intended primarily for beginners in Swedish. A minimum of grammar, with emphasis on simple composition and conversation, and some reading of elementary Swedish prose. (No prerequisite for 7; for 8, 7)

*Fall Semester*

7 T 6:20-8:00, Folwell 12

*Spring Semester*

8 T 6:20-8:00, Folwell 12

**Scan 9-10. Intermediate Swedish.** 3 degree credits each semester. \$27 each semester.

This course is designed either for students who have completed Scan 7-8 or for those who have a reasonable practical working knowledge of Swedish. Review of fundamentals of grammar together with conversation and composition and readings in Swedish prose. (Prerequisite: 8 or #)

*Fall Semester*

9 T 8:10-9:50, Folwell 12

*Spring Semester*

10 T 8:10-9:50, Folwell 12

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Symbols explained on page 35.

## Slavic and Oriental Languages

### Arabic

**Arab 1A-2A. Spoken Arabic.** 3 degree credits each semester. \$27 each semester.

One Arabic dialect will be taught for conversational purposes. (No prerequisite for 1A; for 2A, 1A)

*Fall Semester*  
1A W 6:20-8:00, Folwell 103

*Spring Semester*  
2A W 6:20-8:00, Folwell 103

**Arab 1B-2B. Modern Literary Arabic.** 3 degree credits each semester. \$27 each semester.

This course is intended for students who are interested in the written language. (No prerequisite for 1B; for 2B, 1B)

*Fall Semester*  
1B W 6:20-8:00, Folwell 103

*Spring Semester*  
2B W 6:20-8:00, Folwell 103

### Chinese

**Chin 1-2. Beginning Modern Chinese (Mandarin).** 3 degree credits each semester. \$27 each semester.

An introductory course to modern written and spoken Chinese intended to provide a basis for developing a modest reading and conversational ability. (No prerequisite for 1; for 2, 1 or #)

*Fall Semester*  
1 M 6:20-8:00, Folwell 304, Mather

*Spring Semester*  
2 M 6:20-8:00, Folwell 304, Mather

**Chinese Backgrounds.** (See page 44.)

### Japanese

**Jap 1-2. Beginning Modern Japanese.** 3 degree credits each semester. \$27 each semester.

An introductory course to modern written and spoken Japanese intended to provide a basis for developing a modest reading and conversational ability. (No prerequisite)

*Fall Semester*  
1 M 6:20-8:00, Folwell 305½, Copeland

*Spring Semester*  
2 M 6:20-8:00, Folwell 305½, Copeland

**Jap 3-4. Intermediate Japanese.** 3 degree credits each semester. \$27 each semester.

Intended for students with some experience in modern written and spoken Japanese. The course will attempt to develop ability in reading newspapers and other comparatively simple material. (Prerequisite: 2, or #)

*Fall Semester*  
3 M 8:10-9:50, Folwell 305½, Copeland

*Spring Semester*  
4 M 8:10-9:50, Folwell 305½, Copeland

### Persian

**Pers 1-2. Beginning Persian.** 5 degree credits each semester. \$45 each semester.

An introductory course to modern written and spoken Persian intended to provide a basis for developing a modest reading and conversational ability. The course is designed for persons who either anticipate travel or residence in Persia or who are interested in gaining a start toward eventual use of Persian materials for study of their specialties. (No prerequisite for 1; for 2, 1 or #)

*Fall Semester*  
1 W 6:20-9:20, Folwell 305, Fatemi

*Spring Semester*  
2 W 6:20-9:20, Folwell 305, Fatemi

Symbols explained on page 35.

## Evening and Special Classes

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### Russian

**Russ 1-2. Beginning Russian.** 3 degree credits each semester. \$27 each semester.

A beginning course with emphasis on grammar and reading. Exercises in sentence structure. Translation of narrative and expository prose. (No prerequisite for 1; for 2, 1 or #)

*Fall Semester*

1 M 6:20-8:00, Folwell 101, Niemi

*Spring Semester*

2 M 6:20-8:00, Folwell 305, Niemi

**Russ 3-4. Intermediate Russian.** 3 degree credits each semester. \$27 each semester.

Readings from 19th-century authors, review of essential grammar, practice in spoken Russian. (Prerequisite: 2)

*Fall Semester*

3 T 6:20-8:00, Folwell 305, Nice

*Spring Semester*

4 T 6:20-8:00, Folwell 305, Nice

**Russ 20-21. Advanced Russian.** 3 degree credits each semester. \$27 each semester.

Discussions in Russian on assigned readings. Designed for students who have had 2 or more years of Russian. (Prerequisite: 4 or #)

*Fall Semester*

20 W 6:20-8:00, Folwell 304, Niemi

*Spring Semester*

21 W 6:20-8:00, Folwell 304, Niemi

### Semitic

**Sem 124-125-126. Introduction to Biblical Hebrew.** 3 degree credits each quarter. \$27 each quarter.

Grammatical essentials intended to lay a good foundation for reading and exegetical study of the Bible are stressed. Careful attention is given to the mastery of verb and noun forms. The standard lexicons, grammars and critical commentaries are used. (No prerequisite for 124; for 125, 124; for 126, 125)

*Fall Quarter*

124 M 6:00-8:30, Folwell  
103, Pearson

*Winter Quarter*

125 M 6:00-8:30, Folwell  
103, Pearson

*Spring Quarter*

126 M 6:00-8:30, Folwell  
103, Pearson

### Social Work

**SW 148. Mental Mechanisms and Patterns of Behavior.** 3 degree credits. \$27.

The purpose of the course is to provide social workers with a working understanding of aspects of psychoanalytic theory as they relate to social work practice. Focus will be on those mental and defense mechanisms which cause or influence human behavior. Students wishing graduate credit should inquire at time of registration. (Prerequisite: current practice in a social work agency or related institution, or #)

*Fall Semester*

T 6:20-8:00, Ford 244

**SW 161. Principles of Supervision.** 3 degree credits. \$27.

Principles and methods of supervision of agency staff. Students wishing graduate credit should inquire at time of registration. (Prerequisite: supervision of staff in a social work agency or #)

*Spring Semester*

T 6:20-8:00, Ford 244

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Symbols explained on page 35.



## Course Offerings—Arts and Sciences

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### \*SW 165. Practical Problems in the Casework Process. 3 degree credits. \$27.

This course is designed for the social caseworker who is currently employed by a social agency. The emphasis will be on application of principles and concepts of social casework. There will be a consideration of case material and a use of this material in relating the basic concepts and principles to practice. Students wishing graduate credit should inquire at time of registration. (Prerequisite: current employment in a social work agency or #. Limited to 25 students)

*Spring Semester*

M 6:20-8:00, Ford 185

### \*SW 201. Advanced Social Casework. 3 degree credits. \$27.

Advanced casework method focused primarily on psycho-social diagnosis and treatment. Study and analysis of people with problems in social functioning in their interaction with social agency services and helping processes. Consideration given to referral, consultation, and interdisciplinary relationships within the agency and in the community. Students wishing graduate credit should inquire at time of registration. (Prerequisite: MSW degree and current practice in a social work agency or #. Limited to 25 students)

*Fall Semester*

M 6:20-8:00, Ford 244

## Sociology

### Soc 1. Man in Modern Society. 3 degree credits. \$27.

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. (No prerequisite. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Ford 120, Francis

*Spring Semester*

M 6:20-8:00, Ford 85, Forster

W 7:50-9:30, StP Ext Center 3F, Burch

### Soc 3. Social Problems. (Formerly Soc 49) 3 degree credits. \$27.

A survey course in contemporary social problems with special emphasis on personal demoralization and social disorganization. (No prerequisite. Repeated spring semester)

*Fall Semester*

Th 6:20-8:00, Ford 130, Johnson

*Spring Semester*

Th 6:20-8:00, Ford 130, Johnson

### Soc 14. Rural Sociology. 3 degree credits. \$27.

Presentation of factual data necessary to an understanding of problems of rural social life. (No prerequisite)

*Spring Semester*

W 6:20-8:00, Ford 180, Francis

### Soc 45A-B. Social Statistics. (Not offered 1961-62)

### Soc 53. Elements of Criminology. 3 degree credits. \$27.

General survey of field of criminology. (Prerequisite: 1 or #)

*Fall Semester*

W 6:20-8:00, Ford 130, Donohue

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Symbols explained on page 35.

## Evening and Special Classes

**Soc 112. World Population Problems.** (Not offered 1961-62)

**Soc 120. Social Psychology.** 3 degree credits. \$27.

Research and theory regarding the relation of the individual to social groups. Emphasis on the socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 1 or #)

*Fall Semester*

T 6:20-8:00, Ford 150, Forster

**Soc 140. Social Organization.** 3 degree credits. \$27.

Organization and structure of social groups; basic culture patterns of economic, political, and social institutions. Integration and disintegration of social groups and institutions. Essentials of social dynamics. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 1 or #)

*Fall Semester*

T 8:10-9:50, Ford 160, Forster

**Soc 141. The Family.** (Not offered 1961-62)

**Soc 151. Comparative Social Organization.** 3 degree credits. \$27.

Consideration of the demographic and ecological characteristics, stratification system, institutional organization, and forms of association in several modern nations other than the United States. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 20 credits in sociology, economics, or political science, or #)

*Spring Semester*

M 8:10-9:50, Ford 175, Forster

**Soc 171. Social Life and Cultural Change.** (Not offered 1961-62)

**Soc 180. Methods of Social Research.** 3 degree credits. \$27.

Survey of major methods employed in social research including a consideration of their advantages and limitations when applied to specific types of problems. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 45 or #)

*Fall Semester*

M 8:10-9:50, Ford 185, Francis

## Spanish

*There are 2 sequences of courses in beginning Spanish from which the prospective student may choose the 1 best suited to his needs. 1C-2C-3C, Beginning Spanish, carrying 5 degree credits per unit, comprises the regular standard course in first-year Spanish. The principal aim is to provide a solid foundation for the comprehension of the written and spoken language. Sufficient training in grammar is included to enable the student to acquire elementary skills in conversation and composition. This sequence is recommended for those planning to continue the study of Spanish or wishing to satisfy college language requirements. 1-2-3-4, Beginning Spanish, carrying 3 degree credits per unit, is the same sequence of courses formerly listed in evening classes as: 1-2, Beginning Spanish and 3-4, Intermediate Spanish. This sequence is recommended for those who*

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Symbols explained on page 35.

## Course Offerings—Arts and Sciences

desire a general introduction to the language but who wish to proceed at a slower pace than that required for the standard 5-credit units, with more time for study and preparation.

**Span 1C-2C. Beginning Spanish.** 5 degree credits each semester. \$45 each semester.

Grammar, pronunciation, reading, and practice in speaking. See note above. (No prerequisite for 1C; for 2C, 1C or evening course 2, or 1 year preparatory Spanish)

*Fall Semester*

1C M 6:20-9:20, Folwell 206, Narvaez

*Spring Semester*

2C M 6:20-9:20, Folwell 206, Narvaez

**Span 1-2. Beginning Spanish.** 3 degree credits each semester. \$27 each semester.

Grammar, pronunciation, reading, and practice in speaking. See note above. (No prerequisite for 1; for 2, 1)

*Fall Semester*

1 M 6:20-8:00, Folwell 110, Rundorff

1 Th 6:20-8:00, Folwell 202, Cuneo

2 Th 6:20-8:00, Folwell 203

*Spring Semester*

1 Th 6:20-8:00, Folwell 206

2 M 6:20-8:00, Folwell 208, Rundorff

2 Th 6:20-8:00, Folwell 202, Cuneo

**Span 3-4. Beginning Spanish.** 3 degree credits each semester. \$27 each semester.

Review, composition, readings from modern authors. Attention to correspondence and commercial practice if desired. (Prerequisite: for 3, 2 or 1 year of preparatory Spanish or #; for 4, 3 or #)

*Fall Semester*

3 W 6:20-8:00, Folwell 208

*Spring Semester*

4 W 6:20-8:00, Folwell 208

**Span 55A-55B. Spanish Conversation.** 3 degree credits each semester. \$27 each semester.

Informal discussion of current affairs and everyday topics. (Prerequisite: 4 or #)

*Fall Semester*

55A W 6:20-8:00, Folwell 109

*Spring Semester*

55B W 6:20-8:00, Folwell 109

**Span 73A-73B. A Trip to Latin America and Spain.** 3 degree credits each semester. \$27 each semester.

This course offers profitable information in English about the Spanish-speaking nations as well as half an hour of basic, simple Spanish language in each class period. No previous preparation in Spanish is required. Each student will prepare a notebook containing the Spanish vocabulary generally needed by travelers and a restricted number of practical grammar rules. Thus while enriching his mind with important and useful information on the geography, climate, art, music, places to visit, etc., of each of the Spanish-speaking countries, the student will acquire a beginning knowledge of the Spanish language. (No prerequisite)

*Fall Semester*

73A W 6:20-8:00, Folwell 205, Cuneo

*Spring Semester*

73B W 6:20-8:00, Folwell 205, Cuneo

## Speech and Theater Arts

\*Spch. **Beginning Practical Speech Making.** 3 certificate credits. \$27 plus \$5.50 materials and laboratory fee.

This course is designed particularly for the adult student who wants a practical application of the fundamentals of speech to his professional, business, and social needs. The primary purpose of the course is to develop confidence and effectiveness in speaking situations. Individual attention will be given to cases of nervousness, embarrassment, inadequacy, inferiority, and stage fright. Each student speaks before the class each meeting. Voice recordings and an analysis of the speaking voice will be

Symbols explained on page 35.

## Evening and Special Classes

made. (Prerequisite: high school graduate or #. Each section limited to 20 students. Repeated spring semester)

### *Fall Semester*

M 6:20-8:00, Folwell 5, Fulton  
W 6:20-8:00, Folwell 5

### *Spring Semester*

M 6:20-8:00, Folwell 5, Fulton  
M 8:10-9:50, Folwell 5, Fulton

### **\*Spch. Advanced Practical Speech Making.** 3 certificate credits. \$27.

An advanced speech course designed particularly for the adult student who wishes to develop skill in sound argumentative and effective persuasive speaking. The primary purpose of the course is to present the rules of logic and the impelling motives of conduct in a practical manner. Topics of current interest will be analyzed and discussed. Each student speaks before the class each meeting. (Prerequisite: Beginning Practical Speech Making or #. Class limited to 20 students)

### *Fall Semester*

M 8:10-9:50, Folwell 5, Fulton

### **Spch 5X-6X. Fundamentals of Speech.** 3 degree credits each semester. \$27 each semester plus \$1 laboratory fee for 6X.

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 for 5X; for 6X, 5X or 1)

### *Fall Semester*

5X T 6:20-8:00, Folwell 306, Fletcher  
5X W 7:50-9:30, StP Ext Center 2E,  
Bormann

### *Spring Semester*

5X M 6:20-8:00, Folwell 306, Scott  
6X T 6:20-8:00, Folwell 306, Fletcher  
6X W 7:50-9:30, StP Ext Center 2B,  
Bormann

### **Spch 31. Introduction to the Theater.** 3 degree credits. \$27.

An orientation in the great dramatic tradition through a consideration of plays and playwrights from Sophocles to Tennessee Williams. It covers the history of theatrical customs, conventions and traditions as they affect modern stage production and includes a view of the highlights of theater, architecture, scenic design, stagecraft, lighting, costumes, make-up, and special effects. (No prerequisite)

### *Fall Semester*

W 6:20-8:00, Shevlin 110, Ballet

### **Spch 32. Beginning Acting: Creative Approach.** 3 degree credits. \$27.

Creation and presentation of original scenes and skits. Ability to respond to the imaginative situation with individuality and effectiveness is stressed. (Prerequisite: 31)

### *Spring Semester*

W 6:20-8:00, Scott 19, Adey

### **Spch 81-82. Interpretative Reading.** 3 degree credits. \$27.

Aesthetic theory of literature and of oral reading. Practice in reading for interpretation and mastery of technique. Fiction. (Prerequisite: 5 or 6X)

### *Spring Semester*

81 T 6:20-8:00, Wesbrook 306, Thompson  
82 T 6:20-8:00, Wesbrook 306, Thompson

### **\*Spch. Voice and Diction.** 3 certificate credits. \$27.

A practical and beginning course in training the speaking voice as an expressive instrument. The emphasis is on understanding and practicing the physical skills, emotional attitudes, and vocal

Symbols explained on page 35.

## Course Offerings—Arts and Sciences

habits necessary for good voice production. Individual attention to common deficiencies in breath control, volume, pitch placement and melody, resonance, articulation, pronunciation, speech rhythm, and phrasing. The course is designed to help both students with mild vocal deficiencies and those with adequate voices who wish to increase their range of expressiveness. (No prerequisite. Class limited to 25 students)

### Fall Semester

T 6:20-8:00, Wesbrook 306, Thompson

### Spch. Theater Business Management. 3 certificate credits. \$27.

This course is designed for those interested in the planning and handling of theater publicity, advertising, box office and theater management in the college and community theater. (No prerequisite)

### Spring Semester

M 6:20-8:00, Scott 3, Loppnow and guests

## Study Skills

\*Rhet 47. Efficient Reading. 3 certificate credits (may be used on degree program by petition: 1 credit in SLA or Bus.; 3 credits in Educ, IT, or Ag). \$27 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 tachistoscope and the Harvard Reading Films, two recently developed visual aids. Parallels Efficient Listening and is a suggested follow-up for How to Study. (No prerequisite. Class limited to 32 students. Repeated spring semester)

### Fall Semester

M 6:20-8:00, Ford 15, Wright  
M 8:10-9:50, Ford 15, Wright  
T 6:20-8:00, Ford 15, Horberg  
T 8:10-9:50, Ford 15, Horberg  
W 6:20-8:00, Ford 15, Price  
W 8:10-9:50, Ford 15, Price  
Th 6:00-7:40, StP Ext Center 3C, Thiss  
Th 7:50-9:30, StP Ext Center 3C, Thiss

### Spring Semester

M 6:20-8:00, Ford 15, Wright  
M 8:10-9:50, Ford 15, Wright  
T 6:20-8:00, Ford 15, Horberg  
T 8:10-9:50, Ford 15, Horberg  
W 6:20-8:00, Ford 15, Price  
W 8:10-9:50, Ford 15, Price  
Th 6:00-7:40, StP Ext Center 3C, Thiss  
Th 7:50-9:30, StP Ext Center 3C, Thiss

### SSk. Efficient Reading II. Special Class. \$25 plus \$2 materials fee.

A short, intensive course in efficient reading for students, business and professional people of above-average reading ability. A suggested follow-up for Efficient Reading (Rhet 47) or other reading efficiency training, either as an immediate continuation or refresher course. Emphasis on further refinement of reading techniques and skills of particular use in maintaining superior scholastic or professional status. No duplication of material with Efficient Reading I. Maximum use is made of the perceptoscope, a newly developed remote-control projector with multipurpose training functions. Repeated spring semester.

### September 27-November 22

W 6:20-8:00, Nicholson 216, Brown

### February 14-April 25

W 6:20-8:00, Nicholson 216, Brown

### SSk. Vocabulary Building: How to Expand Your Word Power. 3 certificate credits. \$27 plus 25 cents materials fee.

A class designed to extend the range and increase the quality of one's vocabulary for social and business purposes and for the benefit of one's intellectual development in general. The core of the course consists of the study of 150 word elements which form the basis of thousands of English words. This approach not only enables an individual to enlarge his speaking, writing, and reading vocabulary in a short space of time but also provides him with the means of independently continuing that process

Symbols explained on page 35.

