



Bulletin of the

UNIVERSITY OF MINNESOTA

DEC 1957
9/19/57
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*“Learn
for
Living”*

Evening and Special Classes

Twin Cities Area, 1957-1958

UNIVERSITY OF MINNESOTA

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GENERAL EXTENSION DIVISION

Administration for Evening and Special Classes

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Gilford W. Remington, M.A., Manager of Duluth Extension Office
Eleanor M. Salisbury, M.A., Assistant to the Dean and Co-ordinator of Scholastic and Counseling Services

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

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.

Special hours are in effect at all offices during semester registration periods (see Calendar).

GENERAL EXTENSION DEPARTMENT HEADS AND DIRECTORS

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

Center for Continuation Study, Fred E. Berger, 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, Clarence C. Ludwig, 15 Library Building

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

1957

September	16	Monday	Fall quarter and semester registration begins. (On Monday, September 16, all offices will be open from 8 a.m. to 8 p.m. Beginning with Tuesday, September 17, and continuing through Thursday, September 26, week day hours will be from 12 noon until 8 p.m., Saturday hours from 9 a.m. to 3 p.m.)
September	26	Thursday	Registration closes; all fees due.
September	27, 28	Friday, Saturday	Registration offices closed. No registrations accepted.
September	30	Monday	Fall quarter and semester classes begin; special fees for late registration in effect. (All offices resume regular hours, listed on page 3.)
November	11	Monday	Veterans' Day, holiday.
November	23	Thursday	Thanksgiving Day, holiday.
December	16-20	Monday- Friday	Final examinations for fall quarter.
December	21	Saturday	Fall quarter closes; Christmas recess begins for all classes.
December	30	Monday	Winter quarter registration begins. (No special office hours in effect.)

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January	1	Wednesday	New Year's Day, holiday.
January	6	Monday	Christmas recess closes; winter quarter fees due; winter quarter classes begin; fall semester classes resume.
January	8	Wednesday	Special fee for late registration in effect.
February	3	Monday	Spring semester registration begins. (On Monday, February 3, all offices will be open from 8 a.m. to 8 p.m. Beginning with Tuesday, February 4, and continuing through Thursday, February 13, week day hours will be from 12 noon until 8 p.m., Saturday hours from 9 a.m. to 3 p.m.)
February	3-7	Monday- Friday	Final examinations for fall semester.
February	8	Saturday	Fall semester closes; semester recess begins for semester classes <i>only</i> .
February	13	Thursday	Registration closes; all fees due.
February	14, 15	Friday, Saturday	Registration offices closed. No registrations accepted.
February	17	Monday	Semester recess closes; spring semester classes begin; special fee for late registration in effect. (All offices resume regular hours, listed on page 3.)
March	17-21	Monday- Friday	Final examinations for winter quarter.
March	22	Saturday	Winter quarter closes; spring recess begins for quarter classes <i>only</i> .
March	24	Monday	Spring quarter registration begins. (No special office hours in effect.)
March	31	Monday	Spring recess closes; registration closes, all fees due; spring quarter classes begin.
April	2	Wednesday	Special fee for late registration in effect.
May	30	Friday	Memorial Day, holiday
June	9-13	Monday- Friday	Final examinations for spring quarter and spring semester.
June	14	Saturday	Spring quarter and semester close; 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 page 20 for registration regulations.

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EVENING AND SPECIAL CLASSES

Twin Cities Area

(An index will be found on pages 121, 122, 123)

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. 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 17. Service veterans may register under Public Laws 16, 346, 550, and 894. See Special Information for Veterans and Members of the Armed Forces, page 24.

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 economics (B.S. in Econ.), 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 Junior College level and securing a counselor at the Senior College 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 17.

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 SLA through evening classes.

