

XI  
*Evening and Special Classes, 1959-1960*

General Extension  
Division



Twin Cities Area

Bulletin

*of the UNIVERSITY of MINNESOTA*

# UNIVERSITY OF MINNESOTA

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## GENERAL EXTENSION DIVISION

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Eleanor M. Salisbury, M.A., Assistant to the Dean; Co-ordinator of Scholastic and Counseling Services; Secretary of Committee on Student Scholastic Standing

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, Eleanor M. Salisbury, and James E. Spear.

## GENERAL EXTENSION DIVISION OFFICES

*University Campus:* Southeast entrance, Nicholson Hall, University of Minnesota, Minneapolis 14, Federal 8-8791.

*Minneapolis:* 690 Northwestern Bank Building, Marquette Avenue and Sixth Street South, Minneapolis 2, Federal 2-0624.

*St. Paul:* Second floor, 555 Wabasha Street, St. Paul 2, Capital 2-6175.

*Duluth:* 110 New Garrick Building, 128 West First Street, Duluth 2, Randolph 2-1745.

## TWIN CITIES OFFICE HOURS

Special office hours are in effect at all three extension offices during the *semester registration* periods: weekdays, 12:30 p.m. to 8 p.m.; Saturday, 9 a.m. to 3 p.m. See the Calendar on page 4 for quarter registration office hours.

Throughout the remainder of the academic year, hours differ at the three Twin Cities offices.

The University campus office hours are as follows: Monday through Thursday, 8 a.m. to 12 noon and 1 p.m. to 8 p.m.; Friday, 8 a.m. to 12 noon and 1 p.m. to 5 p.m.; closed Saturday. During the Christmas recess and the spring recess, the office will close at 5 p.m. daily. During the summer recess, the office is open Monday through Friday from 7:45 a.m. to 12 noon and from 1 p.m. to 4:30 p.m.

The Minneapolis and St. Paul office hours are as follows: Monday through Friday, 8 a.m. to 1 p.m. and 2 p.m. to 4:30 p.m.; closed Saturday. Either office may be closed without notice for short periods of time during the summer.

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## GENERAL EXTENSION DEPARTMENT HEADS AND DIRECTORS

Audio-Visual Extension Service, Erwin C. Welke, 121 First Temporary, South of Mines

Center for Continuation Study, Fred E. Berger, 136 Center for Continuation Study Building

Correspondence Study, F. Lloyd Hansen, 251 Nicholson Hall

Evening and Special Classes, Huntington Miller, 54 Nicholson Hall

Municipal Reference Bureau, Orville C. Peterson, 15 Walter Library

Radio and Television Broadcasting (KUOM), Burton Paulu, 1 Eddy Hall

State Organization Service, William C. Rogers, 104 Third Temporary, South of Mines

University of Minnesota Program Service, James S. Lombard, 229 Northrop Memorial Auditorium

## CALENDAR

### 1959

September	14	Monday	<b>Fall quarter and semester registration begins.</b> (Special office hours: weekdays, 12:30 p.m. to 8 p.m.; Saturday, 9 a.m. to 3 p.m.)
September	23	Wednesday	<b>Registration closes;</b> all fees due. Special fees for late registration in effect at midnight; mail registrations postmarked after midnight liable for late fee.
September	24-26	Thursday, Friday, Saturday	Registration offices closed; no registrations accepted.
September	28	Monday	<b>Fall quarter and semester classes begin.</b> (All offices resume regular hours, listed on page 3.)
November	11	Wednesday	Veterans' Day, holiday.
November	26	Thursday	Thanksgiving Day, holiday.
December	14-18	Monday- Friday	Final examination for fall quarter.
December	19	Saturday	<b>Fall quarter closes;</b> Christmas recess begins for all classes.
December	28	Monday	<b>Winter quarter registration begins.</b> (Office hours: all offices, December 28-31, 8 a.m. to 5 p.m.; campus office, January 4-7, 8 a.m. to 8 p.m., January 8, 8 a.m. to 5 p.m.; Minneapolis office, January 4-8, 8 a.m. to 5 p.m.; St. Paul office, January 4-8, 8 a.m. to 8 p.m.)

### 1960

January	1	Friday	New Year's Day, holiday.
January	4	Monday	<b>Winter quarter classes begin;</b> fall semester classes resume.
January	8	Friday	<b>Winter quarter registration closes;</b> all fees due. Mail registrations postmarked after midnight will not be accepted.
February	1	Monday	<b>Spring semester registration begins.</b> (Special office hours: weekdays, 12:30 p.m. to 8 p.m.; Saturday, 9 a.m. to 3 p.m.)
February	1-5	Monday- Friday	Final examinations for fall semester.
February	6	Saturday	<b>Fall semester closes;</b> semester recess begins for semester classes only.
February	10	Wednesday	<b>Spring semester registration closes;</b> all fees due. Special fees for late registration in effect at midnight; mail registrations postmarked after midnight liable for late fee.
February	11-13	Thursday, Friday, Saturday	Registration offices closed; no registrations accepted.
February	12	Friday	Lincoln's Birthday, holiday.
February	15	Monday	<b>Spring semester classes begin.</b> (All offices resume regular hours, listed on page 3.)
February	22	Monday	Washington's Birthday, holiday.
March	14-18	Monday- Friday	Final examinations for winter quarter.
March	19	Saturday	<b>Winter quarter closes;</b> spring recess begins for quarter classes only.
March	21	Monday	<b>Spring quarter registration begins.</b> (Office hours: all offices, March 21-25, 8 a.m. to 5 p.m.; campus office, March 28-31, 8 a.m. to 8 p.m., April 1, 8 a.m. to 5 p.m.; Minneapolis office, March 28 to April 1, 8 a.m. to 5 p.m.; St. Paul office, March 28 to April 1, 8 a.m. to 8 p.m.)
March	28	Monday	<b>Spring quarter classes begin.</b>
April	1	Friday	<b>Spring quarter registration closes;</b> all fees due. Mail registrations postmarked after midnight will not be accepted.
April	15	Friday	Good Friday, holiday.
May	30	Monday	Memorial Day, holiday.
June	6-10	Monday- Friday	Final examinations for spring quarter and spring semester.
June	11	Saturday	<b>Spring quarter and semester close;</b> summer recess begins.

Classes meet on all holidays not designated in the calendar, unless instructor advises to the contrary. Opening and closing dates for classes on other than semester or quarter basis are indicated below description of each class. Registration should be made during the 2 weeks preceding the opening of such classes. See pages 23 to 27 for registration regulations.

# Contents

(Also see Index, pages 130, 131, 132)

	Page
I. Information .....	6
General Information .....	6
Admission Requirements .....	6
University Degree Programs .....	6
Extension Certificate Programs .....	10
Credits .....	20
Prerequisites .....	21
Grades .....	21
Probation .....	22
Auditors .....	22
Committee on Student Scholastic Standing .....	23
Special Classes and Short Courses .....	23
Correspondence Study Courses .....	23
Registration Regulations and Fees .....	23
How to Use This Bulletin for Registering .....	23
Symbols .....	24
Registration Periods .....	24
Present or Former University Day-School Students .....	24
Work Load .....	25
Tuition and Fees .....	25
Late Registrations and Additions .....	25
Transfers .....	25
Limited Classes .....	25
Cancellations and Refunds .....	26
Special Information for Veterans and Members of the Armed Forces .....	27
Special Services for Students .....	31
Program Advising and Personal Counseling .....	31
Extension Student Loan Fund .....	31
Aids for Handicapped Students .....	32
Classes for Foreign-Born Students .....	32
University Library .....	32
Coffman Memorial Union .....	32
Convocations .....	32
University Theater, Artists Course, and Special Lectures .....	32
Minneapolis Symphony Orchestra .....	33
Athletic Facilities .....	33
Season Athletic Tickets .....	33
II. Course Offerings .....	
Agriculture .....	34
Arts and Sciences .....	36
Business Administration .....	77
Education .....	98
Engineering and Technical Sciences .....	101
Recreation .....	120
Classes Listed by Quarters .....	124
Faculty .....	125
Index .....	130
Maps .....	133
Other Services of the General Extension Division .....	back cover

# EVENING AND SPECIAL CLASSES

## Twin Cities Area

(An index will be found on pages 130, 131, 132)

### I. Information

This bulletin is organized in two major sections. The first section includes general information, registration regulations, special information for veterans, and special services for all evening class students. The second section or main body of the bulletin lists the course offerings under 6 headings: Agriculture, Arts and Sciences, Business Administration, Education, Engineering and Technical Sciences, Recreation. Quarter class listing, faculty, index, and maps will be found at the back of the bulletin.

#### GENERAL INFORMATION

##### Admission Requirements

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 21. Service veterans may register under Public Laws 550 and 894. See Special Information for Veterans and Members of the Armed Forces, page 27.

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 28 for special instructions.

##### 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 undergraduate 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 bachelor of business administration (B.B.A.). See below.

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 counseling at the Lower Division level and securing a counselor 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.

Candidates for graduate degrees are referred to the section on Graduate Degrees, page 21.

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

Listed below, in abbreviated form, are basic requirements for the freshman and sophomore years of some selected degree programs.

### College of Science, Literature, and the Arts

The B.A. degree (180 credits) and the A.L.A. degree (90 credits) are available from the College of SLA through evening classes.

#### Course Requirements for Admission to Upper Division

**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	Additional amount required in college
None	15 credits in 1 language
1 year	(a) 10 credits in same language or (b) 15 credits in different language
2 years in 1 language	(a) 5 credits in same language or (b) 10 credits in different language
3 or more years in 1 language	No college requirement if the high school work is validated by the appropriate college department
2 years in each of 2 languages	No college requirement if 1 language is validated at the 2-year level by the appropriate college department

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

1. Anthropology
2. Economics and Business Administration (only BA 1 and 5 accepted)
3. Geography
4. History
5. Political Science
6. Psychology
7. Sociology
8. Social Science (in Interdepartmental Courses and General Education Department)

## Evening and Special Classes

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**D. Courses in Natural Science Departments:** 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 a department to count.

1. Biological sciences: botany, psychology, zoology, General Biology
2. Physical sciences: astronomy, chemistry, geology, physics, Physical World
3. Mathematics (except H, 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. Courses in Humanistic Departments:** At least 15 credits from 2 or more of the following categories. At least 5 credits must be offered from 1 category to count.

1. Art
2. English literature
3. Foreign literature
4. History
5. Humanities
6. Mathematics (except H, 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 PubH 3 or equivalent.

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

### Requirements for the A.L.A. Degree

1. You must earn at least 90 credits in SLA courses, exclusive of quality credits. Grade points are not a factor in this degree.

2. You must earn the degree in not more than 7 quarters of University residence. If you enter the college with advanced standing, you must spend the last 3 quarters before graduation in residence and must earn at least 45 of the required credits in residence. (A student taking the majority of his work on this degree through Extension may, upon petition to SLA, have the 7-quarter requirement waived. But he must be admitted to SLA before completing the final 45 credits of the degree.)

3. You must meet the requirements (listed above as Upper Division admission requirements) in English (A) and at least 3 of the other 4 group requirements: Foreign Language (B); Social Science (C); Natural Science (D); and Humanistics (E). (If you were admitted to SLA before June 1, 1957, you may petition the Scholastic Committee to substitute the old Plan I or Plan II in meeting these requirements.)

### School of Business Administration

The bachelor of science in business (B.S.B.) and the bachelor of science in economics (B.S.E.) are available from business administration through evening classes. The bachelor of business administration (B.B.A.) is also available for a limited time.

Students entering the University prior to the fall of 1958 or entering the School of Business Administration prior to the fall of 1960 may choose to meet the requirements of either the B.S.B., the B.S.E., or the B.B.A. degrees. Those

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†† Introductory natural science courses which count toward the laboratory requirement are: Biol 1-2-3; 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. Nonlaboratory 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.



entering the University in the fall of 1958 or thereafter or entering the School of Business Administration in the fall of 1960 or thereafter may not choose the B.B.A. degree, which is being discontinued.

For all 3 degree programs, the first 90 credits (of the 180 total credit requirement) are taken in the College of Science, Literature, and the Arts.

*Prebusiness Course Requirements for the B.S.B. Degree*

- 1. Business and Economics:** BA 1, Business and the American Economy; BA 5, Elements of Statistics; BA 24-25-26, Principles of Accounting; Econ 1-2, Principles of Economics.
- 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, and 31C or 31D (with required score); or exemption.
- 3. Mathematics:** Math 10 or equivalent (college algebra level).
- 4. Social Sciences:** 15 credits†† in 2 or more of the following departments (at least 5 credits taken in a department to count): anthropology, geography, history, political science, psychology, sociology (except Soc 45). SSci 1-2-3 and 5 credits in 1 of the above departments will satisfy this requirement.
- 5. Natural Sciences:** 8 credits in 1 of the following 2 groups:
  - a. Biological sciences: biology, botany, zoology;
  - b. Physical sciences: chemistry, geology, physics, NSci 4-5-6 (Physical World).All courses must include laboratory to meet this requirement.
- 6. Humanities:** 9 to 15 credits†† in 2 or more of the following departments (at least 5 credits taken in a department to count): art, English literature, foreign literature, history, humanities, music, philosophy, speech and theater arts (except Spch 3, 6, 9 and 39), 1 foreign language.
- 7. Electives:** Sufficient to complete the minimum of 90 credits required for admission.

Students planning to enter the accounting program are required to complete the following courses in addition to those specifically listed above: Comp 27, Advanced Writing; Math 40, Mathematical Analysis I, or equivalent.

*Prebusiness Course Requirements for the B.B.A. Degree*

- 1. Freshman English:** Engl A-B-C or Engl 1A-2A-3A or Engl 1B-2B-3B or Comm 1-2-3 or exemption.
- 2. Mathematics:** Math 10 or equivalent (college algebra level).
- 3. Natural Sciences:** 9 credits in mathematics or 1 of the following laboratory sciences: botany, chemistry, geology, physics, zoology, psychology with laboratory; or NSci 1-2-3; or NSci 4-5-6; or NSci 7-8-9.
- 4. Social Sciences:** 8 credits in 1 of the following: anthropology, geography, history, political science, sociology; or SSci 1-2-3.
- 5. Economics:** Econ 1-2, Principles of Economics; BA 5, Elements of Statistics; BA 24-25-26, Principles of Accounting.
- 6. Electives:** Additional credits to make a total of 90. (In selecting electives, students should include such courses as may be prerequisite to advanced courses required in special sequences in the School of Business Administration.)

*Prebusiness Course Requirements for the B.S.E. Degree*

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

†† If courses in history are used to satisfy the requirements in one area, courses from the same department may not be used to satisfy the requirements in a second area. Courses in Inter-departmental Courses and General Education (humanities, natural science, and social science) may be used to satisfy requirements in only 1 of the 3 areas, 4, 5, and 6.

## Evening and Special Classes

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2. **Mathematics:** *Economics major*—10 credits, including Math 10 or equivalent (college algebra level). *Statistics major*—mathematics through Math 40 or equivalent (analytic geometry level).
3. **Political Science or History:** 9 credits.
4. **Philosophy:** Phil 1 or 2.
5. **Economics:** Econ 1-2; Principles of Economics; BA 5, Elements of Statistics.
6. **Additional Requirements:** *Economics major only*—10 credits additional mathematics or laboratory science; *Statistics major only*—BA 24-25-26, Principles of Accounting.
7. **Electives:** Additional credits to make a total of 90.

### Extension Certificate Programs

The General Extension Division awards certificates for the satisfactory completion of approved programs of study. The work may be done in evening classes, correspondence study courses (see page 23), or both. Day school or Summer Session credits from the University of Minnesota are approved where applicable. A student may also transfer credits from other accredited institutions provided a minimum of 25 per cent of the credits required for the certificate is earned at the University of Minnesota. For advice or information on programs of study leading to certificates, including *transfer of credits*, consult a member of the Committee on Student Scholastic Standing.

Certificates are awarded to students who complete with a C average any of the following programs of study, upon the application of the student and the recommendation of the Committee on Student Scholastic Standing. In any of the certificate programs, the "core requirement" must be fulfilled by all applicants. These courses need not, however, be taken in order, except as prerequisites make it necessary.

Students are urged to make application for the certificate programs as soon as they have determined that they are pursuing such programs.

Students expecting to receive certificates at the conclusion of any evening class term must so notify the Committee on Student Scholastic Standing on a Certificate Application form available from any Extension office at the *beginning* of such term. Senior certificates are awarded at regular University commencement exercises three times during the academic year. All certificates are dated as of a University commencement date.

### Liberal Arts Certificate

(45 credits)

#### *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, 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

(45 credits)

The Interior Design Certificate is awarded upon successful completion of a program of courses in interior design and related fields, totaling 45 credits. 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.

### Core requirement:

Art 83A—Interior Design I	Architectural Drafting I
Art 84A—Interior Design II	(or) Home Design and Planning
Art 103A—Seminar in Interior Design I	Review of Business English
Art 104A—Seminar in Interior Design II	(or) Engl 1B—Freshman English
Art 1—Introduction to Art	Business Correspondence
	Psy 1A—Application of Psychology to Living

*Spread requirement:* not more than two 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    | 3. Ceramics, Sculpture, Weaving   |
| 2. Design, Drafting, Color Photography | 4. French, Humanities, Psychology |

## Public Administration Certificate

(45 credits)

### Core requirement:

Pol 1-2—American Government and Politics	Pol 62—Public Personnel Administration
Pol 60—Organization and Management	Pol 63—Public Financial Administration

*Spread requirement:* at least 15 credits in the following courses:

Pol 58—Governmental Accounting	Pol 73—City and County Planning
Pol 61—Municipal Law and Administration	Pol 76—Business and Government
Pol 64—Employee Training Techniques	Pol 77—Administrative Regulation
Pol 66—Practice of Public Administration	Pol 78—Administrative Responsibility
Pol 67—Administrative Analysis	Jour 78—Public Relations
Pol 68—Administrative Communication	BA 5—Elements of Statistics
Pol 69—Problems in Tax Administration	

*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	Nursing Education
Child Development and Welfare	Political Science
Economics and Business	Psychology
Finance	Recreation
Engineering	Social Work
Industrial Relations	Sociology
Insurance	Transportation

## Secretarial Certificate

(45 credits)

The Secretarial Certificate is awarded to those who, in addition to the necessary skills and experience in typewriting and shorthand, have completed

†† Other subject matter fields are not necessarily excluded, but may be approved upon petition to the Committee on Student Scholastic Standing.

## Evening and Special Classes

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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.

### 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—Survey of Office Management  
Psy 1-2—General Psychology

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

Communication in Management  
BA 5—Elements of Statistics  
BA 26—Principles of Accounting

BA 53—Insurance Principles  
Econ 67—Money and Banking  
BA 78, 98—Business Law

## Industrial Relations Certificate

(46 credits)

### 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—Survey of Office Management  
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  
Work Simplification  
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

### Junior 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—Elements of Statistics  
BA 24-25-26—Principles of Accounting  
BA 58—Business Law

**Spread requirement (9 credits):** at least one 3-credit course in 3 of the following 5 fields, in addition to credits earned under core requirement:

1. Industrial Management
2. Distribution: Marketing, Transportation
3. Economics, Business Finance, Statistics
4. Industrial Relations
5. Business Law

**Concentration requirement:** at least 9 credits in 1 of the following fields, in addition to credits earned under core and spread requirements:

Accounting  
Economics, Business Finance,  
Statistics  
Industrial Management  
Industrial Relations

Insurance  
Marketing  
Real Estate  
Transportation

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

**Senior Certificate (90 credits)**

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

**Core requirement:**

Business English (6 cr); or 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  
BA 58—Business Law  
Econ 67—Money and Banking

**Spread requirement:** at least 12 credits from the following courses:

BA 50—Production Management  
(or) BA 99—Survey of Office Management  
BA 52—Modern Industrial Relations: Labor  
Marketing  
BA 54—Transportation I: Principles  
BA 56—Corporation Finance

BA 57—Principles of Marketing  
Econ 65, 66—Intermediate Economic Analysis  
Econ 68—Elements of Public Finance  
Econ 69—Government Regulation of Business  
BA 78 or 88—Business Law (not both)

**Concentration requirement:** at least 18 additional credits in 1 or 2 of the following fields, in addition to credits earned under core and spread requirement:

Accounting  
Economics, Business Finance, Statistics, Insurance  
Industrial Management, Industrial Relations  
Marketing  
Real Estate  
Transportation

**Electives:** additional courses approved by the Committee on Student Scholastic Standing to make a minimum of 90 credits for the certificate. Some courses in the liberal arts field are recommended as electives.

## Evening and Special Classes

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### Accounting Certificates

#### Junior 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:

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

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

#### Senior 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:

BA 24-25-26—Principles of Accounting  
BA 105A-B-C—Intermediate Accounting  
BA 115A-B—Cost Accounting  
Four additional accounting courses numbered above 100

BA 56—Corporation Finance  
Econ 1-2—Principles of Economics

BA 5—Elements of Statistics

BA 51—Business Statistics

BA 58—Business Law

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—Industrial Relations

BA 53—Insurance

BA 54—Transportation

BA 57—Marketing

Econ 65—Intermediate Economic Analysis

Econ 66—Intermediate Economic Analysis

Econ 67—Money and Banking

Econ 68—Public Finance

Econ 69—Government Regulation of Business

ITM 11-12—College Algebra and Trigonometry I-II

Engl A-B-C, or 1A-2A-3A, or 1B-2B-3B—Freshman English, or Comm 1-2-3—Communication

Comp 27—Advanced Writing

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

#### Junior 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

BA 99—Survey of Office Management

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.

**Senior 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  
BA 99—Survey of Office Management  
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—Insurance Principles  
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 70—History of Management Thought  
BA 72—Modern Industrial Relations  
BA 76—Finance Management  
BA 80—Administrative Practices  
BA 88—Business Law  
BA 102—Human Relations in Industry  
BA 110—Systems and Procedures Analysis: Work Measurement; or equivalent

BA 119—Office Management: Business Communications and Correspondence Control  
BA 129—Office Management: Records Administration  
BA 139—Office Management: 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  
Supervision I, II, III  
Pol 64—Employee Training Techniques  
Pol 68—Administrative Communication  
Psy 156—Psychology of Advertising

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

Accounting  
Business Finance  
Economics

**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:

Engineers and scientists who formulate ideas and create new products and services.

Engineering technicians who help develop, test and apply these ideas and creations.

Skilled workers who make the products and perform routine services.

## Evening and Special Classes

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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 the following certificates in the engineering field. Interested students should study these certificates carefully and select the program best suited to their interests, abilities, work, and educational goals.

A student who is working, or who plans to work, for an Engineering Science or Engineering Technician Certificate must fill out an application blank for admission to the Basic Engineering Science Certificate program in order that records may be kept up to date. These blanks are available in any Extension office. He should also consult an Extension Division counselor before registering, to insure that courses are taken in the most effective sequence in relation to his schedule. When possible a program of study for the full school year should be planned. These procedures are meant to assist the student and will in no way restrict him from dropping or changing to another program.

### **Basic Engineering Science Certificate (52 credits)**

(Replaces Basic Engineering Aide Certificate)

*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.

The Basic Engineering Science Certificate program is designed to provide the student with the fundamentals of mathematics, drawing, physics, and English 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.

Students who complete the Basic Engineering Science Certificate may plan either to continue in the Senior Engineering Science Certificate, or one of the four 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 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 will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.



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 (102 credits)

(Replaces General Engineering Certificate) (Prerequisite: Basic Engineering Science Certificate; 52 credits)

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

Work in the *social-humanistic area* (nontechnical 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 carry degree credit and are transferrable to the Institute of Technology when admission requirements are satisfied.

#### Core requirement:

ITM 24A—Calculus II: Analytic Geometry and Calculus  
ITM 25A—Calculus III: Analytic Geometry and Calculus  
ITM 26A—Calculus IV: Analytic Geometry and Calculus

MM 27—Rigid-Body Mechanics I  
Phys 14—Intermediate Physics  
Phys 14A—Intermediate Physics Laboratory  
InCh 4—General Inorganic Chemistry  
InCh 5—General Inorganic Chemistry

#### Spread requirement: a minimum of 6 credits from the following courses:

ITM 90—Elementary Engineering Statistics  
MM 28—Rigid-Body Mechanics II  
MM 40—Deformable-Body Mechanics I  
MM 41—Deformable-Body Mechanics II

InCh 11—Semimicro Qualitative Analysis  
OrCh 61—Elementary Organic Chemistry  
OrCh 62—Elementary Organic Chemistry

*Electives:* additional courses from the *social-humanistic area*†† (IT nontechnical required courses), 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.

### Senior Engineering Technician Certificates

The Senior Engineering Technician Certificate programs are specialized programs. They are designed to provide more engineering technicians. Our tremendous technological advancement since World War II has created a serious technical manpower shortage.

These programs enable a student to continue the Basic Certificate work in mathematics, physics, and communication, but provide for an accelerated

†† Institute of Technology nontechnical required courses in the social-humanistic area may be chosen from the following: Bot 1-2-3; Psy 1-2, 155; Zool 1-2-3; Econ 1-2, 172; BA 52; Pol 1-2, or 5, or A-B, Pol 25; Soc 1-2, 14 or 104; SScl 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 courses, Religion.

## Evening and Special Classes

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concentration in civil, electrical, industrial or mechanical engineering. Although some of the courses are more limited in scope than those required for an engineering degree they are designed to train engineering technicians capable of being the liaison between the engineer or scientist and the skilled worker. *Students should not consider these programs as a short-cut or stepping stone to a professional engineering degree.* They are, however, intense and complete programs of study at the engineering technician level. Only those courses designated *degree courses* may be transferred to a degree program.

### Senior Civil Engineering Technician (102 credits)

(Replaces Senior Civil Engineering Aide Certificate) (Prerequisite: Basic Engineering Science Certificate; 52 credits)

#### 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 130—Statically Indeterminate Structures

CE 131—Structural Analysis

CE 132—Structural Design

#### Structural

CE 31-32-33—Elementary Structural Analysis and Design

#### Highways and Pavements

CE 20—Surveying

Highways and Pavements IA-IB-IIA-IIB

Highway Design

*Electives:* additional courses from the *social-humanistic area*†† (IT nontechnical required courses) to make a minimum of 102 credits, including those from the Basic Certificate.

### Senior Electrical Engineering Technician Certificate (102 credits)

(Replaces Senior Electrical Engineering Aide Certificate) (Prerequisite: Basic Engineering Science Certificate; 52 credits)

#### 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

Elements of Electronics II

Engl 85—Advanced Technical Communication

Phys 14—Intermediate Physics

Phys 14A—Intermediate Physics Laboratory

*Electives:* additional courses from the *social-humanistic area*†† (IT nontechnical required courses) to make a minimum of 102 credits, including those from the Basic Certificate.

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†† Institute of Technology nontechnical required courses in the social-humanistic area may be chosen from the following: Bot 1-2-3; Psy 1-2, 155; Zool 1-2-3; Econ 1-2, 172; BA 52; Pol 1-2, or 5, or A-B, Pol 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 courses, Religion.

**Senior Industrial Engineering Technician Certificate (102 credits)**

(Replaces Industrial Engineering Certificate) (Prerequisite: Basic Engineering Science Certificate; 52 credits)

*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:

Methods Engineering  
Work Measurement  
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  
BA 52—Modern Industrial Relations: Labor Marketing  
BA 72—Modern Industrial Relations: Manpower Management

**Senior Mechanical Engineering Technician Certificate (102 credits)**

(Replaces Senior Mechanical Engineering Aide Certificate) (Prerequisite: Basic Engineering Science Certificate; 52 credits)

*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 additional courses from the *social-humanistic area* (IT nontechnical required courses) 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

**Discontinued Certificate Programs**

Certificates in *General Engineering* (Junior and Senior), *Industrial Engineering* (Junior and Senior), *Basic Engineering Aide*, and *Senior Engineering Aide* (Civil, Mechanical, and Electrical), as listed in the 1958-59 *Bulletin of Evening and Special Classes*, are open only to those students who entered such programs previous to the fall term, 1959, and who so inform the Evening Class campus office, in writing, previous to March 1, 1960.