## *Evening and Special Classes*

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indefinitely. Recommended as background for other courses in the communication field. (No prerequisite. Repeated spring semester)

### *Fall Semester*

M 7:50-9:30, StP Ext Center 2G, Keeler  
T 6:20-8:00, Nicholson 207, Sheldon  
W 8:10-9:50, Nicholson 207, Stockdale

### *Spring Semester*

M 7:50-9:30, StP Ext Center 2G, Keeler  
T 6:20-8:00, Nicholson 207, Sheldon  
W 8:10-9:50, Nicholson 207, Stockdale

**Grammar Review.** See English, page 59.

**How to Study.** See Interdisciplinary Programs, page 70.

## **Zoology**

See Biology, page 56.

# BUSINESS ADMINISTRATION

Your attention is called to the Master of Business Administration Program on page 29 and to the Business Administration Certificate programs; see pages 12 to 16.

The School of Business Administration renumbered most of its courses, effective with the fall term, 1958. Listed below, for the convenience of former students, are the old number designations and their new equivalents. In many instances, titles have also changed. Only the new titles are listed.

Old Numbers	New Numbers and Titles (Fall, 1958)
Econ 1-2	Econ 1-2—Principles of Economics (no change)
Econ 5	BA 5—Elements of Statistics
Econ 24-25-26	BA 24-25-26—Principles of Accounting
Econ 36	BA 36—Office Procedures
Econ 40	BA 79A—Administrative Secretarial Studies
Econ 50	BA 53—Risk Management and Insurance
BA 51	BA 58—Business Law: Contracts
BA 52	BA 78—Business Law: Agency, Partnership, and Corporations
BA 53	BA 88—Business Law: Sales and Negotiable Instruments
BA 56	BA 98—Business Law: Property Rights and Obligations
Econ 57	Econ 67—Money and Banking
BA 58	Econ 68—Elements of Public Finance
BA 66	BA 55C—Managerial Costs
BA 71	BA 54—Transportation I: Principles
Econ 73	BA 52—Modern Industrial Relations: Labor Marketing
Econ 74	BA 51—Business Statistics
Econ 75	BA 56—Corporation Finance
BA 76	BA 87—Credits and Collections
BA 77	BA 57—Principles of Marketing
Econ 79	Econ 80—Survey of Economic Ideas
Econ 80	Econ 66—Intermediate Economic Analysis: Income and Employment
Econ 81	Econ 65—Intermediate Economic Analysis: The Firm
Econ 85	Econ 69—Government Regulation of Business
BA 86	BA 99—Office Management—Management of Administrative Services
BA 89	BA 50—Production Management
BA 91	BA 89B—Tabulating Equipment Applied to Business
BA 113	BA 117—Sales Management
BA 118	BA 125—Auditing Principles and Procedures
BA 129	BA 184A—Highway Transportation
Econ 129	Econ 150A—Current Economic Issues
BA 134A-B	BA 135A-B—Income Tax Accounting
BA 146	BA 116—Investments
BA 148	BA 106—Securities Markets
BA 150A-B-C	BA 105A-B-C—Intermediate Accounting
BA 152-153	BA 115A-B—Cost Accounting
BA 157	BA 170—Top Management Organization and Control
BA 159	BA 185A—Advanced Accounting
Econ 161	BA 152—Principles of Industrial Relations: Labor Marketing
Econ 163	Econ 162—Union Government and Policies
Econ 164	Econ 172—Public Policy: Labor Relations
Econ 166	BA 142—Settlement of Industrial Relations Disputes
BA 167	BA 72—Modern Industrial Relations: Manpower Management

## Evening and Special Classes

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Old Numbers	New Numbers and Titles (Fall, 1958)
BA 173	BA 97—Market Analysis and Research
BA 174	BA 174—Transportation II: Traffic Management (no change)
BA 176	BA 116—Investments
Econ 176	Econ 104—International Economics
BA 180I-181I	BA 194A-B—Topics in Transportation: Advanced Traffic Management I-II
BA 181G	BA 80—Administrative Practices
BA 182A	BA 145C—Systems and Procedures
BA 182G	BA 60—Business Policy and Management Control
BA 186	BA 106—Securities Markets

## Accounting

*Your attention is called to the Accounting Certificate programs; see page 14.*

### First Year Accounting Courses

BA 24-25-26 (formerly Econ 24-25-26), Principles of Accounting, is the first-year introductory course. It is designed to meet the needs of three groups of students: (a) those who plan to use accounting information for business management purposes; (b) those who intend to be practicing accountants (and who expect, therefore, to continue with the second-year and advanced accounting courses); (c) those who wish an introduction to the "language of business" as part of a liberal education. It is not designed to train students to be bookkeepers.

Persons with prior background or training may receive credit in one or more of these courses by passing an advanced standing examination. These examinations will be given at the following times in Room 307, Vincent Hall.

BA 24	Wednesday, September 20, 7:00 p.m. Wednesday, September 27, 7:00 p.m. Wednesday, December 27, 7:00 p.m. Wednesday, February 7, 7:00 p.m.
BA 25	Thursday, September 21, 7:00 p.m. Thursday, September 28, 7:00 p.m. Thursday, February 8, 7:00 p.m.
BA 26	Friday, September 22, 7:00 p.m. Friday, September 29, 7:00 p.m. Friday, February 9, 7:00 p.m.

The three courses are scheduled on three plans.

1. Regular semester class schedule for 3 credits each of 3 semesters for full first-year course. For students who wish regular class periods in order to take two classes the same evening or who do not wish to spend the time necessary for the more concentrated scheduling.
2. Quarter basis, 2½-hour classes, 3 credits each quarter, course completed in 1 year. For students who wish to complete the entire course in 1 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, 1 year course covered in 1 semester. For those who wish to concentrate on completion of the course in the spring semester in order to begin advanced courses in the following term.



## Course Offerings—Business Administration

**BA 24-25-26. Principles of Accounting.** (Formerly Econ 24-25-26 or BA 54-55) 3 degree credits each semester, §BA 55A-55B. \$27 each semester.

Methods of recording, reporting, and interpreting business events. Use of accounting as a tool of business management. (No prerequisite for 24; for 25 and 26, previous unit. See page 96 for advanced standing examinations)

<i>Fall Semester</i>			<i>Spring Semester</i>		
24	M	6:20-8:00, Ford 30	24	Th	6:20-8:00, Ford 40
24	T	6:00-7:40, StP Ext Center 3F	25	M	6:20-8:00, Ford 50
25	M	8:10-9:50, Ford 50	25	T	6:00-7:40, StP Ext Center 3F
25	T	7:50-9:30, StP Ext Center 3F	26	M	8:10-9:50, Ford 50
26	Th	6:20-8:00, Ford 15			

**BA 24-25-26. Principles of Accounting.** (Formerly Econ 24-25-26 or BA 54-55) 3 degree credits each quarter, §BA 55A-55B. \$27 each quarter.

Methods of recording, reporting, and interpreting business events. Use of accounting as a tool of business management. (No prerequisite for 24; for 25 and 26, previous unit. See page 96 for advanced standing examination)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>		
24	T	5:30-8:00, Ford 50	25	T	5:30-8:00, Ford 50	
24	W	5:15-7:45, StP Ext Center 3G	25	W	5:15-7:45, StP Ext Center 3G	
				26	T	5:30-8:00, Ford 50
				26	W	5:15-7:45, StP Ext Center 3G

**BA 24-25-26. Principles of Accounting (Combined).** (Formerly Econ 24-25-26 or BA 54-55) 9 degree credits, §BA 55A-55B. \$81.

This course covers BA 24-25-26 complete in 1 semester. (No prerequisite. Registrations will be accepted for the entire course only)

<i>Spring Semester</i>	
MTh	6:20-8:50, Vincent 306
MTh	6:00-8:30, StP Ext Center 3F

### Second Year Accounting Courses

**BA 55C. Managerial Costs.** (Formerly BA 66) 3 degree credits, §115A, B. \$27.

General survey of cost accounting from the point of view of the executive who must use cost information in the conduct of his business. Concentrates on the use of cost information for managerial decision-making and control. (Prerequisite: 26 or #)

<i>Spring Semester</i>	
M	6:20-8:00, Vincent 307

**BA 55D. Analysis of Financial Statements.** (To be offered 1962-63)

**BA 105A-B-C. Intermediate Accounting.** (Formerly BA 150A-B-C) 3 degree credits each semester, §BA 55D or BA 65. \$27 each semester.

Second-year accounting for students intending to specialize in accounting or in business finance. 105A: Review of accounting processes, measurement of income, accounting treatment of inventory and plant. 105B: Accounting treatment of cash, receivables, investments, intangible assets, liabilities, and applications of actuarial mathematics. 105C: Accounting treatment of stockholders' equity, interpretation and analysis of financial statements. (Prerequisite: for 105A, new 26 or old Econ 26 [see page 96 for advanced standing examinations]; for 105B, new 105A or old 150A; for 105C, new 105B or old 150B)

<i>Fall Semester</i>			<i>Spring Semester</i>		
105A	M	6:00-7:40, StP Ext Center 2H	105B	M	6:00-7:40, StP Ext Center 2H
105A	Th	6:20-8:00, Vincent 306	105B	Th	6:20-8:00, Vincent 307
105C	M	8:10-9:50, Vincent 307			

Symbols explained on page 35.

## Evening and Special Classes

**BA 115A-115B. Cost Accounting.** (Formerly BA 152-153) 3 degree credits each semester, §BA 55C or BA 66. \$27 each semester.

115A: Practices, principles, and procedures of handling production costs for use in inventory valuation and income determination. An examination of job order, process, and standard cost systems. A brief introduction to standard cost as a tool of cost control. 115B: An analysis of the use of cost information in managerial decision-making. (Prerequisites: for 115A, new 26 or old Econ 26 [see page 31 for advanced standing examinations]; for 115B, new 115A or old 152)

*Fall Semester*

115A M 8:10-9:50, Vincent 307  
115A T 7:50-9:30, StP Ext Center 3E

*Spring Semester*

115B M 8:10-9:50, Vincent 307  
115B T 7:50-9:30, StP Ext Center 3E

### **Special Interest and Advanced Accounting Courses**

**BA. Elementary Functional Wiring for Punched Card Equipment.** 3 certificate credits. \$27.

A course for those interested in procedures for different types of machine operation. Major emphasis on different specialized equipment each semester. (Prerequisite: #)

*Fall Semester*

M 6:20-8:00, Ford 60

**BA 89B. Tabulating Equipment Applied to Business.** (Formerly BA 91) 2 degree credits plus 1 certificate credit. \$27.

Punched card methods and standard procedures as applied to accounting and statistical records. Card and code designs. For those who understand wiring and operation of standard equipment. (Prerequisite: #)

*Spring Semester*

M 6:20-8:00, Ford 60

**BA 125. Auditing Principles and Procedures.** (Formerly BA 118) 3 degree credits. \$27.

Verification of financial data, including consideration of auditing procedures and their application. Preparation of working papers and audit reports is emphasized. (Prerequisite: 105C or ¶105C or old 150C)

*Fall Semester*

W 6:20-8:00, Vincent 306

**BA 135A-B. Income Tax Accounting.** (Formerly BA 134A-B) 3 certificate credits each semester. (4 degree credits on completion of both courses consecutively.) \$27 each semester.

Principles involved in determining taxable net income and computation of federal and state income taxes for individuals, partnerships, and corporations. (Prerequisite: new 105A or old 150A)

*Fall Semester*

135A M 8:10-9:50, Johnston 114

*Spring Semester*

135B M 8:10-9:50, Johnston 114

**BA 145C. Systems and Procedures.** (Formerly BA 182A) (See Pol 67, page 83) 3 degree credits. \$27 plus \$2 laboratory fee.

This course is a survey course of systems and procedures. It is a joint offering of Business Administration and Public Administration and is sponsored by the Twin Cities Chapter, Systems and Procedures Association. Topics include techniques of management surveys, evaluation of organization

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Symbols explained on page 35.

## Course Offerings—Business Administration

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structure, charting, forms design and control, integrated data processing, office work measurement and quality control, preparation of reports, use of costs and statistics in systems analysis, evaluation of reporting systems, administration of a systems program. Instructors include University faculty members and members of the Systems and Procedures Association. (Prerequisite: #)

*Spring Semester*

Th 6:20-8:00, Ford 185, Magraw

**BA 175D. Budgetary Control.** (To be offered 1963-64)

**BA 185A. Advanced Accounting.** (Formerly BA 159) 3 degree credits. \$27.

Consolidated statements, fiduciary and fund accounting, partnership accounting. (Prerequisite: new 105C or ¶105C or old 150C)

*Spring Semester*

M 8:10-9:50, Vincent 112

**BA 185B. Auditing and Public Accounting.** (To be offered 1962-63)

**BA 185C. Governmental Accounting.** (To be offered 1962-63)

**BA. Internal Auditing.** (To be offered 1962-63)

## Advertising

See Journalism, page 72.

## Business English

**Comp. Review of Business English.** 3 certificate credits. \$27.

For those who have been out of school for a while or who had poor preparation for business English while in school. Modern, streamlined sentence structure, paragraphing, punctuation, and spelling. Brief introduction to letter form and organization. Emphasis on brevity, accuracy, meaning, and vividness. (No prerequisite. Repeated spring semester)

*Fall Semester*

T 6:00-7:40, StP Ext Center 3C, Lippert  
T 8:10-9:50, Main Engineering 4, Lippert  
W 6:20-8:00, Main Engineering 4, Lippert

*Spring Semester*

M 6:20-8:00, Main Engineering 4, Lippert  
W 6:20-8:00, Main Engineering 4, Lippert

**Comp. Business Correspondence.** 3 certificate credits. \$27.

A practical class for people recognizing the value of effective expression in business letters. The principal types of letters will be analyzed and the written assignments will emphasize the development of a letter style capable of producing economical, clear, action-getting letters. (No prerequisite. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Main Engineering 4, Lippert  
W 8:10-9:50, Main Engineering 215, Haga

*Spring Semester*

T 6:00-7:40, StP Ext Center 3C, Lippert  
W 6:20-8:00, Main Engineering 215, Haga

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Symbols explained on page 35.

## Evening and Special Classes

**Comp 58. Business Reports and Letters.** (See description and statement in following course, **Communication in Management**.) 3 degree credits. \$27.

**Comp. Communication in Management.** 3 certificate credits. \$27.

*Note—On approval of petition by instructor and the School of Business Administration, degree credit (not in excess of 3 credits) applicable on a Business degree will be recognized for Communication in Management in lieu of Comp 58, provided class work has included appropriate supplementary assignments. Consult instructor at beginning of class term.*

An advanced course for people working at the administrative level. Reviews and analyzes the forms and styles appropriate in the three major classes of management communication: downward (order-giving), upward (administrative reporting), and horizontal (clearance and review). In addition to the class assignments, each student will work out an individual communication project related to his specific job. (No prerequisite. Repeated spring semester)

*Fall Semester*

W 6:20-8:00, Main Engineering 215, Haga

*Spring Semester*

W 8:10-9:50, Main Engineering 215, Haga

## **Business Finance**

**BA 56. Corporation Finance.** (Formerly Econ 75) 3 degree credits. \$27.

Principles governing the planning, raising, and control of short- and long-term funds for a business enterprise. Cash-flow, valuation, capital structures, investment banking, dividend policy, mergers, and reorganization. (Prerequisite: Econ 2 and new BA 26 or old Econ 26. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Vincent 207

M 8:10-9:50, Vincent 207

*Spring Semester*

Th 6:20-8:00, Vincent 205

**BA 106. Securities Markets.** (Formerly BA 148 or BA 186) 3 degree credits. \$27.

The institutional structure of the stock and bond markets. Internal organization and operation of the exchanges, the co-ordination of markets, problems of price behavior of the market as a whole and of specific types of securities. (Prerequisite: new 56 or old Econ 75 or #)

*Spring Semester*

W 6:20-8:00, Vincent 2

**BA 116. Investments.** (Formerly BA 146 or BA 176) 3 degree credits. \$27.

The nature of different types of securities and the characteristics of industrial, utility, and financial enterprises and various government units from the viewpoint of the individual investor. Security analysis and portfolio needs. (Prerequisite: new 56 or old Econ 75)

*Fall Semester*

Th 6:20-8:00, Vincent 1, Hassing

**BA. Introduction to Investments.** 3 certificate credits. \$27.

A fundamental course for serious investors—lay, business or professional—who wish a general background of information on the investment field. 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 practice of various investor groups. (No prerequisite)

*Fall Semester*

T 6:20-8:00, Ford 185, Power

Symbols explained on page 35.

## Business Law

**BA 58, 78, 88, 98. Business Law.** (Formerly BA 51-52-53, 56) 3 degree credits each semester. \$27 each semester.

Comprehensive course in the fundamental principles of law for the business and professional man. 58: Contracts—formation, operation, transfer, discharge. 78: Business associations—nature, creation and terms of the relation, rights, and liabilities of the parties when doing business through agents, partnerships, and corporations. 88: Law of sales of goods under the Uniform Sales Act and law of commercial paper under the Uniform Negotiable Instruments Law. 98: 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: 58 must precede or be taken in conjunction with either 78 or 88 unless # is obtained for a different sequence. Repeated spring semester)

<i>Fall Semester</i>			<i>Spring Semester</i>		
58	T	7:50-9:30, StP Ext Center 2A, VanValkenburg	58	T	6:00-7:40, StP Ext Center 2A, VanValkenburg
58	W	6:20-8:00, Ford 120, Moss	58	W	8:10-9:50, Ford 120, Moss
78	T	6:00-7:40, StP Ext Center 2A, VanValkenburg	78	T	7:50-9:30, StP Ext Center 2A, VanValkenburg
78	W	8:10-9:50, Ford 120, Moss	78	W	6:20-8:00, Ford 120, Moss
88	T	6:20-8:00, Vincent 113, Thomas	88	T	6:20-8:00, Vincent 113, Thomas
			98	W	6:20-8:00, Ford 130, Carroll
			98	Th	6:20-8:00, Johnston 105, Olson

**BA. Business Law of Insurance and Related Subjects I-II.** 3 certificate credits each semester. \$27 each semester.

A survey of the Minnesota law is applied to insurance contracts, interests and related subjects, designed for the layman who has no special training or background in this area, and for those in the insurance profession who are not able to or do not wish to take the more extensive C.L.U., I.I.A., or C.P.C.U. programs. Special emphasis is placed upon the problems arising from these subjects for the owners and key employees of small and medium sized businesses, for those who handle such matters for all businesses, for those who wish to advance to such positions, and for those who may in the future organize their own businesses. Part I: Review of the basic principles of contracts and agency with special application to the insurance contract, insurable interests, subrogation, transfer and termination. Followed by a consideration of the legal meaning, application and effect in Minnesota of the various standard policy clauses contained in life, property, liability, and casualty contracts. Part II: Covers the Minnesota law of warranties, representations, conditions, concealment and fraud; breach, waiver, estoppel and election; social security; government life, property and mortgage insurance; unemployment compensation and welfare programs; Minnesota regulation of insurance companies, insurance policies, and purchasers and sellers of insurance; Minnesota workmen's compensation; and the application and effect of the U.S. and Minnesota income, estate and inheritance taxes on insurance as they affect estate planning, pension plans, and various other incentive devices. The two parts may be taken separately or in either order. (No prerequisite)

<i>Fall Semester</i>		<i>Spring Semester</i>			
I	Th	6:20-8:00, Johnston 125, VanValkenburg	II	Th	6:20-8:00, Johnston 125, VanValkenburg

**BA. Common Legal Problems I, II.** 3 certificate credits each semester. \$27 plus \$1 materials fee.

The Common Legal Problems courses provide a comprehensive course in everyday legal principles, designed to assist the businessman, layman, and housewife to recognize their legal rights and more intelligently and efficiently manage their personal affairs. 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. *Part I* will

Symbols explained on page 35.