Course Requirements for Admission to Senior College

A. Freshman English Courses: 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 1 department to count.

- | | |
|---|--|
| 1. Anthropology | 5. Political Science |
| 2. Economics (except 24-25-26, 27, 32, 33, 34, 36, 37-38-39, 40-41, 43) | 6. Psychology |
| 3. Geography | 7. Sociology |
| 4. History | 8. Social Science (in Interdisciplinary Studies Department). |

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 from 1 department to count.

1. Biological sciences: botany, psychology, zoology, General Biology (NSci 7-8-9).
2. Physical sciences: astronomy, chemistry, geology, physics, Physical World (NSci 4-5-6).
3. Mathematics (except 1, 8, 20, 21).
4. Orientation in the Natural Sciences (NSci 1-2-3) (a student presenting credits in only NSci 1-2 must take his additional work in other than group D2).

^{††} Introductory natural science courses which count toward the laboratory requirement are: 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, 7, 15-16; NSci 1-2-3; Phys 1-2-3, 11; Psy 1-2.

Evening and Special Classes

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 | 6. Mathematics (except 1, 6, 8, 20, 21) |
| 2. English literature | 7. Music |
| 3. Foreign literature | 8. Philosophy |
| 4. History | 9. Speech and theater arts (except 3, 6, 9, 39) |
| 5. Humanities | |

F. Courses 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, exclusive of quality credits. Honor 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 Senior College 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 B.B.A. degree and the B.S. in economics degree (both 180 credits) are available from business administration through evening classes. The first 90 credits are taken in the College of Science, Literature, and the Arts.

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 7 or 8 or 15.
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; Econ 5, Elements of Statistics; Econ 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.)

Course Requirements for the B.S. in Economics Degree (Major Economics)

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:** 10 credits.
3. **Additional Mathematics or Laboratory Science:** 10 credits.
4. **Political Science or History:** 9 credits.
5. **Philosophy:** Phil 1 or 2.
6. **Economics:** Econ 1-2, Principles of Economics; Econ 5, Elements of Statistics.
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 20), 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 pre-requisites 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. Ninety-credit 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

English requirement:

Engl 1b-2b-3b; or Comm 1a-2a-3a; or exemption

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

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

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

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

Concentration requirement: at least 12 credits in 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.

Evening and Special Classes

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

Public Administration Certificate

Core requirement:

Pol 1-2—American Government and Politics
Pol 60—Introduction to Public Administration

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

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

Pol 53—Governmental Accounting
Pol 61—Municipal Law and Administration
Pol 64—Employee Training Techniques
Pol 66—Problems in Public Administration
Pol 67—Administrative Analysis
Pol 68—Administrative Communication

Pol 69—Problems of Tax Administration
Pol 73—City and County Planning
Pol 76—Business and Government
Pol 77—Administrative Regulation
Jour 78—Public Relations
Econ 5—Elements of Statistics

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

Accounting
Child Welfare
Economics and Finance
Engineering
Industrial Relations
Insurance
Nursing Education

Political Science
Psychology
Recreation
Social Work
Sociology
Traffic and Transportation

Secretarial Certificate

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

Core requirement:

Review of Business English and Business Correspondence; or Comp 58, Business Reports and Letters
Econ 1-2—Principles of Economics
Econ 24-25—Principles of Accounting

Econ 36—Office Procedures
Econ 40-41—Secretarial Procedures
BA 51, 53—Business Law
BA 86—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
Econ 5—Elements of Statistics
Econ 26—Principles of Accounting

Econ 50—Insurance Principles
BA 52, 56—Business Law
Econ 57—Economics of Money and Banking

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

Business Administration Certificates

Junior Certificate

Students transferring credits from other institutions to this certificate program must take a minimum of 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 1a; or exemption

Econ 1-2—Principles of Economics

Econ 5—Elements of Statistics

Econ 24-25-26—Principles of Accounting

BA 51—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: Advertising, Marketing and Merchandising, Traffic and Transportation
3. Economics and Finance
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
Advertising
Economics and Finance
Industrial Management
Industrial Relations