## *Evening and Special Classes*

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### **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 above 200 are graduate level only. If you wish to take a course numbered above 100 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 an Extension student at the time he takes the examination. A student may establish credit for work done at a nonaccredited 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 6.

**Graduate**—A graduate student may, upon the approval of his graduate adviser, petition the dean of the Graduate School to have transferred to his graduate record not more than 6 quarter credits under Plan A or 9 quarter credits under Plan B in courses numbered 100 and above. (Under Plan A for the Master's degree in certain fields of engineering, 9 credits taken in Extension may be allowed.) Such courses must be taught by regularly approved members of the graduate faculty (for this information, consult the chairman of the Committee on Student Scholastic Standing). A student registering for graduate credit must ask at the registration office for the appropriate special form at the time of registration. Petition to transfer is limited to credits earned in evening classes since September, 1943. Such transfer of credits will not give graduate residence credit.

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

### Prerequisites

Prerequisites are stated for information, not as obstacles. Some advanced evening classes are of such a nature that they cannot be carried through without certain previous study. Prerequisites, therefore, are listed for these classes. Students who have had a reasonable equivalent of study, training, or experience related to the course desired may be exempted from prerequisites upon consultation with the instructor. 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 properly 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 26). 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 a class 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. The instructor shall turn in to the evening class office a "deficiency report" for each grade of I indicating: (1) the assignments required to remove the I; or (2) that the course must be repeated because of excessive absences. An I which is not turned into a permanent grade within 1 year from the time it is assigned shall become an F

## Evening and Special Classes

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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.

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. Requests for complete transcripts of records may be made by telephoning the University, Federal 2-8158, and asking for the Transcripts Department.

**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, 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 Laws 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.

### **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.

### **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.

### **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 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 27.

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. Instructions for such an arrangement are available from any Extension office.

### **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.

## Evening and Special Classes

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The first line or two of the listing gives the class number, if any, the title, the number of credits, and the tuition per term (semester, quarter, or special), plus special fees, if any. With the exception of certain elementary mathematics courses, 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 20).

The description of the course content follows. Such regulations as pre-requisites, class size limitations, number of meetings, etc., will be found in the parenthetical statement following the course description. (See Prerequisites, page 21.)

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, 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.*

### 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).
- # A sharp sign means "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.
- ## Prerequisite may be equivalent experience, with consent of instructor.

### Registration Periods

All registrations should be made and fees paid during the official registration period preceding the opening of a term. Late registration may be permitted through the first week of a quarter or special term, and through the first 2 weeks of a semester, subject to regulations and fees as indicated. (See Late Registrations and Additions, page 25.)

### 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.

### **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. Students in need of special financial assistance see Extension Student Loan Fund, page 31.

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, will be considered late registrations and will be subject to the late fee. Late fees are assessed as follows: Semester classes—through the first week following the close of the registration period, the late fee will be \$3; through the second week, \$4. Fall Quarter and Fall Special Term classes—through the first week following the close of the registration period, \$3; no registrations accepted beyond that time. Winter and Spring Quarter and Special Term classes—no late fee during the first week of classes; no registrations accepted beyond that time.

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.

## Evening and Special Classes

Registration in limited classes is subject to the following conditions:

1. Registration must be made individually, in person, at any Extension office.
2. No refunds or transfers may be made after the close of the registration period, except for reasons beyond the control of the student, in which case the student must petition on a special form provided for that purpose. No refunds will be considered after the third week of a Quarter or Special Term class or the fourth week of a Semester class. If a refund is made, a registration fee of \$3 will be retained.

### Cancellations and Refunds

For limited class regulations, see above.

Cancellation of registrations must be made in writing or in person at any Extension office. No cancellations will be accepted by telephone. *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 date of last attendance.

In case of cancellation before the opening date of each semester, quarter, or special term, a registration fee of \$3 will be retained, regardless of the amount of tuition.

No cancellation will be accepted during the final 2 weeks of any term.

Full refunds of all tuition and special fees will be made only under special circumstances, as follows:

1. When a class is canceled by the Extension Division.
2. When the hour, day, or location of the class is changed by the Extension Division, after a student has registered in it.
3. 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. In this case, the student should:
  - 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 before the end of the second week of the term.

Partial refunds of tuition and special fees will be made as follows (privilege fees for late registration, additions, and transfers are not refundable):

Cancellation received	Refund Granted	
	Semester Class	Quarter Class
First week .....	75%	75%
Second week .....	75%	50%
Third week .....	50%	25%
After the third week .....		No refund
Fourth week .....	25%	
After the fourth week .....	No refund	

If, for reasons completely beyond his control, a student must cancel after the opening date of a term, he may petition the Committee on Student Scholas-

tic Standing for a full refund of tuition and special fees, except the registration fee of \$3. No such petition will be accepted after the fourth week of the term.

A student who drops out of a class at any time during a term is urged to cancel officially, whether or not a refund is granted. If he drops out of class without officially canceling, he will receive an I (incomplete), which becomes an F within a year. The section on Grades, page 21, explains the I more fully.

Veterans and military personnel cannot cancel classes without permission of the Extension Veterans Office. Please refer to the section on Special Information for Veterans and Members of the Armed Forces.

## **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 eligible for educational benefits under P.L. 346 and P.L. 550 respectively, who have not completed their educational objective may be eligible for tuition assistance from the State of Minnesota Department of Veterans Affairs (State Aid). For further information

## Evening and Special Classes

write to Mr. C. R. Alexander, Commissioner of Veteran Affairs, State of Minnesota, St. Paul 1.

### **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.

Interruptions in excess of 12 months have been greatly liberalized and in some instances may be approved by the Veterans Administration. Acceptable reasons, when supported by documentary statements, are listed below:

1. Immediate family or financial obligations beyond your control which required you to suspend training to obtain employment.
2. You were prevented from continuing your training because of personal or family illness or because of a death in your immediate family.
3. You were required to suspend training because of unavoidable conditions arising in connection with your employment.

(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.

**Registrations**—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.

Veterans are urged to use the facilities of the Veterans Office of the General Extension Division in completing original and supplemental applications for educational training. Such applications can be made at time of registration. Counselors will help designate the proper educational objective. Official VA forms will be available in this office. No evidence of discharge or separation from military service is necessary in applying for original certificate for educational training when permanent mailing address *was in state of Minnesota* at time of discharge or separation. When permanent mailing address *was not in state of Minnesota* a copy or photostat (not original) of DD214 Separation from Military Service is required for VA purposes.

**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, objective, 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 6. 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 one 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 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.

## Evening and Special 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
¾ Work Load .....	15	10	80	100	120
½ 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 ½-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**—Under the new grading system of the University the grades of Y and Z have been eliminated. This means that 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 on "Delinquent Attendance" forms provided for this purpose. 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. Any veteran who fails to sign such certifications for 2 consecutive months will have his registration terminated by the Veterans Administration. Full details regarding these certifications will be given at the time of registration.

A veteran who drops out of any class must officially cancel his registration as of the date of last attendance and must indicate this date on the appropriate monthly certification (VA Form 7-1996a).

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, the General Extension Division emphasizes that by signing a 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. No instructor is authorized to accept cancellations.

## **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.

## **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. Extension veterans are warned that advice or information given by any other source may not satisfy Veterans Administration and University regulations which are peculiar to educational training requirements of the General Extension Division. Do not hesitate to use the services of the Veterans Office, General Extension Division, whenever your educational training benefits are involved.

## **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 5 p.m. and from 6:30 to 8 p.m., Monday through Friday, and from 9 a.m. to 3 p.m. on Saturday in all Extension offices. 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 Fund**

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.

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

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### **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.

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

The Evening and Special Classes Department of the General Extension Division is unable to offer any classes for foreign-born persons during the year 1959-60. However, persons interested in specialized classes in foreign-dialect speech and/or English as a second language may leave their names and addresses with Professor Albert M. Fulton, Room 56, Nicholson Hall, University of Minnesota, for future reference.

We are pleased to inform all persons concerned that beginning, intermediate and advanced classes in every day English, oral and written, are available at the International House, 183 W. Kellogg at Exchange, St. Paul, and Minneapolis Vocational Evening School, Minneapolis. Interested persons should call for further information as indicated below.

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

Miss Marie Kallio, Minneapolis Vocational Evening School, Minneapolis, FE 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 book at \$11. Married students may purchase a second book, for use by *spouse only*, at \$14.50. All ticket books are nontransferable. If classes are canceled, athletic books must be returned to athletic office. Books 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 23, 9 a.m.-4:30 p.m.  
Thursday, September 24, 9 a.m.-9 p.m.  
Friday, September 25, 9 a.m.-4:30 p.m.  
Saturday, September 26, 9 a.m.-2 p.m.  
Monday, September 28, 9 a.m.-9 p.m.  
Tuesday, September 29, 9 a.m.-4:30 p.m.

All ticket sales will be held in Williams Arena Lobby. Students wishing to attend the first game, September 26, must purchase their tickets in advance of that date; admission to that game *only* is by coupon.

Reserved seat ticket books will be issued in Williams Arena Lobby on Thursday and Friday, October 1 and 2, and Saturday, October 3, from 9 a.m. to 2 p.m. Regulations governing purchase, transfer, and cancellation of these books are available on request to the Athletic Ticket office.

## II. 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.*

#### Agricultural Biochemistry (AgBi)

**108. Chemistry of Wheat and Wheat Products.** 3 degree credits (see prerequisite below). \$24.

Lecture course, with collateral library reading, on the chemistry of the production and milling of wheat and its conversion into food. (Prerequisite: 8 credits in inorganic chemistry, 8 credits in organic chemistry; for degree credit, 6 credits additional in elementary biochemistry, or ##)

*Fall Quarter*

Th 6:20-8:50, Snyder 113, St. Paul Campus,  
Geddes and Glass

#### Horticulture (Hort)

**10. Home Floriculture and Gardening.** 3 degree credits. \$24.

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 Semester*

T 6:20-8:00, Horticulture 102, St. Paul Campus, Phillips

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

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

*Fall Semester*

Th 6:20-8:00, Horticulture 102, St. Paul Campus, Phillips

**25. Home Landscape Planting and Construction.** 3 degree credits. \$24.

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

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Symbols explained on page 24.

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 18 to April 28*

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

**51. Garden Flowers and Home Gardening. 3 degree credits. \$24.**

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 16 to April 26*

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

## Soils (Soil)

**6. Garden Soils. 3 credits. \$24.**

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

### Anthropology (Anth)

**1A. Introduction to Anthropology: Prehistoric Man and Culture.** 3 degree credits. \$24.

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*

T 8:05-9:45, Ford 130, Jones

**2A. Introduction to Anthropology: Cultural Anthropology.** 3 degree credits. \$24.

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*

T 8:05-9:45, Ford 130, Holt

**80. The American Indian.** 3 degree credits. \$24.

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

*Fall Semester*

Th 8:05-9:45, Ford 130, Holt

**165. Personality and Culture.** 3 degree credits. \$24.

Role of culture in the formation of personality. Problems of individual adjustments to the demands of culture. Psychological approach to culture. (No prerequisite)

*Spring Semester*

Th 8:05-9:45, Ford 130, Jones

**Minnesota Chippewa.** See page 57.

### Art (Art)

*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.*

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Symbols explained on page 24.

ART HISTORY AND CRITICISM

**1. Introduction to Art.** 3 degree credits. \$24 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)

*Fall Quarter*

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

*Winter Quarter*

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

*Spring Quarter*

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

**2. Principles of Ancient and Medieval Art.** 3 degree credits. \$24 plus \$1 laboratory fee.

A survey of masterworks of architecture, sculpture and painting, from the age of the Pyramids to that of the Cathedrals, and including selected works from the cultures of Egypt, the ancient Near East, Greece, Rome and the Christian Middle Ages. Stress will be laid on the roots of art in the religious, social and political traditions of these cultures. (Prerequisite: 1, or #)

*Winter Quarter*

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

**3. Principles of Renaissance and Modern Art.** 3 degree credits. \$24 plus \$1 laboratory fee.

A survey of the main artistic achievements of the Renaissance in Italy and the North, the Baroque and Rococo, Romanticism, Realism, Impressionism, Post-Impressionism and the main currents in contemporary art. Among the artists discussed will be DaVinci, Michelangelo, Raphael, Titian, Dürer, El Greco, Rubens, Rembrandt, Velasquez, Watteau, Boucher, Chardin, David, Delacroix, Courbet, Monet, Cezanne, Van Gogh, Picasso, and Matisse. (Prerequisite: 1, or #)

*Spring Quarter*

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

**67. Modern Art: Realism, Impressionism, Post-Impressionism.** 3 degree credits. \$24 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 #)

*Fall Quarter*

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

**68. Modern Art: Contemporary Art in Europe and America.** 3 degree credits. \$24 plus \$1 laboratory fee.

A study of the main trends of Twentieth 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 non-representational art and on the abstract-expressionist current of the past decade. (Prerequisite: 1 or 50, or #)

*Winter Quarter*

T 7:30-9:45, Walker Art Cen-  
ter, Waldfogel

*Spring Quarter*

T 7:30-9:45, Walker Art Cen-  
ter, Waldfogel

## Evening and Special Classes

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### Home Design and Planning. 3 certificate credits. \$24.

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 neighbourhood 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*

W 6:20-8:50, Ford 170, Gingold

### STUDIO COURSES

**Art 10. Basic Photography I.** See page 61.

**Art 11. Basic Photography II.** See page 62.

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

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

#### *Spring Semester*

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

### \*30-31-32. Commercial Drawing. 2 degree credits each semester. \$24 plus \$3 laboratory fee.

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

#### *Spring Semester*

M 7:30-10:00, Jones 104

### \*45-94-95. Ceramics. 2 degree credits each semester. \$24 plus \$5 laboratory fee.

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 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.

#### *Fall Semester*

(45 W 6:20-8:45, Holman 134, MacKenzie  
(94

#### *Spring Semester*

(45 W 6:20-8:45, Holman 134, MacKenzie  
(94  
(95

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Symbols explained on page 24.

**60-61-62.\*\* Second Year Drawing and Painting.** (\*\*Art 150-151-152) 2 degree credits each semester. \$24 plus \$4 laboratory fee.

Still life and figure problems to be carried out in charcoal, chalk, water color, and oil. Study of problems related to drawing and painting through experiments designed to suit the needs and purposes of the individual student. (Prerequisite: 22 or 25 or ##)

*Fall Semester*

Th 6:20-9:00, Jones 200, Rollins

*Note: A new certificate award is now available in the field of Interior Design. See page 11.*

**\*83A. Interior Design I.** 3 degree credits. \$24 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)

*Fall Semester*

M 6:20-8:00, Nicholson 209, Lewis  
T 6:20-8:00, Nicholson 209, Lewis  
Th 8:05-9:45, Nicholson 209, Lewis

*Spring Semester*

W 6:20-8:00, Nicholson 209, Lewis  
Th 6:20-8:00, Nicholson 209, Lewis

**84A. Interior Design II.** 3 degree credits. \$24 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)

*Spring Semester*

M 6:20-8:00, Nicholson 209, Lewis  
T 6:20-8:00, Nicholson 209, Lewis

**\*103A-104A. Seminar in Interior Design.** 3 degree credits. \$24.

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.*

*Fall Semester*

W 6:20-8:00, Nicholson 107, Lewis

**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 Fe 8-8759.*

Symbols explained on page 24.

## Evening and Special Classes

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### 15A-B. Lettering. 2 degree credits each semester. \$24 plus \$3 laboratory fee.

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

*Fall Semester*

*February 8-June 2*

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

### 20A-B. Basic Drawing. 4 degree credits each semester. \$48 plus \$6 laboratory fee.

Emphasis is placed on the basic principles of perspective drawing and composition. Some life drawing included. Wide variety of mediums used. (No prerequisite)

*Fall Semester*

*February 8-June 2*

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

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

### 20A-B. Basic Drawing. 2 degree credits each semester. \$24 plus \$3 laboratory fee.

A beginning class for students who desire to attend class only one night a week instead of two.

*Fall Semester*

*February 8-June 2*

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

### 21A-B. Life Drawing. 2 degree credits each semester. \$24 plus \$3 laboratory fee.

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

*Fall Semester*

*February 8-June 2*

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

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

### 22A-B. Still Life Painting. 2 degree credits each semester. \$24 plus \$3 laboratory fee.

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: 20A-B)

*Fall Semester*

*February 8-June 2*

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

### 40A-B. Sculpture. 4 degree credits each semester. \$48 plus \$6 laboratory fee.

Figure modeling. (Prerequisite: 21A-B or #)

*Fall Semester*

*February 8-June 2*

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

### 50A-B. Painting II. 4 degree credits each semester. \$48 plus \$6 laboratory fee.

This class follows the Still Life Painting class. Work in oil composition with continued stress on tone relationship and shape organization. (Prerequisite: 22A-B)

*Fall Semester*

*February 8-June 2*

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

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Symbols explained on page 24.



## Course Offerings—Arts and Sciences

### **54A-B. Life Drawing.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

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

*Fall Semester*

*February 8-June 2*

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

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

### **54C-D. Portrait.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

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

*Fall Semester*

*February 8-June 2*

C W 7:00-9:30, Mpls School of Art,  
Dietrichsen

D W 7:00-9:30, Mpls School of Art,  
Dietrichsen

### **60A-B. Watercolor.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

A broadly designed class in watercolor painting covering a wide range of subject material. (Prerequisite: 20A-B or #)

*Fall Semester*

*February 8-June 2*

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

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

### **62A-B. Life Painting.** 4 degree credits each semester. \$48 plus \$6 laboratory fee.

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

*Fall Semester*

*February 8-June 2*

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

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

### **74A-B. Fashion Illustration.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

Specialized fashion illustration in black and white from the costumed model. Class is designed for student wishing to enter newspaper and magazine fashion illustration field. (Prerequisite: 21)

*Fall Semester*

*February 8-June 2*

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

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

### **75A-B. Graphic Arts (Layout).** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

An advanced course in layout problems encountered daily in actual practice. It includes composition of visual elements as used in magazine, newspaper, poster and direct mail pieces; also study of the principles of layout, movement, balance, emphasis, legibility, color values, lettering design and typographic styling as applied to advertising design. (Prerequisite: 20 or 21 and 15)

*Fall Semester*

*February 8-June 2*

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 Ca 5-9621.

Symbols explained on page 24.

## Evening and Special Classes

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### **21A-B. Life Drawing.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

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

*Fall Semester*

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

*Spring Semester*

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

### **23-24-25. First Year Drawing and Painting.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

An introduction to a variety of art experiences in drawing and painting. Students are encouraged to explore in a number of mediums such as: pencil, charcoal, water colors 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

### **33-34-35. Textile Design: Weaving.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

33: Basic course in weaving offering explorations in texture, color, and spacing and experience in all the processes involving the two-harness loom, including the designing and weaving of the finished fabric. 34: Continuation of beginning course 33 into four-harness weaving including the designing and weaving of the finished fabric. 35: Extension of course 34 with emphasis on the designing and weaving of four-harness; overshot patterns. (Prerequisites: 33, no prerequisite; 34 and 35, previous unit or #s)

*Fall Semester*

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

*Spring Semester*

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

### **40A-B. Sculpture.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

Elementary figure construction: analysis of skeletal and muscular structure in relation to the life model. Preliminary studies in drawing progressing to modeling surface contours in clay, involving the making of armatures. Study of the figure in action and repose. (No prerequisite)

*Fall Semester*

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

*Spring Semester*

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

### **45-94-95. Ceramics.** 2 degree credits each semester. \$24 plus \$5 laboratory fee.

Introduction to materials, forming methods, and production processes. Fundamentals of pottery including handbuilding, wheel throwing, decorative techniques in slip and glaze, glazing and firing. (No prerequisite)

*Fall Semester*

W 7:00-9:30, StP Gallery, Kolb  
Th 7:00-9:30, StP Gallery, Kolb

*Spring Semester*

W 7:00-9:30, StP Gallery, Kolb  
Th 7:00-9:30, StP Gallery, Kolb

### **49A-B. General Crafts (Metal Design).** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

An introduction to the use of tools and basic material working techniques. Emphasis is placed upon individual solution of design problems in jewelry and other decorative metal work. The student will work in base and precious metals and supplementary material such as rare wood and gem stones. (No prerequisite)

*Fall Semester*

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

*Spring Semester*

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

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

**60-61-62. Second Year Drawing and Painting.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

Still life and figure problems to be carried out in charcoal, chalk, water color, and oil. Study of problems related to drawing and painting through experiments designed to suit the needs and purposes of the individual student. (Prerequisite: 22 or 25 or ##)

*Fall Semester*

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

*Spring Semester*

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

**80A-B. Metal Sculpture.** 2 degree credits each semester. \$24 plus \$5 laboratory fee.

Advanced study in metal working techniques with special emphasis upon the relationship between design, material, and technique. Problems limited to small-scale projects. (Prerequisite: 49A and 49B, or #)

*Fall Semester*

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

*Spring Semester*

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

**89. Textile Design: Weaving.** 2 degree credits each semester. \$24 plus \$3 laboratory fee.

Advanced weaving with explorations in areas to be determined by the student in consultation with instructor. (Prerequisite: 35 or ##)

*Fall Semester*

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

*Spring Semester*

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

**101-102. Ceramics.** 2 degree credits each semester. \$24 plus \$5 laboratory fee.

Continuation of basic courses with advanced problems in same areas. (Prerequisite: for 101, 95; for 102, 101)

*Fall Semester*

W 7:00-9:30, StP Gallery, Kolb  
Th 7:00-9:30, StP Gallery, Kolb

*Spring Semester*

W 7:00-9:30, StP Gallery, Kolb  
Th 7:00-9:30, StP Gallery, Kolb

## Astronomy (Ast)

**11. Descriptive Astronomy.** 3 degree credits. \$24.

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, Luyten

**13. Practical and Stellar Astronomy.** 3 degree credits. \$24.

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 10-June 1*

W 6:20-8:00, Physics 133, Luyten

Symbols explained on page 24.

## 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 Thursday, September 17, Nicholson 211  
7:00 Tuesday, September 22, Nicholson 211  
7:00 Tuesday, September 22, St. Paul Extension Center

#### Winter Quarter

7:00 Monday, January 4, Nicholson 211

#### Spring Quarter

7:00 Wednesday, March 23, Nicholson 211

Engl 1B-2B-3B. (See page 45)

Communication 1-2-3. (See page 53)

### COMPOSITION (Comp)

**Grammar Review.** 3 certificate credits. \$24 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

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

#### Winter Quarter

(same schedule as fall)

#### Spring Quarter

(same schedule as fall)

**Comp X (Preparatory Composition).** No credit. \$24 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. The Grammar Review section is recommended for those who are very weak in fundamentals; an A or B in the Grammar Review section is required for admission to Engl 1B or Comm 1.

#### Fall Quarter

T 6:20-8:50, Folwell 113  
W 6:20-8:50, Folwell 113  
F 6:00-8:30, StP Ext Center, 3E

#### Winter Quarter

(same schedule as fall)

#### Spring Quarter

T 6:20-8:50, Folwell 113

#### (Grammar Review Section)

W 6:20-8:50, Folwell 105

(same schedule as fall)

(same schedule as fall)

Symbols explained on page 24.

## Course Offerings—Arts and Sciences

### Writing Projects. 3 certificate credits. \$24.

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)

#### *Fall Semester*

Th 6:20-8:00, Folwell 108, Alford

#### *Spring Semester*

Th 6:20-8:00, Folwell 108, Alford

### 27-28. Advanced Writing. 3 degree credits each semester. \$24.

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 1B-2B-3B, or #. Students may enter either semester)

#### *Fall Semester*

27 W 6:20-8:00, Folwell 207, Macdonald

#### *Spring Semester*

28 W 6:20-8:00, Folwell 207, Macdonald

### 65. The Writing of Research Papers and Articles. 3 degree credits. \$24.

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. Much of the instruction is done in conference. (Prerequisite: Engl 1B-2B-3B or #. Repeated spring semester)

#### *Fall Semester*

Th 6:20-8:00, Johnston 122, Lufkin

#### *Spring Semester*

Th 6:20-8:00, Johnston 122, Lufkin

### 101-102. Seminar in Writing (Advanced Short Story). 3 degree credits each semester. \$24.

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

#### *Fall Semester*

101 T 6:20-8:00, Folwell 205, Macdonald

#### *Spring Semester*

102 T 6:20-8:00, Folwell 205, Macdonald

**Business English.** (See page 82)

**Engineering English.** (See page 106)

### LITERATURE (Engl)

### 1B-2B-3B. Freshman English. 4 degree credits each quarter. \$32.

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 on page 44)

Symbols explained on page 24.

## Evening and Special Classes

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<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
1B T	6:20-9:50, Folwell 105	1B T	6:20-9:50, Folwell 104	1B T	6:20-9:50, Folwell 107
W	6:20-9:50, Folwell 104	W	6:20-9:50, Folwell 101	2B T	6:20-9:50, Folwell 104
F	6:00-9:30, StP Ext Center, 3F	F	6:00-9:30, StP Ext Center, 3G	W	6:20-9:50, Folwell 101
2B T	6:20-9:50, Folwell 107	2B T	6:20-9:50, Folwell 105	F	6:00-9:30, StP Ext Center, 3G
3B W	6:20-9:50, Folwell 107	W	6:20-9:50, Folwell 104	3B T	6:20-9:50, Folwell 105 Center, 3G
		F	6:00-9:30, StP Ext Center, 3F	W	6:00-9:30, StP Ext Center, 3F
		3B T	6:20-9:50, Folwell 108		

**Communication 1-2-3.** (See page 53)

**22-23. Introduction to Literature.** (Offered 1960-61)

**37, 39. Modern Literature.** 3 degree credits each semester. \$24.

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. 39: The novel since Thomas Hardy. (Prerequisite: A-B-C or 1B-2B-3B or Comm 1-2-3, or exemption from requirement) Students who have not had 37 may register for 39, spring semester.

<i>Fall Semester</i>		<i>Spring Semester</i>	
37 Th	6:20-8:00, Folwell 213, Hurrell	39 Th	6:20-8:00, Folwell 213, Monk

**72-73-74. American Literature.** 3 degree credits each quarter. \$24.

Notable American authors from the 17th century to the present. (Prerequisite: 1B-2B-3B or A-B-C or 5 credits in literature beyond Freshman English. Students may enter any quarter)

<i>Fall Quarter</i>		<i>Winter Quarter</i>		<i>Spring Quarter</i>	
72 M	6:20-8:50, Folwell 207, Kwiat	73	(Same schedule as fall)	74	(Same schedule as fall)

**75. Chaucer.** 4 degree credits. \$32.

Readings of selections from *The Canterbury Tales* with introduction dealing with grammar and literary forms of 14th-century English. (Prerequisite: A-B-C or 5 credits in literature beyond Freshman English)

<i>Fall Semester</i>	
T	6:20-8:50, Folwell 203, Ferris

**165. Introduction to Modern English.** 3 degree credits. \$24.

Scientific approach to sounds and grammar of present-day English, with some attention to syntax; implications for a reasonable attitude toward English usage in America. (Prerequisite: 5 credits in literature beyond Freshman English)

<i>Spring Semester</i>	
T	6:20-8:00, Folwell 203, Allen

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Symbols explained on page 24.

## French (Fren)

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.

### 1C-2C. Beginning French. 5 degree credits each semester. \$40.

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

### 1-2. Beginning French. 3 degree credits each semester. \$24.

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

### 3-4. Beginning French. 3 degree credits each semester. \$24.

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

### 17A-B. French for Graduate Students. No credit. \$30.

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 302  
17B M 6:20-8:00, Folwell 201, Brackney

### 20. Introduction to French Literary Texts. 3 degree credits. \$24.

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

## Evening and Special Classes

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### 54-55. French Conversation. 3 degree credits each semester. \$24.