## Evening and Special Classes

consider legal problems of the following types: the purchase, sale, rental, or lease of homes and other real property; the making of wills and handling of estates; the preparation of income tax returns; the rights of persons injured in accidents and the liability of persons causing accidents; liability for trespass on real property and other tortious conduct; the making of contracts; the sale of personal property. *Part II* will consider the rights and responsibilities of husband, wife, parent and child in their relations with each other; criminal acts and criminal trials; the formation and operation of a small business as a sole proprietorship, partnership or corporation; the right to benefits for disability and to retirement pensions under various legislation such as social security, workmen's compensation and old age assistance; the rules of the road governing operation of automobiles; the garnishment of wages; and the filing of mechanic's liens against real property. (No prerequisite. Either course may be taken first. Repeated spring semester)

### Fall Semester

I M 6:20-8:00, Ford 160, Thorfinnson  
and Peterson  
II M 8:10-9:50, Ford 160, Thorfinnson  
and Peterson

### Spring Semester

I M 6:20-8:00, Ford 160, Thorfinnson  
and Peterson  
II M 8:10-9:50, Ford 160, Thorfinnson  
and Peterson

## Economics

**Econ B. The Scope, Methods and Applications of Economics.** (To be offered 1962-63)

**Econ 1-2. Principles of Economics.** 3 degree credits each semester. \$27 each semester.

The principles underlying economic activity and the way these principles work out through our economic institutions. Econ 1 covers demand and supply, competition and monopoly, and the distribution of income. Econ 2 covers national income, money and banking, business cycles, and international trade. Econ 1 and 2 are prerequisite for most advanced courses in business administration and economics. (No prerequisite for 1; for 2, 1. Repeated spring semester)

### Fall Semester

1 M 6:20-8:00, Vincent 6  
1 T 6:00-7:40, StP Ext Center 3E,  
Helmberger  
1 T 6:20-8:00, Vincent 1, Borak  
1 T 8:10-9:50, Vincent 1  
1 W 6:20-8:00, Vincent 1  
1 W 8:10-9:50, Vincent 1  
2 Th 6:20-8:00, Vincent 207

### Spring Semester

1 T 8:10-9:50, Vincent 1  
1 Th 8:10-9:50, Vincent 1  
2 M 6:20-8:00, Vincent 113  
2 T 6:00-7:40, StP Ext Center 3E,  
Helmberger  
2 T 6:20-8:00, Vincent 207  
2 W 6:20-8:00, Vincent 1  
2 W 8:10-9:50, Vincent 113

**Econ 20. Consumer Economics.** 3 degree credits. \$27.

The application of economic principles to major decisions of consumers. How to use income most effectively. The use of credit. Saving; insurance principles; the decision to purchase houses. Sources of consumer information; product testing agencies; government efforts to protect consumers. (No prerequisite)

### Spring Semester

Th 6:20-8:00, Vincent 112, Helmberger

**Econ 65. Intermediate Economic Analysis: The Firm.** (Formerly Econ 81) 3 degree credits. \$27.

Behavior of firms under competitive and monopolistic conditions; factors influencing the firm's decisions regarding production, output, and prices. (Prerequisite: 2)

### Fall Semester

W 8:10-9:50, Vincent 113, Kareken  
Th 6:20-8:00, Vincent 2, Coen

Symbols explained on page 35.

## Course Offerings—Business Administration

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**Econ 66. Intermediate Economic Analysis: Income and Employment.** (Formerly Econ 80) 3 degree credits. \$27.

Determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (Prerequisite: 2)

*Spring Semester*

W 8:10-9:50, Vincent 205, Kareken

Th 6:20-8:00, Vincent 113, Coen

**Econ 67. Money and Banking.** (Formerly Econ 57) 3 degree credits. \$27.

Historical development, present pattern, and economic role of financial institutions, with special emphasis upon commercial banks, the money supply, and the Federal Reserve System. (Prerequisite: 2)

*Spring Semester*

Th 6:20-8:00, Vincent 207, Smith

**Econ 68. Elements of Public Finance.** (Formerly BA 58) 3 degree credits. \$27.

A survey of government expenditures, budgeting, fiscal policy, debts, and taxes in terms of fiscal institutions, impact on business and the economy, and policy issues. (Prerequisite: 2)

*Spring Semester*

T 6:20-8:00, Vincent 1, Borak

**Econ 69. Government Regulation of Business.** (Formerly Econ 85) 3 degree credits. \$27.

Economic aspects of public policy affecting the market process. Relations between market structure and economic efficiency and welfare, economic origins of monopoly and other business limitations on free competition, and purposes and effects of antitrust laws and laws relating to "unfair business practices." (Prerequisite: new 65 or old 81 for business or economic majors, or # for others)

*Spring Semester*

T 8:10-9:50, Vincent 205

**Econ 80. Survey of Economic Ideas.** (Formerly Econ 79) 3 degree credits. \$27.

A historical and analytical treatment of the development of some of the most important ideas and viewpoints in economics, and their relationship to changing economic conditions and politics. (Prerequisite: 2)

*Spring Semester*

Th 8:10-9:50, Vincent 113, Smith

**Econ 104. International Economics.** (Formerly Econ 176) 3 degree credits. \$27.

Principal issues involved in international economic relationships. Significance of foreign trade and investment, international payments and foreign exchange, the gold standard, the International Monetary Fund and Bank, and the arguments over tariffs and foreign aid policies. (Prerequisite: 2)

*Fall Semester*

Th 8:10-9:50, Vincent 205, Smith

**Econ 150A. Current Economic Issues.** 3 degree credits. \$27.

*Note—Those who have taken old Econ 129 may take this course for credit.*

Current controversies over economic policy and the problems that underlie the controversies. Special study of selected topics. (Prerequisite: new 65 and 66 or old 81 and 80)

*Fall Semester*

Th 6:20-8:00, Vincent 113, Smith

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Symbols explained on page 35.

## ***Evening and Special Classes***

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Econ 157. Business Cycles. (To be offered 1962-63)

Econ 160. Comparative Economic Systems. (To be offered 1962-63)

## **Industrial Management and Administration**

**BA 50. Production Management.** (Formerly BA 89) 3 degree credits. \$27.

The techniques, the managerial problems, and the decision-making processes in planning and controlling the production activity. Production as a function of the enterprise rather than as a strictly manufacturing activity. Research and development, the role of standards, physical facilities, systems and procedures analysis, work measurement, materials control, quality control, and production planning and control. (Prerequisite: 2. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Johnston 122, Peterson  
M 8:10-9:50, Johnston 122, Peterson

*Spring Semester*

M 6:20-8:00, Johnston 122, Peterson

**BA 60. Business Policy and Management Control.** (Formerly BA 182C) 3 degree credits. \$27.

*Note—This course may be substituted for new BA 70 or old BA 184, History of Management Thought, as one of the managerial options under the old general business sequence.*

Managerial authority and responsibilities, organizational relationships, and effective executive action. Managerial problems of policy formulation involving decisions based upon a knowledge of all the major functions in the firm. (Prerequisite: to be taken at the end of the core group)

*Spring Semester*

M 8:10-9:50, Johnston 122, Peterson

**BA 80. Administrative Practices.** (Formerly BA 181G) 3 degree credits. \$27.

Develops awareness and perception of the executive's relationships with individuals and groups in the firm. Opportunity to develop administrative abilities, to think and act responsibly, to make decisions which provide opportunities for others in the organization to work effectively toward individual and organizational goals. (Prerequisite: to be taken after the core group or #)

*Spring Semester*

T 6:20-8:00, Vincent 2, Glaskowsky

**BA 170. Top Management Organization and Control.** (Formerly BA 157) 3 degree credits. \$27.

The principal functional areas of management: planning, organizing, staffing, directing, and controlling. Examines attributes of good organization, establishment of goals, policies, and procedures; control systems and techniques; providing necessary factors and relationships to achieve organizational objectives. (Prerequisite: to be taken after the core group or #)

*Spring Semester*

T 8:10-9:50, Vincent 2, Glaskowsky

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Symbols explained on page 35.



## Industrial Relations and Labor Economics

Your attention is called to the Industrial Relations Certificate program; see page 11.

**BA 52. Modern Industrial Relations: Labor Marketing.** (Formerly Econ 73) (\*BA 152)  
3 degree credits. \$27.

This course deals with (a) the marketing of manpower resources; (b) the institutional structure of labor markets; (c) economic and social problems arising out of labor marketing processes; (d) methods, procedures, and proposals for solving these problems. (Prerequisite: Econ 2. Repeated spring semester)

*Fall Semester*

M 6:00-7:40, StP Ext Center 3G, Uphoff  
W 6:20-8:00, Vincent 2, Heneman

*Spring Semester*

W 8:10-9:50, Vincent 207, Bernat

**BA 72. Modern Industrial Relations: Manpower Management.** (Formerly BA 167) 3 degree credits. \$27.

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: new 52 or 152 or old Econ 73 or 161)

*Spring Semester*

W 6:20-8:00, Vincent 207, Woods

**BA 142. Settlement of Industrial Relations Disputes.** (Formerly Econ 166) 3 degree credits. \$27.

The nature of industrial conflict in employment relations pointing up the stresses contributing to conflict and dispute situations; and public and private approaches to the prevention, reduction, and resolution of conflicts. (Prerequisite: 52 or 152)

*Spring Semester*

Th 6:20-8:00, Vincent 2, Turnbull

**Econ 162. Union Government and Policies.** (Formerly Econ 163) 3 degree credits. \$27.

Internal administration and government of unions; economic and social issues; hours, wages, and other conditions of employment. (Prerequisite: BA 52 or 152)

*Spring Semester*

M 8:10-9:50, Vincent 2, Gregory

**Econ 172. Public Policy: Labor Relations.** (Formerly Econ 164) 3 degree credits. \$27.

Employer-employee-union relationships and their social control; legislative, executive, and judicial attempts to deal with these issues; economic and social implications. (Prerequisite: BA 52 or 152)

*Fall Semester*

M 6:20-8:00, Vincent 112, Simler

**Econ 192. Contemporary Labor Issues.** 3 degree credits. \$27.

Synthesizes into an integrated whole the various specialized phases of the labor field and in so doing treats various currently important labor problem areas. (Prerequisite: BA 52 or 152)

*Fall Semester*

W 8:10-9:50, Vincent 2, Turnbull

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Symbols explained on page 35.

## Evening and Special Classes

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### BA. Supervision I: Elements of Supervision. 3 certificate credits. \$27 plus \$1 materials fee.

A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors with emphasis upon human relations aspects of such problems. Deals with such problems as selection, induction and training of new employees, employee appraisal, giving orders, handling grievances, discipline, and employee morale. Extensive use of class discussion of practical problems drawn from office and plant situations. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

M 7:50-9:30, StP Ext Center 3F  
T 6:20-8:00, Ford 70

#### *Spring Semester*

M 6:00-7:40, StP Ext Center 2A  
T 8:10-9:50, Ford 70

### BA. Supervision II: Advanced Techniques of Supervision. 3 certificate credits. \$27.

Emphasizes specialized supervisory techniques based upon principles outlined in Supervision I. Includes discussion of research in supervisory methods and practices and their relative success in application in the office and plant. Methods of supervisory training, morale measurement, job analysis and job evaluation, safety programs, wage and salary administration, principles of organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. (Prerequisite: Supervision I. Repeated spring semester)

#### *Fall Semester*

M 8:10-9:50, Ford 70  
T 8:10-9:50, Ford 70

#### *Spring Semester*

M 6:20-8:00, Ford 70  
M 7:50-9:30, StP Ext Center 2H

### BA. Supervision III: Techniques of Employee Training. 3 certificate credits. \$27.

Primary emphasis is on the training techniques a line supervisor could use in developing his employees. Course content includes discussion of basic principles of training, training on an individual basis, group training, and special problems of orienting the new employee, making use of staff training services, safety training, and evaluation of training. Extensive use is made of class discussion, role playing, case studies, and demonstrations. (Prerequisite: Supervision II)

#### *Fall Semester*

M 6:20-8:00, Ford 40

## Insurance

### BA 53. Risk Management and Insurance. (Formerly Econ 50) 3 degree credits. \$27.

Recognition, measurement, and evaluation of insurable personal, property, and liability risks of economic units. Tools of risk management; assumption, loss prevention, transfer, and others with emphasis on insurance. Design and implementation of the optimum risk management program. Government regulation of insurance. (Prerequisite: Econ 2 or 3. Repeated spring semester)

#### *Fall Semester*

M 8:10-9:50, Vincent 2, Williams

#### *Spring Semester*

M 8:10-9:50, Vincent 207, Williams

### College of Life Underwriters Curriculum.

In co-operation with the Minneapolis and St. Paul chapters of the American College of Life Underwriters (CLU), this year the Extension Division is offering Parts I, II, III, IV, and V of the CLU 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 CLU which is available at Extension offices or through the Minneapolis or St. Paul chapters of the Chartered Life Underwriters.

Minneapolis—Donald P. Bergquist, 1015 First National Bank Building, FEderal 5-7838

St. Paul—David York, 1005 Pioneer Building, CApital 5-4616

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Symbols explained on page 35.

## Course Offerings—Business Administration

**CLU Part I. Fundamentals of Life and Health Insurance, A-B.** 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part I. The subject matter will cover such topics as needs and uses; types of contracts; the arithmetic of premiums and reserves; introduction to health insurance; contract provisions; structure of the business; fundamentals of programming and settlement options. For information concerning the CLU educational program and its requirements see notice above.

*Fall Semester*

A M 4:30-6:30, 430 Oak Grove, Preston

*Spring Semester*

B M 4:30-6:30, 430 Oak Grove, Preston

**CLU Part II. Group Insurance, Health Insurance and Pensions, A-B.** 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part II, as conducted by the American College of Life Underwriters. The subject matter will cover group life insurance, individual health insurance, group health insurance, pensions, problems of old age, unemployment, and disability. For information concerning the CLU educational program and its requirements see notice above.

*Fall Semester*

A M 4:30-6:30, 3701 Wayzata Blvd,  
Blackwell

*Spring Semester*

B M 4:30-6:30, 3701 Wayzata Blvd,  
Blackwell

**CLU Part III. Law, Trusts, and Taxation, A-B.** 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part III, as conducted by the American College of Life Underwriters. The subject matter will cover such topics as business law; legal aspects of life insurance; estates, wills, and trusts; taxation. (Prerequisite: #)

*Fall Semester*

A T 4:30-6:30, 3701 Wayzata Blvd, Moss

*Spring Semester*

B T 4:30-6:30, 3701 Wayzata Blvd, Moss

**CLU Part IV. Economics and Finance, A-B.** 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part IV, as conducted by the American College of Life Underwriters. Section A will be devoted to the study of basic principles of economics. Section B will cover family and business finance. For details as to the content of the course and for information concerning the CLU educational program and its requirements, see notice above. (No prerequisite for A; for B, previous unit)

*Fall Semester*

A M 4:00-5:40, StP Ext Center 3F, Wheeler  
A T 4:30-6:30, 3701 Wayzata Blvd, Barker

*Spring Semester*

B M 4:00-5:40, StP Ext Center 3F, Wheeler  
B T 4:30-6:30, 3701 Wayzata Blvd, Barker

**CLU Part V. Business Insurance and Estate Planning, A-B.** 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for the annual CLU examination in Part V. The subject matter will cover settlement options and programming; life insurance for business purposes; estate planning; human behavior and motivation; ethics. (No prerequisite for A; for B, previous unit)

*Fall Semester*

A Th 4:30-6:30, 3701 Wayzata Blvd, Larkin

*Spring Semester*

B Th 4:30-6:30, 3701 Wayzata Blvd, Larkin

### Property and Casualty Insurance Curriculum.

The University of Minnesota co-operates with the Insurance Institute of America and the American Institute for Property and Casualty Underwriters, Inc., by offering an educational program that provides the basic courses needed by those who wish to take the examinations of either or both of the

Symbols explained on page 35.

## Evening and Special Classes

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institutes. The Insurance Institute of America courses are considered excellent preparation for the more difficult American Institute courses which lead to the Chartered Property and Casualty Underwriters (CPCU) award. Complete details of the program of training under both institutes are printed in the institutes' annual announcements, copies of which may be obtained from the General Extension Division of the University of Minnesota. (Co-ordinator for CPCU program for 1961-62 will be Bernard C. Bengtson, CAPital 4-3737)

**IIA Parts A, B, and C.** 3 certificate credits each for Parts A and B; \$27 each quarter. 2 certificate credits for Part C, \$18.

Based on the Part A, Part B, and Part C Topical Outlines of the Insurance Institute of America. Provides a background in property and liability insurance and serves as a preparatory course for the CPCU program. *Part A:* Economic and social influences of insurance; types of risk and kinds of insurance to meet them; legal principles important to property and liability insurance; historical development of insurance; rate making; types of insurers and their organization; underwriting and re-insurance; analysis of insurance contracts; regulation. *Part B:* An intensive study of fire and marine insurance contracts. *Part C:* An intensive study of casualty insurance contracts. It is highly recommended but not required that all parts be taken in sequence.

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>March 26-May 14</i>	
A	M 6:20-8:50, Vincent 210, Howard	B	M 6:20-8:50, Vincent 210, Howard	C	M 6:20-8:50, Vincent 210, Howard

**CPCU Part I. Insurance Principles and Practices, A-B.** 3 certificate credits each semester. \$27 each semester.

An intensive course in the basic principles of property and casualty insurance, designed as preparation for examination I for the Chartered Property Casualty Underwriter (CPCU) 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, co-ordinated and supervised by the University School of Business Administration. (Prerequisite: at least 3 years' *general* experience or the equivalent in formal study and acceptance of special registration application; consult any Extension office)

<i>Fall Semester</i>		<i>Spring Semester</i>	
A	M 6:20-8:00, Ford 180, Bengtson (co-ordinator)	B	M 6:20-8:00, Ford 180, Bengtson (co-ordinator)

**CPCU Part II. Insurance Principles and Practices, A-B.** 3 certificate credits each semester. \$27 each semester.

An intensive course in the basic functional aspects of insurance, designed as preparation for examination II for the Chartered Property Casualty Underwriter (CPCU) 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, co-ordinated and supervised by the University School of Business Administration. (Prerequisite: CPCU Part I or at least 3 years' *general* experience or the equivalent in formal study and acceptance of special registration application; consult any Extension office)

<i>Fall Semester</i>		<i>Spring Semester</i>	
A	M 8:10-9:50, Ford 180, Bengtson (co-ordinator)	B	M 8:10-9:50, Ford 180, Bengtson (co-ordinator)

**CPCU Part III. Economics; Government and Business, A-B.** 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for examination III for the Chartered Property Casualty Underwriter (CPCU) award offered by the American Institute for Property and Casualty Underwriters, Inc. The subject matter covers a general view of economic organization, the economic role of government, bases and types of government control and competition. (Prerequisite: acceptance of special registration application or completion of one or more parts of the CPCU program)

<i>Fall Semester</i>		<i>Spring Semester</i>	
A	Th 6:20-8:00, Ford 170	B	Th 6:20-8:00, Ford 160

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Symbols explained on page 35.