Insurance
Marketing and Merchandising
Real Estate
Traffic and Transportation

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

Senior Certificate

Students transferring credits from other institutions to this certificate program must take a minimum of 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 1a-2a-3a; or exemption

Econ 1-2—Principles of Economics

Econ 5—Elements of Statistics

Econ 24-25-26—Principles of Accounting

BA 51—Business Law

Econ 57—Economics of Money and Banking

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

BA 52 or 53—Business Law (not both)

BA 58—Elements of Public Finance

BA 71—Transportation: Services and Charges I

Econ 73—Manpower Economics and Labor Problems

Econ 75—Corporation Finance

BA 77—Survey in Marketing

Econ 80-81—Intermediate Economic Analysis

Econ 85—Government Regulation of Business

BA 86—Survey of Office Management

(or) BA 89—Production Management

Evening and Special Classes

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	Industrial Management
Advertising, Marketing, and Merchandising	Industrial Relations
Economics, Finance and Insurance	Real Estate
	Traffic and 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.

Industrial Relations Certificate

Core requirement:

Econ 1-2—Principles of Economics
Econ 73—Manpower Economics and Labor Problems
Econ 164—Labor Legislation: Collective Bargaining
BA 167—Introduction to Industrial Relations
Econ 169—Labor Legislation: 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 168—Advanced Personnel Administration
BA 180-181-182D—Senior Topics in Industrial Relations
One course from the following:
Econ 162—Labor Movements
Econ 163—Union Government and Policies
Econ 166—Settlement of Industrial Disputes

Electives: any two courses from the following:

BA 86—Survey of Office Management	Supervision I, II, III
BA 89—Production Management	Elements of Work Simplification
Pol 64—Employee Training Techniques	Advanced Work Simplification
Pol 68—Administrative Communication	Economics of Collective Bargaining
Psy 125-126—Psychology of Individual Differences	Work Measurement and Production Standards
Psy 144-145—Abnormal Psychology	Industrial Plant Layout
Soc 120—Social Psychology	Problems of Union Administration
Soc 146—Industrial and Occupational Sociology	Personnel Methods
	Human Relations in Industry

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.

General Engineering Certificates

Junior Certificate

Students transferring credits from other institutions to this certificate program must take a minimum of 6 credits in engineering courses at the University of Minnesota.

Core requirement:

Basic Technical Writing I; or Engl 1b; or Comm 1a; or exemption	ITM 13—Analytic Geometry
ITM 11—College Algebra and Trigonometry I	ITM 24—Calculus I: Differential
ITM 12—College Algebra and Trigonometry II	ITM 25—Calculus II: Integral
	Draw 14-15—Engineering Graphics

Electives: additional courses from engineering or the physical sciences approved by the Committee on Student Scholastic Standing to make a minimum of 45 credits for the certificate.

Senior Certificate

Students transferring credits from other institutions to this certificate program must take a minimum of 12 credits in engineering courses at the University of Minnesota.

Core requirement:

Basic Technical Writing I-II; or Engl 1b-2b-3b; or Comm 1a-2a-3a; or exemption
ITM 11—College Algebra and Trigonometry I
ITM 12—College Algebra and Trigonometry II
ITM 13—Analytic Geometry
ITM 24—Calculus I: Differential

ITM 25—Calculus II; Integral
MM 26—Engineering Statics
MM 127—Engineering Dynamics
(or) MM 128—Engineering Solid Mechanics
Draw 14-15-16—Engineering Graphics

Concentration requirement: at least 30 additional credits in 1 of the following fields, or approved combination thereof:

Aeronautical Engineering
Agricultural Engineering
Chemical Engineering
Chemistry
Civil Engineering

Electrical Engineering
Mathematics
Mechanical Engineering
Mining Engineering
Physics

Electives: additional courses approved by the Committee on Student Scholastic Standing to make a minimum of 90 credits for the certificate. Courses in liberal arts and business administration are recommended.