Informal discussion of current affairs and everyday topics. (Prerequisite: 3-4, or #)

*Fall Semester*

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

*Spring Semester*

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

## Geography (Geog)

### 4. Human Geography. 5 degree credits. \$40.

Geography of population and principal ways of life; capacity of the earth for future population. (No prerequisite)

*Spring Semester*

T 6:20-9:20, Ford 285, Webb

### 41. Geography of Primary Production. 5 degree credits. \$40.

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

*Fall Semester*

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

## Geology (Geol)

### 1-2. General Geology. 3 degree credits each semester. \$24 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 resume 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*

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

### A-B. General Geology Laboratory. 2 degree credits each semester. \$16 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 11; for B, A and 2, or A and 12)

*Fall Semester*

A T 8:05-9:45, Pillsbury 22, Dickinson

*Spring Semester*

B T 8:05-9:45, Pillsbury 22, Dickinson

### 23A-24A. Mineralogy. 3 degree credits each semester. \$24 each semester.

A study of the physical and chemical characteristics of minerals; occurrence, genesis, and uses. Determinative work and identification of minerals by physical tests. (No prerequisite for 23A; for 24A, 23A or #)

*Fall Semester*

23A Th 6:20-8:00, Pillsbury 100, Tennissen

*Spring Semester*

24A Th 6:20-8:00, Pillsbury 100, Tennissen

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Symbols explained on page 24.



## German (Ger)

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, comprise 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.

### 1B-2B. Beginning German. 5 degree credits each semester. \$40.

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

#### Fall Semester

1B M 6:20-9:20, Folwell 107, Ramras  
M 6:00-9:00, StP Ext Center 2F

#### Spring Semester

2B M 6:20-9:20, Folwell 107, Ramras  
M 6:00-9:00, StP Ext Center 2F

### 3B. Beginning German. 5 degree credits. \$40.

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

#### Fall Semester

M 6:20-9:20, Folwell 108

### 1-2. Beginning German. 3 degree credits each semester. \$24.

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  
Th 6:20-8:00, Folwell 209, Wood

#### Spring Semester

1 M 6:20-8:00, Folwell 226, Wood  
2 M 6:20-8:00, Folwell 209, Weiss

### 3. Beginning German. 3 degree credits. \$24.

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, Prottengeler

#### Spring Semester

M 6:20-8:00, Folwell 108, Prottengeier

### 4. Beginning German. 3 degree credits. \$24.

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

#### Spring Semester

M 6:20-8:00, Folwell 108, Prottengeler

Symbols explained on page 24.

## Evening and Special Classes

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

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 205, Menze  
17B M 6:20-8:00, Folwell 105

#### *Spring Semester*

17A M 6:20-8:00, Folwell 104, Menze  
17B M 6:20-8:00, Folwell 202

## History (Hist)

### 1-2-3.‡ Civilization of the Modern World. (\*\*Hist 53-54-55) 3 degree credits each quarter. \$24 each quarter.

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. (No prerequisite)

#### *Fall Quarter*

1 W 6:20-8:00, Ford 115,  
Wright

#### *Winter Quarter*

2 (same schedule as fall)

#### *Spring Quarter*

3 (same schedule as fall)

### 14-15-16.‡ History of Ancient Civilization. (\*\*Hist 50-51-52) 3 degree credits each quarter. \$24 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)

#### *Fall Quarter*

14 Th 5:30-8:00, Ford 115,  
Jones

#### *Winter Quarter*

15 (same schedule as fall)

#### *Spring Quarter*

16 (same schedule as fall)

### 17-18-19.‡ History of Asia. (\*\*Hist 59-60-61) 3 degree credits each quarter. \$24 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 1200 A.D. 18: Asia 1200-1800 A.D.: Chinese empire period; India: Muslim domination; Japanese feudalism; the beginning

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

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 120, Stein	18 (same schedule as fall)	19 (same schedule as fall)

### 20-21-22.‡ American History. 3 degree credits each semester. \$24 each semester.

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>
21 Th 6:00-7:40, StP Ext Center 3G, Noble	20 M 6:20-8:00, Ford 115, Beatty
22 M 6:20-8:00, Ford 115, Beatty	22 Th 6:00-7:40, StP Ext Center 3G, Noble

**Minnesota Chippewa.** See page 57.

### 93-94.‡ American Diplomatic History. 3 degree credits each semester. \$24 each semester.

93: American diplomacy, 1776-1846. 94: Period of National development, 1848-1898. (No prerequisite)

<i>Fall Semester</i>	<i>Spring Semester</i>
93 M 8:05-9:45, Ford 115, Beatty	94 M 8:05-9:45, Ford 115, Beatty

### 100-101-102.‡ History of the Ancient Near East. 3 degree credits each quarter. \$24 each quarter.

100: The first civilization in the Ancient Near East: sources of knowledge of the past with special attention to archaeology; beginnings of agriculture; advent of civilization in the great river valleys; the Old Kingdom in Egypt; Sumerian period in Mesopotamia; the Egyptian Middle Kingdom; the Age of Hammurabi; characteristics of ancient Near Eastern civilization: literature, art and architecture, law, religion, economics, society, and technology. 101: The Age of Empires, 1600-1000 B.C.: the New Kingdom (Empire) in Egypt; the Hittite Empire; developments in Syria and Palestine with special attention to the Canaanites, Philistines, and Hebrews; the spread of civilization to Asia Minor and Aegean lands. 102: 1000-500 B.C.: Phoenicians; Hebrews; the Assyrian Empire; Assyrian civilization; the Age of Nebuchadnezzar; Saite period in Egypt; the Lydian kingdom; contacts between Greece and the Near East; the Persian Empire. (No prerequisite, but it is suggested that 102 be preceded by 101, and 101 by 100 in order that student may acquire a background for following course)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
100 T 5:30-8:00, Ford 130, Jones	101 (same schedule as fall)	102 (same schedule as fall)

### 102C. History of the Byzantine Empire. 3 degree credits. \$24.

A history of the Byzantine Empire and the survival of classical culture in the eastern Mediterranean, from the founding of Constantinople in the Fourth Century A.D. to the fall of the City in 1453. Political, military, and economic affairs will be stressed, along with the relations of Byzantium with the Medieval West, Slavic East, and the Islamic World. Lectures, assigned readings, and periodic examinations. *Students will be responsible for the work of the class and the material presented in the lecture series, immediately following.* (No prerequisite)

*Winter Quarter*  
W 6:20-9:00, Ford 155, Jones

Symbols explained on page 24.

## Evening and Special Classes

### **The Byzantine Empire. Special Class. \$12.**

A series of nine weekly lectures by outstanding authorities. Topics covered will include: beginnings and background of the Eastern Empire; religion; art, architecture and the minor arts; literature, science and philosophy; music; daily life; and influences on Russian, Near-Eastern, and Western cultures.

Lectures will begin promptly at 8:00 p.m. on Wednesdays, starting January 13 and concluding March 9, in room 155 Ford Hall. Professor Tom B. Jones is coordinator of the series. Students wanting credit may register for Hist 102C, above, which meets at 6:20 on the same evenings.

### **109-110.‡ Europe in the 20th Century. 3 degree credits each semester. \$24 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. (No prerequisite)

#### *Fall Semester*

109 W 6:20-8:00, Ford 150, Deutsch

#### *Spring Semester*

110 W 6:20-8:00, Ford 150, Deutsch

### **134-135.‡ History of World War II. 3 degree credits each semester. \$24 each semester.**

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

#### *Fall Semester*

134 W 8:05-9:45, Ford 150, Deutsch

#### *Spring Semester*

135 W 8:05-9:45, Ford 150, Deutsch

### **138A-139A.‡ American History 1865-1900. 3 degree credits each semester. \$24 each semester.**

Completes a 3-semester sequence, 137A-138A-139A, covering the period 1850-1900. 138A: Reconstruction and the South; the Grant regime; growth of segregation, industrialization and labor problems; cultural developments. 139A: Party struggles in national politics; effect of economic depressions; money and other problems; the Spanish-American War; the Far East. (No prerequisite. Students need not have had 137A)

#### *Fall Semester*

138A M 6:20-8:00, Ford 130, Loehr

#### *Spring Semester*

139A M 6:20-8:00, Ford 130, Loehr

### **148A-146A. History of the South. 3 degree credits each semester. \$24 each semester.**

148A completes the sequence 146A-147A-148A. 146A begins the sequence again; it will be completed in 1960-61. 148A: Covers the period 1890-1959. 146A: Covers the period 1607-1840. (No prerequisite)

#### *Fall Semester*

148A Th 8:05-9:45, Ford 115, Noble

#### *Spring Semester*

146A Th 8:05-9:45, Ford 115, Noble

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Symbols explained on page 24.

## Interdepartmental Courses and General Education

### COMMUNICATION (Comm)

**1-2-3. Communication.** 4 degree credits each quarter. \$32 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. The sequence is accepted by the University as meeting all requirements which are satisfied by Engl 1B-2B-3B, Freshman English. (Prerequisite: Preparatory Composition or satisfactory score on English Placement Test, as explained on page 44)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
1 Th 5:30-9:00, TNM 106, O'Hara	2 (same schedule as fall)	3 (same schedule as fall)

### FAMILY LIFE (FL)

**1A. Preparation for Marriage.** 3 degree credits. \$24 plus \$1 material fee.

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

<i>Fall Semester</i>	<i>Spring Semester</i>
M 6:20-8:00, TNM 115, Torbett	T 6:20-8:00, TNM 115, Torbett

### HUMANITIES (Hum)

**1. Humanities in the Modern World I.** (\*\*Hum 51) 3 degree credits. \$24.

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, prose, criticism, literature, poetry, and art. Authors: Pope, Voltaire, Rousseau, Burke, Goethe, Tolstoy. (No prerequisite)

<i>Fall Semester</i>	
M	8:05-9:45, Johnston 114, Brown
T	6:20-8:00, Johnston 114, MacInnes
T	6:20-8:00, Johnston 113, Blum
Th	8:05-9:45, Johnston 114, Sharma

**2. Humanities in the Modern World II.** (\*\*Hum 52) 3 degree credits. \$24.

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. (No prerequisite)

<i>Spring Semester</i>	
M	8:05-9:45, Johnston 114, Brown
T	6:20-8:00, Johnston 114, MacInnes
Th	8:05-9:45, Johnston 114, Sharma

Symbols explained on page 24.

## Evening and Special Classes

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### 3. Humanities in the Modern World III. (\*\*Hum 53) 3 degree credits. \$24.

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. (No prerequisite)

*Fall Semester*

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

### 4. Humanities in the Modern World IV. (\*\*Hum 54) 3 degree credits. \$24.

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. (No prerequisite)

*Spring Semester*

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

### 11. The Greek Heritage. (\*\*Hum 61) 3 degree credits. \$24.

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. (No prerequisite)

*Fall Semester*

T 6:20-8:00, Johnston 115, Ames

### 12. Roman and Medieval Heritage. (\*\*Hum 62) 3 degree credits. \$24.

Roman state. Hellenistic and Roman civilization. Epicureanism and Stoicism. Neo-Platonism. 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. (No prerequisite)

*Spring Semester*

T 6:20-8:00, Johnston 115, Ames

### 21. American Life. 3 degree credits. \$24.

Growth of individualism and democracy (with particular attention to minorities) as recorded in American history, social thought, literature, and the arts. (No prerequisite)

*Fall Semester*

W 6:00-7:40, StP Ext Center 2G, Dawes

### 22. American Life. 3 degree credits. \$24.

Role of the land, of the city, and of religious and philosophic attitudes (from Puritanism to Pragmatism) in determination of American ideals. (No prerequisite)

*Spring Semester*

W 6:00-7:40, StP Ext Center 2G, Dawes

## PERSONAL ORIENTATION (PO)

### \*1. How to Study. 2 degree credits (see course description). \$24.

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

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

semester. Students intending to use this course in a degree program should consult an adviser before registering)

### *Fall Semester*

Th 6:20-8:00, Johnston 306, Wark  
Th 8:05-9:45, Johnston 306, Carlson

### *Spring Semester*

M 6:20-8:00, Johnston 306, Carlson  
M 8:05-9:45, Johnston 306, Wark

## SOCIAL SCIENCE (SSci)

**1, 2, 3. Introduction to Social Science.** 4 degree credits each semester. \$32 each semester.

An integrated study of the factors—historical, political, economic, social, psychological, and cultural—that influence and are influenced by man's conduct. 1: Development of personality. 2: Work as a central aspect of modern life. 3: The quest for community. (No prerequisite)

### *Fall Semester*

1 M 5:45-8:00, Johnston 115, Chenoweth  
3 W 5:45-8:00, Johnston 115, Blum

### *Spring Semester*

2 M 5:45-8:00, Johnston 115, Chenoweth  
1 W 5:45-8:00, Johnston 115, Blum

**91, 92(UMD). The Great Lakes-St. Lawrence Region.** See page 70.

## Italian (Ital)

**1A-2A. Beginning Conversational Italian.** 3 degree credits each semester. \$24.

Conversational approach. (No prerequisite for 1A; for 2A, 1A or #)

### *Fall Semester*

1A T 6:20-8:00, Folwell 201, Haigh

### *Spring Semester*

2A T 6:20-8:00, Folwell 201, Seim

**3A. Conversational Italian.** 3 degree credits. \$24.

A continuation of Ital 1A-2A.

### *Fall Semester*

W 6:20-8:00, Folwell 205, Poli-Turco

## Journalism (Jour)

**13. Introduction to Journalistic Writing.** 3 degree credits. \$24.

Lectures and assignments in journalistic mediums and audiences; fundamentals of fact-gathering and fact-writing for newspapers, periodicals, broadcasting, and advertising. (Prerequisite: Engl 1B-2B-3B or ##. Repeated spring semester)

### *Fall Semester*

W 6:20-8:00, Murphy 212, Newhall

### *Spring Semester*

W 6:20-8:00, Murphy 212, Lindsay

**18. Principles of Advertising.** 3 degree credits. \$24.

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

Symbols explained on page 24.

## Evening and Special Classes

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**\*54. Typography for Publications and Advertising.** 3 degree credits. \$24 plus \$5 laboratory fee.

Study of type faces in current usage. Choosing type faces for headline forms and text. Layouts. Copyfitting and composition in typography laboratory. (Prerequisite: 13 or 18 or ##. Class limited to 20 students)

*Spring Semester*

M 6:20-8:00, Murphy 315, Wilson

**\*65. Graphic Processes and Layout Techniques for Publications and Advertising.** 3 degree credits. \$24 plus \$5 laboratory fee.

Study of letterpress, offset, gravure, and silk screen printing by demonstration and movie. Evaluation of processes. Use of engravings, art, and illustration techniques in publications and advertising. Practice in layout. (Prerequisite: ##. Class limited to 20 students)

*Fall Semester*

M 6:20-8:00, Murphy 212, Wilson

**\*69. Business News and Feature Writing.** 3 degree credits. \$24.

For persons in advertising or in specialized publications. Gathering material and writing of news stories, feature articles, and other types of copy in the business-advertising field. Audiences in this field; media. (Prerequisite: Engl 1B-2B-3B, or ##. Class limited to 18 students. Repeated spring semester)

*Fall Semester*

T 8:05-9:45, Murphy 212, Bush

*Spring Semester*

T 8:05-9:45, Murphy 212, Bush

**\*73. Magazine Writing I.** 3 degree credits. \$24.

The theory and techniques of the nonfiction magazine article for general and specialized periodicals; subjects and materials, practice assignments, manuscript criticism, editorial principles, basic instruction for beginners in this field of writing. (Prerequisite: Engl 1B-2B-3B, or ##. Class limited to 18 students)

*Fall Semester*

T 6:20-8:00, Murphy 212, Bush

**78. Public Relations.** 3 degree credits. \$24.

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 mediums, 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*

M 6:20-8:00, Murphy 308, Lindsay

**\*79. Advertising Copy Writing.** 3 degree credits. \$24.

Techniques of writing retail and national advertising copy. Application of psychological principles relating to approach, appeals and response. Use of pre-testing, post-testing and creative research findings. (Prerequisite: 18 or ##. Class limited to 18 students)

*Spring Semester*

Th 6:20-8:00, Murphy 212, Winter

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Symbols explained on page 24.



## Library Science (Lib)

### 53. School Library Management. 3 degree credits. \$24.

Intended only for those working toward certification as school librarians. (No prerequisite)

*Fall Quarter*

T 4:00-6:30, Library 4A, Callahan

### 55. Library Administration. 3 degree credits. \$24.

Introduction to principles of library administration, organization, and management. To orient students in the library profession and help them discover the principles of library administration. (No prerequisite)

*Winter Quarter*

TTh 4:30-6:00, Library 4A, Berninghausen

### 62. Reference I. 3 degree credits. \$24.

General reference tools and theory and practice of reference work. A prerequisite for graduate study and required for certification as a school librarian. (No prerequisite)

*Fall Quarter*

M 6:30-9:00, Library 4A, Wezeman

*Spring Quarter*

W 6:30-9:00, Library 4A, Wezeman

### 70. Selection of Library Materials. 3 degree credits. \$24.

Techniques, standards for selection of books, magazines, pamphlets, phonograph records, films, etc. (No prerequisite)

*Winter Quarter*

M 6:30-9:00, Library 4A, Berninghausen

### 83. Cataloguing and Classification. 3 degree credits. \$24.

*Fall Quarter*

W 6:30-9:00, Library 4A, Simonton

### 176. Communication Media and the Library. 3 degree credits. \$24.

Process of communication. Books, magazines, newspapers, television, radio, and the film in relation to libraries in society. (Prerequisite: #)

*Spring Quarter*

M 6:30-9:00, Library 4A, Berninghausen

## Minnesota Studies (MinS)

### Minnesota Chippewa: the History of a People. Special Class. \$12.

A course in Indian history, dealing with the Chippewa, Minnesota's modern pioneers: leaders, political alliances, diplomatic marriages, conquests and settlements. Attention will be given to the language, through which most Chippewa adults still relate to the world; to goals influencing choice and conduct; and to the creeping cultural paralysis, which began with the first contacts of the Chippewa with white men and continued—seldom recognized and never checked—until a free people's will to resist was all but lost. Of particular interest and usefulness to social workers, teachers, church workers, nurses, persons in volunteer work. (No prerequisite)

*February 15-April 18*

M 6:30-8:00, Nicholson 122, Mudgett

Symbols explained on page 24.

## Evening and Special Classes

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**Anth 80. The American Indian.** See page 36.

**SSci 91, 92. The Great Lakes-St. Lawrence Region.** See page 70.

**NatH. Birds of Minnesota.** See page 60.

**NatH. Wild Game of Minnesota.** See page 60.

## Music (Mus)

*Individual instruction in music offered by the Department of Music is open to registration through the General Extension Division by students not able to attend day classes full time. A \$4 registration fee will be charged for each applied music course in addition to the regular tuition and fees. The usual fee for late registrations will also be charged.*

### Applied Music

Private lessons are given in piano, organ, voice, violin, trumpet, and all other orchestral instruments. Registration is made on the quarterly basis through the office of the Department of Music, 107 Scott Hall. Time and place of lessons are also arranged through the music office. 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*. For further information consult any office of the General Extension Division or the office of the Department of Music.

### Enjoying Music. No credit. \$24.

For those who wish to develop or increase their enjoyment and understanding of music as a means toward life enrichment. The lectures are carefully and completely illustrated by recordings. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

M 6:20-8:00, Scott 4, Ivory

#### *Spring Semester*

M 6:20-8:00, Scott 4, Ivory

### American Jazz. No credit. \$24.

A course designed primarily for the "amateur" who would like to know more about jazz in order to understand it better and enjoy it more. What is and isn't jazz? What should we listen for; what are the different styles—"Dixie," "swing," etc.? The place of jazz in today's culture: how it has affected American popular and classical music.

Extensive use of records and tape recordings in conjunction with informal class discussions. No previous musical training or experience necessary. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

Th 6:20-8:00, Nicholson 111, Caswell

#### *Spring Semester*

Th 6:20-8:00, Nicholson 111, Caswell

### \*Piano Playing for Pleasure (Group Piano) I-II. 2 certificate credits each semester. \$24.

Practical piano for the person who wishes to play the piano for pleasure. Emphasis on sight reading, transportation, harmonization, improvisation, accompanying. Student will learn

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

to chord and to play simple tunes. (No prerequisite for I; prerequisite for II is I or #. Each section limited to 20 students)

<i>Fall Semester</i>		<i>Spring Semester</i>	
I T 7:00-9:00, MusEd 103, Duckworth	II T 7:00-9:00, MusEd 103, Duckworth		
Th 7:00-9:00, MusEd 103, Duckworth			

### 40-41-42. University Symphony Orchestra. 1½ degree credits each semester. \$12.

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 W 7:00-9:30, Northrop Aud, Oberg	41-42 W 7:00-9:30, Northrop Aud, Oberg		

### 43. University Chorus. 1 degree credit each quarter. \$8.

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, Collins	(same schedule as fall)	(same schedule as fall)

### Introduction to Sacred Music I-II. 3 certificate credits each semester. \$24.

Principles of sacred music; music of the liturgies, Gregorian chant, music of the congregations, choir and organ music; cantata, oratorio, and passion writing, past and present. To alternate each year with 50-51-52, American Music. (No prerequisite)

<i>Fall Semester</i>		<i>Spring Semester</i>	
I T 6:20-8:00, Scott 104, Riedel	II T 6:20-8:00, Scott 104, Riedel		

### 73-74-75. Introduction to Opera. 3 degree credits each semester. \$24.

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 non-music majors)

<i>Fall Semester</i>		<i>Spring Semester</i>	
73-74 W 6:20-8:00, Scott 4, Knowles	74-75 W 6:20-8:00, Scott 4, Knowles		

### 147-148-149. Opera Production. 2 degree credits each quarter. \$16 plus \$4 laboratory fee.

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 Tuesday and Thursday. See schedule below.*

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
147 T 6:20-8:00, MusEd 204, Knowles	148 (same schedule as fall)	149 (same schedule as fall)
Th 3:30-5:00, MusEd 204, Knowles		

Symbols explained on page 24.

## Evening and Special Classes

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### Natural History (NatH)

#### \*Birds of Minnesota. Special Class. \$24.

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)

*Spring Semester*

Th 6:20-8:00, Museum of Natural History 309,  
Breckenridge, Gunderson

#### \*Wild Game of Minnesota. Special Class. \$16.

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)

*Fall Quarter*

W 6:20-8:00, Museum of Natural History  
309, Gunderson

### Nursing

#### NURSING ADMINISTRATION (NuAd)

#### 58. Introduction to Ward Administration. 3 degree credits. \$24.

Place of the head nurse in the hospital organization; basic principles of maintaining nursing service; analyzing patients' needs and directing activities of ward personnel. (Open to registered professional nurses)

*Fall Quarter*

T 6:00-8:30, Owre 111, Grainger

#### 85. Fundamentals of Nursing Service Administration. 3 degree credits. \$24.

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 professional nurses)

*Spring Quarter*

T 6:00-8:30, Millard 116, Walseth

**Nursing Education (NuEd).** See page 100.

### Philosophy (Phil)

#### 1. Problems of Philosophy. 3 degree credits. \$24.

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 115, Raab  
Th 6:20-8:00, Johnston 113, Mason

*Spring Semester*

T 6:20-8:00, Johnston 113, Garver

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Symbols explained on page 24.

**2. Logic.** 3 degree credits. \$24.

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 8:05-9:45, Johnston 115, Allen  
W 8:05-9:45, Johnston 114, Maxwell

*Spring Semester*

T 8:05-9:45, Johnston 113, Garver

**3. Ethics.** 3 degree credits. \$24.

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)

*Spring Semester*

Th 6:20-8:00, Johnston 115, Raab  
Th 6:20-8:00, Johnston 113, Mason

**50A. Ancient Philosophy.** 3 degree credits. \$24.

The origin of Greek thought, from Thales to Aristotle, with special emphasis on Plato and Aristotle. (No prerequisite. This course is a somewhat abridged counterpart of 50, which carries 5 credits. It may be offered in fulfillment of the requirement for a major in philosophy or as prerequisite for advanced courses *only* under exceptional circumstances and by special arrangement with the Department of Philosophy)

*Fall Semester*

Th 6:20-8:00, Johnston 106, Allen

**52A. Modern Philosophy.** 3 degree credits. \$24.

Rise and development of modern philosophy. The scientific revolution of Copernicus and Galileo; attempts at a new philosophy by Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume; criticism of these earlier attempts by Kant and Hegel. (No prerequisite. This course is a somewhat abridged counterpart of 52, which carries 5 credits. It may be offered in fulfillment of the requirement for a major in philosophy or as prerequisite for advanced courses *only* under exceptional circumstances and by special arrangement with the Department of Philosophy)

*Spring Semester*

W 6:20-8:00, Johnston 113, Mason

## Photography (Phot)

*Students in all photography classes must furnish their own cameras.*

**\*Art 10. Basic Photography I.** (Same as Jour 10) 3 degree credits. \$24 plus \$5 laboratory fee.

A course for beginners, with little or no experience in photography. The course will include lectures and demonstrations dealing with basic photographic equipment and materials, general camera and darkroom techniques, history, and criticism. There will be some laboratory work in 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 24 students)

*Fall Semester*

M 6:20-8:00, Jones 2, Liebling

*Spring Semester*

M 6:20-8:00, Jones 2, Liebling

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Symbols explained on page 24.

## Evening and Special Classes

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### \*Art 11. Basic Photography II. (Same as Jour 11) 3 degree credits. \$24 plus \$5 laboratory fee.

A course for amateurs with some experience and familiarity with special photographic equipment and techniques. Work will include some assigned projects, lectures, and demonstrations, but special attention will be given to individual interests and requirements. (Prerequisite: Art 10 or equivalent with §. Repeated spring semester. Limited to 24 students)

*Fall Semester*

W 6:20-8:00, Jones 2, Liebling

*Spring Semester*

W 6:20-8:00, Jones 2, Liebling

### Color Photography I. 3 certificate credits. \$24 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

### Color Photography II. 3 certificate credits. \$24 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

### Motion Picture Production I. 3 certificate credits. \$24 plus \$5 laboratory fee.

A basic course designed to give the businessman and beginning film producer a well-rounded foundation in the several phases of motion picture production. Exercises in script writing, cinematography, editing, sound recording, and laboratory procedures provide a basis for producing educational and industrial films in your various institutions. (No prerequisite)

*Fall Semester*

T 6:20-8:00, Wesbrook 50, Cain

### Motion Picture Production II. 3 certificate credits. \$24 plus \$7.50 laboratory fee.

An advanced course in motion picture production techniques designed to put into practice the theory learned the previous semester. The course includes group experiments offering a wider opportunity for practical experience with the tools and equipment of 16mm film production. (Prerequisite: Motion Picture Production I or §)

*Spring Semester*

T 6:20-8:00, Wesbrook 50, Cain

## Political Science (Pol)

### 1-2.† American Government and Politics: Parts I and II. 3 degree credits each semester. \$24 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,

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

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, Hathaway  
1 Th 6:00-7:40, StP Ext Center 2G, Mitau

### *Spring Semester*

2 M 6:20-8:00, Ford 155, Christensen  
2 Th 6:00-7:40, StP Ext Center 2G, Mitau

### **A-B.† The State in the Modern World.** 3 degree credits each semester. \$24 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 8:05-9:45, Ford 70, Chase

### *Spring Semester*

B W 8:05-9:45, Ford 70, Chase

### **25. World Politics.** 3 degree credits. \$24.

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*

T 6:20-8:00, Ford 115, Rogers

### **50. Political Behavior.** (\*\*Pol 167) 3 degree credits. \$24.

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 6:20-8:00, Ford 150, Hoffmann

### **51. Political Behavior.** (\*\*Pol 168) 3 degree credits. \$24.

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; 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 6:20-8:00, Ford 150, Hoffmann

### **52. American Political Parties.** (\*\*Pol 137) 3 degree credits. \$24.

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 8:05-9:45, Ford 130, Backstrom

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Symbols explained on page 24.