## Course Offerings—Business Administration

**CPCU Part V. Management, Accounting, and Finance A-B.** 3 certificate credits each semester. \$27 each semester.

This course is designed as preparation for examination V for the Chartered Property Casualty Underwriter (CPCU) award. The subject matter covers the principles of management, principles of accounting, and principles of finance. (Prerequisite: acceptance of special registration application or completion of one or more parts of the CPCU program)

*Fall Semester*

A Th 8:10-9:50, Ford 170

*Spring Semester*

B Th 8:10-9:50, Ford 160

**BA. Business Law of Insurance and Related Subjects I-II.** See page 101.

### Marketing

**BA 57. Principles of Marketing.** (Formerly BA 77) 3 degree credits. \$27.

Marketing functions and institutions. Channels of distribution. Retail and wholesale trades. Pricing policies and practices. Marketing policies and methods for consumers' goods, producers' goods, and raw materials. (Prerequisite: Econ 2. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Vincent 113, Harper  
W 6:20-8:00, Vincent 207

*Spring Semester*

M 6:20-8:00, Vincent 205  
W 6:20-8:00, Vincent 205

**BA 87. Credits and Collections.** (Formerly BA 76) 3 degree credits. \$27.

Nature and types of credit and of credit instruments and agencies; qualifications and work of credit manager; valuation and use of financial statements and credit reports; collection methods and correspondence; bankruptcy and adjustments; credit limits and control. (Prerequisite: new 57 or old 77)

*Fall Semester*

Th 6:20-8:00, Vincent 112, Kerns

**BA. Principles of Credits and Collections II.** 3 certificate credits. \$27.

This course is designed to follow BA 87 with emphasis upon analysis of financial statements as a source of credit information; legal remedies used in collection of delinquent accounts; handling insolvent accounts and bankruptcies; adjustment problems and the use of adjustment bureaus; credit insurance; activities and services of credit associations; measures of credit department efficiency, and other important phases of credit work. (Prerequisite: new 87 or old 76 or #)

*Spring Semester*

Th 6:20-8:00, Vincent 210, Kerns

**BA 97. Market Analysis and Research.** (Formerly BA 173) 3 degree credits. \$27.

Techniques used in marketing research. Emphasis on marketing information which can aid in the solution of marketing problems. Selected nonsurvey and survey research techniques. (Prerequisite: new 51 or old Econ 74 and new BA 57 or old 77)

*Fall Semester*

Th 6:20-8:00, Vincent 205

**BA 117. Sales Management.** (Formerly BA 113) 3 degree credits. \$27.

Sales policies and planning, sales organization, selection, training, and compensation of salesmen, control of sales performance, sales budgets, and cost control. Case materials. (Prerequisite: new 57 or old 77)

*Fall Semester*

M 6:20-8:00, Vincent 205

Symbols explained on page 35.

## Evening and Special Classes

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### National Institute of Credit Curriculum

The University of Minnesota co-operates with the Credit and Financial Management Association of Minneapolis and the St. Paul Chapter of the National Association of Credit Men in a program of training leading toward the awards of Associate and Fellow of the National Institute of Credit (the educational branch of the National Association of Credit Men). Those interested in working for these awards should be registered with the National Institute of Credit at the Association office (502 Thorpe Building, Minneapolis; Telephone FEderal 6-8356) and should receive advice there as to an approved program of study. Course registrations for evening classes should be made at any of the Extension Division offices, indicated on page 4 of the Evening Classes bulletin.

The curriculum of the National Institute of Credit, together with selected Extension Division courses, follows. (The suggested Extension courses should prove valuable to those contemplating work toward a University degree or an Extension certificate as well as for the Institute awards. For further information, consult the Extension Committee on Student Scholastic Standing.)

#### *Institute Curriculum*

##### **Associate Award**

Business Economics  
Basic Accounting  
Business Correspondence  
Credit and Collection Principles  
Advanced Credits

#### **††Approved Equivalent Extension Courses**

Econ 1-2, Principles of Economics  
BA 24-25-26, Principles of Accounting  
Business Correspondence  
BA 87, Credits and Collections  
Principles of Credits and Collections II

##### **Fellow Award Program (in addition to preceding courses)**

Law of Contracts and Agency  
Law of Business Transactions or Negotiable  
Papers

BA 58-78, Business Law  
BA 88, Business Law

Public Speaking  
Salesmanship or Marketing

Beginning Practical Speech Making  
Basic Salesmanship, or  
BA 57, Principles of Marketing

Credit Management Problems  
Financial Statement Analysis  
Psychology (Applied, General, or Business)

No equivalent course  
BA 55D, Analysis of Financial Statements  
Psy 1A, Application of Psychology to  
Living, or  
Psy 1-2, General Psychology, or  
Psy 122-123, Vocational Development and  
Personnel Psychology

Techniques of Supervision  
Office Management or  
Personnel Management  
Electives

Supervision I  
BA 99, Office Management—Management of  
Administrative Services

## Office Management

*Your attention is called to the Management of Administrative Services Certificate programs; see page 15.*

### **BA. Scientific Management in the Office. 3 certificate credits. \$27.**

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. (No prerequisite)

*Spring Semester*

T 6:20-8:00, Vincent 211, Northcott

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†† Electives and substitutions or transfers of credits may be approved on petition to the educational committees of the local association chapters. For further information on this program, please consult Mr. Lindholm in the Association office (Thorpe Building).

Other symbols explained on page 35.

## Course Offerings—Business Administration

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**BA 99. Office Management—Management of Administrative Services.** (Formerly BA 86)  
3 degree credits. \$27.

Problems involving organization, planning, and control of administrative services. Communications; records management; equipment analysis and control; forms and supplies; flow of work, layout, and environment; office personnel. (Prerequisite: Econ 2 or #)

*Spring Semester*

T 6:20-8:00, Vincent 211, Northcott, Donaldson

### Real Estate

*The University of Minnesota co-operates 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. Co-ordinator for the Real Estate Boards: Bernard G. Rice, 415 Minnesota Federal Building, Minneapolis.*

**BA. Fundamentals of Real Estate Practice.** 3 certificate credits. \$27.

Economic functions of the real estate business; fundamental practices of the real estate office and other realtors; real estate valuations; methods of appraising; brokerage; principles of real estate management; ethics of real estate practice. Basic course; should be taken prior to any other courses in real estate curriculum. (No prerequisite)

*Fall Semester*

M 6:20-8:00, Physics 133, Rice (co-ordinator)

**BA. Real Estate Financing and Insurance.** 3 certificate credits. \$27.

A study of financing methods and practice relating to conventional, FHA, VA, and combination loans; secondary financing; special loans on leases, farms, industrial and commercial properties; and primary phases of insurance procedures in the average real estate office. (No prerequisite)

*Fall Semester*

W 6:20-8:00, Ford 85, Rice (co-ordinator)

**BA. Real Estate Sales Brokerage.** 3 certificate credits. \$27.

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)

*Spring Semester*

W 6:20-8:00, Ford 85, Rice (co-ordinator)

**BA. Real Estate Appraisal.** 3 certificate credits. \$27.

Detailed consideration of principles and practices involved in appraising various types of real property for various purposes. Factors determining valuations; making and reporting appraisals. Appraisals procedures in various legal actions. (No prerequisite)

*Spring Semester*

M 6:20-8:00, Physics 133, Rice (co-ordinator)

**Real Estate Law (BA 98, Business Law).** See page 101.

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Symbols explained on page 35.

## Evening and Special Classes

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### Salesmanship

#### BA. Salesmanship I. 3 certificate credits. \$27.

Selling principles that influence people to buy; why people spend money for something. Presentation of the product or service; magic words, descriptive words; types of buyers; resistances that cause failures; the buyer's mind at time of close, closing techniques. (No prerequisite. Repeated spring semester)

##### *Fall Semester*

M 6:20-8:00, Ford 185, Stanchfield  
Th 6:00-7:40, StP Ext Center 3E, Stanchfield

##### *Spring Semester*

M 6:20-8:00, Ford 120, Stanchfield

#### \*BA. Salesmanship II. 3 certificate credits. \$27.

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. (Prerequisite: Salesmanship I or #. Class limited to 35 students)

##### *Spring Semester*

Th 6:20-8:00, Ford 170, Stanchfield

### Secretarial Procedures

*Your attention is called to the Secretarial Certificate program; see page 10.*

#### BA 36. Office Procedures. (Formerly Econ 36) 3 degree credits. \$27.

Editing and revising correspondence; communications; basic indexing and filing problems; intra-office relationships. (Prerequisite: new 34 or old Econ 34 or #)

##### *Fall Semester*

W 6:20-8:00, Vincent 211

#### BA 79A. Administrative Secretarial Studies. (Formerly Econ 40) 3 degree credits. \$27.

Office situations and problems in the work of an administrative assistant to an executive. Office procedures and secretarial dictation and transcription. (Prerequisite: new 34 and 39 or old Econ 34 and 39 or #)

##### *Spring Semester*

W 6:20-8:00, Vincent 211

### Statistics

#### BA 5. Elements of Statistics. (Formerly Econ 5) 3 degree credits. \$27.

Elementary concepts in statistical methods. Sources and collection of data; tabular and graphic presentation; frequency distributions; probability; sampling; introduction to statistical estimation and decision-making. (Prerequisite: Math 7 or 8 or 10 or 15 or ITM 11. Repeated spring semester)

##### *Fall Semester*

M 6:20-8:00, Vincent 307  
T 6:20-8:00, Vincent 2  
W 6:00-7:40, StP Ext Center 3E

##### *Spring Semester*

T 6:20-8:00, Vincent 301  
W 6:20-8:00, Vincent 113

#### BA 51. Business Statistics. (Formerly Econ 74) 3 degree credits. \$27.

Basic concepts of regression and correlation; statistical estimation and decision-making, applications to such fields as survey sampling, acceptance sampling, and statistical quality control; introduction to time series analysis and index numbers. (Prerequisite: new 5 or old Econ 5)

##### *Fall Semester*

T 8:10-9:50, Vincent 2

##### *Spring Semester*

T 8:10-9:50, Vincent 301

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Symbols explained on page 35.



## Transportation

### BA 54. Transportation I: Principles. (Formerly BA 71) 3 degree credits. \$27.

Roles, interests, and relationships of users of the service, carriers, and regulatory agencies in the transportation field; national transportation policy approach. Organization of the transportation industry and administration of the transportation function by users of the service in their business activities. Economic aspects of railway, highway, pipeline, water, and air transportation. Current transportation problems; national transportation policy. (Prerequisite: Econ 2)

#### *Fall Semester*

M 6:20-8:00, Vincent 1, Nightingale

### BA 174. Transportation II: Traffic Management. 3 degree credits. \$27.

Principles of transport control and their application within the industrial (noncarrier) firm; carrier traffic management. Principles governing construction, interpretation, and application of rail, motor, water, express, pipeline, freight forwarder, and air freight classifications and tariffs. Problems involving determination of charges on typical movements within and between major freight rate territories. (Prerequisite: new 54 or old 71)

#### *Spring Semester*

M 6:20-8:00, Vincent 1, Nightingale

### BA 184A. Highway Transportation. (Formerly BA 129) 3 degree credits. \$27.

Economic aspects; national policy; services, pricing, operations, and management of the motor carrier industry; federal and state regulatory policies and problems; ICC motor carrier cost studies; intercity and urban passenger operations and problems; the transit problem of the cities. (Prerequisite: new 54 or old 71)

#### *Spring Semester*

W 6:20-8:00, Vincent 112, Harper

### BA 194A-B. Topics in Transportation: Advanced Traffic Management I-II. (Formerly BA 180I-181I) 3 degree credits each semester. \$27 each semester.

Transportation rates, transport control practices, and their applications within the individual firm. Analysis of important current ICC cases and decisions affecting users of the service and carriers. (Prerequisite: 174)

#### *Fall Semester*

194A M 8:10-9:50, Vincent 211, Nightingale

#### *Spring Semester*

194B M 8:10-9:50, Vincent 211, Nightingale

### BA. Interstate Commerce Practice and Procedure I-II. 3 certificate credits each semester. \$27 each semester.

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: new 194A or old 180I or #)

#### *Fall Semester*

I W 6:20-8:00, Vincent 205, Nightingale

#### *Spring Semester*

II W 6:20-8:00, Vincent 211, Nightingale

# EDUCATION

*Prospective Teachers:* Persons interested in undergraduate programs preparing them to teach in elementary or secondary schools should make an appointment through the General Extension Division with an adviser in the College of Education. Most professional education courses must be taken in day school, when schools are in session for observation. However, all programs in the College of Education emphasize the preparation of the teacher in general education and in the teaching subjects. Many evening offerings listed in the Arts and Sciences section of this bulletin may be taken by prospective teachers for later use toward degree programs in the College of Education.

*Teachers-in-Service:* Many courses in academic fields are available for teachers through evening class registration. Attention is called particularly to offerings listed under Arts and Sciences in this bulletin. Professional education courses available through evening classes are limited because of an extensive offering in the late afternoon and Saturday morning hours as part of the day school program of the College of Education.

*Renewal of Teaching Certificates:* Former teachers wishing to renew certificates should check with the State Department of Education concerning their individual requirements. Those who need an additional 8 quarter credits may select courses in education pertinent to their teaching level (elementary or secondary) or courses in the major teaching field. Secondary teachers are especially urged to emphasize current work in the teaching subject itself.

## Art Education

**ArEd 17. Pictorial Expression for Elementary Education.** 3 degree credits. \$27 plus \$2 materials fee.

Survey of art in life and education. Materials, techniques, and ideas important to children's art expression, relationship to adult expression, and significance in educational growth. (No prerequisite)

*Fall Quarter*

W 6:20-8:50, TSF 259, Gayne

**ArEd 18. Design Activities for Elementary Education.** 3 degree credits. \$27 plus \$2 materials fee.

Relationships between art and nature. Problems in inventions, arrangement and decoration, color, lettering, poster, and bulletin board displays. (No prerequisite)

*Winter Quarter*

W 6:20-8:50, TSF 259, Gayne

**ArEd 19. Functional Arts and Crafts in Elementary Education.** 3 degree credits. \$27 plus \$2 materials fee.

Influence of art on modern life. Typical opportunities for integrated experiences. Clothing, architecture and interior design, community planning, commercial and industrial design, puppetry, dramatics, intercultural relations, holiday projects, etc. (No prerequisite)

*Spring Quarter*

W 6:20-8:50, TSF 259, Gayne

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Symbols explained on page 35.

The following 2 courses, ArEd 90 and 95, are available to out-state communities on a workshop basis involving 10 hours of instruction in 4 or 5 daily sessions in late afternoons or evenings during a 1-week period. For further information, write Office of Associate Dean, 54 Nicholson Hall (or to Professor Clifton A. Gayne, 105 Jones Hall), University of Minnesota, Minneapolis 14.

**ArEd 90. Understanding Children's Art. 1 credit.**

Lectures, discussions, demonstrations with art materials; recent developments regarding art activities important to the educational achievement and personality development of all children at school and at home; suggestions for parents, elementary teachers, and others who work with young children.

**ArEd 95. Painting for Amateurs. No credit.**

Lectures, demonstrations, discussions, critique sessions; effective methods for independent study, use of basic references, defining and applying standards for self criticism and improvement.

## Child Development

**CD 80. Child Psychology. 3 degree credits. \$27.**

Science of child development and its applications. (Prerequisite: Psy 2. Repeated spring semester)

*Fall Semester*

T 6:20-8:00, Folwell 101

*Spring Semester*

T 6:20-8:00, Folwell 101, Hansen

**CD 90. Child Rearing. 3 degree credits. \$27.**

*September 18-November 20*

See course description, day, time, place, and instructor as listed under *Child Rearing* on page 116. Degree credit students will be required to do extra work involving observations, reports, and special examinations. Consult instructor at first class session for assignments.

**CD 132. Adolescent Psychology. 3 degree credits. \$27.**

Social, physical, mental, emotional, and personality development during adolescence. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 80)

*Fall Semester*

T 6:20-8:00, Folwell 109, Hansen

**CD 140. Behavior Problems. 3 degree credits. \$27.**

Types, origins, development, and treatment. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 80 or equivalent)

*Fall Semester*

M 8:10-9:50, Folwell 101, Reed

**CD 144. Psychology of the Gifted Child. 3 degree credits. \$27.**

Psychology and development of high intellectual ability and of special talents. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 80 or equivalent)

*Spring Semester*

M 8:10-9:50, Folwell 101, Reed

Symbols explained on page 35.

## ***Evening and Special Classes***

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### **CD. Child Rearing. No credit. \$18.**

A practical course for parents and others interested in children. The course is designed to introduce current thinking in regard to child care philosophies and practices; to trace the development of children from birth through adolescence; to explain the child's behavior in terms of his progressive stages of development; and to relate the development and behavior to child care techniques. Class discussion is an important part of the course.

*September 18-November 20*

M 6:20-8:20, Child Welfare 226, Peterson

**Family Studies.** (See page 61.)

## **Curriculum and Instruction**

### **EdCI 105. Audio-Visual Materials in Education. 3 degree credits. \$27 plus \$6 laboratory fee.**

Characteristics, advantages, limitation, and practical schoolroom use of audio-visual materials of nonprojection and projection types. Practice in operation of audio-visual equipment. Students wishing graduate credit should inquire at time of registration. (No prerequisite. Class meets for 3 hours and 20 minutes weekly, as indicated below)

*September 26-October 24*

T 4:30-6:10 and 7:10-8:50, StP Ext Center 2A,  
Pearson

### **EdCI 109. Audio-Visual Materials and Equipment Laboratory. 3 degree credits. \$27 plus \$6 laboratory fee.**

Planning and making materials for audio-visual education; use of machines and equipment. Students wishing graduate credit should inquire at time of registration. (Prerequisite: 105 or #. Class meets for 3 hours and 20 minutes weekly, as indicated below)

*October 31-November 28*

T 4:30-6:10 and 7:10-8:50, StP Ext Center 2A,  
Pearson

### **EdCI 151. Diagnosis and Treatment of Learning Difficulties. 3 degree credits. \$27.**

Evaluation of results of teaching; diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a testing program. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

*Fall Semester*

M 6:20-8:00, Johnston 115, Wesenberg

## **Educational Psychology**

### **EPsy 60. Introduction to Measurement and Statistics. 3 degree credits. \$27.**

A study of measures of central tendency, variability, and correlation, as well as principles of test construction. (Prerequisite: 6 credits in psychology)

*Fall Semester*

Th 6:20-8:00, Johnston 114, Hoyt

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Symbols explained on page 35.