Industrial Engineering Certificates

Junior Certificate

Students transferring credits from other institutions to this certificate program must take a minimum of 6 credits in industrial engineering courses at the University of Minnesota.

Core requirement:

Basic Technical Writing I; or Engl 1b; or Comm 1a, or exemption
ITM 11—College Algebra and Trigonometry I
ITM 12—College Algebra and Trigonometry II
Draw 14-15—Engineering Graphics
Machine Tool Operation I

Econ 1-2—Principles of Economics
Elements of Industrial Engineering and Management
Elements of Work Simplification
Work Measurement and Production Standards

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

Evening and Special Classes

Senior Certificate

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

Core requirement:

Basic Technical Writing I-II; or Engl 1b-2b-3b; or Comm 1a-2a-3a; or exemption
ITM 11—College Algebra and Trigonometry I
ITM 12—College Algebra and Trigonometry II
ITM 13—Analytic Geometry
Draw 14-15-16—Engineering Graphics
Machine Tool Operation I
Econ 1-2—Principles of Economics
Econ 5—Elements of Statistics
(or) ITM 90—Elementary Engineering Statistics

Econ 73—Manpower Economics and Labor Problems
BA 167—Introduction to Industrial Relations
Elements of Industrial Engineering and Management
Production Planning and Control
Elements of Work Simplification
Work Measurement and Production Standards
Industrial Plant Layout
Elements of Quality Control
Manufacturing Cost Analysis

Electives: additional courses approved by the Committee on Student Scholastic Standing to make a minimum of 90 credits for the certificate. The following courses are recommended:

Psy 1-2—General Psychology
Soc 146—Industrial and Occupational Sociology
BA 133—Standard Cost Accounting
Draw 52—Alignment Charts
Supervision I, II, III
Industrial Safety and Health
Materials Handling and Packaging

Process Engineering
Advanced Work Simplification
Advanced Topics in Quality Control
Methods-Time Measurement
Beginning Practical Speech Making
Basic Salesmanship
Motion Picture Photography

Engineering Aide Program

The Engineering Aide program has been developed by the General Extension Division in co-operation with the Institute of Technology, the Relations with Industry Committee of the American Society for Engineering Education, and the Minnesota Highway Department. It is a terminal program, leading to a Basic Engineering Aide Certificate and to three Senior Engineering Aide Certificates, designed to qualify the student as an engineering technician capable of performing responsible design or supervisory assignments in his field of

A student who is working, or who plans to work, for an Engineering Aide Certificate must fill out an application blank for admission to the 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.

specialization. Persons interested in the program who are already employed or seeking employment in a Twin Cities area industry utilizing engineering aide technicians should consult their company's training or personnel officer for program counseling and registration information. Employees of the Minnesota Highway Department interested in supplementary education should consult the Personnel Director of the Minnesota Highway Department. Others may obtain program counseling and registration information from any General Extension Division office.

Basic Engineering Aide Certificate

(47 credits)

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 Aide 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. All requirements in the Basic Engineering Aide Certificate program carry University degree credits and provide an opportunity for persons interested in engineering work who are unable to pursue full-time day study to complete, in the evening, approximately one-fifth of the required course work for an engineering degree.

Students who complete the Basic Engineering Aide Certificate should plan either to continue in one of the Senior Engineering Aide programs, which are offered in the evening, or to make application for admission to the Institute of Technology and, if qualified, continue work in day school toward a degree in engineering.