## Evening and Special Classes

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### 54. Chinese Government. (\*\*Pol 154) 3 degree credits. \$24.

Constitutional and political development in China; political ideas, government, political parties, and problems. (No prerequisite)

#### *Fall Semester*

W 6:20-8:00, Ford 70, Turner

### 55. Government of the Soviet Union. (\*\*Pol 143, Government of the U.S.S.R. and Adjacent States) 3 degree credits. \$24.

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

#### *Spring Semester*

M 6:20-8:00, Ford 175, Turner

### 75. Local Government in the United States. (\*\*Pol 116, Local Government) 3 degree credits. \$24.

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 8:05-9:45, Ford 170, Backstrom

## PUBLIC ADMINISTRATION COURSES

*The General Extension Division, in co-operation with the Public Administration Center of the Political Science Department, offers a Certificate in Public Administration for the satisfactory completion of approved programs of study. The course program for this award is outlined in detail on page 11 of this bulletin. The completed program represents the equivalent of 1 academic year of full-time study at university level.*

### 58. Governmental Accounting. (See BA 185C, page 81) 3 degree credits. \$24.

A course in the principles and procedures of governmental accounting including: fund accounting; budgetary accounting as it relates to preparation and control of appropriation and program budgets, and control of periodic allotments; revenues, expenditures, assets, and liabilities; account classification; organizational and administrative aspects including systems and simplification techniques, financial reporting; principles of governmental cost accounting. (No prerequisite. Qualified students may register for BA 185C. Consult instructor)

#### *Fall Semester*

Th 6:20-8:00, Ford 160, Magraw

### 60. Organization and Management. (\*\*Pol 131, Public Administration) 3 degree credits. \$24.

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 8:05-9:45, Ford 150, Warp

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Symbols explained on page 24.



## Course Offerings—Arts and Sciences

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### 62. Public Personnel Administration. 3 degree credits. \$24.

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*

W 6:20-8:00, Ford 175, Jackson

### 63. Public Financial Administration. 3 degree credits. \$24.

Survey of purchasing, contracting, revenues, taxation, special assessments, service charges, borrowing, expenditures, budgeting, accounting, cost accounting, auditing, and reporting. Emphasis on state and municipal practices.

*Fall Semester*

T 6:20-8:00, Ford 160, Robertson

### 66. Practice of Public Administration. 3 degree credits. \$24.

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*

Th 8:05-9:45, Ford 175, Warp

### 67. Administrative Analysis. (See BA 145C, page 81) 3 degree credits. \$24 plus \$2 material fee.

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 B.A. 145C. Consult instructor)

*Spring Semester*

Th 6:20-8:00, Ford 160, Magraw

### 73. City and County Planning. 3 degree credits. \$24.

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.

*Fall Semester*

W 6:20-8:00, Ford 160, Engelen

## Psychology (Psy)

### 1A. Application of Psychology to Living. 3 degree credits. \$24.

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; may be taken with the same satisfaction before or after Psy 1-2. Elective credit in S.L.A. Not to be confused with Elementary Psychology A. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Nicholson 213, White  
T 6:00-7:40, StP Ext Center 3G, White  
Th 8:05-9:45, Nicholson 216, White

*Spring Semester*

M 8:05-9:45, Nicholson 216, White  
T 6:00-7:40, StP Ext Center 3G, White  
Th 6:20-8:00, Nicholson 216, White

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Symbols explained on page 24.

## Evening and Special Classes

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### 1-2.† General Psychology. 3 degree credits each semester. \$24.

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, White  
1 Th 6:00-7:40, StP Ext Center 2A, D'Andrea  
2 T 6:20-8:00, Nicholson 213, Meier

#### *Spring Semester*

2 W 6:20-8:00, Nicholson Aud, White  
2 Th 6:00-7:40, StP Ext Center 2A, D'Andrea  
1 T 6:20-8:00, Nicholson 211, Meier

### \*4-5.† Introductory Laboratory Psychology. 2 degree credits each semester. \$24.

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 8:05-9:45, Psychology 211, Horton  
W 8:05-9:45, Psychology 211, Quiggle  
Th 7:50-9:30, StP Ext Center 3C, Koplín

#### *Spring Semester*

5 T 8:05-9:45, Psychology 211, Horton  
W 8:05-9:45, Psychology 211, Quiggle  
Th 7:50-9:30, StP Ext Center 3C, Koplín

### 70. Principles of Psychological Measurement. 3 degree credits. \$24.

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: 1-2 or §)

#### *Fall Semester*

T 6:20-8:00, Johnston 106, Campbell

#### *Spring Semester*

T 6:20-8:00, Johnston 106, Campbell

### 119. Psychology of Personality. 3 degree credits. \$24 plus \$1 laboratory fee.

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

#### *Spring Semester*

W 8:05-9:45, Psychology 115, Sherman

### 122-123.† Vocational Development and Personnel Psychology. 3 degree credits each semester, \$Psy 160. \$24 plus \$1 laboratory fee.

Deals with selecting, counseling, training, and maintaining an efficient labor force in industry. Theory and practice of giving, interpreting, and evaluating psychological tests and of interviewing; constructing and using rating scales; training, maintaining, and promoting employees. There will also be actual practice in the use of psychological tests. (Prerequisite: §)

#### *Fall Semester*

122 M 6:20-8:00, Psychology 211, Longstaff

#### *Spring Semester*

123 M 6:20-8:00, Psychology 211, Longstaff

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

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### **125-126. Psychology of Individual Differences.** 3 degree credits each semester. \$24.

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. (Prerequisite: 1-2, 4-5, or 5 credits in statistics; 125 must precede 126)

#### *Fall Semester*

125 T 6:20-8:00, Johnston 122, Dawis

#### *Spring Semester*

126 T 6:20-8:00, Johnston 122, Dawis

### **135-136-137. Occupational Counseling.** 2 degree credits each quarter. \$16 each quarter.

Occupational information as used in counseling. Educational and occupational training opportunities and requirements. Psychological techniques in case analysis, interviewing, and remedial work. Types of vocational problems. Illustrative case histories. (Prerequisite: for 135, #; for 136, 135; for 137, 136)

#### *Fall Quarter*

135 Th 6:20-8:00, Psychology 211, Jewell

#### *Winter Quarter*

136 (same schedule as fall)

#### *Spring Quarter*

137 (same schedule as fall)

### **144-145.† Abnormal Psychology.** 3 degree credits each semester. \$24.

Normal and abnormal behavior contrasted. Dynamics, and particularly the social determinants, of personality and maladjustments. (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

### **156. Psychology of Advertising.** 3 degree credits. \$24.

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. (Prerequisite: 1-2 and Econ 1-2)

#### *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. \$24.

Fundamental principles of health conservation and disease prevention. (No prerequisite)

#### *Fall Semester*

T 6:20-8:00, Mayo 125, Thomson

### **53. Introduction to Public Health.** 5 degree credits. \$40.

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 Nursing Home, Room 4,  
436 Main Street, StP, Schuman

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Symbols explained on page 24.

## Evening and Special Classes

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### 75. Introduction to Environmental Sanitation. 3 degree credits. \$24.

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

*Spring Semester*

M 6:20-8:00, Mayo 1250, Stauffer

### 133. Mental Health. 3 degree credits. \$24.

Emotional factors underlying wholesome family relations or interfering with successful adjustment in family and community. (Prerequisite: Industrial personnel only)

*Fall Quarter*

T 6:30-9:00, Mayo 1250, Williams

## Scandinavian (Scan)

### 1-2. Beginning Norwegian. 3 degree credits each semester. \$24.

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

### 3-4. Intermediate Norwegian. 3 degree credits each semester. \$24.

Designed for students with some theoretical and practical knowledge of Norwegian. Provides a rapid review of grammar and considerable practice in conversation and composition. Readings in Norwegian. (Prerequisite: for 3, 2; for 4, 3)

*Fall Semester*

3 M 6:20-8:00, Folwell 12, Nelson

*Spring Semester*

4 M 6:20-8:00, Folwell 12, Nelson

### 7-8. Beginning Swedish. 3 degree credits each semester. \$24.

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, Gustafson

*Spring Semester*

8 T 6:20-8:00, Folwell 12, Gustafson

### 9-10. Intermediate Swedish. 3 degree credits each semester. \$24.

This course is designed either for students who have completed 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: 7-8, or #)

*Fall Semester*

9 T 8:05-9:45, Folwell 12, Gustafson

*Spring Semester*

10 T 8:05-9:45, Folwell 12, Gustafson

### 13-14. Beginning Danish. 3 degree credits each semester. \$24.

This course is intended for students who have little or no previous knowledge of Danish, stresses the oral approach. It is planned especially for SPAN students, but is open to others. (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

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

### 17-18. Beginning Finnish. 3 degree credits each semester. \$24.

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

### 19-20. Intermediate Finnish. 3 degree credits each semester. \$24.

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

## Slavic and Oriental Languages

### JAPANESE (Jap)

#### 1-2. Beginning Modern Japanese. 3 degree credits each semester. \$24.

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

#### 3-4. Intermediate Japanese. 3 degree credits each semester. \$24.

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: Jap 1-2, or #)

#### *Fall Semester*

3 M 8:05-9:45, Folwell 305½, Copeland

#### *Spring Semester*

4 M 8:05-9:45, Folwell 305½, Copeland

### RUSSIAN (Russ)

#### 1-2. Beginning Russian. 3 degree credits each semester. \$24.

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

#### *Fall Semester*

1 M 6:20-8:00, Folwell 113, Niemi

#### *Spring Semester*

2 M 6:20-8:00, Folwell 113, Niemi

#### 3-4. Intermediate Russian. 3 degree credits each semester. \$24.

Readings from 19th-century authors, review of essential grammar, practice in spoken Russian. (Prerequisite: 1-2)

#### *Fall Semester*

3 W 6:20-8:00, Folwell 302, Niemi

#### *Spring Semester*

4 W 6:20-8:00, Folwell 302, Niemi

Symbols explained on page 24.

## Evening and Special Classes

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### **20-21. Advanced Russian.** 3 degree credits each semester. \$24.

Discussions in Russian on assigned readings. Designed for students who have had two or more years of Russian. (Prerequisite: Russ 4 or #)

#### *Fall Semester*

20 W 8:05-9:45, Folwell 302, Niemi

#### *Spring Semester*

21 W 8:05-9:45, Folwell 302, Niemi

## Social Science (SSci)

### **91, 92(UMD). The Great Lakes-St. Lawrence Region.** 3 degree credits each term. \$24 each term.

A study of the Great Lakes-St. Lawrence River region from the view point of the social sciences. 91: Development and future prospects of the major manufacturing and service industries. 92: Development and prospects of the mineral and power industries. Course designed especially for teachers and businessmen. Offered through the Division of Social Sciences, University of Minnesota, Duluth. (No prerequisite)

Oct. 3, 17, 31, Nov. 14, 28, Dec. 12, Jan. 9.

Feb. 13, 27, Mar. 12, 26, Apr. 9, 23, May 7.

91 S 8:30 a.m.-12:30, Nicholson 216, Sielaff

92 S 8:30 a.m.-12:30, Nicholson 216, Sielaff

**Minnesota Chippewa.** See page 57.

**Introduction to Social Science.** See page 55.

## Social Work (SW)

### **\*11. Essential Tasks of Child Caring.** 3 degree credits. \$24.

Essential considerations of child-caring with particular emphasis upon the child's emotional development, socialization and the caring adult's handling of the child's behavior. Also, stress upon the meaning for the child of his parent's unavailability or a separation from parents and a required dependency upon a new central caring person. Especially designed for personnel of homemaker services, boarding home care and children's institutions. (Prerequisite: affiliation with social agency, or #. Class limited to 25 students)

#### *Fall Semester*

Th 8:00-10:00 a.m., Johnston 106, Maier

### **\*103. Family Centered Casework.** 3 degree credits. \$24.

Consideration of the cultural, social, and economic characteristics of the American family and the way these influence its role as the major social institution through which the individual at all ages attempts to meet social and maturational needs. Factors determining family development and functioning, problems in inter-personal relationship, such as marital conflict, parent-child conflict, etc., will be discussed with a view toward defining a family centered approach to their understanding and treatment. (Prerequisite: current employment in a social agency. Class limited to 25 students)

#### *Spring Semester*

W 4:00-6:00, Johnston 105, Schneiderman

### **\*165. Practical Problems in the Casework Process.** 3 degree credits. \$24.

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.

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Symbols explained on page 24.

## Course Offerings—Arts and Sciences

There will be a consideration of case material and a use of this material in relating the basic concepts and principles to practice. (Prerequisite: current employment in a social agency or #. Class limited to 25 students)

### *Fall Semester*

Th 8:00-10:00 a.m., StP Ext Center 3F, Compton

### **\*169. Casework with Children. 3 degree credits. \$24.**

The course is designed primarily to increase competence in the practice of the casework method in working with children of school age. This implies achieving a clearer and deeper understanding of children whose social and emotional problems interfere with their happiness and adjustment in the home, school and community. This also implies the exploration and utilization of social work theory, knowledge, skills, and attitudes in the process of helping children to prevent, handle or solve the various degrees of social and emotional dysfunctioning. Because children cannot be best understood or helped except within their environment, some consideration will be given in the course to work with parents, agency personnel and community resources. Teaching and learning will be implemented through active discussion, analysis of case material, lecture and complementary reading. (Prerequisite: current employment in a social agency to provide casework services for children, or #. Class limited to 25 students)

### *Fall Semester*

T 6:20-8:00, Ford 244, Merl

### **\*271. Community Organization. 3 degree credits. \$24.**

Practice and theory of community organization as developed in social work, in terms of bringing social resources to bear on social needs. Understanding and implementation of socio-cultural concepts in effecting social change on agency, neighborhood and community levels. Case method emphasized. (Prerequisite: current and former practitioners in group work, neighborhood, case work, recreation, public health, nursing, education and church agencies and organizations; or #. Class limited to 25 students)

### *Fall Semester*

T 10:00 a.m.-11:40 a.m., TSF 109, Goldstein

## Sociology (Soc)

### **1. Man in Modern Society. (Formerly Intro. to Soc.) 3 degree credits. \$24.**

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 120, Carroll

W 7:50-9:30, StP Ext Center 2A, Rybnicek

### **2. The American Community. 3 degree credits. \$24.**

Sociological analysis of modern American society. Topics emphasized include distribution of population, urban-rural differences, social factors in business systems, occupational groups, determination of social status, and minority group adjustment. Attempts to familiarize student with current research methods. (Prerequisite: 1 or 3)

### *Spring Semester*

M 6:20-8:00, Ford 70, Rybnicek

Symbols explained on page 24.

## Evening and Special Classes

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### 3. Social Problems. (Formerly Soc 49) 3 degree credits. \$24.

A survey course in contemporary social problems with special emphasis on personal demoralization and social disorganization. (No prerequisite. Repeated spring semester)

*Fall Semester*

W 7:50-9:30, StP Ext Center 2A, Corwin

*Spring Semester*

Th 6:20-8:00, Ford 150, Johnson

### 45A-45B. Social Statistics. 3 degree credits each semester, §BA 5. \$24.

Introduction to statistical methods employed in analyses of social data including methods of measuring central tendency, dispersion, significance of differences, and correlation. (No prerequisite)

*Fall Semester*

45A M 8:05-9:45, Ford 120, Francis

*Spring Semester*

45B M 8:05-9:45, Ford 120, Francis

### 53. Elements of Criminology. 3 degree credits. \$24.

General survey of field of criminology. (Prerequisite: 1 or ##)

*Fall Semester*

Th 6:20-8:00, Ford 170, Carroll

### 120. Social Psychology. 3 degree credits. \$24.

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. (Prerequisite: 1 or ##)

*Fall Semester*

T 6:20-8:00, Ford 170, Forster

### 123. Minority Group Relations. 3 degree credits. \$24.

Interaction of social and cultural groups in America. Processes leading to group contact; characteristics and contributions of ethnic groups in the United States; mechanisms and problems of group adjustment. Democratic theory and practice; sources of prejudice; contemporary status of principal minority groups; international implications; trends and proposed solutions. (Prerequisite: 1 or ##)

*Spring Semester*

T 6:20-8:00, Ford 160, Forster

### 140. Social Organization. 3 degree credits. \$24.

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. (Prerequisite: 1 or ##)

*Fall Semester*

T 8:05-9:45, Ford 170, Forster

### 141. Family. 3 degree credits. \$24.

The evolution of the family; development of family unity or disunity, the roles of the several members of the family, methods of investigation of the family. (Prerequisite: 1 or ##)

*Spring Semester*

Th 8:05-9:45, Ford 150, Johnson

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Symbols explained on page 24.



## Spanish (Span)

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 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.

### 1C-2C. Beginning Spanish. 5 degree credits each semester. \$40.

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

#### *Spring Semester*

2C M 6:20-9:20, Folwell 206

### 1-2. Beginning Spanish. 3 degree credits each semester. \$24.

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 208, 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

### 3-4. Beginning Spanish. 3 degree credits each semester. \$24.

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

### 55A-55B. Spanish Conversation. 3 degree credits each semester. \$24.

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

#### *Fall Semester*

55A W 6:20-8:00, Folwell 108

#### *Spring Semester*

55B W 6:20-8:00, Folwell 108

### 73A-73B. A Trip to Latin America and Spain. 3 degree credits each semester. \$24.

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.

Symbols explained on page 24.

## Evening and Special Classes

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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 226, Cuneo

### *Spring Semester*

73B W 6:20-8:00, Folwell 226, Cuneo

## Speech and Theater Arts (Spch)

**\*Beginning Practical Speech Making.** 3 certificate credits. \$24 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 made. (Prerequisite: High school graduate or ##. Each section limited to 20 students. Repeated spring semester)

### *Fall Semester*

M 6:20-8:00, Folwell 5

M 8:05-9:45, Folwell 5, Fulton

W 6:20-8:00, Folwell 5

### *Spring Semester*

M 6:20-8:00, Folwell 5, Fulton

M 8:05-9:45, Folwell 5, Fulton

**\*Advanced Practical Speech Making.** 3 certificate credits. \$24 plus \$5.50 materials and laboratory fee.

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 15 students)

### *Fall Semester*

M 6:20-8:00, Folwell 10, Fulton

**5X-6X.† Fundamentals of Speech.** (Replaces 1-2-3) 3 degree credits each semester. \$24 plus \$1 laboratory fee.

Speech as a means of social adaptation and control; techniques of body and voice; organization of speech material and study of types of speeches; practice for correctness and effectiveness in presentation. Voice recordings. (No prerequisite for 5X; for 6X, 5X or 1)

### *Fall Semester*

5X M 6:20-8:00, Folwell 305, Fletcher

6X M 6:20-8:00, Folwell 306

### *Spring Semester*

5X M 6:20-8:00, Folwell 305

6X M 6:20-8:00, Folwell 306, Fletcher

**31. Introduction to the Theater.** 3 degree credits. \$24.

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 high-lights of theater, architecture, scenic design, stagecraft, lighting, costumes, make-up, and special effects. (No prerequisite)

### *Fall Semester*

W 6:20-8:00, Shevlin 110, L Manfull

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Symbols explained on page 24.

**32. Beginning Acting: Creative Approach.** 3 degree credits. \$24.

The creative approach to acting. Emphasis is placed upon honest and effective response to imaginary situations. Students examine the basic texts of Stanislavsky, Boleslavsky, and McGaw, and present original scenes and skits. Freedom from self-sensitivity to environment, and appreciation of the arts of acting are the primary objectives. (Prerequisite: 31)

*Spring Semester*

W 6:20-8:00, Shevlin 110, H Manfull

**\*39. Parliamentary Procedures.** 2 degree credits. \$24.

Training for group leadership; emphasis is placed on a working knowledge of parliamentary procedures for chairmen and participants as well as informal approaches to group management. The course stresses the learning-by-doing approach with each student given several opportunities to practice the various skills and techniques presented. (No prerequisite. Class limited to 20 students)

*Spring Semester*

M 6:20-8:00, Folwell 205, Shapiro

**51. Advanced Public Speaking.** 3 degree credits. \$24.

Preparation and delivery of speeches on current public issues. (Prerequisite: 1-2 or 5)

*Fall Semester*

M 6:20-8:00, Folwell 308, Scott

**\*65. Radio and Television Speech.** 3 degree credits. \$24 plus \$2 laboratory fee.

Speech and psychology of radio and television; voice, diction, articulation, pronunciation, speech personality. Specific projects in radio and television situations. Several voice recordings will be made. (Prerequisite: 1-2 or ##. Class limited to 25 students)

*Fall Semester*

T 6:20-8:00, Murphy 302

**Study Skills (SSk)**

**\*Rhet 47. Efficient Reading.** 3 certificate credits (may be used on degree program by petition: 1 credit in S.L.A. or Bus., 3 credits in Educ., I.T., or Ag.). \$24 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 8:05-9:45, Ford 15, Wright  
T 6:20-8:00, Ford 15, Mondale  
T 8:05-9:45, Ford 15, Mondale  
W 6:20-8:00, Ford 15, Brown  
W 8:05-9:45, Ford 15, Price  
Th 6:00-7:40, STP Ext Center 3C, Whipp

*Spring Semester*

M 6:20-8:00, Ford 15, Wright  
M 8:05-9:45, Ford 15, Wright  
T 6:20-8:00, Ford 15, Mondale  
T 8:05-9:45, Ford 15, Mondale  
W 6:20-8:00, Ford 15, Brown  
W 8:05-9:45, Ford 15, Price  
Th 6:00-7:40, STP Ext Center 3C, Whipp

**Efficient Listening.** 3 certificate credits. \$24.

The primary emphasis in this course is upon efficient listening to instructive and directive speech. Of particular value to those who wish to improve concentration when listening to lectures,

Symbols explained on page 24.

## Evening and Special Classes

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dictated material, instructions orally presented. Half of each class session is occupied with lectures on such topics as inefficient listening and its causes, the desire to learn and learning economy, the elements of concentration, speech structuralization, comprehension of main points, four usable systems of note-taking, and emotional adjustment of the speaker and his thesis. The other half of each class session is devoted to student performance. (No prerequisite. Repeated spring semester)

### *Fall Semester*

M 6:20-8:00, Johnston 106, Cashman  
T 6:20-8:00, Johnston 126, Cashman

### *Spring Semester*

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

### **Vocabulary Building: How to Expand Your Word Power.** 3 certificate credits. \$24 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 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 8:05-9:45, Nicholson 207, Stockdale

### *Spring Semester*

M 7:50-9:30, StP Ext Center 2G, Keeler  
T 6:20-8:00, Nicholson 207, Sheldon  
W 8:05-9:45, Nicholson 207, Stockdale

**Grammar Review.** See English, page 44.

**How to Study.** See Interdepartmental Courses and General Education, page 53.

## Zoology (Zool)

**1-2-3.† General Zoology.** 3 degree credits each quarter for 1 and 2. \$24 plus \$10 laboratory fee each quarter. 4 degree credits for 3. \$32 plus \$10 laboratory fee.

Structure, physiology, embryology, classifications, and evolution of animals. One hour of lecture and 2 hours of laboratory each evening. (No prerequisite for 1; for 2, 1)

### *Fall Quarter*

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

### *Winter Quarter*

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

### *Spring Quarter*

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

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Symbols explained on page 24.

## BUSINESS ADMINISTRATION

*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 50	BA 53—Insurance Principles
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 54-55	BA 55A-55B—Elementary Accounting
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 65	BA 55D—Analysis of Financial Statements
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 84	Econ 160—Comparative Economic Systems
Econ 85	Econ 69—Government Regulation of Business
BA 86	BA 99—Survey of Office Management
BA 89	BA 50—Production Management
BA 91	BA 89B—Tabulating Equipment Applied to Business
BA 111	BA 197—Purchasing
BA 113	BA 117—Sales Management
BA 118	BA 125—Auditing Principles
BA 129	BA 184A—Highway Transportation
Econ 129	Econ 150A—Current Economic Issues
BA 134A-134B	BA 135A-135B—Income Tax Accounting
BA 135	BA 185B—Public Accounting
BA 136	BA 175C—Controllershhip Functions and Procedures
BA 146	BA 176—Investments
BA 148	BA 186—The Securities Market
Econ 149	Econ 157—Business Cycles
BA 150A-150B-150C	BA 105A-105B-105C—Intermediate Accounting
BA 152-153	BA 115A-115B—Cost Accounting
BA 154	BA 175D—Budgetary Control
BA 156	BA 76—Finance Management
BA 158	BA 185C—Governmental Accounting
BA 159	BA 185A—Advanced Accounting
Econ 161	BA 152—Principles of Industrial Relations: Labor Marketing
Econ 162	Econ 152—Labor Movements
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
BA 168	BA 182B—Intermediate Manpower Management
Econ 169	Econ 182—Economic Security
BA 173	BA 97—Market Analysis and Research
BA 174	BA 174—Transportation II: Traffic Management (no change)
Econ 176	Econ 104—International Economics
Econ 178	Econ 120—Economics of Consumption

## Evening and Special Classes

Old Numbers	New Numbers and Titles (Fall, 1958)
BA 180D-181D-182D	BA 202—Organization and Staffing;
	BA 222—Wage and Salary Administration;
	BA 262-272-282—Graduate Topics in Industrial Relations
BA 180I-181I	BA 194A-194B—Topics in Transportation; Advanced Traffic Management I-II
BA 181A	BA 145B—Internal Auditing
BA 182A	BA 145C—Systems and Procedures
BA 182G	BA 60—Business Policy and Management Control
BA 184	BA 70—History of Management Thought

## Accounting

*Note: New certificate awards are now available in the field of Accounting. 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 book-keepers.

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 23	7:00
	Wednesday	September 30	7:00
	Wednesday	December 30	7:00
	Wednesday	February 10	7:00
BA 25	Thursday	September 24	7:00
	Thursday	October 1	7:00
	Thursday	February 11	7:00
BA 26	Friday	September 25	7:00
	Friday	October 2	7:00
	Friday	February 12	7:00

The three courses are scheduled on three plans.

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|---|--|
| 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.   |

Symbols explained on page 24.

## 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. \$24 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 78 for advanced standing examinations)

#### *Fall Semester*

- 24 H 6:20-8:00, Ford 30, Kerns, Clarke,  
Cummings  
24 T 7:50-9:30, StP Ext Center 3F, Kellogg,  
Creviere  
25 M 8:05-9:45, Ford 30, Cummings  
26 T 6:00-7:40, StP Ext Center 3F,  
Creviere  
26 Th 6:20-8:00, Vincent 306, Petterson

#### *Spring Semester*

- 24 Th 6:20-8:00, Ford 60, Petterson  
25 M 6:20-8:00, Ford 30, Kerns, Clarke  
25 T 7:50-9:30, StP Ext Center 3F, Kellogg  
26 M 8:05-9:45, Ford 30, Cummings

### **BA 24-25-26. Principles of Accounting.** (Formerly Econ 24-25-26 or BA 54-55) 3 degree credits each quarter, §BA 55A-55B. \$24 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 78 for advanced standing examinations)

#### *Fall Quarter*

- 24 T 5:30-8:00, Ford 30,  
Urban, Malmon,  
Edie  
24 W 5:15-7:45, StP Ext Center 3G, Powell,  
Spangler

#### *Winter Quarter*

- 25 (Same schedule as fall)

#### *Spring Quarter*

- 26 (Same schedule as fall)

### **BA 24-25-26. Principles of Accounting (Combined).** (Formerly Econ 24-25-26 or BA 54-55) 9 degree credits, §BA 55A-55B. \$72.