**EPsy 110. Educational Measurement in the Classroom.** 3 degree credits. \$27.

Principles and methods for construction, evaluation, and improvement of educational measurement in classroom instruction. Students wishing graduate credit should inquire at time of registration. (No prerequisite)

*Spring Semester*

Th 6:20-8:00, Johnston 106, Hoyt

**EPsy 159. Personality Development and Mental Hygiene.** 3 degree credits. \$27.

This course purports to give the teacher a fresh way of looking at his task and at his relations with students by drawing upon modern concepts of mental health. The thesis is developed that emotional and intellectual growth in the classroom can best be fostered when the teacher understands and comes to grips with the motives and values which characterize his students. Topics treated include a description of the person in good mental health, an analysis of adjustment processes and of common sources of conflict and anxiety, psychological descriptions of the major grade-range groups in our schools and the mental health implication for dealing with them in the classroom; typical distinctions in the psychological makeup of successful and unsuccessful teachers; examination of sources of frustration in teaching and of behavior conducive to sound mental health in teaching. Students wishing graduate credit should inquire at time of registration. (Prerequisite: junior class level or teaching experience or #. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Johnston 114, Borow

*Spring Semester*

M 6:20-8:00, Johnston 113, Borow

**EPsy 193. Principles of Psychology of Human Learning.** 3 degree credits. \$27.

Application to school situation; motivation; rate of learning and forgetting; teaching of skills, meanings, attitudes; reasoning and problem solving; transfer of learning. Students wishing graduate credit should inquire at time of registration. (Prerequisite: teaching experience or #)

*Spring Semester*

M 6:20-8:00, Johnston 114, Kellogg

## Nursing Education

**\*NuEd 68. Construction and Use of Examinations and Other Measurement in Basic Nursing Courses.** 3 degree credits. \$27.

Criteria for judging and improving methods of educational measurement; examinations as aids to student progress; relation of examination scores to grading systems; practice in making and scoring course examinations. (Open to registered nurses. Class limited to 35 students)

*Winter Quarter*

T 6:00-8:20, Millard 214, Weise

**\*NuEd 73. Principles of Education in Nursing.** 3 degree credits. \$27.

Identification of principles of learning and teaching; application of principles in a variety of nursing situations; sources and selection of materials and organization for instruction; evaluation of learning. (Open to registered nurses. Class limited to 35 students)

*Fall Quarter*

M 6:00-8:20, Millard 118, Dunning

# ENGINEERING AND TECHNICAL SCIENCES

*Your attention is called to the Engineering Science and Engineering Technician Certificate programs; see page 17.*

## Aeronautics

### Ground School Courses for Air Pilots

**General Information**—The University Ground School offers several different courses at various times throughout the entire year (12 months). Each course is designed to meet the needs of pilots who are preparing for one of the following Federal Aviation Agency written and oral examinations: Private Pilot Certificate, Commercial Pilot Certificate, Flight Instructor Certificate, Instrument Rating, and Air Transport Rating. The Ground School is authorized to award F.A.A. Graduation Certificates upon satisfactory completion of a 50-hour basic course preparing for the Private Pilot Certificate, or upon satisfactory completion of a 150-hour advanced course (three 50-hour units) preparing for the Commercial Pilot Certificate. The University also awards 4 Extension Certificate credits for satisfactory completion of each 50-hour course or unit.

The University Ground School meets all requirements of, and is certificated by, the F.A.A. as an Approved Basic and Advanced Ground School, and as such offers to its students all of the privileges extended by the F.A.A. to such approved schools. It is to the flight student's advantage to complete the ground-school studies and F.A.A. written examinations as early as possible in his or her flight training program, as there is a 2-year time limit, following the completion of an F.A.A. written examination, before the related flight test must be passed.

In addition to the 50-hour basic course (described below) and the 150-hour advanced course, special accelerated short courses (described below) are offered from time to time, depending upon the demand, for pilots who have completed the 50-hour basic course and who are now preparing for the F.A.A. written and oral examinations for the Commercial Pilot Certificate, the Flight Instructor Certificate, the Instrument Rating, or the Air Transport Rating. In this way it is possible to satisfy pilots' ground-school requirements in the shortest possible time and at minimum expense.

Most classes meet on Tuesdays and Thursdays, starting at 7 p.m., in 209 Aeronautical Engineering building on the Minneapolis Campus of the University. The director and principal instructor for all courses is Sam R. Hamilton.

Specific information regarding starting dates, class meeting schedules, tuition fees, and class load limits can be obtained from airport bulletin boards, or by calling the General Extension Division (FEderal 8-8791—Station 8), or by calling Mr. Hamilton at Midway 8-2559. Persons who need any further information regarding the different courses or who wish to be personally notified when a specific course is to be started should contact Mr. Hamilton.

### Basic Ground School Course for Student Pilots and Private Pilots

This 7-week course, designed primarily for student pilots and prospective pilots who are preparing for the Federal Aviation Agency's written and oral examinations for certification as a private pilot, consists of 50 hours of instruction on air navigation, radio aids, meteorology, flight theory and analysis of flight maneuvers, aircraft and engine operation, civil air regulations, aircraft instruments, and other subjects pertaining to the safe, efficient, and economical operation of aircraft.

The course is open to all pilots and prospective pilots, regardless of their educational or flight-experience background. Although the course aims directly at fully preparing for the private pilot examinations (both written and oral), it also prepares for possible subsequent enrollment in any one of the accelerated ground-school courses described below.

The class meets twice a week, on Tuesdays and Thursdays, at 7 p.m., for 7 weeks, in 209 Aeronautical Engineering building on the Minneapolis Campus of the University. The tuition fee is \$36, and registration must be completed not later than the third class meeting, either in the classroom or at any University Extension Division office. The instructor is Sam R. Hamilton.

Starting dates for the course are posted on airport bulletin boards from time to time throughout the entire year (12 months), or can be obtained by calling the General Extension Division (FEderal 8-8791—Station 8), or by calling Mr. Hamilton at Midway 8-2559. Persons who wish to be personally notified when the next basic course is to be offered should contact Mr. Hamilton.

## Course Offerings—Engineering and Technical Sciences

### Accelerated Ground-School Courses for Commercial Pilots, Flight Instructors; the Instrument Rating and the Air Transport Rating

From time to time, depending upon the demand, the University Ground School offers special short courses preparing for the Federal Aviation Agency's written and oral examinations for the Commercial Pilot Certificate, the Flight Instructor Certificate, the Instrument Rating, and the Air Transport Rating. These accelerated courses are open to pilots who have completed the basic course described above, and who now need only a further short course of instruction for one of the advanced certificates or ratings issued by the F.A.A. The principal instructor is Sam R. Hamilton.

Specific information regarding starting dates, class meeting schedules, tuition fees, and class load limits can be obtained from airport bulletin boards, or by calling the General Extension Division (FEderal 8-8791—Station 8), or by calling Mr. Hamilton at Midway 8-2559. Persons who need any further information regarding these special short courses or who wish to be personally notified when a specific course is to be started should contact Mr. Hamilton.

## Architecture

### Arch. Refresher Course in Structural Design for Architects. Special Class. \$36.

This course is designed for practicing architects and will consist of lectures and problem sessions relating to structural design in steel, timber, and concrete. (No prerequisite)

*Winter Quarter*

T 6:30-9:00, Architecture 60, Self

### STC. Architectural Drafting I-II-III-IV. (See page 134.)

### Art. Home Design and Planning. (See page 52.)

## 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. An equipment 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.

### Analytical Chemistry

#### AnCh 57. Quantitative Analysis. 4 degree credits. \$36 plus \$5 laboratory fee.

Introductory course covering the general principles and methods of gravimetric and volumetric analysis. Typical problems are assigned and attention is given to proper laboratory practice. Primarily for premedical students. (Prerequisite: InCh 11 or 26)

*Spring Semester*

Lect T 6:20-8:00, Chemistry 325, Herr  
Lab Th 6:20-10:20, Chemistry 310, Herr

#### AnCh 100-101. Quantitative Analysis. (Formerly 101-102) 2 degree credits for 100, \$18. 3 degree credits for 101, \$27.

Introductory lecture courses covering the general principles and theoretical foundations of quantitative analysis. 100: Gravimetric analysis. 101: Volumetric analysis. (Prerequisite: for 100, InCh 11 or 26; for 101, 100 or 51)

*Fall Semester*

100 T 8:10-9:50, Chemistry 325, Herr

*Spring Semester*

101 T 8:10-9:50, Chemistry 325, Herr

Symbols explained on page 35.

## Evening and Special Classes

**AnCh 102A. Quantitative Analysis Laboratory.** 3 degree credits. \$27 plus \$5 laboratory fee.

Introductory course covering the methods of quantitative analysis. (Prerequisite: 101 or 52 or ¶101. Repeated spring semester)

*Fall Semester*

Th 6:20-10:20, Chemistry 310, Herr

*Spring Semester*

Th 6:20-10:20, Chemistry 310, Herr

### **Inorganic Chemistry**

**InCh 4-5.† General Inorganic Chemistry.** 5 degree credits each semester. \$45 plus \$5 laboratory fee each semester.

An introduction to chemistry from the standpoint of atomic structure; periodic properties of the elements and compounds derivable from structural considerations; a study of the laws governing the behavior of matter, theories of solutions, acids, bases, and equilibrium. (Prerequisite: elementary algebra)

*Fall Semester*

4 Lab T 6:20-9:20, Chemistry 325, †† Herr  
Lect Th 6:20-8:00, Chemistry 325, Herr

*Spring Semester*

5 Lab T 6:20-9:20, Chemistry 325, †† Herr  
Lect Th 6:20-8:00, Chemistry 325, Herr

**InCh 11. Semimicro Qualitative Analysis.** 4 degree credits. \$36 plus \$5 laboratory fee.

Laboratory work in systematic qualitative analysis of cations with lectures on solutions, ionization, chemical and physical equilibria, oxidation and reduction, etc. (Prerequisite: 5 or 25)

*Fall Semester*

Lect T 6:20-8:00, Chemistry 325, Herr  
Lab Th 6:20-9:20, Chemistry 310, Herr

## **Civil Engineering**

*Your attention is called to the Senior Civil Engineering Technician program; see page 20.*

**CE 18-19-20. Surveying.** (Not offered 1961-62)

**CE 31. Elementary Structural Analysis.** 3 degree credits. \$27.

Algebraic and graphical analysis of structural framework, influence lines. Equivalent loads. (Prerequisite: EG 14 and MM 27)

*Fall Quarter*

M 6:20-9:20, Main Engineering 305, Wetzel

**CE 32. Elementary Structural Design.** 3 degree credits. \$27.

Design principles and methods of selecting members and connection. (Prerequisite: 31 and MM 40)

*Winter Quarter*

M 6:20-9:20, Main Engineering 305, Wetzel

†† First class meeting, only, in room 325 Chemistry.  
Other symbols explained on page 35.



## Course Offerings—Engineering and Technical Sciences

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**CE 33. Elementary Structural Design.** 3 degree credits. \$27.

Design of timber and steel members and connections. (Prerequisite: 32)

*Spring Quarter*

M 6:20-9:20, Main Engineering 305, Wetzel

**CE 109. Geodetic Surveying.** 3 degree credits. \$27.

First-order triangulation, traverse, and level nets. Least squares adjustments of survey nets. Computations and use of state-wide co-ordinate grids. Geodetic astronomy. (Prerequisite: 20)

*Fall Quarter*

W 6:20-9:00, Main Engineering 316, Fant

**CE 111. Land Surveying.** 3 degree credits. \$27.

Study of Minnesota Public Land Survey and proper methods of resurveys. Subdivision design and computations. Preparation of standard plats and descriptions. (Prerequisite: 20)

*Winter Quarter*

W 6:20-9:00, Main Engineering 316, Fant

**CE 112. Aerial Surveying and Photogrammetry.** 3 degree credits. \$27.

Theory and methods of making planimetric and topographic maps from aerial and terrestrial photographs. (Prerequisite: 20)

*Spring Quarter*

W 6:20-9:00, Main Engineering 316, Fant

**CE 130. Statically Indeterminate Structures.** (Not offered 1961-62)

**CE 131. Structural Analysis.** (Not offered 1961-62)

**CE 132. Structural Design.** (Not offered 1961-62)

**CE 141. Reinforced Concrete.** 3 degree credits. \$27.

Principles of reinforced concrete. Design of beams, slabs, columns, and footings. Analysis of continuous beams and rigid frames. (Prerequisite: 33)

*Fall Quarter*

W 6:20-9:20, Experimental Engineering 22, Self

**CE 142. Reinforced Concrete Design.** 3 degree credits. \$27.

Continuation of 141. Ultimate strength design. Application of principles of design of complete building frames, footings, and retaining walls. (Prerequisite: 130, 141)

*Winter Quarter*

W 6:20-9:20, Experimental Engineering 22, Self

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Symbols explained on page 35.

## Evening and Special Classes

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### CE 144. Prestressed Reinforced Concrete. 3 degree credits. \$27.

Principles of design and analysis for pretensioned and post-tensioned construction. Methods of prestressing and fabrication. Design of buildings and bridges using prestressed reinforced concrete. (Prerequisite: 142)

*Spring Quarter*

W 6:20-9:20, Architecture 60, Self

### CE. Highways and Pavements II. 3 certificate credits. \$27.

Grading and base construction. Bituminous materials and aggregates. Design and construction of flexible and rigid pavements. (Prerequisite: Highways and Pavements I)

*Fall Quarter*

W 6:20-9:00, Experimental Engineering 193,  
Pederson

### CE. Soil Engineering. 3 certificate credits. \$27.

A course intended for students who wish to become familiar with the basic soil properties and use of soil information in highway and structural engineering. Solids-volume relationships, properties and tests, Atterberg limits, compaction, permeability, engineering classification, frost action, shear strength and lateral pressures. (No prerequisite, but knowledge of elementary algebra is desirable)

*Winter Quarter*

W 6:20-9:00, Experimental Engineering 193,  
Pederson

## Electrical Engineering

*The following sequences, EE 36-37-38 and 37A-38A, carry degree credit for students majoring in agricultural, aeronautical, chemical, civil, mechanical, metallurgical, and mining engineering and metallurgy.*

### EE 36-37-38. Elements of Electrical Engineering. 3 degree credits each quarter. \$27 each quarter plus \$5 laboratory fee for 36.

Basic concepts of direct-current and alternating-current circuits, electric and magnetic fields. Analysis of electron devices and their associated circuitry, semiconductors. Electromechanical energy conversion. Regulating systems, instrumentation. (Prerequisite: mathematics through differential equations [ITM 26A or 80 or equivalent]; 3 lect and 2 prob session hours per week for 36; 3 lect hours per week for 37 and 38; 37A and 38A must be taken concurrently with 37 and 38)

	<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
36	T 6:00-9:00, Electrical Engineering 237	37 T 6:00-9:00, Electrical Engineering 237	38 T 6:00-9:00, Electrical Engineering 237
	Th 6:00-7:40, Electrical Engineering 237		

### EE 37A-38A. Electrical Engineering Laboratory. 1 degree credit each quarter. \$9 plus \$5 laboratory fee each quarter.

Supporting laboratory for EE 37-38. Experimental study of electric circuits and devices with emphasis on instrumentation and measurement techniques. (Prerequisite: ¶37 for 37A, ¶38 for 38A; 2 lab hours per week)

	<i>Winter Quarter</i>	<i>Spring Quarter</i>
37A	Th 6:00-7:40, Electrical Engineering 118	38A Th 6:00-7:40, Electrical Engineering 118

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Symbols explained on page 35.

## Course Offerings—Engineering and Technical Sciences

The following sequence, EE 61-62-63, is one of the regular sequences of the third-year electrical engineering curriculum. In the revised program it replaces the courses EE 51, 52A, 53, 54A, which have been discontinued.

**EE 61-62-63. Introductory Circuit Theory.** 4 degree credits each quarter. \$36 plus \$5 laboratory fee each quarter.

Analysis of linear circuits excited by constant, exponential, and sinusoidal sources. Time and frequency analysis of the forced and free response of circuits and the concepts of power and energy in lumped constant elements. (Prerequisite: ITM 26A and Phys 14; 3 lect and 2 rec hours per week)

		<i>Fall Quarter</i>			<i>Winter Quarter</i>			<i>Spring Quarter</i>
61	M	6:00-9:00, Electrical Engineering 237	62	M	6:00-9:00, Electrical Engineering 237	63	M	6:00-9:00, Electrical Engineering 237
	W	6:00-7:40, Mechanical Engineering 214		W	6:00-7:40, Mechanical Engineering 214		W	6:00-7:40, Mechanical Engineering 214

The following sequences, EE 71-72-73 and 81B-82B-83B, of the revised third-year electrical engineering curriculum are offered for those students who have previously completed work through the courses EE 51, 52, 52A, 53, 54, 54A. The courses EE 55, 56, and 56A have been discontinued.

**EE 71-72-73. Electromagnetic Fields and Materials.** 4 degree credits each quarter. \$36 plus \$5 laboratory fee each quarter.

Properties and behavior of electromagnetic fields under static and time-varying conditions based upon the experimental laws of electromagnetism leading to Maxwell's equations; interaction of fields and matter; energy concepts; conductive, dielectric, and magnetic properties of materials. (Prerequisite: 51, 52, 52A, 53, 54 and 54A; each sequence [71, 81B] [72, 82B] [73, 83B] must be taken concurrently; 2 lab hours per week)

		<i>Fall Quarter</i>			<i>Winter Quarter</i>			<i>Spring Quarter</i>
71	M	6:00-9:00, Electrical Engineering 137	72	M	6:00-9:00, Electrical Engineering 137	73	M	6:00-9:00, Electrical Engineering 137
	W	6:00-7:40, Electrical Engineering 137		W	6:00-7:40, Electrical Engineering 137		W	6:00-7:40, Electrical Engineering 137

**EE 81B-82B-83B. Electrical Engineering Laboratory.** 1 degree credit each quarter. \$9 plus \$5 laboratory fee each quarter.

Experimental study of electric circuits and electromagnetic fields. (Prerequisite: ¶71-72-73; 2 lab hours per week)

		<i>Fall Quarter</i>			<i>Winter Quarter</i>			<i>Spring Quarter</i>
81B	W	7:40-9:30, Electrical Engineering Labs	82B	W	7:40-9:30, Electrical Engineering Labs	83B	W	7:40-9:30, Electrical Engineering Labs

The following courses carry certificate credit and are offered as part of the Senior Electrical Engineering Technician program.

**EE. Elements of Electric Circuits.** 6 certificate credits. \$54.

Fundamentals of direct and alternating current circuits. Network theorems. Network analysis—singlephase and polyphase. Transient analysis. Frequency response of networks; power and energy concepts. Nonsinusoidal waveforms, nonlinear circuit elements, nonlinear circuit analysis methods.

Symbols explained on page 35.