The requirements for the Basic Engineering Aide Certificate program are listed below. No electives or substitutions are permitted in this program, nor will any prerequisite be waived. The Basic Engineering Aide Certificate may reasonably be completed in 2½ years of 2 to 3 evenings' class attendance per week. 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 13—Analytic Geometry
Draw 14-15-16—Engineering Graphics

Phys 11-12—General Physics for Engineers
GE 70—Slide Rule
Engl 1b-2b-3b—Freshman English

Senior Engineering Aide Certificates

The Senior Engineering Aide Certificate program is a terminal program. It provides for a continuation of the Basic Certificate work in mathematics, physics, and communication, and for a concentration in civil, electrical, or mechanical engineering. Its purpose is to train technicians capable of performing responsible design and supervisory assignments as a member of an engineering team. While credits in some of the mathematics, physics, and commu-

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nication classes may be used toward an engineering degree, most of the requirements have been specially developed for the terminal technical program, and credits earned in such courses are not transferable to, nor is the course of study designed to provide the necessary background for, an engineering degree. The Senior Engineering Aide program, therefore, is not a short cut or stepping stone for students who have a professional engineering degree objective, but is, rather, an intensive, complete course of study at the technical and design level.

The Senior Engineering Aide Certificate work may reasonably be completed in 5 years of 2 to 3 evenings' class attendance per week. Senior Certificates are awarded to students who complete with a minimum C average the prescribed program of study and are presented at regular University commencement exercises during the academic year.

Senior Civil Engineering Aide (101 credits)

Basic Engineering Aide Certificate	MM 127—Engineering Dynamics
ITM 24—Calculus I: Differential	MM 128—Engineering Solid Mechanics
ITM 25—Calculus II: Integral	Surveying I-II
Draw 22-23—Applied Graphics: Concrete and Steel	Highways and Pavements I-II
Phys 13—General Physics for Engineers	Beginning Practical Speech Making
MM 26—Engineering Statics	Engl 85—Advanced Technical Communication

Senior Mechanical Engineering Aide (101 credits)

Basic Engineering Aide Certificate	MM 127—Engineering Dynamics
ITM 24—Calculus I: Differential	MM 128—Engineering Solid Mechanics
ITM 25—Calculus II: Integral	Machine Design I-II
Draw 21—Applied Graphics: Mechanical Engineering	Thermodynamics
Phys 13—General Physics for Engineers	Beginning Practical Speech Making
MM 26—Engineering Statics	Engl 85—Advanced Technical Communication

Senior Electrical Engineering Aide (102 credits)

Basic Engineering Aide Certificate	Elements of Electric Machines (new course, 1957-58)
ITM 24—Calculus I: Differential	Elements of Electronics (new course, 1957-58)
ITM 25—Calculus II: Integral	Electronic Devices
Phys 13—General Physics for Engineers	Beginning Practical Speech Making
MM 26—Engineering Statics	Engl 85—Advanced Technical Communication
MM 127—Engineering Dynamics	
Elements of Electric Circuits (new course, 1957-58)	

Credits

Validity—The credits listed in the class description are quarter credits, notwithstanding the fact that most regular evening class terms are organized as semesters rather than as quarters. Unless these credits are called "certificate" credits, it is understood that they may be valid toward a degree in the appropriate college of the University of Minnesota, provided other conditions are met; certificate credits may be used only in Extension certificate programs. Note that classes in certain subjects carry less University credit in evening classes than do the corresponding day school classes owing to the limited number of class hours and extent of course content of the evening class. The successful

completion of these subjects in Extension, however, does meet the prerequisite requirements of advanced subjects in both Extension and day school.

Class Numbering—Courses carrying University credit are numbered as follows: Junior College courses, numbered 1 through 49, are intended primarily for freshmen and sophomores; Senior College courses, numbered 50 through 99, are intended primarily for juniors and seniors; courses numbered 100 through 199 are considered Senior College 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. The fee for such special examination is \$5. In the same way, a student may establish credit for work done at a nonaccredited institution. Arrangements for special examinations are made through the Committee on Student Scholastic Standing.

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

Graduate—A graduate student may, upon the approval of his graduate adviser, petition the dean of the Graduate School to have transferred to his graduate record not more than 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 offered by the Extension Division of the University of Minnesota in the Twin Cities and Duluth areas, and 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.

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It is necessary that those students taking classes for University credit meet any prerequisite listed. A prerequisite course may not usually be taken for credit after the advanced course has been satisfactorily completed.

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. 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 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 23).