This course covers 24-25-26 complete in 1 semester. (No prerequisite. Registrations will be accepted for the entire course only.)

#### *Spring Semester*

- MTh 6:20-8:50, Vincent 306, Edie  
MTh 6:00-8:30, StP Ext Center 3F, Creviere

## SECOND YEAR ACCOUNTING COURSES

### **BA 55C. Managerial Costs.** (Formerly BA 66) 3 degree credits, §115A, 115B. \$24.

General survey of cost accounting from the point of view of the executive who must use cost information in the conduct of his business. (Prerequisite: new BA 26 or old Econ 26. See page 78 for advanced standing examinations)

#### *Spring Semester*

- Th 6:20-8:00, Vincent 307, Burns

### **BA 55D. Analysis of Financial Statements.** (Formerly BA 65 or BA 150C) (To be offered 1960-61)

### **BA 105A-105B-105C. Intermediate Accounting.** (Formerly BA 150A-150B-150C) 3 degree credits each semester, §BA 55D or BA 65. \$24 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

## Evening and Special Classes

inventory and plant. 105B: Accounting treatment of cash, receivables, investments, intangible assets and applications of actuarial mathematics. 105C: Accounting treatment of stockholders' equity, interpretation and analysis of financial statements. (Prerequisites: for 105A, new BA 26 or old Econ 26 [see page 78 for advanced standing examinations]; for 105B, new BA 105A or old BA 150A; for 105C, new BA 105B or old BA 150B)

### Fall Semester

105A M 6:00-7:40, StP Ext Center 2H,  
Johnson  
105A M 6:20-8:00, Vincent 301, Lund  
105C M 8:05-9:45, Vincent 1, Clarke

### Spring Semester

105B M 6:00-7:40, StP Ext Center 3G,  
Johnson  
105B M 6:20-8:00, Vincent 301, Lund

**BA 115A-115B. Cost Accounting.** (Formerly BA 152-153) 3 degree credits each semester, \$BA 55C or BA 66. \$24 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 BA 26 or old Econ 26 [see page 78 for advanced standing examinations]; for 115B, new BA 115A or old BA 152)

### Fall Semester

115A T 8:05-9:45, Vincent 307, Gibson  
115A T 6:00-7:40, StP Ext Center 3E,  
Kellogg

### Spring Semester

115B T 8:05-9:45, Vincent 307, Gibson  
115B T 6:00-7:40, StP Ext Center 3E,  
Kellogg

## SPECIAL INTEREST AND ADVANCED ACCOUNTING COURSES

**Elementary Functional Wiring for Punched Card Equipment.** 3 certificate credits. \$24.

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 70, Engel, Lowry

**BA 89B. Tabulating Equipment Applied to Business.** (Formerly BA 91) 2 degree credits plus 1 certificate credit. \$24.

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 160, Bonney

**BA 125-185B. Auditing Principles and Procedures and Public Accounting.** (Formerly BA 118-135) 3 certificate credits each semester. (6 degree credits on completion of both courses consecutively.) \$24 each semester.

An introduction to auditing principles and procedures. (Prerequisite: new BA 105C or 105C or old BA 150C for BA 125; BA 125 for BA 185B)

### Fall Semester

125 W 6:20-8:00, Vincent 306, Berryman

### Spring Semester

185B W 6:20-8:00, Vincent 306, Berryman

Symbols explained on page 24.



## Course Offerings—Business Administration

**BA 135A-135B. Income Tax Accounting.** (Formerly BA 134A-134B) 3 certificate credits each semester. (4 degree credits on completion of both courses consecutively.) \$24 each semester.

Principles involved in determining taxable net income and computation of federal and state income taxes for individuals, partnerships, and corporations. (Prerequisite: new BA 105A or old BA 150A)

*Fall Semester*

135A M 8:05-9:45, Vincent 301, Rapoport  
135A W 6:00-7:40, StP Ext Center 3F, Daly

*Spring Semester*

135B M 8:05-9:45, Vincent 301, Rapoport  
135B W 6:00-7:40, StP Ext Center 3F, Daly

**BA 145B. Internal Auditing.** (Formerly BA 181A) (To be offered 1960-61)

**BA 145C. Systems and Procedures.** (Formerly BA 182A) (See Pol 67, page 65)  
3 degree credits. \$24 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 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 160, Magraw and others

**BA 175D. Budgetary Control.** (Formerly BA 154) (To be offered 1960-61)

**BA 185A. Advanced Accounting.** (Formerly BA 159) 3 degree credits. \$24.

Consolidated statements, fiduciary and fund accounting, partnership accounting. (Prerequisite: new BA 105C or #105C or old BA 150C)

*Spring Semester*

M 8:05-9:45, Vincent 1, Clarke

**BA 185C. Governmental Accounting.** (Formerly BA 158) (See Pol 58, page 64)  
2 degree credits plus 1 certificate credit. \$24.

A course in the principles and procedures of governmental accounting including: fund accounting; budgetary accounting as it relates to preparation and control of appropriation and program budgets, and control of periodic allotments; revenues, expenditures, assets, and liabilities; account classification; organizational and administrative aspects including systems and simplification techniques, financial reporting; principles of governmental cost accounting. (Prerequisite: BA 105C or #105C, or old BA 150C)

*Fall Semester*

Th 6:20-8:00, Ford 160, Magraw

**Advanced Cost Accounting A-B.** 3 certificate credits each semester. \$24 each semester.

A detailed practical application to business situations of the principles of cost accounting, and the installation of cost systems; burdens and burden centers; pro forma journal entries; wage methods; change from job to process cost methods; by-product accounting; forms. (Prerequisite: BA 115A-B or ##)

*Fall Semester*

A M 6:00-7:40, StP Ext Center 3A, Tuttle

*Spring Semester*

B M 6:00-7:40, StP Ext Center 3A, Tuttle

Symbols explained on page 24.

## Evening and Special Classes

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**Constructive Accounting and Accounting Systems A-B.** 3 certificate credits each semester. \$24 each semester.

**Fall:** Constructive accounting. Design and installation of a modern accounting system; the makeup of various forms for use in the system—purchase orders, receiving slips, invoices, requisitions, shop tickets, etc.; design and ruling of books of original entry; ledgers of various kinds. **Spring:** Accounting systems. Classification of industry according to types of accounting problems; special features of each, constructive, operative, interpretative features. Case method used. (Prerequisite: #)

### Fall Semester

A M 7:50-9:30, StP Ext Center 3A, Tuttle

### Spring Semester

B M 7:50-9:30, StP Ext Center 3A, Tuttle

## Business English

**Review of Business English.** 3 certificate credits. \$24.

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 8:05-9:45, 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

**Business Correspondence.** 3 certificate credits. \$24.

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 8:05-9:45, 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

**Comp 58.** (See description and statement in following course, **Communication in Management.**) 3 degree credits. \$24.

**Communication and Management.** 3 certificate credits. \$24.

*Note—On approval of petition by instructor and the School of Business Administration, degree credit (not in excess of 3 credits) applicable for 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 8:05-9:45, Main Engineering 215, Haga

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Symbols explained on page 24.

## Business Finance

### **BA 56. Corporation Finance.** (Formerly Econ 75) 3 degree credits. \$24.

The corporation in comparison with other types of business units. Organization and capital structure, raising fixed and circulating capital, treatment of corporate earnings, incentives to and forms of combination, trusteeship, and reorganization. (Prerequisite: Econ 1)

*Fall Semester*

M 6:20-8:00, Vincent 207, Sutton  
M 8:05-9:45, Vincent 207, Nilsen

*Spring Semester*

Th 8:05-9:45, Vincent 2, Nilsen

### **BA 76. Finance Management.** (Formerly BA 156) 3 degree credits. \$24.

Duties of the financial manager of a modern business. Various sources from which capital may be secured, best use of a company's funds, and special financial problems which arise in the typical business. (Prerequisite: new BA 56 or old Econ 75 and one advanced course in accounting or #)

*Spring Semester*

M 6:20-8:00, Vincent 207, Sutton

### **BA 176. Investments.** (Formerly BA 146) 3 degree credits. \$24.

A general or "cross cut" survey of the external and internal factors influencing the prices of securities, and of the principles of an investment policy for the individual investor. Objective analysis from source materials of factors explaining price differentiation. (Prerequisite: new BA 56 or old Econ 75)

*Fall Semester*

M 8:05-9:45, Vincent 2, Stevenson

### **BA 186. The Securities Market.** (Formerly BA 148) 3 degree credits. \$24.

Consideration of behavior over time or "longitudinal" analysis of prices of individual and groups of securities. The relationship of economic conditions to security values, particularly the effects of cyclical fluctuation. (Prerequisite: new BA 176 or old BA 146 or #)

*Spring Semester*

M 8:05-9:45, Vincent 2, Stevenson

### **Introduction to Investments.** 3 certificate credits. \$24.

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

## Business Law

### **BA 58-78-88, 98. Business Law.** (Formerly BA 51-52-53, 56) 3 degree credits each semester. \$24.

Comprehensive course in the fundamental principles of law for the business and professional man. 58: Contracts—formation, operation, transfer, discharge. 78: Business associations—nature.

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Symbols explained on page 24.

## Evening and Special Classes

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: BA 58 must precede or be taken in conjunction with either 78 or 88 unless # is obtained for a different sequence)

### Fall Semester

58 T 7:50-9:30, StP Ext Center 2A,  
VanValkenburg  
58 W 6:20-8:00, Ford 120, Moss  
78 T 6:00-7:40, StP Ext Center 2A,  
VanValkenburg  
78 W 8:05-9:45, Ford 120, Moss  
88 T 6:20-8:00, Vincent 113, Thomas

### Spring Semester

58 T 6:00-7:40, StP Ext Center 2A,  
VanValkenburg  
58 W 8:05-9:45, Ford 120, Moss  
78 T 7:50-9:30, StP Ext Center 2A,  
VanValkenburg  
78 W 6:20-8:00, Ford 120, Moss  
88 T 6:20-8:00, Vincent 113, Thomas  
98 W 6:20-8:00, Ford 130, Carroll

**Common Legal Problems I-II.** 3 certificate credits each semester. \$24 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 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 negligent 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 150, Thorfinnson and  
Clay  
II M 8:05-9:45, Ford 150, Thorfinnson and  
Clay

### Spring Semester

I M 6:20-8:00, Ford 150, Thorfinnson and  
Clay  
II M 8:05-9:45, Ford 150, Thorfinnson and  
Clay

## Economics

**Econ B. The Scope, Methods, and Applications of Economics.** 3 degree credits.  
(Offered 1960-61)

**Econ 1-2. Principles of Economics.** 3 degree credits each semester. \$24.

A study of the principles underlying economic activity and the way these principles work out through our economic institutions. Topics covered by Econ 1 include demand and supply, competition and monopoly, and the distribution of income. Topics covered in Econ 2 include national income, money and banking, business cycles, and international trade. Econ 1 and 2 are

Symbols explained on page 24.

## Course Offerings—Business Administration

prerequisite for most advanced courses in business administration and economics. (No prerequisite for Econ 1; for Econ 2, Econ 1)

### *Fall Semester*

1 M 6:20-8:00, Vincent 113  
1 M 6:00-7:40, StP Ext Center 2A,  
Helmberger  
1 T 6:20-8:00, Vincent 1, Borak  
1 W 6:20-8:00, Vincent 1  
1 W 8:05-9:45, Vincent 1  
2 Th 6:20-8:00, Vincent 207

### *Spring Semester*

1 T 8:05-9:45, Vincent 1  
1 Th 8:05-9:45, Vincent 1  
2 M 6:20-8:00, Vincent 113  
2 M 6:00-7:40, StP Ext Center 2A,  
Helmberger  
2 T 6:20-8:00, Vincent 207  
2 W 6:20-8:00, Vincent 113  
2 W 8:05-9:45, Vincent 113

**BA 52. Modern Industrial Relations: Labor Marketing.** (Formerly Econ 73) See Industrial Relations, page 87.

**Econ 65. Intermediate Economic Analysis: The Firm.** (Formerly Econ 81) 3 degree credits. \$24.

Examination of the behavior of firms under competitive and monopolistic conditions, with particular attention to factors influencing the firm's decisions regarding production, output, and prices. (Prerequisite: Econ 2)

### *Fall Semester*

W 6:20-8:00, Vincent 6, Coen

**Econ 66. Intermediate Economic Analysis: Income and Employment.** (Formerly Econ 80) 3 degree credits. \$24.

Determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (Prerequisite: Econ 2)

### *Spring Semester*

W 6:20-8:00, Vincent 207, Coen

**Econ 67. Money and Banking.** (Formerly Econ 57) 3 degree credits. \$24.

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: Econ 2)

### *Fall Semester*

Th 6:20-8:05, Vincent 113, Smith

**Econ 68. Elements of Public Finance.** (Formerly BA 58) 3 degree credits. \$24.

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: Econ 2)

### *Spring Semester*

T 6:20-8:00, Vincent 1, Borak

**Econ 69. Government Regulation of Business.** (Formerly Econ 85) 3 degree credits. \$24.

Economic aspects of public policy affecting the market process. Topics studied include 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 anti-

Symbols explained on page 24.

## Evening and Special Classes

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trust laws and laws relating to "unfair business practices." (Prerequisite: new Econ 65 or old Econ 81 for business or economics majors, or # for others)

### *Fall Semester*

W 6:20-8:00, Vincent 207, Boddy

### **Econ 80. Survey of Economic Ideas.** (Formerly Econ 79) 3 degree credits. \$24.

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: Econ 2)

### *Fall Semester*

Th 8:05-9:45, Vincent 113, Smith

### **Econ 104. International Economics.** (Formerly Econ 176) 3 degree credits. \$24.

An introductory treatment of the 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: Econ 2)

### *Spring Semester*

Th 8:05-9:45, Vincent 205, Smith

### **Econ 120. Economics of Consumption.** (Formerly Econ 178) 3 degree credits. \$24.

Theories and research relating to saving and spending; the utility and indifference approaches, the behaviorist approach (Katona, Morgan, etc.); the consumption function literature; the forecasting of consumer spending; the role of buying plans. (Prerequisite: Econ 2)

### *Fall Semester*

Th 6:20-8:00, Vincent 205, Helmberger

### **Econ 150A. Current Economic Issues.** 3 degree credits. \$24.

*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 Econ 65 and 66 or old Econ 81 and 80)

### *Spring Semester*

Th 6:20-8:00, Vincent 113, Smith

**Econ 152. Labor Movements.** See Industrial Relations, page 87.

**Econ 157. Business Cycles.** (Formerly Econ 149) 3 degree credits. (Offered 1960-61)

**Econ 160. Comparative Economic Systems.** (Formerly Econ 84) 3 degree credits. (Offered 1960-61)

**Econ 162. Union Government and Policies.** (Formerly Econ 163) 3 degree credits. (Offered 1960-61)

**Econ 172. Public Policy: Labor Relations.** See Industrial Relations, page 87.

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Symbols explained on page 24.

## Course Offerings—Business Administration

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**Econ 182. Economic Security.** (Formerly Econ 169) 3 degree credits. (Offered 1960-61)

**Econ 182B. Intermediate Manpower Management.** See Industrial Relations, page 87.

### Industrial Management and Administration

**BA 50. Production Management.** (Formerly BA 89) 3 degree credits. \$24.

Introduction to the management of the production function. The techniques, the managerial problems, and the decision-making processes in planning and controlling the production activity. Emphasis is on 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: Econ 2)

#### *Fall Semester*

M 6:20-8:00, Johnston 122, Peterson  
M 8:05-9:45, Johnston 122, Peterson

#### *Spring Semester*

M 6:20-8:00, Johnston 122, Peterson

**BA 60. Business Policy and Management Control.** (Formerly BA 182G) 3 degree credits. \$24.

*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.*

An evaluation of the areas of managerial authority and responsibilities, organizational relationships, and effective executive action. Presents 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 8:05-9:45, Johnston 122, Peterson

### Industrial Relations and Labor Economics

**BA 52. Modern Industrial Relations: Labor Marketing.** (Formerly Econ 73) 3 degree credits. \$24.

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 1-2)

*Note—Qualified students may earn graduate credit in BA 152. For information, consult the Committee on Student Scholastic Standing.*

#### *Fall Semester*

M 6:00-7:40, StP Ext Center 3G  
W 6:20-8:00, Vincent 2, Heneman

#### *Spring Semester*

T 6:20-8:00, Vincent 2

**BA 72. Modern Industrial Relations: Manpower Management.** (Formerly BA 167) 3 degree credits. \$24.

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;

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Symbols explained on page 24.

## Evening and Special Classes

compensation; collective bargaining; governmental personnel programs. (Prerequisite: new BA 52 or 152 or old Econ 73 or 161)

### *Spring Semester*

W 6:20-8:00, Vincent 2, Heneman

### **BA 102. Human Relations in Industry.** 3 degree credits. \$24.

Philosophy, policy, and methods employed in the "human relations" approach to managerial problems. The problems of human relations arising in large scale organization of people and approaches to their solution. Role playing, sensitivity training, conference and discussion methods, case study. (Prerequisite: BA 52)

### *Spring Semester*

T 8:05-9:45, Vincent 2

### **BA 142. Settlement of Industrial Relations Disputes.** (Formerly Econ 166) 3 degree credits. \$24.

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)

### *Fall Semester*

Th 8:05-9:45, Vincent 2, Turnbull

### **Econ 152. Labor Movements.** (Formerly Econ 162) 3 degree credits. \$24.

Origins and growth of labor organizations and their problems under various forms of government; economic and social consequences of these developments. (Prerequisite: BA 52 or 152)

### *Spring Semester*

T 6:20-8:00, Vincent 205, Seltzer

### **Econ 172. Public Policy: Labor Relations.** (Formerly Econ 164) 3 degree credits. \$24.

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*

Th 6:20-8:00, Vincent 2, Turnbull

### **BA 182B. Intermediate Manpower Management.** (Formerly BA 168) 3 degree credits. \$24.

Advanced analysis of industrial relations in unions and managements. Consideration of mechanisms, practices, and procedures of manpower management, policy determination and review; personnel records and reports; and evaluation of industrial relations programs. (Prerequisite: new BA 72 or old BA 167)

### *Fall Semester*

W 8:05-9:45, Vincent 2, Heneman

### **BA 202. Organization and Staffing.** (Formerly BA 180-181-182D) 3 degree credits. \$24.

Translation of organization goals and objectives to specific manpower goals and objectives, and staffing to meet the organization's manpower needs. Techniques for recruitment, selection, and assignment of manpower resources for optimal utilization. (Prerequisite: BA 72 or 172)

### *Spring Semester*

W 8:05-9:45, Vincent 2, England

Symbols explained on page 24.



## Course Offerings—Business Administration

### **BA 222. Wage and Salary Administration.** (Formerly 180-181-182D) 3 degree credits. \$24.

Designed to develop familiarity with concepts and procedures for the administration of compensation programs in the plant and office, for managerial and nonmanagerial employees. Various methods of job evaluation, wage surveys, incentives, fringes and benefits, and the administration of wage and salary programs. (Prerequisite: BA 72 or 172)

#### *Fall Semester*

T 6:20-8:00, Vincent 205, Seltzer

### **Supervision I: Elements of Supervision.** 3 certificate credits. \$24 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 6:00-7:40, StP Ext Center 3F  
T 6:20-8:00, Ford 70

#### *Spring Semester*

M 7:50-9:30, StP Ext Center 2H  
T 6:20-8:00, Ford 70

### **Supervision II: Advanced Techniques of Supervision.** 3 certificate credits. \$24.

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)

#### *Fall Semester*

M 8:05-9:45, Ford 70

#### *Spring Semester*

M 6:00-7:40, StP Ext Center 2H  
M 8:05-9:45, Ford 70

### **Supervision III: Techniques of Employee Training.** 3 certificate credits. \$24.

Primary emphasis is on the training techniques a line supervisor could make use of 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 160, Robinson

## Insurance

### **BA 53. Insurance Principles.** (Formerly Econ 50) 3 degree credits. \$24.

Risk and its adverse economic effects; methods of handling risks; theory of insurance and insurable risks; insurable personal, property, and liability risks; risk management; personal, property, and liability insurance contracts; types of insurers; production, underwriting, actuarial, finance, and claims functions of insurers; industry and government regulation; social control. (Prerequisite: Econ 2 or ##)

#### *Fall Semester*

M 8:05-9:45, Vincent 6, Williams

#### *Spring Semester*

M 8:05-9:45, Vincent 6, Williams

Symbols explained on page 24.

## Evening and Special Classes

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### 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 and IV 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—E. B. Eliason, Jr., 503 Lutheran Brotherhood Building, Fe 3-3225

St. Paul—David York, 1005 Pioneer Building, Ca 5-4616

### CLU Part I. Fundamentals of Life Insurance and Annuities, A-B. 3 certificate credits each semester. \$24.

This course is designed as preparation for the annual CLU examination in Part I, Fundamentals of Life Insurance and Annuities. The subject matter will cover such topics as: basic life insurance principles, the life insurance contract, functions of life insurance, mortality tables, premiums, selection of risk, types of insurance companies and associations, fundamentals of life insurance and annuity contracts.

For information concerning the CLU educational program and its requirements see notice above.

#### Fall Semester

A T 4:00-5:40, 430 Oak Grove, Preston

#### Spring Semester

B T 4:00-5:40, 430 Oak Grove, Preston

### CLU Part II. Business Life Insurance, Accident and Sickness Insurance, Group Insurance, and Pensions, A-B. 3 certificate credits each semester. \$24.

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 life insurance for business purposes, problems of old age, unemployment and disability, accident and sickness insurance, group insurance, pensions, and deferred compensation.

For information concerning the CLU educational program and its requirements see notice above.

#### Fall Semester

A M 4:00-5:40, NW Bank Bldg 690, Staff  
A M 4:00-5:40, StP Ext Center 3F, Wheeler

#### Spring Semester

B M 4:00-5:40, NW Bank Bldg 690, Staff  
B M 4:00-5:40, StP Ext Center 3F, Wheeler

### CLU Part III. Law, Trusts, and Taxation, A-B. 3 certificate credits each semester. \$24.

This course is designed as preparation for the annual CLU examination in Part III, Law, Trusts, and Taxation, as conducted by the American College of Life Underwriters. The subject matter will cover such topics as business law; estates, wills and trusts; and taxation, etc. (Prerequisite: #)

#### Fall Semester

A W 4:00-5:40, NA Casualty Bldg, Connor

#### Spring Semester

B W 4:00-5:40, NA Casualty Bldg, Connor

### CLU Part IV. Economics and Business and Family Finance, A-B. 3 certificate credits each semester. \$24.

This course is designed as preparation for the annual CLU examination in Part IV, Economics and Business and Family Finance, 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 finance 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 W 4:00-5:40, 1st Natl Bank Bldg,  
Directors Room, Nilsen

#### Spring Semester

B W 4:00-5:40, 1st Natl Bank Bldg,  
Directors Room, Nilsen

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Symbols explained on page 24.

**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 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 1959-60 will be: Bernard C. Bengtson, CA 4-3737)

**I.I.A. Parts A, B, and C. 3 certificate credits each semester. \$24 each semester.**

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; risk and 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 reinsurance; 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 Part A be taken before Parts B and C.

*Fall Semester*

A M 6:20-8:00, Vincent 6, Williams

*Spring Semester*

B-C M 6:20-8:00, Vincent 6, Williams

**CPCU Part I. Insurance Principles and Practices, A-B. 3 certificate credits each semester. \$24.**

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)

*Fall Semester*

A M 6:20-8:00, Ford 180, Bengtson  
(co-ordinator)

*Spring Semester*

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. \$24.**

An intensive course in the basic principles of property and casualty 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)

*Fall Semester*

A M 8:05-9:45, Ford 180, Bengtson  
(co-ordinator)

*Spring Semester*

B M 8:05-9:45, Ford 180, Bengtson  
(co-ordinator)

**CPCU Part III. General Education, A-B. 3 certificate credits each semester. \$24.**

This course is designed as a preparation for examination III for the Chartered Property and Casualty Underwriter (CPCU) award. The course covers economics, American government

Symbols explained on page 24.

## Evening and Special Classes

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and social legislation. (Prerequisite: acceptance of special registration application or completion of one or more parts of CPCU program)

### *Fall Semester*

A Th 6:20-8:00, Ford 130

### *Spring Semester*

B Th 6:20-8:00, Ford 130

## Marketing

### **BA 57. Principles of Marketing.** (Formerly BA 77) 3 degree credits. \$24.

Marketing functions and institutions; channels of distribution; retail and wholesale trade; pricing policies and practices; marketing policies and methods for consumers' goods, producers' goods, and raw materials. (Prerequisite: Econ 2)

### *Fall Semester*

M 6:20-8:00, Vincent 2, Hancock

### *Spring Semester*

W 8:05-9:45, Vincent 6, Harper

### **BA 87. Credits and Collections.** (Formerly BA 76) 3 degree credits. \$24.

Nature and types of credit and of credit instruments and agencies; qualifications and work of the credit manager; valuation and use of financial statements and credit reports; collection methods and correspondence; bankruptcy and adjustments; credit limits and control. (Prerequisite: new BA 57 or old BA 77)

### *Fall Semester*

Th 6:20-8:00, Vincent 6, Kerns

### **Principles of Credits and Collections II.** 3 certificate credits. \$24.

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 BA 87 or old BA 76 or ##)

### *Spring Semester*

Th 6:20-8:00, Vincent 6, Kerns

### **BA 97. Market Analysis and Research.** (Formerly BA 173) 3 degree credits. \$24.

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 BA 51 and 57 or old BA 74 and 77 or #)

### *Fall Semester*

T 8:05-9:45, Vincent 6, Holloway

### **BA 117. Sales Management.** (Formerly BA 113) 3 degree credits. \$24.

Management of selling activities including sales policies and planning, sales promotion, sales organization, and channels of distribution; selection, training, and compensation of salesmen; control of sales performance including sales budgets and cost control. Case materials. (Prerequisite: new BA 57 or old BA 77)

### *Fall Semester*

M 6:20-8:00, Vincent 205, Lewis

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Symbols explained on page 24.

## Course Offerings—Business Administration

### BA 197. Purchasing. (Formerly BA 111) 3 degree credits. \$24.

Purchasing of materials, supplies, and equipment as a major function in business. Basic principles of purchasing in industrial, governmental, and institutional organizations. Quality and quantity decisions, forward buying, evaluation of purchasing procedures, and pricing policies. (Prerequisite: new BA 57 or old BA 77 or #)

*Fall Semester*

T 6:20-8:00, Vincent 6, Holloway

### 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 Fe 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 the inside cover 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*

#### *††Approved Equivalent Extension Courses*

#### **Associate Award**

Business Economics

Basic Accounting

Business Correspondence

Credit and Collection Principles

Advanced Credits

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

Public Speaking

Salesmanship or Marketing

Credit Management Problems

Financial Statement Analysis

Psychology (Applied, General, or Business)

BA 58-78, Business Law

BA 88, Business Law

Beginning Practical Speech Making

Basic Salesmanship, or

BA 57, Principles of Marketing

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, Survey of Office Management

†† 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 24.

## Office Management

*Note: New certificate awards are now available in the field of Office Management. See page 14.*

### **Scientific Management in the Office.** 3 certificate credits. \$24.

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 301, Baillie

### **BA 99. Survey of Office Management.** (Formerly BA 86) 3 degree credits. \$24.

Lectures and conferences in Scientific Management in the Office (see above) plus written case problems in principles of office organization and management; office location and layout; furniture and equipment; flow of work; supplies, correspondence, records; job analysis, personnel training, compensation and promotion; supervision and quality control; work simplification; time measurement; budgets and costs. (Prerequisite: Econ 2)

*Spring Semester*

T 6:20-8:00, Vincent 301, 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 Bldg., Minneapolis.*

### **Fundamentals of Real Estate Practice.** 3 certificate credits. \$24.

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, Ford 20, Rice (co-ordinator)

### **Real Estate Financing and Insurance.** 3 certificate credits. \$24.

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 20, Rice (co-ordinator)

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Symbols explained on page 24.