## Evening and Special Classes

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Electric and magnetic fields. Magnetic circuits. Lecture and laboratory. (Prerequisite: ITM 13A or #. Repeated spring semester)

*Fall Semester*

T 6:00-9:30, Mechanical Engineering 102

*Spring Semester*

T 6:00-9:30, Mechanical Engineering 106

**EE. Elements of Electronics I.** 6 certificate credits. \$54.

Electronic emission, conduction through vacuum and gases. Characteristics of vacuum and gas tubes. Photo-sensitive devices, electronic control circuits. Amplifier circuits, feedback; oscillators. Applications of vacuum and gas tube devices. (Prerequisite: Elements of Electric Circuits. Repeated spring semester)

*Fall Semester*

T 6:00-9:30, Electrical Engineering 137

*Spring Semester*

T 6:00-9:30, Electrical Engineering 137

**EE. Elements of Electronics II.** 6 certificate credits. \$54.

Semiconductor devices and their circuit application; conduction in semiconductors, transistor characteristics and equivalent circuits; transistor amplifiers, oscillators, and multivibrators. Tunnel diodes. Lectures, problems, and laboratory demonstrations. Knowledge of circuit analysis using complex numbers is required. (Prerequisite: Elements of Electronics I or #)

*Spring Semester*

Th 6:00-9:30, Electrical Engineering 137

**EE. Elements of Electronics III.** 6 certificate credits. \$54.

Terminal course of the certificate credit electronics sequence. Digital and analog computer circuits—operational amplifiers, binary systems, memory units. Application of electronic instruments to measurements and instrumentation, transducers. Lecture and laboratory. (Prerequisite: Elements of Electronics II)

*Fall Semester*

Th 6:00-9:30, Electrical Engineering 137

**EE. Refresher Course for Electrical Engineers.** Special Class. \$45.

This course is designed for practicing engineers and will consist of lectures and problem sessions. (Prerequisite: BEE or equivalent degree)

*Winter Quarter*

W 6:00-9:30, Electrical Engineering 237,  
Electrical Engineering Staff

## Engineering English

**\*Engl 85(IT). Advanced Technical Communication.** 3 degree credits. \$27.

Technical writing, including reports and manuals, combined with the public speaking required of engineers, technical men, and those in the business and sales end of the technical industries. Stress in writing is on concise, definite, connected styles; use of numbers, abbreviations, and illustrations; organization of material; and proper levels of writing for different levels of readers. Stress in speaking is on preparation and organization; getting and holding interest; and on use of visual methods and materials. (Prerequisite: Engl 3B or Comm 3. Limited to 25 students. Repeated spring semester)

*Fall Semester*

M 8:10-9:50, Main Engineering 4, Lippert

*Spring Semester*

T 8:10-9:50, Main Engineering 4, Lippert

**\*Engl 86(IT). Advanced Technical Communication.** 3 degree credits. \$27.

Technical and business letter writing combined with conference and interview technique for engineers, technical men, and those in the business and sales end of the technical industries. Letters

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Symbols explained on page 35.

## Course Offerings—Engineering and Technical Sciences

include inquiry, reply, conference setup, adjustment, letter report, recommendation, and supervisory types (also job application, public relations, sales, and employee relations as the class may elect). Consideration of the technical magazine article. Speech work includes both planning and setting up, participating in, and following up conferences, and technical and supervisory interviews. (Prerequisite: 85[IT]. Limited to 25 students)

Spring Semester

M 8:10-9:50, Main Engineering 4, Lippert

**Engl. Basic Technical Writing I-II.** 3 certificate credits each semester. \$27 each semester.

Review of basic English and introduction to technical writing. Designed for people in the technical industries. Includes sentence design, spelling, and punctuation. Covers basic techniques of definition, description, process, procedure, and analysis writing. Organization and correlation into text of tables, diagrams, illustrations. Emphasis on accuracy, brevity, simplicity, and layout. Prepares students to write simple reports, specifications, procedures, material for manuals, supervisory materials, and basic letters of a technical nature. (No prerequisite)

Fall Semester

I W 8:10-9:50, Main Engineering 4, Lippert

Spring Semester

II W 8:10-9:50, Main Engineering 4, Lippert

## Engineering Graphics

(Formerly Engineering Drawing)

*EG 14, 15, and 16 are the basic drawing courses required in the first year of the Institute of Technology.*

*They replace former Engineering Drawing courses 1, 2, and 3, and 4, 5, and 6. The new courses have been redesigned from the viewpoint of the engineer with more emphasis on the mathematic-orthographic relationship. A thorough coverage of the fundamentals is augmented in this sequence by more material on graphic computation.*

**EG 14. Engineering Graphics.** 3 degree credits. \$27.

Engineering representation, analysis, and synthesis. Including systems of projection, co-ordinate systems. Solution of space problems, and vector application with mathematical correlation. Engineering geometry, shape description and sketching. (Prerequisite: ITM 8 or equivalent or ¶8. Repeated spring semester)

Fall Semester

M 7:00-9:00, StP Ext Center 3C, Springer  
W 6:00-8:00, Architecture 10, Palmer

Spring Semester

M 7:00-9:00, StP Ext Center 3C, Springer  
T 6:00-8:00, Architecture 25, Bullen

**EG 15. Engineering Graphics.** 3 degree credits. \$27.

Engineering representation, analysis and synthesis. Continuation of graphic solutions of space problems. Size description, common devices, applications of theory and standard practices. Axonometric oblique and perspective projection. Freehand sketching and shading. (Prerequisite: 14, and ITM 11 or ¶11. Repeated spring semester)

Fall Semester

T 6:00-8:00, Architecture 25, Bullen

Spring Semester

W 6:00-8:00, Architecture 10, Palmer

**EG 16. Engineering Graphics.** 3 degree credits. \$27.

Graphical computations of engineering problems, involving graphic algebra, calculus and statics. Functional scales, nomography, representation and analysis of empirical data. Engineering charts and

Symbols explained on page 35.

## Evening and Special Classes

algebraic checks on solutions of graphical space problems. (Prerequisite: 15 and ITM 12, or ¶12. Repeated spring semester)

### *Fall Semester*

T 6:00-8:00, Architecture 10, Kleinhenz

### *Spring Semester*

T 6:00-8:00, Architecture 10, Kleinhenz

## General Engineering

**\*GE 70. The Slide Rule.** 1 degree credit. \$13.50.

Theory and computation practice necessary for those who wish to use the slide rule in ordinary computations. Drills on fundamental processes. (No prerequisite. Class limited to 25 students. Repeated spring semester)

### *Fall Semester*

T 6:00-7:00, Architecture 40, Ziemke  
T 7:00-8:00, Architecture 40, Ziemke

### *Spring Semester*

T 6:00-7:00, Architecture 40, Ziemke  
T 7:00-8:00, Architecture 40, Ziemke

## Industrial Engineering

*Your attention is called to the Senior Industrial Engineering Technician program; see page 22.*

**IE. Industrial Engineering and Management.** 5 certificate credits. \$45.

A study of the problems and techniques of developing a highly efficient management team for a modern manufacturing concern. Includes discussions on business organization and financing, research and product development, standardization, plant layout and materials handling, production and inventory control, quality control, cost control, labor relations. (No prerequisite. Repeated spring semester)

### *Fall Semester*

T 6:20-9:20, Mechanical Engineering 214

### *Spring Semester*

W 6:20-9:20, Mechanical Engineering 102

**IE. Motion and Time Study.** (Combines materials previously presented in the classes Methods Engineering and Work Measurement) 5 certificate credits. \$45 plus \$1 laboratory fee.

Principles and techniques for effective work methods and analysis. Process charts, flow diagrams, paper work systems, work distribution tables, micromotion study. The role of the worker in the work environment. Fundamentals of work measurement: time study, work sampling, predetermined time systems, and standard data. Discussion of performance rating, number of cycles to study, allowances, and other factors necessary to develop an effective standard. (Prerequisite: ITM 11 or #)

### *Fall Semester*

T 6:20-9:20, Mechanical Engineering 106

### *Spring Semester*

W 6:20-9:20, Mechanical Engineering 208

**IE. Work Measurement.** (Final offering) 3 certificate credits. \$27 plus \$1 laboratory fee.

Principles and techniques of time study to provide factual data for wage incentives, cost accounting and estimating, production scheduling, and management control. Lectures and practice in job standardization, use of stop watch, performance rating, rest and delay allowances, development of standard data and maintenance of current standards. (Prerequisite: Methods Engineering)

### *Fall Semester*

Th 6:20-8:00, Mechanical Engineering 180

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Symbols explained on page 35.

## Course Offerings—Engineering and Technical Sciences

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### **IE. Inventory and Production Control.** 5 certificate credits. \$45.

Development of systems for increasing plant efficiency through effective co-ordination of inventories, manpower, and equipment with sales. Lectures and discussion on sales forecasting, master scheduling, inventory control, work routing, scheduling of operations, dispatching, analysis of equipment requirements. (Prerequisite: ITM 11 or #)

*Fall Semester*

W 6:20-9:20, Mechanical Engineering 208

### **IE. Introduction to Reliability.** 5 certificate credits. \$45.

Concepts of reliability, principles of designing for reliability, nature and causes of failures, experimental procedures associated with reliability investigations, life tests, accelerated life tests, use of field data. (Prerequisite: ITM 90 or #)

*Fall Semester*

T 6:20-9:20, Mechanical Engineering 208

### **IE. Introduction to Operations Research.** (Formerly Introduction to Operations Analysis) 5 certificate credits. \$45.

Formulation, interpretation, and solution of the assignment, transportation, and general linear programming problems. Discussion of problems involving game theory, waiting lines, sequencing, replacement, dynamic and convex programming, and Monte Carlo methods. Applications of these techniques to general industrial problems, and in particular to problems of product mix, distribution, production scheduling, staffing, and simulation. (Prerequisite: ITM 11 or #)

*Spring Semester*

T 6:20-9:20, Mechanical Engineering 214

### **IE. Manufacturing Cost Analysis.** 3 certificate credits. \$27.

A study of sources and uses of cost data to make industrial engineering decisions and to reduce manufacturing costs. Covers basic accounting principles and procedures, accumulation and allocation of costs, and budgeting. (Prerequisite: ITM 11 or #)

*Fall Semester*

Th 6:20-8:00, Mechanical Engineering 102

### **IE. Principles of Engineering Economy.** 5 certificate credits. \$45.

Principles and techniques needed for making decisions about the acquisition and retirement of capital goods by industry. Concepts and methods to be used as guides for decision making by comparing alternative types of financing. (Prerequisite: ITM 11 or #. Manufacturing Cost Analysis is recommended, but not required)

*Spring Semester*

Th 6:20-9:20, Mechanical Engineering 214

### **IE. Statistical Quality Control.** 5 certificate credits. \$45.

Determination of quality requirements and their relation to manufacturing costs. Establishing 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: ITM 11 or #)

*Fall Semester*

M 6:20-9:20, Mechanical Engineering 110,  
McElrath

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Symbols explained on page 35.

## Evening and Special Classes

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### IE. Advanced Statistical Quality Control. 5 certificate credits. \$45.

Variables acceptance sampling, industrial tests of significance, fundamentals of analysis of variance and design of experiments, linear regression, introduction to sequential analysis of data, some nonparametric statistical methods. (Prerequisite: Statistical Quality Control, or ITM 90 or BA 51 or #)

*Spring Semester*

M 6:20-9:20, Mechanical Engineering 110,  
McElrath

### IE. Layout Engineering and Materials Handling Systems. (Not offered 1961-62)

## Mathematics (Institute of Technology)

### Placement Examination in High School Algebra

All students who wish to register for ITM 11, College Algebra and Trigonometry I, must fill out an Application for Admission at time of registration. Only those students who have satisfactorily completed ITM 9, Higher Algebra, or its equivalent in high school or an institution of higher learning (not a trade school) and receive a satisfactory score in the Placement Examination in High School Algebra will be permitted to register. Under some conditions, a student is exempt from the Placement Examination. These conditions are stated in the Application for Admission.

If you have completed ITM 9, Higher Algebra, or its equivalent, register for ITM 11, College Algebra and Trigonometry I, and fill out the Application for Admission. If you are not exempt, take the Placement Examination on one of the dates listed below. You will be advised on or before the first meeting of the class in ITM 11, College Algebra and Trigonometry I, if you must transfer to ITM 9, Higher Algebra. (ITM 9 carries a 5-credit equivalent for purposes of determining a Korean Veteran monthly educational allowance or tuition refund by the Veterans Administration.)

No student will be permitted to stay in ITM 11, College Algebra and Trigonometry I, unless he has completed the necessary prerequisites and has passed or been excused from the Placement Examination in High School Algebra. After the first week of classes *no registrations* will be accepted and *no transfers* permitted *except* in instances in which the student is not qualified to continue. The Placement Examination will be given on the following dates:

#### *Fall Semester*

7:00 p.m., Friday, September 15, Nicholson 211

7:00 p.m., Wednesday, September 20, Nicholson 211

7:00 p.m., Wednesday, September 20, StP Ext Center 3E

#### *Spring Semester*

7:00 p.m., Monday, February 5, Nicholson 211

7:00 p.m., Wednesday, February 7, Nicholson 211

7:00 p.m., Wednesday, February 7, StP Ext Center 2E

### ITM 5. Basic Mathematics. 5 certificate credits. \$45.

A practical course for anyone needing an elementary background in basic mathematics such as shop men in industry or machine work. It is also valuable as a refresher in elementary mathematics. It includes a study of the arithmetic of whole numbers, fractions and decimals; an introduction to algebra and linear equations; other topics selected from elementary algebra, geometry and trigonometry. (Prerequisite: arithmetic. Repeated spring semester)

*Fall Semester*

MTh 6:20-7:45, Main Engineering 229

*Spring Semester*

MTh 6:20-7:45, Main Engineering 229

### ITM 6. Elementary Algebra. Entrance credit. \$54.

Elements of algebra to quadratic equations, equivalent to 1 year of ninth grade algebra. (Prerequisite: arithmetic. Entrance requirement for College of Agriculture, Forestry, and Home Economics;

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Symbols explained on page 35.



## Course Offerings—Engineering and Technical Sciences

College of Veterinary Medicine; College of Science, Literature, and the Arts; and Institute of Technology. Repeated spring semester)

### Fall Semester

MW 6:20-8:00, Main Engineering 203  
TTh 6:20-8:00, Main Engineering 203

### Spring Semester

MW 6:20-8:00, Main Engineering 203  
TTh 6:20-8:00, Main Engineering 203

### ITM 7. Plane Geometry. Entrance credit. \$54.

Elements of plane geometry, equivalent to 1 year of high school plane geometry. (Prerequisite: arithmetic. Entrance requirement for College of Agriculture, Forestry, and Home Economics; College of Veterinary Medicine; College of Science, Literature, and the Arts; and Institute of Technology. Repeated spring semester)

### Fall Semester

MW 6:20-8:00, Main Engineering 206

### Spring Semester

MW 6:20-8:00, Main Engineering 206

### ITM 8. Solid Geometry. Entrance credit. \$27.

Standard theorems and exercises; practice in special proofs and original exercises. (Prerequisite: plane geometry. Entrance requirement for Institute of Technology. Repeated spring semester)

### Fall Semester

M 6:00-7:40, StP Ext Center 2G  
Th 6:20-8:00, Main Engineering 206

### Spring Semester

Th 6:20-8:00, Main Engineering 206

### ITM 9. Higher Algebra. Entrance credit. \$45.

Fundamental operations, linear equations, factoring, fractions, simultaneous linear equations, exponents, radicals, graphical methods, quadratic equations, ratio, variation, binomial theorem, and other topics. (Prerequisite: elementary algebra. Entrance requirement for Institute of Technology. Repeated spring semester)

### Fall Semester

MW 6:20-7:45, Main Engineering 205  
TTh 6:20-7:45, Main Engineering 205  
TTh 6:00-7:25, StP Ext Center 2E

### Spring Semester

MW 6:20-7:45, Main Engineering 205  
TTh 6:20-7:45, Main Engineering 205  
TTh 6:00-7:25, StP Ext Center 2E

### ITM 11. College Algebra and Trigonometry I. 5 degree credits. \$45.

Trigonometric functions, right triangles, slide rule, oblique triangles, vectors, radian measure. Factoring, fractions, functions and graphs, linear equations, exponents and radicals, quadratic equations, systems of quadratic equations, proportion and variation, logarithms. (Prerequisite: 9, or equivalent, and satisfactory score on placement examination in high school algebra; explained on page 128. Repeated spring semester)

### Fall Semester

MW 6:20-7:45, Main Engineering 106  
TTh 6:20-7:45, Main Engineering 104  
TTh 6:00-7:25, StP Ext Center 2F

### Spring Semester

MW 6:20-7:45, Main Engineering 104  
TTh 6:20-7:45, Main Engineering 104  
TTh 6:00-7:25, StP Ext Center 2H

### ITM 12. College Algebra and Trigonometry II. 5 degree credits. \$45.

Inequalities, progressions, logarithmic and exponential equations. Trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations, complex numbers. Theory of equations, permutations, combinations, probability, determinants. (Prerequisite: 11. Repeated spring semester)

### Fall Semester

MW 6:20-7:45, Main Engineering 104  
TTh 6:20-7:45, Main Engineering 106  
MW 6:00-7:25, StP Ext Center 2E

### Spring Semester

MW 6:20-7:45, Main Engineering 106  
TTh 6:20-7:45, Main Engineering 217  
TTh 6:00-7:25, StP Ext Center 2E

Symbols explained on page 35.

## Evening and Special Classes

### **ITM 13A. Calculus I: Analytic Geometry and Calculus. 5 degree credits. \$45.**

Fundamentals of analytic geometry, equation of straight line, graphs and equations. Functions, limits, derivative, applications to velocity, acceleration, geometry. Antiderivatives, rectilinear motion, area. Rules of differentiation, conic sections, maxima and minima, rates, calculus of trigonometric functions. (Prerequisite: 12. Repeated spring semester)

*Fall Semester*

T 6:20-9:20, Main Engineering 227  
W 6:00-9:00, StP Ext Center 2F

*Spring Semester*

M 6:20-9:20, Main Engineering 215  
W 6:00-9:00, StP Ext Center 2F  
TTh 6:20-7:45, Main Engineering 106

### **ITM 24A. Calculus II: Analytic Geometry and Calculus. 5 degree credits. \$45.**

Differentials, parametric equations. Definite integral, mean-value theorem, areas, volumes, work, energy, moments of inertia. Further topics in analytic geometry. Calculus of exponential, logarithmic and hyperbolic functions. Techniques of integration. (Prerequisite: 13A. Repeated spring semester)

*Fall Semester*

T 6:20-9:20, Main Engineering 215

*Spring Semester*

T 6:20-9:20, Main Engineering 227  
W 6:00-9:00, StP Ext Center 2E

### **ITM 25A. Calculus III: Analytic Geometry and Calculus. 5 degree credits. \$45.**

Further applications of integration, polar-coordinates, vectorial treatment of motion in a curve, methods of approximation. Solid analytic geometry with vectors, partial differentiation, multiple integration. (Prerequisite: 24A. Repeated spring semester)

*Fall Semester*

T 6:20-9:20, Main Engineering 229

*Spring Semester*

T 6:20-9:20, Main Engineering 215

### **ITM 26A. Calculus IV. Differential Equations and Calculus. 5 degree credits. \$45.**

Further study of limits, L'Hospital's rule. Sequences, series, Taylor's formula. Convergence, absolute and conditional, improper integrals, power series, expansion of functions. Differential equations; equations of first order; standard methods of solutions; linear equations with constant coefficients, application; simultaneous equations, integration by series, numerical methods. (Prerequisite: 25A. Repeated spring semester)

*Fall Semester*

M 6:20-9:20, Main Engineering 215

*Spring Semester*

T 6:20-9:20, Main Engineering 229

### **ITM 90. Elementary Engineering Statistics. 3 degree credits. \$27.**

Probability, permutations, and combinations. Frequency distributions. Introduction to sampling significance tests, regression charts. (Prerequisite: 24A)

*Fall Semester*

W 6:20-8:00, Main Engineering 227

### **ITM 147. Vector Analysis. 3 degree credits, §ITM 152, 154. \$27.**

Scalar and vector products, derivatives, geometry of space curves, del operator, line and surface integrals, divergence and Stokes' theorem, transformation of co-ordinates, dyadics, applications. (Prerequisite: 25 or 25A)

*Fall Quarter*

Th 6:20-9:00, Main Engineering 227

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Symbols explained on page 35.