Continuation Classes

Unless otherwise indicated (see, for instance, special notes under History and Art headings) units of classes which run for 2 semesters should be taken in sequence and the first unit of the course should be considered as prerequisite to the second unit even though the 2 units are listed together with "no prerequisite" indicated (see Fren 1-2).

A dagger (†) after a course number indicates that all units of the course preceding the dagger must be completed before credit will be granted for any unit of the course.

Grades

Passing Grades—The grades A, B, C, and D indicate work of varying degree of merit, A being the highest, D being the lowest passing grade. Any of these enables the course credit to be counted toward a degree or Extension certificate, though in most curriculums a C average must be maintained.

Failing Grades—The grade F is given for work which in the opinion of the instructor does not deserve college credit. A grade of Z is given for failing work when the student has canceled or dropped the course after mid-term.

Explanatory Grades—Some symbols are used simply to describe the student's registration status without implying either success or failure. V indicates auditor. W means that the student officially canceled either prior to mid-term or after mid-term with a passing grade. Y indicates that a student, officially registered, either never attended, stopped attending before mid-term without canceling, or stopped attending after mid-term without canceling and was passing. A student expecting to apply evening class work to a degree program is warned that Y's may be changed to Z's upon transfer of credit to the degree record.

Temporary Grade—I, meaning incomplete, is a temporary grade indicating that a student has a satisfactory record in work done but for reasons satisfactory to the instructor in charge was unable to complete the course in time. Incomplete work may be completed in any way the instructor directs and should have the student's earliest attention. If this is not done within a year,

the I will be treated as a W. In such a case, a student may ask that the grade be set aside and that he be permitted to make up the incomplete. If his request is approved by the Committee on Student Scholastic Standing, the special examination fee of \$5 is charged.

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.

Honor Points

For Extension certificates, honor 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 honor 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 16, 346, 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,

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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 should consult the Scholastic Committee of the college from which he intends to get his degree. All other Extension students should bring their problems to a member of the Extension Scholastic Committee, listed on page 2 of this bulletin.

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.

The special classes are usually designed for a specific group of professional people who want certain educational information at a specific time and are not interested in credit. Short courses may be either semiprofessional in nature, or cultural—such as lecture series of general interest to the educated public. If you would like further information or wish to be put on a mailing list for the cultural short courses, please telephone the campus office of the Division.

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 24.

Registration dates, offices, and office hours are indicated on pages 3 and 4; registration may also be made by mail except where specified and *except by veterans and military personnel*. Registration forms will be sent by any Extension office, upon request.

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.

How to Use This Bulletin for Registering

The listing of each class in this bulletin should in most cases give you all the information you need for filling out your registration forms. Most classes appear under their appropriate department or subject heading; where several classifications are possible, cross references will usually be given. There is an index at the back of the bulletin for your convenience.

The first line or two of the listing gives the class number, if any, the title, the number of credits, and the tuition per term (semester, quarter, or special), plus special fees, if any. All arabic-numbered listings are University 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 Extension Certificates, page 9).

The description of the course content follows. Such regulations as prerequisites, class size limitations, number of meetings, etc., will be found in the parenthetical statement following the course description. (See Prerequisites, page 17.)

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:

- * Limited class. Registration must be made in person.
- † To receive credit for this course, all courses listed ahead of the dagger must be completed.
- ‡ A sequence course, which need not be taken in order. (Otherwise, hyphens separating course numbers indicate they must be taken in sequence.)
- § Credit is not given if the equivalent course listed after the section mark has been taken for credit.
- ¶ Prerequisite may be concurrent registration with course being described.
- ‡ Consent of instructor is required.
- ** 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.

Explanation of the symbols used will also be found at the beginning of each major academic course heading, pages 32, 34, 73, and 95.

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 2 weeks of a semester, quarter, or special term, subject to regulations and fees as indicated.

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

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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.

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. A student is not registered until his fees are paid. 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 30.