## Course Offerings—Business Administration

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### **Real Estate Sales Brokerage.** 3 certificate credits. \$24.

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 20, Rice (co-ordinator)

### **Real Estate Appraisal.** 3 certificate credits. \$24.

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, Ford 20, Rice (co-ordinator)

### **Real Estate Law (BA 98, Business Law).** See Business Law, page 83.

### **Home Design and Planning.** See page 38.

### **Building Material Estimating.** See page 117.

## Salesmanship

### **Salesmanship I.** 3 certificate credits. \$24.

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 170, Stanchfield

### **\*Salesmanship II.** 3 certificate credits. \$24.

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 180, Stanchfield

## Secretarial

### **Refresher Course in Business Theory for Secretaries.** No credit. 4 units; each unit, \$15.

This course is designed as a refresher course for secretaries who have some background in business theory. It serves as a review for candidates for the Certified Professional Secretary examinations, and for others who wish a brief survey of the various fields of business theory

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Symbols explained on page 24.

## Evening and Special Classes

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with which a secretary should be familiar. It will consist of 24 sessions covering the following 4 units of 6 sessions each: Secretarial Procedures and Business English; Secretarial Accounting; Economics and Business Administration; Business Law and Human Relations. The refresher course will begin September 29 and conclude March 29. Unit I will be Secretarial Procedures and Business English; the subjects of the other units will be determined later. Please consult the Extension offices after October 1. Students may take any or all of the four units of the course. Course co-ordinator is Miss Naomi Peterson, Fe 2-8158, ext 296. See also the Secretarial Certificate program, page 11.

T 6:20-8:50, Ford 120, Peterson and staff

Unit I, September 29 through November 3  
Unit II, November 10 through December 15  
Unit III, January 12 through February 16  
Unit IV, February 23 through March 29

**BA 99. Office Management.** See page 94.

### Statistics

**BA 5. Elements of Statistics.** (Formerly Econ 5) 3 degree credits. \$24.

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)

#### *Fall Semester*

M 6:20-8:00, Vincent 306, Crichton  
T 6:20-8:00, Vincent 2, Lake  
W 6:00-7:40, StP Ext Center 3E, Crichton

#### *Spring Semester*

T 6:20-8:00, Vincent 6, Lake  
W 6:00-7:40, StP Ext Center 3E, Crichton

**BA 51. Business Statistics.** (Formerly Econ 74) 3 degree credits. \$24.

Basic concepts of regression and correlation; statistical estimation and decision-making, with applications to such fields as survey sampling, acceptance sampling, and statistical quality control; introduction to time series analysis and index numbers. (Prerequisite: new BA 5 or old Econ 5)

#### *Spring Semester*

T 8:05-9:45, Vincent 6, Antelman

### Transportation

**BA 54. Transportation I: Principles.** (Formerly BA 71) 3 degree credits. \$24.

Introduction to the roles, interests, and relationships of users of the service, carriers, and regulatory agencies in the transportation field, emphasizing the 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 and evaluation of 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. \$24.

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

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Symbols explained on page 24.



## Course Offerings—Business Administration

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tariffs. Problems involving determination of charges on typical movements within and between major freight rate territories. (Prerequisite: new BA 54 or old BA 71)

*Spring Semester*

M 6:20-8:00, Vincent 1, Nightingale

**BA 184A. Highway Transportation.** (Formerly BA 129) 3 degree credits. \$24.

Economic aspects of the American highway transportation system and motor transportation; national policy; services, pricing, operations, and management of the motor carrier industry; federal and state regulatory policies and problems, including ICC motor carrier cost studies; intercity and urban passenger operations and problems, including the transit problem of the cities. (Prerequisite: new BA 54 or old BA 71)

*Spring Semester*

W 6:20-8:00, Vincent 6, Harper

**BA 194A-194B. Topics in Transportation: Advanced Traffic Management I-II.** (Formerly BA 180I-181I) 3 degree credits each semester. \$24.

Advanced study of transportation rates and transport control practices and applications within the individual firm. Analysis of important current ICC cases and decisions affecting users of the service and carriers. (Prerequisite: BA 174)

*Fall Semester*

194A M 8:05-9:45, Vincent 210, Nightingale

*Spring Semester*

194B M 8:05-9:45, Vincent 211, Nightingale

**Interstate Commerce Practice and Procedure I-II.** 3 certificate credits each semester. \$24.

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 BA 194A or old BA 180I or ##)

*Fall Semester*

I W 6:20-8:00, Vincent 210, Nightingale

*Spring Semester*

II W 6:20-8:00, Vincent 210, Nightingale

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Symbols explained on page 24.

## 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. \$24 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)

*Spring Semester*

W 6:20-8:00, TSF 259, Gayne

**19. Functional Arts and Crafts in Elementary Education.** 3 degree credits. \$24 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)

*Fall Semester*

W 6:20-8:00, TSF 259, Gayne

**81. Puppetry in Education.** 3 degree credits. \$24 plus \$2 materials fee.

Use of simple puppetry as a teaching technique and problems of motivation and correlation with school subjects. Construction, manipulation, and stage techniques related to typical school situations. (No prerequisite)

*Fall Semester*

Th 6:20-8:00, TSF 259, Cherry

*Spring Semester*

Th 6:20-8:00, TSF 259, Cherry

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Symbols explained on page 24.

**85. Art for Integration in Secondary Education.** 3 degree credits. \$24 plus \$2 materials fee.

Prepares teachers with no previous training in art to appreciate and use art for furthering the objectives of their own fields. (No prerequisite)

*Spring Semester*

M 6:20-8:00, TSF 259, Wold

## Child Development and Welfare (CD)

**80. Child Psychology.** 3 degree credits. \$24.

A survey of the psychology of the young child from the standpoint of development and learning. (Prerequisite: Psy 1-2)

*Fall Semester*

M 6:20-8:00, Folwell 101, Hurst

*Spring Semester*

T 6:20-8:00, Folwell 101, Wahlsted

**140. Behavior Problems.** 3 degree credits. \$24.

Types, origin, development, and treatment of behavior problems in children and adolescents. (Prerequisite: 12 credits in psychology, educational psychology, or sociology)

*Fall Semester*

T 8:05-9:45, Folwell 101, Wahlsted

**142. Psychology of Atypical Children.** 3 degree credits. \$24.

Physical, sensory, and mental deviations and handicaps. Personal, social, and vocational adjustment. (Prerequisite: 12 credits in psychology or ##)

*Spring Semester*

M 6:20-8:00, Folwell 101, Hurst

**144. Psychology of the Gifted Child.** 3 degree credits. \$24.

Psychology and development of high intellectual ability and of special talents. (Prerequisite: CD 80 or equivalent and 9 credits from psychology, educational psychology, sociology, and home economics.)

*Spring Semester*

T 8:05-9:45, Folwell 101, Wahlsted

## Curriculum and Instruction (EdCI)

**103. Teaching of Science in the Elementary School.** 3 degree credits. \$24.

Emphasis on resources and materials and their application to the elementary grades. (Prerequisite: Ed 71A-B or teaching experience)

*Fall Semester*

M 6:20-8:00, Peik 365, Boeck

**151. Diagnosis and Treatment of Learning Difficulties.** 3 degree credits. \$24.

Evaluation of results of teaching; diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a testing program. (No prerequisite)

*Fall Semester*

T 6:20-8:00, Johnston 105, Balow

Symbols explained on page 24.

## **Educational Psychology (EPsy)**

### **60. Introduction to Measurement and Statistics. 3 degree credits. \$24.**

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

### **110. Measurement in the Classroom. 3 degree credits. \$24.**

Principles and methods for construction, evaluation, and improvement of educational measurement in classroom instruction. (No prerequisite)

*Spring Semester*

Th 6:20-8:00, Johnston 114, Hoyt

### **193. Principles of Psychology of Human Learning. 3 degree credits. \$24.**

Application to school situations; motivation; rate of learning and forgetting; teaching of skills, meanings, attitudes; reasoning and problem solving; transfer of learning. (Prerequisite: senior, graduate or #. Repeated spring semester)

*Fall Semester*

M 6:00-7:40, StP Ext Center 3G, Kellogg

*Spring Semester*

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

## **Nursing Education (NuEd)**

### **73. Principles of Education in Nursing. 3 degree credits. \$24.**

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 professional nurses)

*Fall Quarter*

M 6:00-8:30, Millard 116, Dunning

# ENGINEERING AND TECHNICAL SCIENCES

## Aeronautics

### Basic Ground School for Air Pilots

This 6-week course is intended primarily for student pilots and prospective pilots who are preparing for the Federal Aviation Agency's written examination for certification as a *Private Pilot*, and consists of 42 hours of concentrated instruction on air navigation, meteorology, analysis of flight maneuvers, aircraft and engine operation, civil air regulations, radio aids, 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 background.

Although the course aims directly at fully preparing for the Private Pilot examination, it also prepares for possible subsequent enrolment in the Advanced Ground School course for pilots who are seeking a Commercial Pilot Certificate or a Flight-Instructor Certificate or an Instrument Rating.

The class meets twice a week, on Tuesdays and Thursdays, from 7 p.m. to 10:30 p.m., for 6 weeks, in Room 209 of the Aeronautical Engineering building on the main campus of the University.

Four certificate credits are awarded for satisfactory completion of the course. The fee is \$32, 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 determined by consulting any University Extension Division office or by calling Mr. Hamilton at Midway 8-2559.

### Advanced Ground School

This 6-week course is designed primarily for pilots who are preparing for the Federal Aviation Agency's written examination for certification as a *Commercial Pilot*, and consists of 42 hours of concentrated instruction aimed directly at preparing for the Commercial Pilot examination. The course is open only to students who have completed the Basic Ground School course or its equivalent.

The class meets twice a week, on Tuesdays and Thursdays, from 7 p.m. to 10:30 p.m., for 6 weeks, in Room 209 of the Aeronautical Engineering building on the main campus of the University.

Four certificate credits are awarded for satisfactory completion of the course. The fee is \$32, 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 this course are posted on airport bulletin boards from time to time throughout the entire year, or can be determined by consulting any University Extension Division office or by calling Mr. Hamilton at Midway 8-2559.

### Instrument-Rating Ground School

This 6-week course is offered to pilots who are preparing for the Federal Aviation Agency's written examination for an *Instrument Rating*, and who have completed the Advanced Ground School course or its equivalent. The course consists of 42 hours of intensive instruction aimed directly and exclusively at preparing for the Instrument Rating. The instructor is Sam R. Hamilton.

The course is offered whenever there appears to be sufficient demand. Information regarding the starting date for the next such course, the tuition fee, the schedule of class meetings, and so forth, can be obtained from airport bulletin boards, or by consulting any University Extension Division office or by calling Mr. Hamilton at Midway 8-2559.

### Flight-Instructor Ground School

This 6-week course is offered to pilots who are preparing for the Federal Aviation Agency's written examination for certification as a *Flight Instructor*, and who have completed the Advanced Ground School course or its equivalent. The course consists of 42 hours of intensive instruction aimed directly and exclusively at preparing for Flight Instructor certification. The instructor is Sam R. Hamilton.

## Evening and Special Classes

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The course is offered whenever there appears to be sufficient demand. Information regarding the starting date for the next such course, the tuition fee, the schedule of class meetings, and so forth, can be obtained from airport bulletin boards, or by consulting any University Extension Division office or by calling Mr. Hamilton at Midway 8-2559.

### Architecture (Arch)

#### Refresher Course in Structural Design for Architects. Special Class. \$40.

This course designed for practicing architects and will consist of lectures and problem sessions. (Prerequisite: Background in strength of materials and statics required)

*Winter Quarter*

T 6:20-9:20, Main Engineering 305, Self

### 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)

##### 51-52.‡ Quantitative Analysis. 2 degree credits each semester. \$16.

Introductory lecture courses covering the general principles and theoretical foundations of quantitative analysis. 51: Gravimetric analysis. 52: Volumetric analysis. (Prerequisite: InCh 26 or 11)

*Fall Semester*

51 T 6:20-8:00, Chemistry 325, Herr

*Spring Semester*

52 T 6:20-8:00, Chemistry 325, Herr

##### 53-54.‡ Quantitative Analysis Laboratory. 3 degree credits each semester. \$24 plus \$5 laboratory fee.

Introductory course covering the methods of quantitative analysis. 53: Gravimetric analysis. 54: Volumetric analysis. (Prerequisite: 51 or 51 for 53; 52 or 52 for 54)

*Fall Semester*

53 Th 6:20-10:20, Chemistry 310, Herr

*Spring Semester*

54 Th 6:20-10:20, Chemistry 310, Herr

#### INORGANIC CHEMISTRY (InCh)

##### 4-5.† General Inorganic Chemistry. 5 degree credits each semester. \$40 plus \$5 laboratory fee.

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

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†† First class meeting only in room 325 Chemistry.  
Other symbols explained on page 24.

## Course Offerings—Engineering and Technical Sciences

### 11. Semimicro Qualitative Analysis. 4 degree credits. \$32 plus \$5 laboratory fee.

Laboratory work in systematic qualitative analysis of cations with lectures on solutions, ionization, chemical and physical equilibriums, oxidation and reduction, etc. (Prerequisite: InCh 5 or 25)

#### *Fall Semester*

Lect T 8:05-9:45, Chemistry 325, Herr  
Lab Th 6:20-9:20, Chemistry 310, Herr

### ORGANIC CHEMISTRY (OrCh)

### 61-62. Elementary Organic Chemistry. 5 degree credits each semester. \$40 plus \$5 laboratory fee.

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

#### *Fall Semester*

61 Lect M 6:20-8:00, Chemistry 325  
Lab W 6:20-10:00, Chemistry 317 & 390

#### *Spring Semester*

62 Lect M 6:20-8:00, Chemistry 325  
Lab W 6:20-10:00, Chemistry 317 & 390

**Agricultural Biochemistry.** See page 34.

## Civil Engineering (CE)

### 18. Surveying. 3 degree credits. \$24.

Theory and practice in length, angle, and elevation measurements; transit and level adjustments and use. Astronomic observations for azimuth. Field problems in traverses and level circuits. Adjustments of traverses, triangulation and level circuits. (Prerequisite: ITM 12. For those without instrument experience some extra class periods held Saturday mornings)

#### *Fall Quarter*

W 6:20-9:40, Main Engineering 217, Fant

### 19. Surveying. 3 degree credits. \$24.

Simple, compound, and spiral horizontal curves; vertical curves; elements of route surveying, grades, curvature, rise and fall, mass diagram and earthwork volume calculations. (Prerequisite: 18)

#### *Winter Quarter*

W 6:20-9:40, Main Engineering 217, Fant

### 20. Surveying. 3 degree credits. \$24.

Property and design surveys including land surveys, topographic surveys, design computations and methods, and construction surveys. Field problems in curve staking, slope staking, cross sectioning, and stadia mapping. (Prerequisite: 18)

#### *Spring Quarter*

W 6:20-9:40, Main Engineering 217, Fant

### 31. Elementary Structural Analysis. 3 degree credits. \$24.

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 225, Sack

Symbols explained on page 24.

## Evening and Special Classes

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### 32. Elementary Structural Design. 3 degree credits. \$24.

Design principles and methods of selecting members and connection. (Prerequisite: 31 and MM 40)

*Winter Quarter*

M 6:20-9:20, Main Engineering 225, Sack

### 33. Elementary Structural Design. 3 degree credits. \$24.

Design of timber and steel members and connections. (Prerequisite: 32)

*Spring Quarter*

M 6:20-9:20, Main Engineering 225, Sack

### Hydr 103. Fluid Mechanics. 5 degree credits. \$40.

Physical fluid properties, fluid statics, energy principle for compressible and incompressible fluids, pressure-momentum principles, elementary principles of turbines and pumps, dimensional analysis, introduction to advanced principles of flow phenomena. (Prerequisite: MM 27)

*Fall Semester*

Th 6:20-9:20, Experimental Engineering 193,  
Olson

### 130. Statically Indeterminate Structures. 3 degree credits. \$24.

Method of moment area. Williot diagram. Slope-deflection method. (Prerequisite: 33 or equivalent)

*Fall Quarter*

M 6:20-9:00, Experimental Engineering 22,  
Barker

### 131. Structural Analysis. 2 degree credits. \$24.

Moment distribution method. (Prerequisite: 130)

*Winter Quarter*

M 6:20-9:00, Experimental Engineering 22, Barker

### 132. Structural Design. 2 degree credits. \$24.

Continuous structures of steel and concrete. (Prerequisite: 131)

*Spring Quarter*

M 6:20-9:00, Experimental Engineering 22,  
Barker

### 160. Applied Hydraulics. 3 degree credits. \$24.

Pipeline, compound pipe systems, network analysis. Centrifugal pumps, analysis, and problems. Characteristic curves, pump constants, selection, and economic factors. Open channel flow design, hydraulic elements, varied flow computations, losses, irrigations, and drainage problems. (Prerequisite: Hydr 103)

*Spring Semester*

Th 6:20-9:20, TSCE 220, Olson

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Symbols explained on page 24.



## Course Offerings—Engineering and Technical Sciences

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### Highways and Pavements IA. 2 certificate credits. \$16.

Textbook assignments, lectures and problems. Highway systems, finance, and economics. The geometric design of highways. (Prerequisite: ITM 12, CE 18-19 desirable)

#### *Fall Quarter*

T 6:20-8:00, Experimental Engineering 193,  
Thomas

### Highways and Pavements IB. 2 certificate credits. \$16.

Elements of soils, highway drainage, grading and base construction. Test properties of aggregate. (Prerequisite: IA)

#### *Winter Quarter*

T 6:20-8:00, Experimental Engineering 193,  
Thomas

### Highways and Pavements IIA. 2 certificate credits. (Offered fall quarter 1960)

Bituminous materials and paving mixtures. Pavement design and construction. (Prerequisite: IB)

### Highways and Pavements IIB. 2 certificate credits. (Offered winter quarter 1960-61)

Properties and tests of cement and concrete. The design of concrete mixtures. Computation of batch weights, volumes, and costs. Air-entrained concrete and measurement of air content. Concrete construction methods. Some laboratory work. (Prerequisite: IIA or MM 40 or 128)

### Refresher Course for Civil Engineers. Special Class. \$40.

This course is designed for practicing engineers and will consist of lectures and problem sessions. (Prerequisite: BCE or equivalent degree)

#### *Winter Quarter*

M 6:20-9:20, Experimental Engineering 193,  
Civil Engineering Staff

## Electrical Engineering (EE)

### Elements of Electric Circuits. 6 certificate credits. \$48.

Fundamentals of direct and alternating current circuits. Network theorems. Network analysis—single phase and polyphase. Frequency response of networks; power and energy concepts. Nonsinusoidal wave forms, nonlinear circuit elements. Electric and magnetic fields. Magnetic circuits. Lecture and laboratory. (Prerequisite: ITM 13A. Repeated spring semester)

#### *Fall Semester*

TTh 6:20-8:00, Electrical Engineering 237,  
Cartwright

#### *Spring Semester*

TTh 6:20-8:00, Electrical Engineering 237,  
Cartwright

### Elements of Electronics I. 6 certificate credits. \$48.

Electronic emission, conduction through vacuum and gases. Characteristics of vacuum and gas tubes. Photo-sensitive devices, electronic control circuits. Amplifier circuits, feedback;

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Symbols explained on page 24.

## Evening and Special Classes

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oscillators. Applications of vacuum and gas tube devices. (Prerequisite: Elements of Electric Circuits. Repeated spring semester)

*Fall Semester*

TTh 6:20-8:00, Electrical Engineering 238

*Spring Semester*

TTh 6:20-8:00, Electrical Engineering 238

### Elements of Electronics II. 6 certificate credits. \$48.

Semiconductor devices and their circuit application; conduction in semiconductors, transistor characteristics and equivalent circuits; transistor amplifiers, oscillators, and multivibrators. Lectures, problems, and laboratory demonstration. Knowledge of circuit analysis using complex numbers is required. (Prerequisite: Elements of Electronics I or ##. Repeated spring semester)

*Fall Semester*

TTh 6:20-8:00, Electrical Engineering 137

*Spring Semester*

TTh 6:20-8:00, Electrical Engineering 335

### Elements of Electric Machines and Control Systems. 6 certificate credits. \$48.

Magnetic amplifiers—theory and applications, transformers. Speed-torque and volt-ampere characteristics of rotational electrical devices. Study of electrical control systems—feedback, criteria for stability. Introduction to such topics as Nyquist and Bode diagrams, Boolean algebra, binary numbering systems. Lectures and laboratory work. (Prerequisite: Elements of Electric Circuits or ##)

*Spring Semester*

TTh 6:20-8:00, Electrical Engineering 137,

### Refresher Course for Electrical Engineers. Special Class. \$40.

This course is designed for practicing engineers and will consist of lectures and problem sessions. (Prerequisite: BEE or equivalent degree)

*Winter Quarter*

W 6:20-9:20, Electrical Engineering 238,  
Electrical Engineering Staff

## Engineering English (Engl)

### \*85 (IT). Advanced Technical Communication. 3 degree credits. \$24.

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 1B-2B-3B or Comm 1-2-3. Limited to 25 students)

*Fall Semester*

M 8:05-9:45, Main Engineering 4, Lippert

*Spring Semester*

T 8:05-9:45, Main Engineering 4, Lippert

### \*86(IT). Advanced Technical Communication. 3 degree credits. \$24.

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 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

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Symbols explained on page 24.

## Course Offerings—Engineering and Technical Sciences

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 8:05-9:45, Main Engineering 4, Lippert

### **Basic Technical Writing I-II.** 3 certificate credits each semester. \$24.

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 8:05-9:45, Main Engineering 4, Lippert

### *Spring Semester*

II W 8:05-9:45, Main Engineering 4, Lippert

## **Engineering Graphics (EG)**

(Mechanical Engineering Department)

### **14. Engineering Graphics.** 3 degree credits. \$24.

Engineering representation and analysis of systems of projection, the coordinate system, graphical solution of metric and non-metric space problems, intersections and developments. Precision in graphics and techniques of sketching. (Prerequisite: ITM 8 or equivalent or ¶)

### *Fall Semester*

M 7:00-9:00, StP Ext Center 3C, Springer  
W 6:00-8:00, Aero Engineering 215, Palmer

### *Spring Semester*

T 6:00-8:00, Aero Engineering 215, Bullen

### **15. Engineering Graphics.** 3 degree credits. \$24.

Engineering representation and analysis. Continuation of graphic solution of space problems with mathematical correlation. Intersections, developments, size description, common devices and application of theory and standard practices to working drawings. (Prerequisite: 14, and ITM 11 or ¶)

### *Fall Semester*

T 6:00-8:00, Aero Engineering 215, Bullen

### *Spring Semester*

M 7:00-9:00, StP Ext Center 3C, Springer  
W 6:00-8:00, Aero Engineering 215, Palmer

### **16. Engineering Graphics.** 3 degree credits. \$24.

Graphical computations including graphic algebra, functional scales, monograph, graphic statics, and calculus. Graphical analysis of engineering problems, representation of data, analysis of empirical data and curve fitting. (Prerequisite: 15, and ITM 12 or ¶)

### *Fall Semester*

T 6:00-8:00, Main Engineering 18,  
Engineering Graphics Staff

### *Spring Semester*

T 6:00-8:00, Main Engineering 18,  
Engineering Graphics Staff

### **21. Applied Graphics (Mechanical Engineering).** 3 certificate credits. (Offered Fall 1960)

Further applications of graphical theory and representation and drafting techniques. Interchangeable assembly drawings, surface quality specifications, standard conventions, and practices involved in engineering design. Engineering applications involving surface intersections and development and bending allowance theories. (Prerequisite: 16 or 3 or equivalent)

Symbols explained on page 24.

## Evening and Special Classes

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### 23. Applied Graphics (Civil Engineering). 3 certificate credits. \$24.

Graphic representation as applied to steel and wood structures. Framing plans, details, engineering, and shop drawings. (Prerequisite: 16 or 3 or equivalent)

#### *Fall Semester*

W 6:00-8:00, Main Engineering 18, Springer

## General Engineering (GE)

### 70. The Slide Rule. 1 degree credit. \$12.

Theory and computation practice necessary for those who wish to use the slide rule in ordinary computations. Drills on fundamental processes. (No prerequisite)

#### *Fall Semester*

Th 6:00-7:00, Main Engineering 217, Self  
Th 7:00-8:00, Main Engineering 217, Self

#### *Spring Semester*

Th 7:00-8:00, Main Engineering 217, Self

## Industrial Engineering (IE)

### Industrial Engineering and Management. (Formerly Elements of Industrial Engineering and Management) 5 certificate credits. \$40.

A survey 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. Required for advanced work in industrial engineering. Repeated spring semester)

#### *Fall Semester*

M 6:20-9:20, Mechanical Engineering 18,  
Nyquist

#### *Spring Semester*

W 6:20-9:20, Mechanical Engineering 18,  
Nyquist

### Methods Engineering. (Formerly Work Simplification) 3 certificate credits. \$24.

Common sense principles combined with systematic analysis to eliminate waste motion and unnecessary effort in all fields of work. Lectures are combined with actual practice in the application of the flow process chart, flow diagram, in the analysis of a job for improvement. The course is designed for personnel who wish to learn the skills of work simplification for direct application to the solution of work problems in their own area. (Prerequisite: Industrial Engineering and Management and ITM 11 or ##. Required for advanced work in industrial engineering. Repeated spring semester)

#### *Fall Semester*

W 6:20-8:00, Mechanical Engineering 102,  
Warre

#### *Spring Semester*

W 6:20-8:00, Mechanical Engineering 102, Warre

### \*Work Measurement. 3 certificate credits. \$24 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. Class limited to 20 students. Repeated spring semester)

#### *Fall Semester*

W 6:20-8:00, Mechanical Engineering 180,  
Gunderson

#### *Spring Semester*

W 6:20-8:00, Mechanical Engineering 180,  
Gunderson

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Symbols explained on page 24.

**Inventory and Production Control.** 5 certificate credits. \$40.

Development of systems for increasing plant efficiency through effective co-ordination of inventories, manpower, and equipment with sales. Lectures and discussions on sales forecasting, master scheduling, inventory control, work routing, scheduling of operations, dispatching, analysis of equipment requirements. (Prerequisite: Industrial Engineering and Management and ITM 11 or ##)

*Fall Semester*

M 6:20-9:20, Mechanical Engineering 202,  
Antelman

**Introduction to Operations Analysis.** 5 certificate credits. \$40.

Formulation, interpretation, and solution of both the general linear programming problem and the transportation model of linear programming. Applications of linear programming, in particular, to product mix, distribution, and production scheduling problems. The assignment problem. Sequencing models. The traveling salesman problem. (Prerequisite: Industrial Engineering and Management and ITM 11 or ##)

*Spring Semester*

M 6:20-9:20, Mechanical Engineering 202,  
Antelman

**Statistical Quality Control.** 5 certificate credits. \$40.

Determination of quality requirements and their relation to manufacturing costs. Establishment of quality control standards; inspection procedures and organization. Use of statistical sampling techniques and control charts for more effective inspection and reduction of costs. For those engaged in quality control, and others such as production supervisors, plant managers, and design engineers who are concerned with quality problems. (Prerequisite: ITM 11 or ##)

*Fall Semester*

M 6:20-9:20, Mechanical Engineering 110,  
McElrath

**Advanced Statistical Quality Control.** 5 certificate credits. \$40.

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 old BA 74 or ##)

*Spring Semester*

M 6:20-9:20, Mechanical Engineering 110,  
McElrath

**Manufacturing Cost Analysis.** 3 certificate credits. \$24.

A survey 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: Industrial Engineering and Management or ##)

*Fall Semester*

Th 6:20-8:00, Mechanical Engineering 110

**Process Engineering.** 3 certificate credits. \$24.

Planning of manufacturing and assembling operations to meet quantity and quality requirements of the product at minimum cost. (Prerequisite: Methods Engineering or ##)

*Spring Semester*

T 6:20-8:00, Mechanical Engineering 106,

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Symbols explained on page 24.