## *Course Offerings—Engineering and Technical Sciences*

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**ITM 148. Differential Equations.** 3 degree credits, §ITM 150A. \$27.

Linear differential and difference equations with constant coefficients, isoclines, phase, plane, reduction in order, numerical solutions, series solutions, Bessel functions, Legendre polynomials, introduction to boundary value problems. (Prerequisite: 80 or 26A)

*Winter Quarter*

Th 6:20-9:00, Main Engineering 227

**ITM 149. Determinants and Matrices.** 3 degree credits, §ITM 142. \$27.

Determinants, matrices, linear equations, vector spaces, quadratic and bilinear forms, characteristic roots, applications to systems of ordinary differential equations. (Prerequisite: 25 or 25A)

*Spring Quarter*

Th 6:20-9:00, Main Engineering 227

**ITM 165A. Introduction to Programming Modern Digital Calculators.** 3 degree credits (§ITM 165). \$27 each semester.

Organization of a modern digital calculator. Binary number system. Instruction code, elementary coding, flow charts, techniques for avoiding errors, code checking, scaling, subroutines, assembly techniques, interpretive programs. (Prerequisite: 25 or 25A. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Main Engineering 227

*Spring Semester*

W 6:20-8:00, Main Engineering 305

**ITM 184. Elementary Numerical Analysis in Engineering.** 3 degree credits. \$27.

Finite differences, interpolation, summation of series, numerical integration, Euler-McLaurin formula and asymptotic expansions. Numerical solutions of systems of algebraic and transcendental equations, Newton's and Graeffe's method. (Prerequisite: 26A or 80)

*Fall Quarter*

T 6:20-9:00, Main Engineering 305

**ITM 185-186. Numerical Analysis in Engineering.** 3 degree credits each quarter. \$27 each quarter.

Approximation of functions and least squares. Approximate solution of ordinary and partial differential equations, Moulton's, Runge's relaxation and iteration methods. Calculation of eigenvalues of matrices and differential problems, Rayleigh-Ritz method. Integral equations. Programming of computers. (Prerequisite: 147, 148, 149, 184 or 152, 153, 184 or #)

*Winter Quarter*

185 T 6:20-9:00, Main  
Engineering 305

*Spring Quarter*

186 T 6:20-9:00, Main  
Engineering 305

## **Mechanical Engineering**

*For the first time in several years, the Department of Mechanical Engineering, Institute of Technology, is offering the third-year Upper Division classes ME 30-31-32, Thermodynamics. Satisfactory completion will permit credit toward the B.M.E. and other degrees in the Institute of Technology in accordance with departmental regulations.*

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Symbols explained on page 35.

## Evening and Special Classes

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Your attention is called to the Senior Mechanical Engineering Technician program on page 23.

**ME 30-31-32. Thermodynamics.** 3 degree credits each quarter. \$27 each quarter.

Properties and processes for working fluids in engineering devices. Application of the fundamental laws correlating energy with heat and work. (Prerequisite: ITM 26A or ITM 26A, Phys 14; or completion of courses in integral and differential calculus and sophomore-level college physics)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
30	Th 6:20-9:00, Mechanical Engineering 110	31	Th 6:20-9:00, Mechanical Engineering 110	32	Th 6:20-9:00, Mechanical Engineering 110

**ME. Refrigeration and Air Conditioning I-II.** 5 certificate credits each semester. \$45 each semester.

A course for those engaged in the design, construction maintenance, and sale of refrigeration and air conditioning equipment and systems. Fundamental terms and definitions; air conditioning and refrigeration loads; psychrometry, use of psychrometric chart; air conditioning processes including cooling, dehumidification, heating, and humidification; duct design, centrifugal fans, refrigeration cycles including mechanical compression and absorption; refrigeration equipment including compressors, condensers, evaporators, expansion valves and control; properties of refrigerants; design problems involving estimating requirements and selecting equipment for various air conditioning and refrigeration applications. (Prerequisite: ITM 11 or # for I; for II, I)

<i>Fall Semester</i>		<i>Spring Semester</i>	
I	Th 6:20-9:20, Mechanical Engineering 208	II	Th 6:20-9:20, Mechanical Engineering 208

**ME. Machine Design I-II.** 5 certificate credits each semester. \$45 each semester.

Fundamental principles of design of machine elements: lubrication, theory, and application; friction drives, screws, gears, belts, connectors, flywheels, machine frames, shrink fits, stress concentration, vibration analysis, and application of velocity and acceleration analysis to machine design problems. The course will consist of a series of lectures and problems to be solved in class. Laboratory experiments will be used whenever possible. Special movies will be used. (Prerequisite: ITM 11 or # for I; for II, I)

<i>Fall Semester</i>		<i>Spring Semester</i>	
I	T 6:20-9:20, Mechanical Engineering 308	II	T 6:20-9:20, Mechanical Engineering 308

**\*ME. Machine Tool Fundamentals.** 5 certificate credits. \$45 plus \$3 laboratory fee.

Lecture and laboratory course which covers all types of machines for production such as lathes, drill presses, shapers, milling machines, turret lathes, automatic screw machines, surface grinders, cylindrical grinders, centerless grinders, thread grinders, thread milling machines, jig boring machines, gear hobbers, gear shapers, and profile milling machines. Also topics in tool wear, surface finish, coolants, and metal cutting economics. (Prerequisite: ITM 11 or #. Class limited to 20 students)

<i>Fall Semester</i>	
M	6:20-9:20, Mechanical Engineering 325

**ME. Tool Design.** 5 certificate credits. \$45 plus \$1 laboratory fee.

Lecture and laboratory course which covers tooling methods, selection of best machine for the manufacturing operations, design of jigs and fixtures, tool making procedures, and tool inspection methods. Analysis of piece part blueprints will be made to determine best sequences of manufacturing operation and estimating machining time to manufacture the part. (Prerequisite: ITM 11 or #)

<i>Spring Semester</i>	
T	6:20-9:20, Mechanical Engineering 325

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Symbols explained on page 35.

## Course Offerings—Engineering and Technical Sciences

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### ME. Refresher Course for Mechanical Engineers. Special Class. \$45.

This course is designed for practicing engineers, and will consist of lectures and problems sessions. (Prerequisite: BME or equivalent degree)

*Winter Quarter*

W 6:20-9:20, Mechanical Engineering 106,  
Mechanical Engineering Staff

### ME. Kinematics of Machinery I-II. (Not offered 1961-62)

### ME. Instrumentation and Automatic Control. (Not offered 1961-62)

## Mechanics and Materials

### MM 27. Rigid-Body Mechanics I. 3 degree credits. \$27.

Vector algebra. Application of the equations of equilibrium to the analysis of simple engineering structures and machines. Nature and influence of friction. Elementary theory of statically determinate framed structures. (Prerequisite: ITM 25A; this course may be substituted for 92)

*Fall Semester*

Th 6:20-8:00, Main Engineering 215

### MM 28. Rigid-Body Mechanics II. 3 degree credits. \$27.

Application of the principles of particle motion. Kinematics. Impulse-momentum and work-energy principles. Potential and potential energy, motion in a central force field. Introduction to forced and free mechanical vibrations. (Prerequisite: 27 and ITM 26A or ITM 80)

*Spring Semester*

Th 6:20-8:00, Main Engineering 215

### MM 29. Rigid-Body Mechanics III. 3 degree credits. \$27.

Dynamics of rigid-body motions. Extension of the principles of impulse-momentum and work energy. Euler's equations of motion. The gyroscope. Virtual work. Stability. (Prerequisite: 28)

*Fall Semester*

Th 6:20-8:00, Main Engineering 305

### MM 40. Deformable-Body Mechanics I. 3 degree credits. \$27.

Stress and strain. Applications to tension and torsion members, beams, columns, and joints. Design considerations. Statically indeterminate members. (Prerequisite: 27; this course may be substituted for 93)

*Fall Semester*

T 6:20-8:00, Aeronautical Engineering 211,  
Blatherwick

### MM 41. Deformable-Body Mechanics II. 3 degree credits. \$27.

Stress and strain, and deformation analysis of beams, columns, rings, and cylindrical pressure vessels. (Prerequisite: 40)

*Spring Semester*

T 6:20-8:00, Aeronautical Engineering 211,  
Blatherwick

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Symbols explained on page 35.

## Evening and Special Classes

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### Metallurgy

See Physical Metallurgy, under Specialized Technology Courses, page 135.

### Physics

**Phys 11-12-13. General Physics for Engineers.** 5 degree credits each semester. \$45 plus \$10 laboratory fee each semester.

11: Mechanics; lecture, discussion or laboratory, and quiz each week. 12: Heat, electricity, and magnetism; lecture and laboratory each week. 13: Wave motion, sound and light; lecture and laboratory each week. (Prerequisite: for 11, ITM 11 or ¶ITM 11; for 12, ITM 12 and Phys 11; for 13, ITM 13 or 13A and Phys 12. Courses must be taken in order)

*Fall Semester*

11 MW 6:30-8:30, Physics 150  
13 MW 6:30-8:30, Physics 170, Harris

*Spring Semester*

12 MW 6:30-8:30, Physics 170

**Phys 14-14A. Intermediate General Physics and Physics Laboratory.** 5 degree credits. \$45 plus \$10 laboratory fee. (14 and 14A must be taken concurrently)

Mechanics and electricity, selected topics. Lecture and quiz each week. (Prerequisite: 13, and ITM 24 or 24A or ¶ITM 24A)

*Spring Semester*

MW 6:30-8:30, Physics 166, Harris

**Phys 50-50A. Intermediate General Physics and Physics Laboratory.** 5 degree credits. \$45 plus \$10 laboratory fee. (50 and 50A must be taken concurrently)

Selected topics in modern physics. (Prerequisite: 6 or 9 or 14, and ITM 25 or 25A or ¶25A)

*Fall Semester*

MW 6:30-8:30, Physics 166

### Specialized Technology Courses

**STC. Architectural Drafting I-II-III-IV.** No credit. \$40.50 each unit.

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. Fall semester will include steel construction, all types of steel stresses including trusses. Spring semester will include concrete beams, columns, floor slabs, 1- and 2-way construction. (No prerequisite: Students may register for any unit in any semester with #)

*Fall Semester*

T 7:00-9:30, Main Engineering 302, Johnson

*Spring Semester*

T 7:00-9:30, Main Engineering 302, Johnson

**STC. Designing for Production.** No credit. \$45.

Study of the major engineering materials and principal manufacturing processes together with their influence on the product design and manufacturing processes. Consideration of material and process selection and their relation to the ease of processing, service life, maintenance, and first cost of the product. (No prerequisite)

*Spring Semester*

Th 6:20-9:20, Mechanical Engineering 208

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Symbols explained on page 35.

## *Course Offerings—Engineering and Technical Sciences*

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**STC. Physical Metallurgy I-II.** No credit. \$27 each semester.

An introductory course for those engaged in heat treating, metal working, specification writing, inspection or dealing in metal products. The structure of metals and alloys and the effect of working and heat treatment on structure and properties; steels, cast irons, surface treatments, and nonferrous alloys. This is a lecture course. No laboratory work involved. (No prerequisite for I; for II, I)

*Fall Semester*

I M 6:20-8:00, Mines and Metallurgy 116,  
Jerabek

*Spring Semester*

II M 6:20-8:00, Mines and Metallurgy 116,  
Jerabek

**\*STC. Plastics Technology.** No credit. \$45 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. Class limited to 20 students)

*Fall Semester*

Th 6:20-9:20, Mechanical Engineering 106

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Symbols explained on page 35.

# RECREATION

*Note that the recreational activities are offered in five groups: for girls only, for boys only, for boys and girls, for women only, and for men only. Recreation classes carry no credit and require no prerequisite. A health examination is required for admission to all recreation classes except golf.*

Registration for all children's swimming classes must be made by mail. If you have not received an Application Form, please telephone—*do not write*—the campus office, FEderal 8-8791. The envelope containing your application must be postmarked *at or after* 1 p.m., Friday, September 1, for fall classes and cannot be considered for acceptance if postmarked after September 8 unless openings are available. Applications for spring classes must be postmarked *at or after* 1 p.m., Friday, January 19, 1962, for spring classes and cannot be considered for acceptance if postmarked after January 26 unless openings are available.

## Activities Open to Girls

*A health examination is required of all girls taking recreation classes. Each child must bring a letter from her own physician stating approval of the activity in which she is registered.*

### \*Swimming for Small Girls. Special Class. \$17 plus \$2 special fee.

A course in swimming for girls between the ages of 6 and 12 years. Each girl must bring a permit for swimming from her own doctor; no one will be allowed in the pool without permit. First meeting will be for the purpose of classifying swimmers into the following groups: Beginners; Advanced Beginners (those who swim with ease in shallow water); Intermediates (those who swim with ease in deep water); Advanced (those who wish to learn advanced strokes—both synchronized and speed—and spring board diving). Swimmers may bring their own suits. Caps are required for all swimmers. (Each section limited to 20 girls)

	<i>Fall Semester</i>		<i>Spring Semester</i>
Beginners		Beginners	
S	8:45-9:30, Norris Gym 51, Lampe	S	8:45-9:30, Norris Gym 51, Lampe
S	11:00-11:45, Norris Gym 51, Lampe	S	11:00-11:45, Norris Gym 51, Lampe
S	11:45-12:30, Norris Gym 51, Lampe	S	11:45-12:30, Norris Gym 51, Lampe
Advanced Beginners		Advanced Beginners	
S	9:30-10:15, Norris Gym 51, Lampe	S	9:30-10:15, Norris Gym 51, Lampe
S	10:15-11:00, Norris Gym 51, Lampe	S	10:15-11:00, Norris Gym 51, Lampe
Intermediates		Intermediates	
S	10:15-11:00, Norris Gym 51, Starr	S	10:15-11:00, Norris Gym 51, Starr
S	11:00-11:45, Norris Gym 51, Starr	S	11:00-11:45, Norris Gym 51, Starr
Advanced		Advanced	
S	9:30-10:15, Norris Gym 51, Starr	S	9:30-10:15, Norris Gym 51, Starr

Symbols explained on page 35.



## Activities Open to Boys

**Swimming for Boys. Special Class. \$17 plus \$2 special fee.**

A course in swimming for boys between the ages of 6 and 12 years who are at least 48 inches tall. Each boy must bring a permit for swimming from his own doctor and furnish his own towel. Swimming suits are not worn. Each boy should be registered for an appropriate section according to his estimated ability. Sections are classified as follows: Nonswimmers; Beginners—those who can swim, but not 10 yards; Advanced Beginners—those who can swim 10 yards, but not in deep water; Intermediates—those who can swim 25 yards in deep water; Advanced Intermediates—those who can swim 25 yards of 2 or more strokes; Advanced. The first meeting will be used for the purpose of reclassifying swimmers where necessary.

### Spring Semester

Nonswimmers	S 9:00-9:45, Cooke Hall, Heusner
Beginners	S 9:45-10:30, Cooke Hall
	S 10:30-11:15, Cooke Hall
Advanced Beginners	S 11:15-12:00, Cooke Hall
Intermediates	S 9:45-10:30, Cooke Hall, Heusner
Advanced Intermediates	S 10:30-11:15, Cooke Hall, Heusner
Advanced	S 11:15-12:00, Cooke Hall, Heusner

## Activities Open to Boys and Girls

**\*Swimming for Boys and Girls. Special Class. \$17 plus \$2 special fee.**

A course in swimming for children, beginners and advanced beginners. Children must be at least 7 years of age and at least 46 inches tall. Each child should bring a permit from his family doctor and furnish his own suit and towel. Woolen suits are not permitted. (Each section limited to 20 students)

### Spring Semester

Beginners	S 9:00-9:40, StP Gymnasium, Nowotny
	S 9:40-10:20, StP Gymnasium, Nowotny
Advanced Beginners	S 10:20-11:00, StP Gymnasium, Nowotny
	S 11:00-11:40, StP Gymnasium, Nowotny

## Activities Open to Women

*A health examination is required for all recreation classes except golf. A physician will be available at Norris Gymnasium for Women at the first class meeting only. The cost of the health examination is 75 cents. Anyone not taking the health examination must bring a letter from her own physician stating approval of the activity in which she is registered. Information about lockers will be given at the first class meeting. In swimming classes, a sterilized suit and towel are provided for each swimmer.*

**\*Golf (Beginning)—for Women. Special Class. \$17 plus \$2 special fee.**

For those who have no previous experience. Class and individual instruction in the fundamentals of golf. Discussion of rules, golf etiquette, and terminology. As much instruction as possible to be

Symbols explained on page 35.

## Evening and Special Classes

given in the spring at University Golf Course, weather permitting. Students furnish own clubs for outdoor play, and two golf balls. (Each section limited to 20 students)

### *Spring Semester*

T 5:45-6:30, Norris Gym 60, Cochrane  
T 6:30-7:15, Norris Gym 60, Cochrane  
W 5:45-6:30, Norris Gym 60, Lampe  
W 6:30-7:15, Norris Gym 60, Lampe  
Th 5:45-6:30, Norris Gym 60, Lampe  
Th 6:30-7:15, Norris Gym 60, Lampe

### **\*Golf (Intermediate)—for Women. Special Class. \$17 plus \$2 special fee.**

A review of the fundamentals (as listed for Beginning Golf) with the work of the class planned to meet individual needs. Students furnish own clubs for outdoor play, and two golf balls. (Prerequisite: some knowledge of and experience in golf. Each section limited to 20 students)

### *Spring Semester*

T 7:15-8:00, Norris Gym 60, Cochrane  
W 7:15-8:00, Norris Gym 60, Lampe  
Th 7:15-8:00, Norris Gym 60, Lampe

### **\*Swimming (Beginning)—for Women. Special Class. \$17 plus \$2 special fee.**

For those who have had no previous experience in swimming. A health examination will be given at the first class meeting. (Each section limited to 25 students. Repeated spring semester)

#### *Fall Semester*

T 5:45-6:30, Norris Gym 51, Tinker

#### *Spring Semester*

T 5:45-6:30, Norris Gym 51, Stoner

### **\*Swimming (Advanced Beginning)—for Women. Special Class. \$17 plus \$2 special fee.**

For those able to float and swim slightly but who are not yet at home in deep water. A health examination will be given at the first class meeting. (Each section limited to 25 students. Repeated spring semester)

#### *Fall Semester*

T 6:30-7:15, Norris Gym 51, Tinker

#### *Spring Semester*

T 6:30-7:15, Norris Gym 51, Stoner  
W 6:30-7:15, Norris Gym 58, Hannah

### **\*Swimming (Intermediate)—for Women. Special Class. \$17 plus \$2 special fee.**

For those who are able to swim in deep water but wish to perfect their swimming strokes. Instruction in diving is included. (Each section limited to 25 students)

#### *Spring Semester*

T 5:45-6:30, Norris Gym 58, Tinker

### **\*Swimming (Intermediate-Advanced)—for Women. Special Class. \$17 plus \$2 special fee.**

For those who are able to swim in deep water but wish to perfect their swimming strokes. Instruction in diving is included. (Each section limited to 25 students)

#### *Fall Semester*

T 5:45-6:30, Norris Gym 58, Stoner

### **\*Swimming (Advanced, Synchronized and Diving)—for Women. Special Class. \$17 plus \$2 special fee.**

For those who wish to learn advanced swimming strokes, synchronized swimming, and spring-board diving. (Each section limited to 25 students)

#### *Spring Semester*

T 6:30-7:15, Norris Gym 58, Tinker

Symbols explained on page 35.