## Evening and Special Classes

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### **\*Layout Engineering and Materials Handling Systems. 5 certificate credits. \$40.**

Analysis and synthesis of layouts and materials handling systems with emphasis on individual item analyses. Data requirements and sources. The study and application of principles and analytic techniques for optimal integration of production facilities. Analyses of space utilization and the flow and control of materials. (Prerequisite: Methods Engineering or **EE**. Class limited to 25 students)

#### *Fall Semester*

W 6:20-9:20, Mechanical Engineering 110,

## Mathematics (ITM)

### **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 Blank at time of registration. Only those students who have satisfactorily completed ITM 9, Higher Algebra, or equivalent 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 Blank.

If you have completed ITM 9, Higher Algebra, or equivalent, register for ITM 11, College Algebra and Trigonometry I, and fill out the Application Blank. 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 remain in ITM 11, College Algebra and Trigonometry I, unless all conditions for admission have been met.

#### *Fall Semester*

7:00 p.m. Friday, September 18, Nicholson 211

7:00 p.m. Wednesday, September 23, Nicholson 211

7:00 p.m. Wednesday, September 23, StP Ext Center 2E

#### *Spring Semester*

7:00 p.m. Monday, February 8, Nicholson 211

7:00 p.m. Wednesday, February 10, Nicholson 211

7:00 p.m. Wednesday, February 10, StP Ext Center 2E

### **5. Basic Mathematics. 5 certificate credits. \$40.**

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 secondary mathematics. It includes arithmetic through fractions, decimals, percentage; elementary geometry involving areas of plane figures, proportion, volumes, and weights; elementary algebra; elementary trigonometry and logarithms. (Prerequisite: arithmetic. Repeated spring semester)

#### *Fall Semester*

MTh 6:20-7:45, Main Engineering 227, Dolid

#### *Spring Semester*

MTh 6:20-7:45, Main Engineering 227,  
Stackelberg

### **6. Elementary Algebra. Entrance credit. \$48.**

Elements of algebra to quadratic equations, equivalent to 1 year of 9th grade algebra. (Prerequisite: arithmetic. Repeated spring semester. Entrance requirement for College of Agri-

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Symbols explained on page 24.

## Course Offerings—Engineering and Technical Sciences

culture, Forestry, and Home Economics; College of Veterinary Medicine; College of Science, Literature, and the Arts; and Institute of Technology)

### Fall Semester

MW 6:20-8:00, Main Engineering 203,  
Burgstahler

TTh 6:20-8:00, Main Engineering 203, Walczak

### Spring Semester

MW 6:20-8:00, Main Engineering 203,  
Burgstahler

TTh 6:20-8:00, Mines 120, Brown

## 7. Plane Geometry. Entrance credit. \$48.

Elements of plane geometry, equivalent to 1 year of high school plane geometry. (Prerequisite: arithmetic. Repeated spring semester. 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)

### Fall Semester

MW 6:20-8:00, Main Engineering 206, Barich

### Spring Semester

MW 6:20-8:00, Main Engineering 206, Barich

## 8. Solid Geometry. Entrance credit. \$24.

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 2E

Th 6:20-8:00, Main Engineering 206, Barich

### Spring Semester

M 6:00-7:40, StP Ext Center 2E

Th 6:20-8:00, Main Engineering 206, Barich

## 9. Higher Algebra. Entrance credit. \$40.

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 104,  
Faulkner

TTh 6:20-7:45, Main Engineering 104, Serbyn

TTh 6:00-7:25, StP Ext Center 2E, Polansky

### Spring Semester

MW 6:20-7:45, Main Engineering 104, Walczak

TTh 6:20-7:45, Main Engineering 104, Serbyn

TTh 6:00-7:25, StP Ext Center 2E, Polansky

## 11. College Algebra and Trigonometry I. 5 degree credits. \$40.

Review of elementary algebra, factoring, fractions, functions, and graphs, linear equations and determinants, exponents, and radicals, quadratic equations, inequalities, systems of quadratic equations, proportion and variation, mathematical induction, binomial theorem, trigonometric functions, right triangles, oblique triangles, radian measure, slide rule. (Prerequisite: ITM 9 or equivalent and satisfactory score on placement examination in high school algebra; explained on page 110. Repeated spring semester)

### Fall Semester

MW 6:20-7:45, Main Engineering 106, Loye

TTh 6:20-7:45, Main Engineering 205,  
Pitcaiah

TTh 6:00-7:25, StP Ext Center 2F, Scott

### Spring Semester

MW 6:20-7:45, Main Engineering 205,  
Johnson

TTh 6:20-7:45, Main Engineering 203, Driver

TTh 6:00-7:25, StP Ext Center 2F,

## 12. College Algebra and Trigonometry II. 5 degree credits. \$40.

Progressions, logarithms, trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations, complex numbers. Theory of equations, permu-

Symbols explained on page 24.

## Evening and Special Classes

tations, combinations, probability, partial fractions, hyperbolic functions. (Prerequisite: 11. Repeated spring semester)

### Fall Semester

M 6:20-9:20, Main Engineering 205, Culmer  
W 6:20-9:20, Main Engineering 205, Culmer  
W 6:00-9:00, StP Ext Center 2E, Polansky

### Spring Semester

MW 6:20-7:45, Main Engineering 106, Loye  
TTh 6:20-7:45, Main Engineering 205, Swenson  
TTh 6:00-7:25, StP Ext Center 2H, Scott

### 13A. Calculus I: Analytic Geometry and Calculus. 5 degree credits. \$40.

Rectangular co-ordinates, straight line, functions and graphs, derivative, limit. Rules of differentiation, continuity, curve tracing, rates, maxima and minima. Locus and equations, conic sections, polar co-ordinates. (Prerequisite: 12. Repeated spring semester)

### Fall Semester

T 6:20-9:20, Main Engineering 227, Thompson  
W 6:00-9:00, StP Ext Center 2F, Wilcox

### Spring Semester

M 6:20-9:20, Main Engineering 305, Culmer  
W 6:00-9:00, StP Ext Center 2E, Polansky

### 24A. Calculus II: Analytic Geometry and Calculus. 5 degree credits. \$40.

Mean value theorem, indefinite integral, definite integral, area, volume, lengths, centroids, moments of inertia, hydrostatic pressure, work. Differentiation and integration of transcendental functions. Polar co-ordinates, parametric equations. Vectors, vector calculus. (Prerequisite: 13A)

### Fall Semester

T 6:20-9:20, Main Engineering 215, Fischer  
F 6:00-9:00, StP Ext Center 2E, Wilcox

### Spring Semester

T 6:20-9:20, Main Engineering 227, Thompson  
W 6:00-9:00, StP Ext Center 2F, Wilcox

### 25A. Calculus III: Analytic Geometry and Calculus. 5 degree credits. \$40.

Methods of integration. Solid analytic geometry treated by vector methods, partial differentiation, geometry of surfaces, differentials, directional derivative, maxima and minima. Multiple integrals, volume, surface area, physical applications. (Prerequisite: 24A)

### Fall Semester

T 6:20-9:20, Main Engineering 106, Loye

### Spring Semester

T 6:20-9:20, Main Engineering 215, Fischer  
F 6:00-9:00, StP Ext Center 2E, Wilcox

### 26A. Calculus IV: Differential Equations and Calculus. 5 degree credits. \$40.

Infinite series: convergence tests, Taylor's formula and expansion of functions. Differential equations; equations of first order; standard methods of solutions; linear equations with constant coefficients, applications; simultaneous equations, integration by series, numerical methods. (Prerequisite: 25A)

### Spring Semester

T 6:20-9:20, Main Engineering 106, Loye

### 80. Elementary Differential Equations. 3 degree credits. \$24.

Equations of first order, singular solutions; linear equations with constant coefficients, simultaneous equations, integration in series, numerical solutions. (Prerequisite: 25 or 25A)

### Fall Semester

M 6:20-8:00, Main Engineering 215, Fischer

### 90. Elementary Engineering Statistics. 3 degree credits. \$24.

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, Johnson

Symbols explained on page 24.



**132. Introduction to Statistics and Probability.** 3 degree credits. (Offered Fall 1960)

Descriptive statistics, correlation, permutations and combinations, probability distribution, elementary limit theorems. (Prerequisite: 25 or 25A)

**133B-134B. Probability with Engineering Applications.** 3 degree credits each quarter. (Offered Winter and Spring 1961)

Recurrent events, random walk, diffusion, Markoff chains, Poisson processes, general random processes, random noise, stationary processes, spectral densities and autocorrelation functions, linear and nonlinear transformations, prediction, and smoothing. (Prerequisite: 132, 153, or 132, 148, 149 or #)

**147. Vector Analysis.** 3 degree credits, \$ITM 152, 154. \$24.

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 106

**148. Differential Equations.** 3 degree credits, \$ITM 150A. \$24.

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 106

**149. Determinants and Matrices.** 3 degree credits, \$ITM 142. \$24.

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 106

**165A. Introduction to Programming Modern Digital Calculators.** 3 degree credits, \$ITM 165. \$24.

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)

*Spring Semester*

W 6:20-8:00, Main Engineering 227

**184. Elementary Numerical Analysis in Engineering.** 3 degree credits. \$24.

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: 80 or 26A)

*Fall Quarter*

T 6:20-9:00, Main Engineering 206

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Symbols explained on page 24.

## Evening and Special Classes

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**185-186. Numerical Analysis in Engineering.** 3 degree credits each quarter. \$24 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 #)

<i>Winter Quarter</i>		<i>Spring Quarter</i>	
185	T 6:20-9:00, Main Engineering 206	186	T 6:20-9:00, Main Engineering 206

## Mechanical Engineering (ME)

**Energy Utilization and Transfer.** (Replaces Thermodynamics) 5 certificate credits. \$40.

A study of the properties of gases and vapors. The fundamental laws correlating energy with heat and work. Heat transfer in engineering equipment. Construction, operation and performance analysis of systems such as steam engines, steam turbines, gas engines, air compressors, refrigerators, heat pumps and auxiliary equipment. (Prerequisite: ITM 25A and Physics 13)

<i>Spring Semester</i>	
M	6:20-9:20, Mechanical Engineering 102, Rees

**\*Instrumentation and Automatic Control.** 5 certificate credits. \$40.

The first part of the course will be concerned with the more common types of automatic controls found in residential and commercial usage. These include two-position or on-off and proportional or throttling type control effects. These fundamental control actions will be studied thoroughly in both lecture and laboratory. Both electrical- and air-operated controls are included. The remainder of the course will deal with industrial instruments and automatic controls. The theory of control will be covered mathematically, descriptively, and graphically. Basic modes of control built into commercial industrial controllers such as proportional, automatic reset, and rate response will be covered in detail. Methods of obtaining these responses such as electrically, hydraulically, or pneumatically will be analyzed. Typical industrial control circuits will be investigated. This will involve analysis of all component parts such as the process measuring means, recording or indicating instrument, controller, and final control elements. (Prerequisite: ITM 11. Class limited to 28 students)

<i>Fall Semester</i>	
M	6:20-9:20, Mechanical Engineering 302, Ogata

**Kinematics of Machinery I-II.** 3 certificate credits each semester. \$24 each semester.

Part I: Theory and methods of motion analysis of basic mechanisms. Motion cycle characteristics of common elementary and compound mechanical linkages with respect to displacement, velocity, acceleration, and forces.

Part II: Theory of gearing and the design of gear trains and cams. Advanced study of mechanical linkages covering the design of speed reducers, feeder devices, curve function generators and basic mechanical computing elements. (Prerequisite: ITM 11 or ## for I; for II, I)

<i>Fall Semester</i>		<i>Spring Semester</i>	
I	W 6:20-8:00, Mechanical Engineering 302, Palmer	II	W 6:20-8:00, Mechanical Engineering 302, Palmer

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Symbols explained on page 24.

## Course Offerings—Engineering and Technical Sciences

### Machine Design I-II. 5 certificate credits each semester. \$40 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)

#### Fall Semester

I T 6:20-9:20, Mechanical Engineering 308,  
Larsen

#### Spring Semester

II T 6:20-9:20, Mechanical Engineering 308,  
Larsen

### Refrigeration and Air Conditioning I-II.† 5 certificate credits each semester. \$40 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)

#### Fall Semester

I Th 6:20-9:20, Mechanical Engineering 208,  
Rees

#### Spring Semester

II Th 6:20-9:20, Mechanical Engineering 208,  
Rees

### \*Servomechanisms. 5 certificate credits. \$40 plus \$3 laboratory fee.

An elementary course covering the basic principles of servomechanisms. A brief review will cover the necessary mathematics. Elementary control systems will be discussed as well as basic error-indicators or follow-up mechanisms, both mechanical and electrical. Detailed analysis will also be made of servo systems with various types of damping. Methods of obtaining desired types of damping and other required system characteristics will be discussed in detail. (Prerequisite: ITM 25. Class limited to 25 students)

#### Spring Semester

M 6:20-9:20, Mechanical Engineering 302,  
Ogata

### \*Tool Design. 5 certificate credits. \$40 plus \$1 laboratory fee.

Lecture and laboratory course which covers tooling methods, selection of best machine for the manufacturing operation, 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 ##. Class limited to 24 students)

#### Spring Semester

T 6:20-9:20, Mechanical Engineering 325,  
Crowder

### Refresher Course for Mechanical Engineers. Special Class. \$40.

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

Symbols explained on page 24.

## Mechanics and Materials (MM)

**27. Rigid-Body Mechanics I.** (Replaces 26) 3 degree credits. \$24.

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; Phys 14 required fall 1960; this course may be substituted for 92)

*Fall Semester*

Th 6:20-8:00, Main Engineering 215, Fischer

*Spring Semester*

M 6:20-8:00, Main Engineering 215, Fischer

**28. Rigid-Body Mechanics II.** (Replaces 26 and 127) 3 degree credits. \$24.

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, Fischer

**29. Rigid-Body Mechanics III.** (Replaces 127) 3 degree credits, \$Phys 100. \$24. (Offered fall 1960).

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)

**40. Deformable-Body Mechanics I.** (Replaces 128) 3 degree credits. \$24.

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, Experimental Engineering 22,  
Miller

**41. Deformable-Body Mechanics II.** (Replaces 128) 3 degree credits. \$24.

Stress, strain, and deformation analysis of beams, columns, rings, and cylindrical pressure vessels. (Prerequisite: 40)

*Spring Semester*

T 6:20-8:00, Experimental Engineering 22,  
Miller

**127. Engineering Dynamics.** 5 degree credits. \$40. (Offered last time fall 1959)

Kinematics of structural elements. Dynamics of particles and of rigid bodies. Work and energy. Impulse and momentum. Introduction to mechanical vibrations. (Prerequisite: 26)

*Fall Semester*

Th 6:20-9:20, Experimental Engineering 10,  
Doeringsfeld

**\*142. Experimental Mechanics.** 2 degree credits. \$24 plus \$6 laboratory fee.

Assumptions made in theoretical mechanics, limitations of theory, and role of experimental mechanics. Mechanical, electrical, optical, and other gauges for measurement of static and dynamic strain. Photoelasticity, brittle coating and other methods for determining localized strain. Verification of equations of solid mechanics. Tests of axial, torsional, and transverse-

## Course Offerings—Engineering and Technical Sciences

loaded members. (Prerequisite: 40 or 85 or 128. Class limited to 15 students. Repeated spring semester)

### *Fall Semester*

T 6:00-8:00, Experimental Engineering 25,  
Blatherwick

### *Spring Semester*

T 6:00-8:00, Experimental Engineering 25,  
Blatherwick

## Physics (Phys)

**11-12-13. General Physics for Engineers.** 5 degree credits each semester. \$40 plus \$10 laboratory fee.

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 7:00-9:00, Physics 145  
13 MW 7:00-9:00, Physics 166, Harris

### *Spring Semester*

12 MW 7:00-9:00, Physics 145

**14-14A. Intermediate General Physics and Physics Laboratory.** 5 degree credits. \$40 plus \$10 laboratory fee.

Mechanics and electricity, selected topics. Lecture and quiz each week. (Prerequisite: 11-12-13 and ITM 24 or 24A or ITM 24A)

### *Spring Semester*

MW 7:00-9:00, Physics 166,

## Specialized Technology Courses (STC)

*It is the desire of the Evening and Special Classes Department of the General Extension Division to co-operate with industry in developing and operating Specialized Technology Courses which serve specific needs of its employees.*

**Architectural Drafting I-II-III-IV.** No credit. \$36.

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 225, Johnson

### *Spring Semester*

T 7:00-9:30, Main Engineering 225, Johnson

**Building Material Estimating.** No credit. \$24.

Training in reading detailed blueprints and estimating quantities of materials or cubic yardage in excavations; measurements, picking off blueprints, estimating and figuring total amounts of concrete, brick, timber, and all kinds of steel buildings. This course is intended for the beginner who has no training or experience in reading blueprints or in estimating. Ability to use a slide rule is helpful but not necessary. (No prerequisite)

### *Fall Semester*

Th 8:05-9:45, Main Engineering 217, Self

Symbols explained on page 24.

## Evening and Special Classes

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### \*Machine Tool Operation. No credit. \$40 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. All laboratory work on the above machines consists of the manufacture of machined parts to commercial standards necessary to manufacture a 14-inch all-g geared head lathe with quick change gear box. (No prerequisite. Class limited to 20 students)

#### *Fall Semester*

M 6:20-9:20, Mechanical Engineering 106,  
Crowder

### \*Methods-Time Measurement (M.T.M.). No credit. (Offered 1960-61)

Methods-Time Measurement is a procedure for analyzing manual work in terms of elemental motions for which standard time have been established. M.T.M. is a valuable tool for simplifying work methods and for setting accurate and consistent time standards for incentive, planning, estimating, and cost control. Lectures, discussions, and demonstrations will be integrated with practice in the application of M.T.M. to factory and office operations. (Prerequisite: training or experience in time study and work simplification. Class limited to 15 students)

### Physical Metallurgy I-II. No credit. \$24 each semester.

I: 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 other 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 116, Jerabek

#### *Spring Semester*

II M 6:20-8:00, Mines 116, Jerabek

### Plastics Technology. No credit. \$32 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)

#### *Fall Semester*

Th 6:20-9:00, Mechanical Engineering 106,  
Holthby

### Press Working of Metals. No credit. \$24 plus \$1 materials fee.

This is a design course dealing with: types of presses and their selection; preliminary steps in die engineering; specifications for selection of sheet materials and die steels; bending, forming, embossing, folding, shaving, burnishing, broaching, and trimming dies; drawing dies; coining, swaging, and cold sizing dies; temporary dies and low-cost tools for limited production; two-step die operations and progressive dies; assembly dies; considerations given to the press working of stainless steels, monel metal, and the nonmetallic materials—fiber, rubber, and rawhide. (No prerequisite)

#### *Fall Semester*

M 6:20-8:00, Mechanical Engineering 214,  
Benson

### Residential Heating and Air Conditioning I-II. No credit. \$40 each semester.

A course designed to present the fundamentals of heating and air conditioning to those interested in designing, installing, selling, or recommending the modern type appliances and systems for residential installations. The subject matter deals with terminology; heat transfer and heat transmission coefficients; sources of heat loss from a structure; vapor transmission

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Symbols explained on page 24.

## Course Offerings—Engineering and Technical Sciences

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problems; design of gravity and mechanical warm air heating systems; design of gravity and forced hot water heating systems; design of wet and dry panel heating systems; fuels and combustion equipment selections and controls; residential cooling loads and design of residential air conditioning systems. (No prerequisite for I; for II, I)

### *Fall Semester*

I W 6:20-9:20, Mechanical Engineering 214,  
Borry

### *Spring Semester*

II W 6:20-9:20, Mechanical Engineering 214,  
Borry

### **\*Use of Mechanical Engineering Handbooks I-II. No credit. \$32 each semester.**

The purpose of these courses is to train and acquaint those engaged in industrial work with the technical information available in mechanical engineering handbooks. Part I will include a review of the various types of mechanical engineering handbooks and a classification of these as to the type of technical data they contain. The plan of study will include the solution of a wide variety of practical problems with the use of handbook data alone. Typical problems included will be those dealing with material specifications, handbook tables, machine fastenings, standards for fits and screw threads, etc. Part II is a continuation of Part I. It will include additional work on a variety of problems involved in mechanical work. In addition, the solution of a comprehensive problem requiring the use of a large variety of data in the handbook will be undertaken. The many shortcuts involved in problem solution with the aid of the handbook will be stressed. (No prerequisite for I; for II, I. Class limited to 28 students)

### *Fall Semester*

I Th 7:00-9:15, Mechanical Engineering 325,  
Larsen

### *Spring Semester*

II Th 7:00-9:15, Mechanical Engineering 325,  
Larsen

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Symbols explained on page 24.

## RECREATION

Note that the recreational activities are offered in four groups: for children only, for women only, for men only, and for men and women. Unless otherwise designated, all classes meet for one 45-minute session per week, carry no credit, and require no prerequisite. A health examination will be required in all Extension 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. Those not receiving this health examination must bring a letter from their own physician stating his approval of swimming or tennis. Information about lockers will be given at first class meeting. A sterilized suit and towel are provided for each woman swimmer.

### Activities Open to Children

Registration for all children's swimming classes must be made by mail postmarked *not earlier than September 11 and January 29*. Special forms will be required. For information telephone—do not write—the campus office, Fe 8-8791.

#### \*Swimming for Small Girls. Special Class. \$15 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); intermediate swimmers (those who swim with ease in deep water). Swimmers may bring their own suits. Caps are required for all swimmers. (Each section limited to 20 girls)

##### Fall Semester

###### Beginners

S 8:45-9:30, Norris Gym 51, Lampe  
S 11:00-11:45, Norris Gym 51, Lampe

###### Advanced Beginners

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

###### Intermediates

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

##### Spring Semester

###### Beginners

S 8:45-9:30, Norris Gym 51, Lampe  
S 11:00-11:45, Norris Gym 51, Lampe

###### Advanced Beginners

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

###### Intermediates

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

#### Swimming for Boys. Special Class. \$15 plus \$2 special fee.

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

##### Spring Semester

###### Beginners and Intermediates

S 10:00-10:45, Cooke Hall, Ostrander

###### Advanced

S 11:00-11:45, Cooke Hall, McDonnell

Symbols explained on page 24.



## Course Offerings—Recreation

### \*Swimming for Boys and Girls. Special Class. \$15 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 Only to Women

### Exercise for Relaxation, Conditioning and Fitness—for Women. Special Class. \$15 plus \$2 special fee.

Class work is of two kinds: Part I—Work on general conditioning, for example, flexibility and stimulation, will be done as a group with music. Part II—Individual programs with individual help to those who have special needs and problems in muscle toning and relaxation of tension.

#### *Fall Semester*

T 5:30-6:15, Norris Gym 153, Reiter  
T 6:15-7:00, Norris Gym 153, Reiter

### \*Golf (Beginning)—for Women. Special Class. \$15 plus \$2 special fee.

For those who have no previous experience. Class and individual instruction in the fundamentals of golf. Motion pictures and slides showing proper form of strokes. Discussion of rules, golf etiquette, and terminology. As much instruction as possible to be 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 5:30-6:15, Norris Gym 60, Reiter  
T 6:15-7:00, Norris Gym 60, Reiter  
W 5:30-6:15, Norris Gym 60, Lampe  
W 6:15-7:00, Norris Gym 60, Lampe  
Th 5:30-6:15, Norris Gym 60, Lampe  
Th 6:15-7:00, Norris Gym 60, Lampe

### \*Golf (Intermediate)—for Women. Special Class. \$15 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. (Prerequisite: some knowledge of and experience in golf. Each section limited to 20 students)

#### *Spring Semester*

T 7:00-7:45, Norris Gym 60, Reiter  
W 7:00-7:45, Norris Gym 60, Lampe  
Th 7:00-7:45, Norris Gym 60, Lampe

### \*Swimming (Beginning)—for Women. Special Class. \$15 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 6:00-6:45, Norris Gym 51, Stoner

#### *Spring Semester*

T 5:30-6:15, Norris Gym 51, Tinker  
T 6:15-7:00, Norris Gym 51, Stoner

Symbols explained on page 24.

## Evening and Special Classes

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### \*Swimming (Advanced Beginning)—for Women. Special Class. \$15 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 6:00-6:45, Norris Gym 58, Tinker

#### *Spring Semester*

T 6:15-7:00, Norris Gym 58, Tinker  
W 6:15-7:00, Norris Gym 58, Stoner

### \*Swimming (Intermediate and Advanced)—for Women. Special Class. \$15 plus \$2 special fee.

A course for those who know how to swim but wish to learn new strokes or polish up on those they already know. Instruction in diving and elementary water safety included. (Each section limited to 25 students. Repeated spring semester)

#### *Fall Semester*

T 6:50-7:35, Norris Gym 51, Stoner

#### *Spring Semester*

T 5:30-6:15, Norris Gym 58, Stoner  
W 7:00-7:45, Norris Gym 58, Stoner

### \*Swimming (Advanced) and Diving—for Women. Special Class. \$15 plus \$2 special fee.

A course for advanced swimmers who want further instruction in diving. (Each section limited to 25 students. Repeated spring semester)

#### *Fall Semester*

T 6:50-7:35, Norris Gym 58, Tinker

#### *Spring Semester*

T 7:00-7:45, Norris Gym 58, Tinker

### Tennis (Beginning)—for Women. Special Class. \$15 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 5:30-6:15, Norris Gym 151  
W 6:15-7:00, Norris Gym 151

## Activities Open Only to Men

### \*Golf—for Men. Special Class. \$15 plus \$2 special fee.

The fundamentals of golf. The first eight or ten meetings will be held in the golf gymnasium. The last six 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 5 golf balls. (Each section is limited to 20 men)

#### *Spring Semester*

M 6:00-7:00, South Tower, Stadium, McDonnell  
M 7:00-8:00, South Tower, Stadium, McDonnell  
M 8:00-9:00, South Tower, Stadium, McDonnell  
T 6:00-7:00, South Tower, Stadium, McDonnell  
T 7:00-8:00, South Tower, Stadium, McDonnell  
T 8:00-9:00, South Tower, Stadium, McDonnell

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Symbols explained on page 24.