**Swimming for Teen Agers (14-18)—for Girls. Special Class. \$17 plus \$2 special fee.**

Content arranged according to interest and ability of the group. Includes techniques in form, synchronized swimming and stunts, and competitive swimming.

*Fall Semester*

T 6:30-7:15, Norris Gym 58, Stoner

*Spring Semester*

W 5:45-6:30, Norris Gym 58, Hannah

**Tennis (Beginning)—for Women. Special Class. \$17 plus \$2 special fee.**

Group and individual instruction. First 11 weeks of instruction given indoors; last 6 weeks at the University tennis courts. Individual practice for the improvement of strokes. Students furnish own tennis rackets and balls. Tennis permits are necessary if University courts are used. (Consult instructor)

*Spring Semester*

W 5:45-6:30, Norris Gym 151, Lamb

W 6:30-7:15, Norris Gym 151, Lamb

**Activities Open to Men**

**\*Golf—for Men. Special Class. \$17 plus \$2 special fee.**

The fundamentals of golf. The first 8 or 10 meetings will be held in the golf gymnasium; the last 6 meetings will be held, weather permitting, at the University Golf Course. The outdoor schedule is adjusted to light. Students will furnish their own clubs and a minimum of five golf balls. (Each section is limited to 20 men)

*Spring Semester*

M 6:00-7:00, South Tower, Stadium, Anderson

M 7:00-8:00, South Tower, Stadium, Anderson

M 8:00-9:00, South Tower, Stadium, Anderson

T 6:00-7:00, South Tower, Stadium, Anderson

T 7:00-8:00, South Tower, Stadium, Anderson

T 8:00-9:00, South Tower, Stadium, Anderson

**Swimming—for Men. Special Class. \$17 plus \$2 special fee.**

Class and individual instruction for beginners in all swimming strokes, in diving, and in fundamentals of lifesaving. Woolen bathing suits are not permitted. Each person must bring a permit for swimming from his own physician. Other sections arranged on demand.

*Spring Semester*

W 8:05-8:50, Cooke Hall, Giles

## Classes Listed by Quarters

*Classes are listed here by quarters for convenience in planning your program. Please do not register using this list alone. Look up the class on the page referred to in the list.*

### Fall Quarter

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Art 2, page 49  
Art 50, page 49  
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Art Education 17, page 114

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## Faculty

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*Owing to uncertainties of some departments as to future staff and unavoidable last minute additions and changes, this list is necessarily incomplete.*

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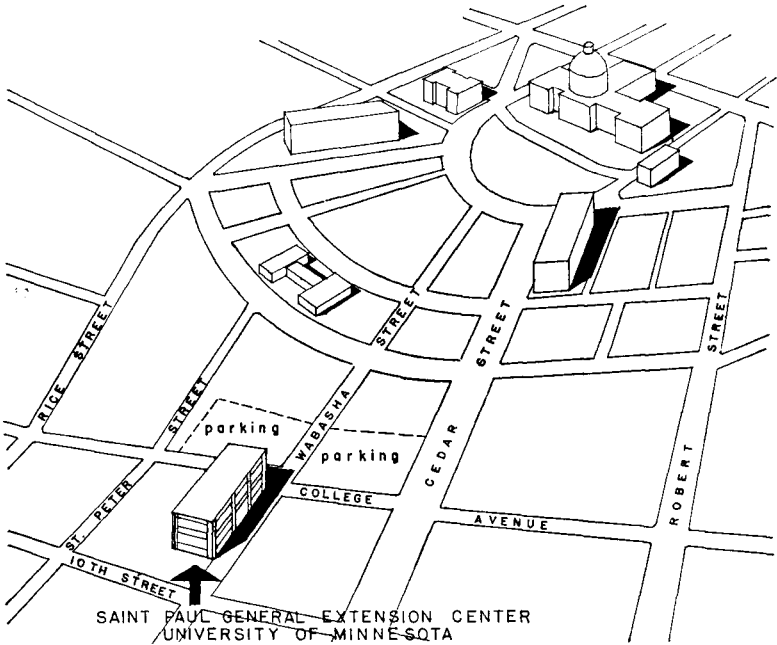
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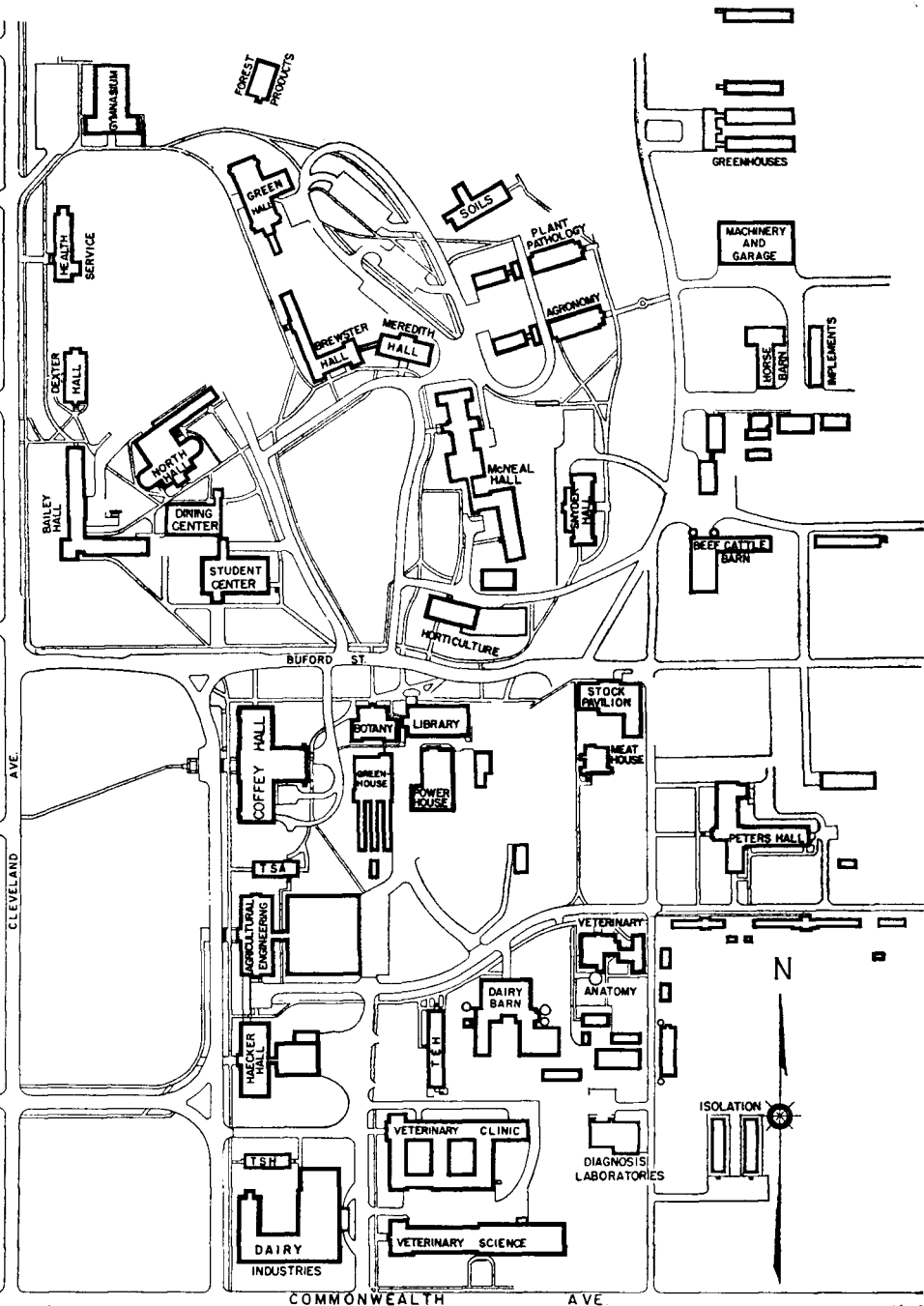
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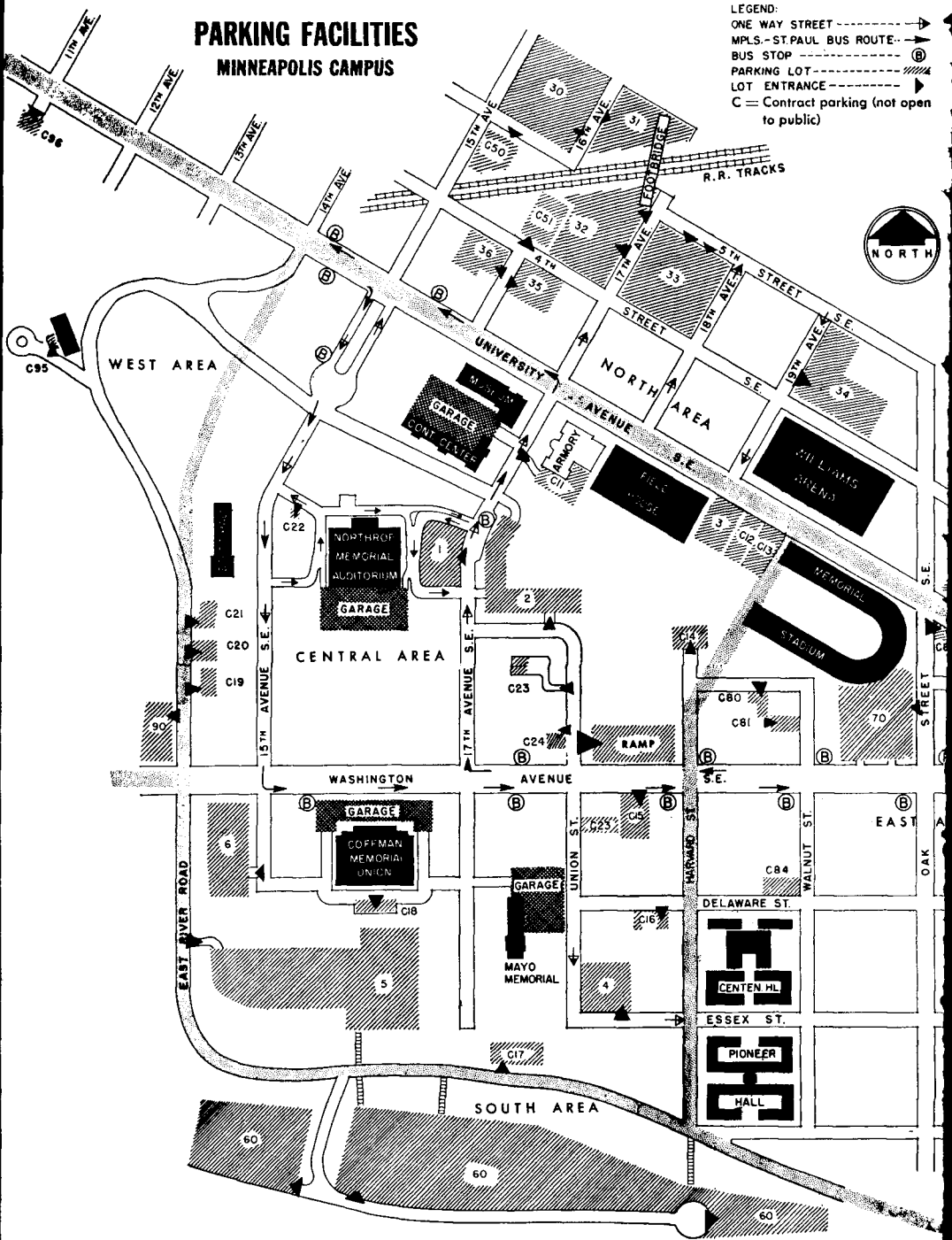
The ST. PAUL EXTENSION CENTER of the University is located in downtown St. Paul, at the intersection of Wabasha Street and College Avenue, at the foot of the Capital Approach. Most St. Paul Evening Classes are held in this building.



# ST. PAUL CAMPUS

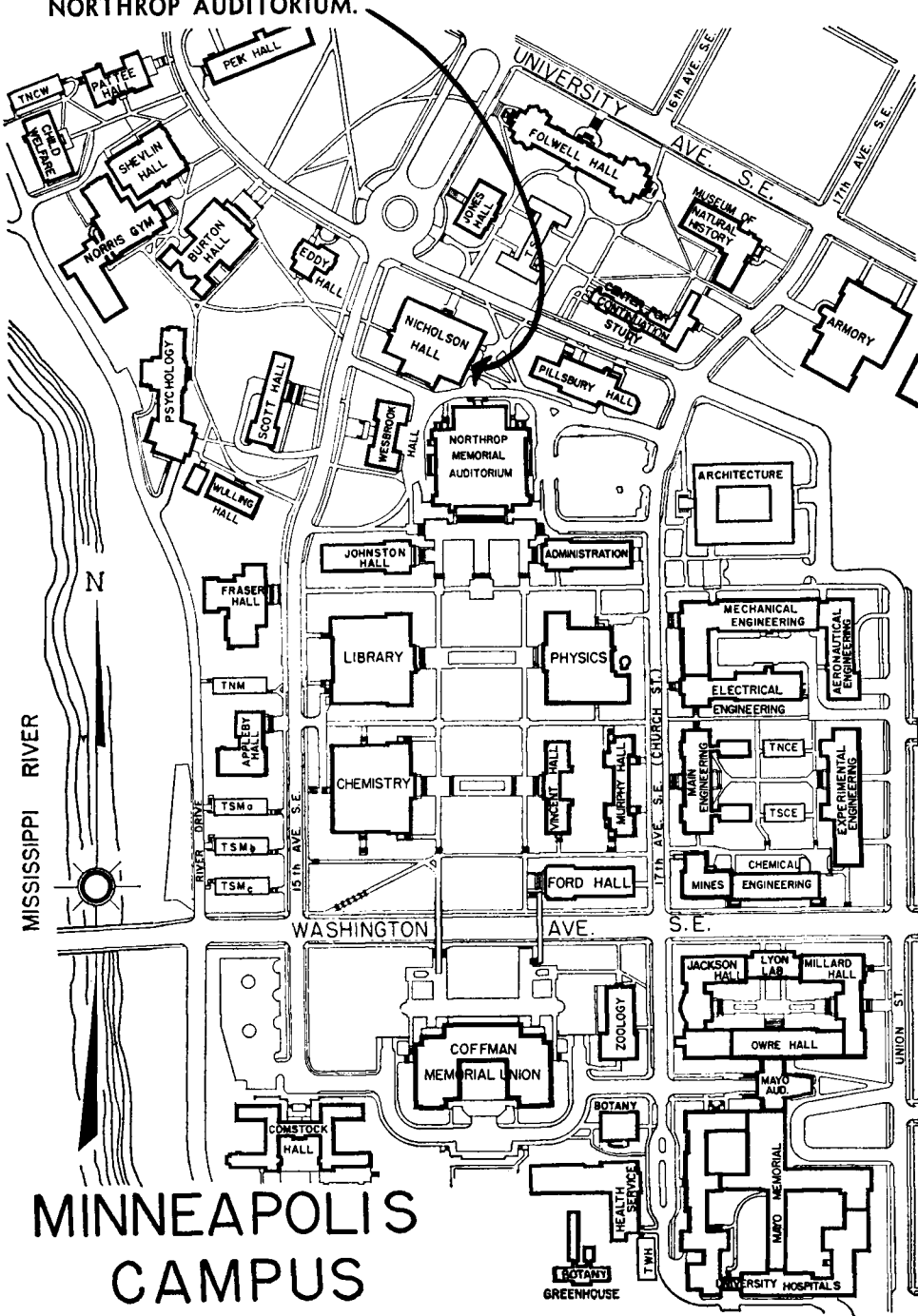
# PARKING FACILITIES MINNEAPOLIS CAMPUS

- LEGEND:  
 ONE WAY STREET ----->  
 MPLS.-ST. PAUL BUS ROUTE - (B)  
 BUS STOP - (B)  
 PARKING LOT - (hatched area)  
 LOT ENTRANCE - (arrow)  
 C = Contract parking (not open to public)





The MAIN OFFICE of the GENERAL EXTENSION DIVISION is located in NICHOLSON HALL. Students should use entrance immediately behind NORTHROP AUDITORIUM.



# MINNEAPOLIS CAMPUS

## **Other Services of the General Extension Division . . .**

### **Audio-Visual Extension Service**

operates a large library of films, film strips, and slides available on a rental basis to schools, organizations, and individuals, offers advisory service and conducts institutes and workshops throughout the state. For information, contact: Audio-Visual Extension Service, 115 TSMa, University of Minnesota, Minneapolis 14.

### **Center for Continuation Study**

presents institutes and short courses in professional and postgraduate, business, and cultural fields. For information, contact: Center for Continuation Study, University of Minnesota, Minneapolis 14.

### **Correspondence Study**

offers some 300 high school, collegiate, and general courses by home study, designed to be used toward University degrees or certificates, for occupational advancement, or for development of special interests of the individual. For a bulletin, contact: Correspondence Study Department, 251 Nicholson Hall, University of Minnesota, Minneapolis 14.

### **Municipal Reference Bureau**

co-operates with the League of Minnesota Municipalities in supplying information about city and village affairs to civic officials and others interested. For information, contact: Municipal Reference Bureau, 15 Walter Library, University of Minnesota, Minneapolis 14.

### **Radio and Television Broadcasting (KUOM)**

broadcasts educational, musical, news, and sports programs to the Upper Midwest; its staff produces educational telecasts which may be shown on educational or commercial stations. For a schedule, contact: KUOM, 1 Eddy Hall, University of Minnesota, Minneapolis 14.

### **State Organization Service**

assists voluntary nonprofit associations on a community or statewide basis by supplying them with secretarial, mimeograph, mailing, and general organizational services, subject matter aid, and space. For information, contact: State Organization Service, 15th and Washington Avenues Southeast, University of Minnesota, Minneapolis 14.

### **University of Minnesota Program Service**

brings concerts, lectures, and assembly programs to audiences of the area and maintains a drama advisory service and loan play library. For information, contact: University Program Service, 229 Northrop Memorial Auditorium, University of Minnesota, Minneapolis 14.