**Swimming—for Men. Special Class. \$15 plus \$2 special fee.**

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

*Spring Semester*

W 8:05-8:50, Cooke Hall, Giles

**Activities Open to Men and Women**

**Badminton Club—for Men and Women. Special Class. \$15 plus \$2 special fee.**

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

*Fall Semester*

M 6:00-7:30, Cooke Hall Gym, Anway

M 7:30-9:00, Cooke Hall Gym, Anway

## 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

Agricultural Biochemistry 108, page 34  
Soils 6, page 35  
Art 1, page 37  
Art 67, page 37  
Home Design and Planning, page 38  
Grammar Review, page 44  
Preparatory Composition, page 44  
English 1B, page 45  
English 2B, page 45  
English 3B, page 45  
English 72, page 46  
History 1, page 50  
History 14, page 50  
History 17, page 50  
History 100, page 51  
Communication 1, page 53  
Library Science 53, page 57  
Library Science 62, page 57  
Library Science 83, page 57  
Music 43, page 59  
Music 147, page 59  
Psychology 135, page 67  
Public Health 133, page 68  
Wild Game, page 160  
Zoology 1, page 76  
Business Administration 24, page 79  
Nursing Education 73, page 100  
Civil Engineering 18, page 103  
Civil Engineering 31, page 103  
Civil Engineering 130, page 104  
Highways and Pavements 1A, page 105  
Mathematics 147, page 113  
Mathematics 184, page 113

### Winter Quarter

Art 1, page 37  
Art 2, page 37  
Art 68, page 37  
Grammar Review, page 44  
Preparatory Composition, page 44  
English 1B, page 45  
English 2B, page 45  
English 3B, page 45  
English 73, page 46  
History 2, page 50  
History 15, page 50  
History 18, page 50  
History 101, page 51  
History 102C, page 51

Communication 2, page 53  
Library Science 55, page 57  
Library Science 70, page 57  
Music 43, page 59  
Music 148, page 59  
Psychology 136, page 67  
Zoology 2, page 76  
Business Administration 25, page 79  
Business Administration 26, page 79  
Refresher Course in Structural Design for Architects, page 102  
Civil Engineering 19, page 103  
Civil Engineering 32, page 104  
Civil Engineering 131, page 104  
Highways and Pavements 1B, page 105  
Refresher Course for Civil Engineers, page 105  
Refresher Course for Electrical Engineers, page 107  
Mathematics 148, page 113  
Mathematics 185, page 114  
Refresher Course for Mechanical Engineers, page 115

### Spring Quarter

Art 1, page 37  
Art 3, page 37  
Art 68, page 37  
Grammar Review, page 44  
Preparatory Composition, page 44  
English 1B, page 45  
English 2B, page 45  
English 3B, page 45  
English 74, page 46  
History 3, page 50  
History 16, page 50  
History 19, page 50  
History 102, page 51  
Communication 3, page 53  
Library Science 62, page 57  
Library Science 176, page 57  
Music 43, page 59  
Music 149, page 59  
Nursing Administration 85, page 60  
Psychology 137, page 67  
Zoology 3, page 76  
Business Administration 24, page 79  
Civil Engineering 20, page 103  
Civil Engineering 33, page 104  
Civil Engineering 132, page 104  
Mathematics 149, page 113  
Mathematics 186, page 114

## Faculty

*Telephone numbers of faculty members may be obtained from the campus office of the General Extension Division, Federal 8-8791, during office hours, or from the University of Minnesota operator, Federal 2-8158, after office hours.*

Harold J. Alford, M. A., Assistant Professor of English  
Immanuel C. Fischer, M.S., Assistant Professor of Engineering  
Albert M. Fulton, Ph.M., Associate Professor of Speech  
Leah M. Lewis, B.S., Assistant Professor of Interior Design  
Helen P. Mudgett, M.A., Assistant Professor of Intercultural Education  
Wendell White, Ph.D., Associate Professor of Psychology

Owing to uncertainties of some departments as to future staff and unavoidable last minute additions and changes, this list is necessarily incomplete.

Harold B. Allen, Ph.D., Professor of English  
Reginald Allen, Ph.D., Instructor in Philosophy  
Robert J. Ames, Ph.D., Associate Professor of Humanities  
Gordon R. Antelman, B.S., Instructor in Statistics  
Ethel B. Anway, Instructor in Physical Education  
Harold F. Arneman, Ph.D., Associate Professor of Soils  
Charles H. Backstrom, Ph.D., Assistant Professor of Political Science  
Leonard T. Baillie, M.A., Lecturer in Office Management  
Bruce Balow, Ph.D., Associate Professor of Education  
Steve S. Barich, M.A., Assistant Professor of Mechanical Engineering  
Richard M. Barker, M.S.C.E., Instructor in Civil Engineering  
W. Donald Beatty, Ph.D., Associate Professor of History  
Bernard C. Bengtson, B.A., Lecturer in Insurance  
Harland Benson, Lecturer in Mechanical Engineering  
David K. Berninghausen, M.A., Director of Library School  
R. Glenn Berryman, Ph.D., C.P.A., Assistant Professor of Accounting  
Allan A. Blatherwick, Ph.D., Assistant Professor of Aeronautical Engineering  
Fred Blum, Ph.D., Associate Professor in Social Science Program  
Morgan Blum, M.A., Assistant Professor of Humanities  
Francis M. Boddy, Ph.D., Professor of Economics  
Clarence H. Boeck, Ph.D., Associate Professor of Education  
Joseph B. Bonney, B.S., Lecturer in Accounting  
Wesley Booman, Ph.D., Lecturer in Psychology  
Arthur M. Borak, Ph.D., Associate Professor of Economics  
John Borry, M.S., M.E., Lecturer in Mechanical Engineering  
Emmert M. Brackney, Ph.D., Professor of Romance Languages  
Walter J. Breckenridge, Ph.D., Director, Museum of Natural History  
David Brown, B.A., Instructor in Humanities  
James I. Brown, Ph.D., Professor of Rhetoric  
John A. Brown, B.A., Teaching Assistant in Mathematics  
Paul W. Bullen, B.S.C.E., Assistant Professor of Mechanical Engineering  
Sylvan Burgstahler, M.S., Instructor in Mathematics  
James F. Burks, Ph.D., Assistant Professor of Romance Languages  
Thomas Burns, M.A., C.P.A., Instructor in Accounting  
George S. Bush, M.A., Assistant Professor of Journalism  
Donald G. Cain, B.A., Production Manager, Audio-Visual Education Service  
Ann P. Callahan, M.A., Assistant Professor of Library Science  
David Campbell, M.A., Research Fellow in Psychology  
Richard F. Carlson, B.A., Instructor in Psychology  
John R. Carroll, LL.B., Lecturer in Business Law  
Thomas E. Carroll, M.A., Instructor in Sociology  
Paul A. Cartwright, M.S., Associate Professor of Electrical Engineering  
Paul H. Cashman, Ph.D., Associate Professor of Rhetoric  
Austin B. Caswell, M.A., Instructor in General Arts and Music  
Harold W. Chase, Ph.D., Associate Professor of Political Science  
M. Gene Chenoweth, M.A., Instructor in Social Science  
James Cherry, M.Ed., Instructor in Art Education  
Asher N. Christensen, B.A., Professor of Political Science  
John Clarke, B.B.A., C.P.A., Instructor in Accounting

Charles H. Clay, LL.B., Lecturer in Business Law  
 Edward Coen, Ph.D., Associate Professor of Economics  
 Walter S. Collins, M.A., Assistant Professor of Music  
 Beulah Compton, M.A.S.W., Instructor in Social Work  
 George Connor, LL.B., Lecturer in Insurance  
 Edward M. Copeland, Jr., B.A., Instructor in Slavic and Oriental Languages  
 Ronald G. Corwin, M.A., Instructor in Sociology  
 J. Orville Creviere, Lecturer in Accounting  
 Charles F. Crichton, B.A., Lecturer in Economics  
 Bert A. Crowder, M.S.M.E., Assistant Professor of Mechanical Engineering  
 William J. Culmer, M.A., Instructor in Mathematics  
 William Cummings, B.B.A., Instructor in Accounting  
 James A. Cuneo, Ph.D., Associate Professor of Romance Languages  
 Dennis D. Daly, LL.B., Instructor in Accounting  
 Thomas D'Andrea, B.A., Research Fellow in Psychology  
 Marylahan Dawes, M.A., Lecturer in Humanities  
 Rene Dawis, Ph.D., Research Associate in Industrial Relations  
 Cyrille E. DeCosse, Lecturer in Art  
 Harold C. Deutsch, Ph.D., Professor of History  
 Kendall A. Dickinson, M.S., Teaching Assistant in Geology  
 William Dietrichsen, Lecturer in Art  
 Harry A. Doeringsfeld, C.E., Professor of Mechanics and Materials  
 William A. Dolid, B.A., Teaching Assistant in Mathematics  
 Ernestine C. Donaldson, M.A., Associate Professor of Office Management  
 Rodney D. Driver, B.S., Instructor in Mathematics  
 Gordon Duckworth, M.A., Assistant Professor of Music  
 Marvin D. Dunnette, Ph.D., Associate Professor of Psychology  
 Frances E. Dunning, M.Ed., Assistant Professor of Nursing  
 Eugene Edie, M.A., C.P.A., Instructor in Accounting  
 Lorenz Eitner, Ph.D., Professor of Art  
 Marvin Engel, Instructor in Accounting  
 Rodney E. Engelen, B.A., Lecturer in Political Science  
 George W. England, Ph.D., Associate Professor in Industrial Relations and Acting Assistant  
     Director, Industrial Relations Center  
 Eugene H. Falk, Ph.D., Professor of Romance Languages  
 Jesse E. Fant, M.S.C.E., Assistant Professor of Civil Engineering  
 J. Earl Faulkner, M.S., Instructor in Mathematics  
 Sumner J. Ferris, B.A., Instructor in English  
 William Fletcher, Ph.D., Associate Professor of Speech  
 John Forster, M.A., Assistant Professor of Sociology  
 Roy G. Francis, Ph.D., Associate Professor of Sociology  
 J. Newton Garver, B.Ph., Instructor in Philosophy  
 Clifton A. Gayne, Jr., Ph.D., Professor of Art Education  
 William F. Geddes, Ph.D., Professor of Agricultural Biochemistry  
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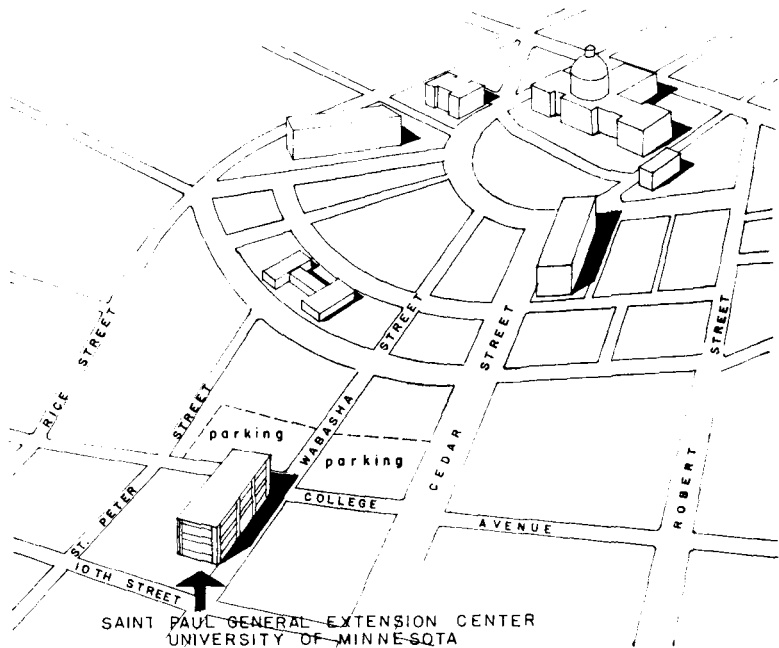
## Index

(See Table of Contents, page 5)

Page		Page	
Accounting .....	78	Credits and Collections .....	92
Acting .....	74	Credits, Course .....	20
Admission Requirements .....	6	Danish .....	68
Aeronautics .....	101	Day-School Students, Present or Former .....	24
Agriculture .....	34	Degree Programs .....	6
Agricultural Biochemistry .....	34	Drama .....	74
Air Pilots' Ground School .....	101	Drawing and Engineering Graphics .....	107
Anthropology .....	36	Drawing, General .....	38
Architectural Drafting .....	117	Economics .....	84
Architecture .....	38, 102	Education .....	98
Art .....	36	Electrical Engineering .....	105
Art Education .....	98	Electronics .....	105
Astronomy .....	43	Engineering Classes .....	101
Athletic Facilities .....	33	Engineering Science and Technician Programs .....	16
Auditor Status .....	22	English .....	44
Badminton .....	123	Business .....	82
Birds of Minnesota .....	60	Composition .....	44
Building Material Estimating .....	117	Engineering .....	106
Bulletins, University .....	7	Foreign Born .....	32
Bus Route .....	134	Literature .....	45
Business Classes .....	77	Placement Tests .....	44
Business English .....	82	Ethics .....	61
Business Finance .....	83	Examinations, Special .....	20
Business Law .....	83	Exercise .....	121
Business News .....	56	Faculty .....	125
Business Theory for Secretaries .....	95	Family Life .....	53
Calendar .....	4	Fashion Illustration .....	41
Cancellations and Refunds .....	26	Fees .....	25
Ceramics .....	38	Finnish .....	69
Certificates, Extension .....	10	Football Tickets .....	33
Certification for Teachers .....	98	Foreign Born, Language for .....	32
Chartered Property Casualty Underwriters Curriculum .....	91	French .....	47
Chaucer .....	75	Gardening .....	34
Chemistry .....	102	General Information .....	6
Child Development and Welfare .....	99	Geography .....	48
Child Psychology .....	99	Geology .....	48
Chorus, University .....	59	German .....	49
Civil Engineering .....	104	Golf .....	120
College of Life Underwriters Curriculum .....	90	Government and Politics .....	62
Communication .....	53	Grades .....	21
Composition .....	44	Grade Points .....	22
Correspondence Study .....	23		
Counseling Services .....	31		

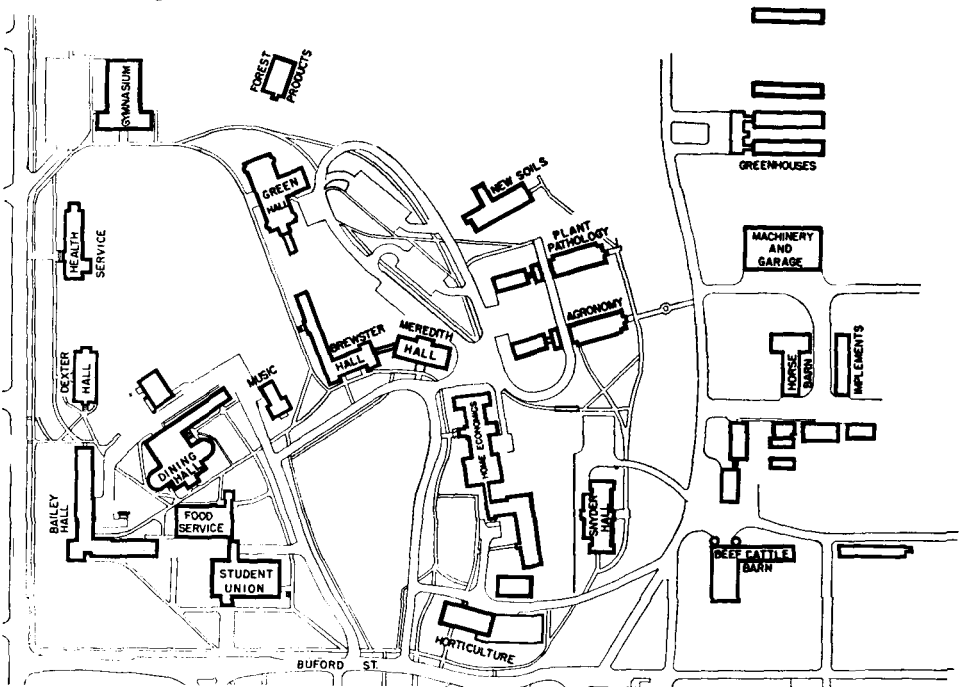
	Page		Page
Graduate Credits .....	21	Mechanical Engineering .....	114
Grammar Review .....	44	Mental Health .....	68
Graphic Processes .....	56	Metal Craft .....	42
Graphics, Engineering .....	107	Metallurgy, Physical .....	118
Great Lakes-St. Lawrence Region .....	70	Methods Engineering .....	108
Ground School .....	101	Mineralogy .....	48
		Modern Art .....	37
		Music .....	58
Handbooks, Mechanical Engi- neering .....	119	National Institute of Credit Curriculum .....	93
Health .....	67	Natural History .....	60
Heating and Air Conditioning .....	118	Norwegian .....	68
Highways and Pavements .....	105	Nursing .....	60
History .....	50	Nursing Education .....	100
Holidays .....	4		
Horticulture .....	34	Occupational Counseling .....	67
Housing .....	38, 65	Office Management .....	94
How to Study .....	54	Offices and Office Hours .....	3
Humanities .....	53	Opera, Introduction to .....	59
Hydraulics .....	104	Oriental Languages .....	69
Income Tax Accounting .....	81	Painting .....	38
Incomplete Grades .....	21	Parking and Bus Routes .....	134
Indian, American .....	36	Parliamentary Procedures .....	75
Indian, Chippewa .....	57	Philosophy .....	60
Industrial Engineering .....	108	Photography .....	61
Industrial Management .....	87	Physics .....	117
Industrial Relations .....	87	Piano Playing for Pleasure .....	58
Insurance .....	89	Placement Test, Accounting .....	78
Interdepartmental Courses .....	53	Placement Test, English .....	44
Interior Design .....	39	Placement Test, Mathematics .....	110
Investments .....	83	Planning, City and County .....	65
Italian .....	55	Plastics Technology .....	118
		Political Science .....	62
Japanese .....	69	Preparation for Marriage .....	53
Jazz, American .....	58	Preparatory Composition .....	44
Journalism .....	55	Prerequisites .....	21
		Press Working of Metals .....	118
Landscape Planning .....	34	Process Engineering .....	109
Late Fees .....	25	Production Control .....	109
Layout Engineering .....	110	Property and Casualty Insurance Curriculum .....	91
Legal Problems .....	84	Psychology .....	65
Lettering .....	40	Advertising .....	67
Library Science .....	57	Child .....	99
Library, Use of University .....	32	Educational .....	100
Listening, Efficient .....	75	General .....	66
Literature, American .....	46	Personnel .....	66
Literature, English .....	45	Public Administration .....	64
Loan Fund, Student .....	31	Public Health .....	67
Logic .....	61	Public Relations .....	56
		Public Speaking .....	74
Machine Tool Operation .....	118	Puppetry .....	98
Magazine Writing .....	56	Purchasing .....	93
Marketing .....	92		
Marriage, Preparation for .....	53		
Mathematics .....	110		

	Page		Page
Quality Control .....	109	Engineering .....	112
Quarter Classes .....	124	Social .....	72
Quarter Dates .....	4	Student Counseling Bureau, Services of .....	31
Radio and Television Speech .....	75	Study Skills .....	75
Reading, Efficient .....	75	Surveying .....	103
Real Estate .....	94	Swedish .....	68
Recess Periods .....	4	Swimming .....	120, 121, 123
Recreation Classes .....	120	Symbols, Explanation of .....	24
Refrigeration .....	115	Tabulating Equipment Accounting .....	80
Registration Regulations .....	23	Wiring .....	80
Reports on Grades .....	22	Technical Sciences .....	101
Rhetoric .....	75	Technology Classes .....	101
Russian .....	69	Tennis .....	122
Sales Management .....	92	Theater Arts .....	74
Salesmanship .....	95	Tickets, Athletic, Symphony, Theater, and Others .....	33
Scandinavian .....	68	Tool Design .....	115
Scholastic Standing, Committee on Student .....	2	Transferring Credits .....	20
Sculpture .....	40	Transportation Courses .....	96
Secretarial Certificate .....	11	Typography .....	56
Secretarial Refresher Course .....	95	Veterans' Information .....	27
Semester Dates .....	4	Vocabulary Building .....	76
Servomechanisms .....	115	Vocational Counseling and Tests .....	31
Slavic and Oriental Languages .....	69	Ward Administration .....	60
Slide Rule .....	108	Weaving, Textile .....	42
Social Science .....	70	Wild Game of Minnesota .....	60
Social Work .....	70	Work Load, Student .....	25
Sociology .....	71	Work Measurement .....	108
Soils .....	35	World Politics .....	63
Spanish .....	73	Writing Classes .....	44
Specialized Technology Courses .....	117	Writing, Technical .....	107
Speech .....	74	Zoology .....	76
Statistics .....	96		
Business .....	96		
Education .....	100		



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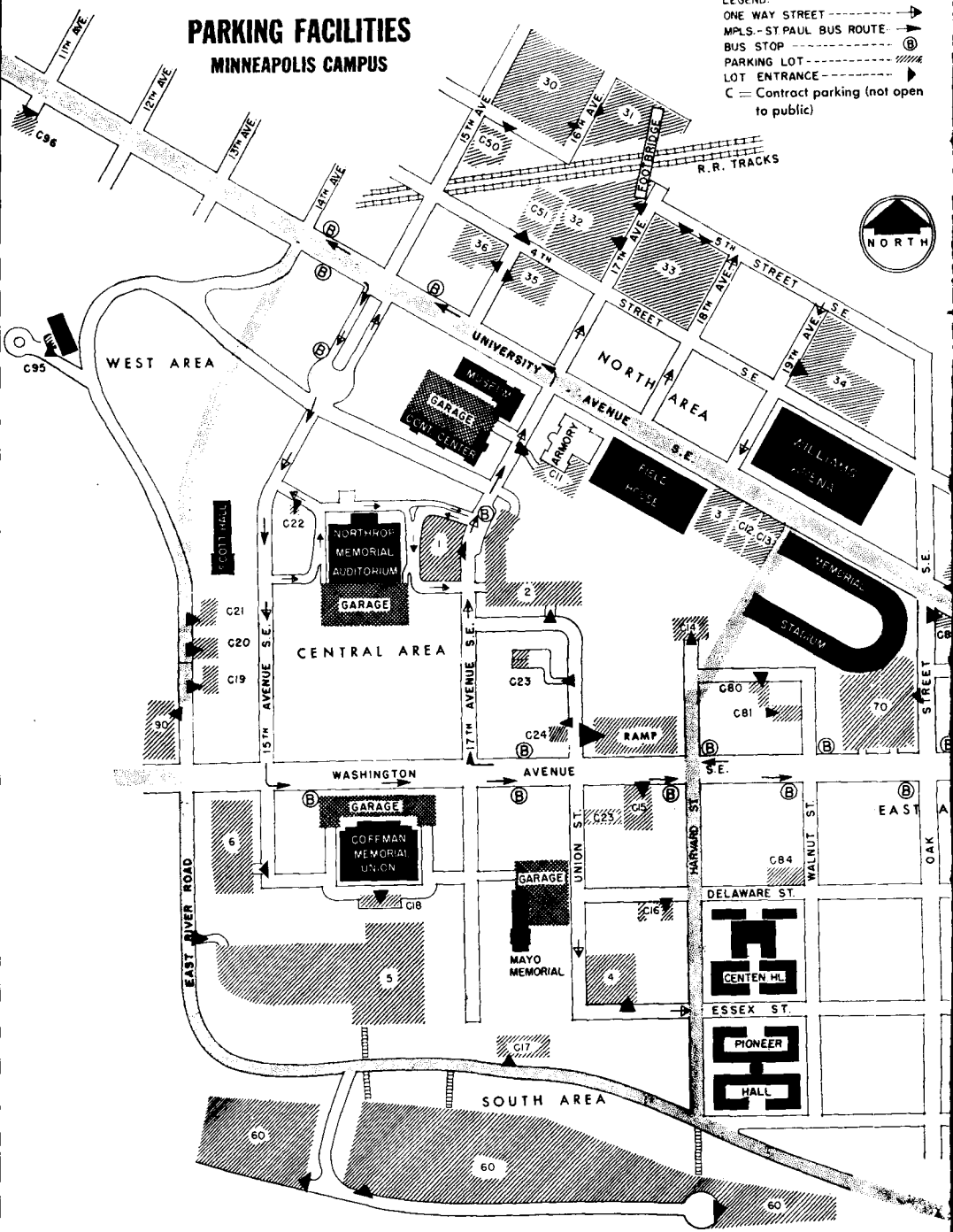
The ST. PAUL EXTENSION CENTER of the University is located in downtown St. Paul, at the intersection of Wobasha Street and College Avenue, at the foot of the Capitol Approach. Most St. Paul evening classes are held in this building.

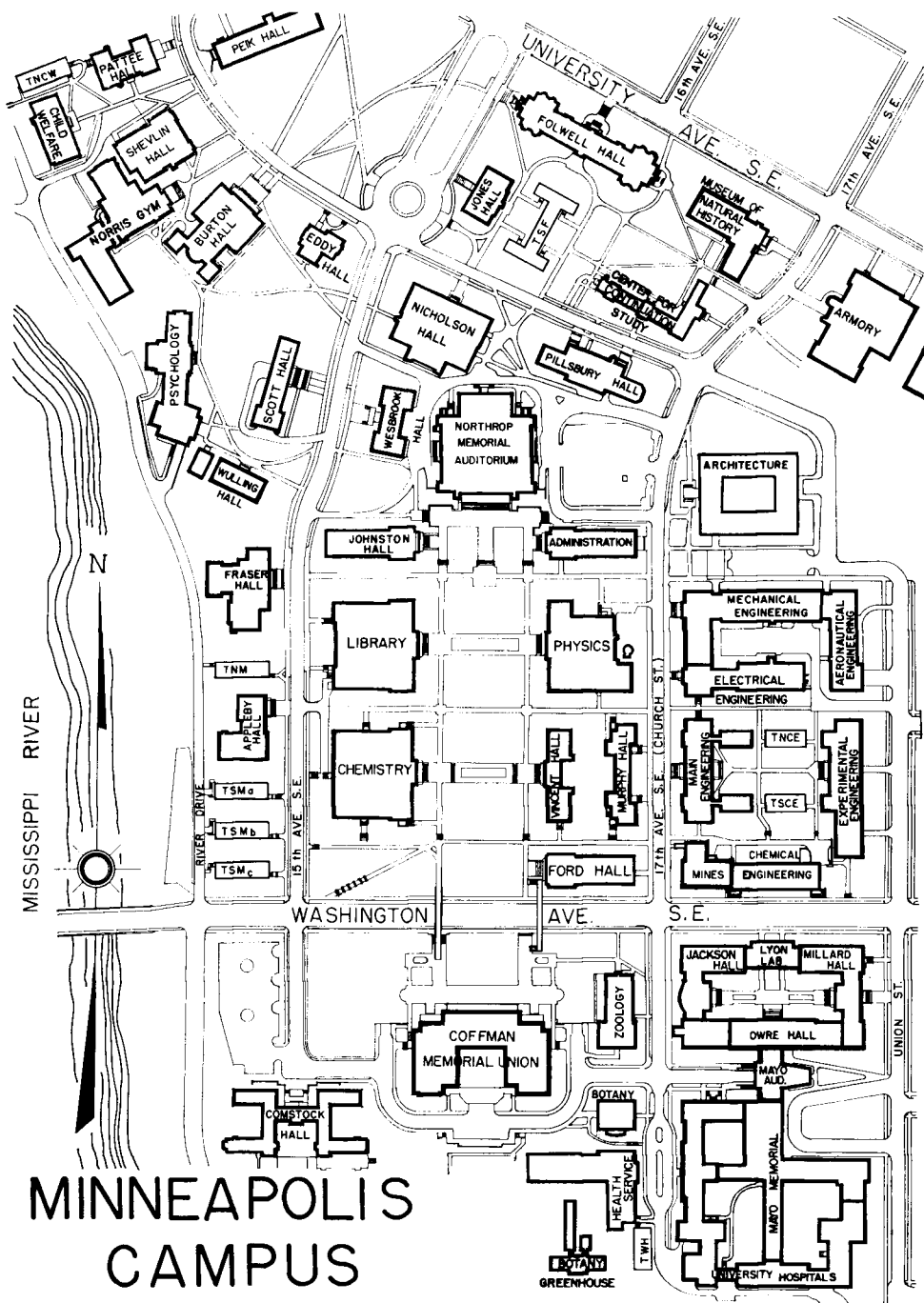


The ST. PAUL CAMPUS of the University, the north one-half of which is shown here, is located north of Commonwealth Avenue and east of Cleveland Avenue. Classes in agriculture are held on the St. Paul Campus.

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- LEGEND.
- ONE WAY STREET →
  - MPLS.-ST PAUL BUS ROUTE
  - BUS STOP (B)
  - PARKING LOT (hatched area)
  - LOT ENTRANCE (arrow)
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