Late Registrations and Additions

All registrations, whether initial or added, received on or after the opening date of a class term, will be considered late registrations and will be subject to a late fee. During the first week of a term, the late fee will be \$3; during the second week, \$4.

The late fee applies whether a class carries University credit, certificate credit, or no 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 16, 346, 550, and 894 and must be paid by the veteran personally; nor do they apply to military personnel on Off-Duty Academic Instruction or Tuition Assistance Programs.

There are no exceptions to payment of late fees.

Transfers

Students may transfer without penalty during the first week of classes; there will be a fee of \$3 for transferring during the second week.

See also regulations concerning Limited Classes, below.

Limited Classes

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

Registration in limited classes is subject to the following conditions:

1. Registration must be made in person at any Extension office.
2. No refunds or transfers may be made except for reasons beyond the control of the student, in which case the student must petition on a special form provided for that purpose.

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):

During any semester, quarter, or special term of 10 or more weeks:

<i>Cancellation received</i>	<i>Refund granted</i>
First week	75%
Second week	75%
Third week	50%
Fourth week	25%
After the fourth week	No refund

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

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. Under these programs, eligible military personnel, may be entitled to payment of 75 per cent of tuition for approved classes. The remaining 25 per cent 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 office 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. Registration must be made in person at the Veterans Office, 56 Nicholson Hall, Minneapolis Campus, Federal 8-8791.

World War II Veterans

All World War II veterans are herewith advised that their educational benefits under Public Law 346 terminated July 25, 1956. As of this date the only exceptions are those veterans who enlisted or re-enlisted between the dates of October 6, 1945, and October 5, 1946, provided, of course, that they initiated their training within 4 years from their date of separation from military service, and, further, provided that they have been in continuous educational training since that time. Educational benefits for these veterans will be terminated 9 years from the end of their first period of enlistment or re-enlistment.

Tuition, fees, book and supply costs for all classes in which these World War II veterans are enrolled will be paid by the Veterans Administration only through their termination date. The General Extension Division will bill each veteran for such costs not paid by the Veterans Administration.

The Veterans Office, 56 Nicholson Hall, Minneapolis Campus, 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.

Korean War Veterans

A Korean 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 Korean 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 Korean veteran can interrupt his educational program for a period not to exceed 12 calendar months. He must re-enroll so that he will be actually attending class 12 months from the last day of the last semester, quarter, or term in which he enrolled except that if his delimiting date has not been reached the interruption may be extended to the delimiting date. This means that if a term closed June 15, 1957, a veteran must be enrolled in and attending class on or before June 15, 1958. The Veterans Administration makes no exception to this rule. The mere registration for classes does not satisfy the re-enrollment requirement. (c) Any Korean 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 wishes to change his program after his delimiting date, the Veterans Administration will approve the change only if the change requested represents "normal progression." The Veterans Administration has defined normal progression as being a continuing educational program leading from one degree to a higher degree. However, if the Korean veteran has not used his one change in objective a new educational objective other than a higher degree may be approved provided it involves no material loss of time or credit. The Veterans Office of the educational institution at which the Korean veteran was last enrolled should be consulted regarding such a proposed change in objective.

For all practical purposes the foregoing provisions of Public Law 550 mean that (a) a Korean veteran who has not yet initiated a program of education and training must do so during fall semester 1957 if his delimiting date falls on or before February 16, 1958; (b) a Korean veteran who has previously initiated a program of education and training must resume active pursuit of his program during fall semester 1957 if the termination date of his last completed enrollment period was on February 9, 1957, or (c) a Korean veteran who was enrolled in a program of education and training during spring semester or quarter 1957 has the option of re-entering fall semester or quarter 1957 or of suspending his training for a period not to exceed 12 months from the date of completion of the last semester or quarter in which he was enrolled.

Recent changes in the Korean Veteran Educational Bill, Public Law 550, now permit Korean veterans to initiate their educational training in correspondence courses and change to evening or day time classes or vice versa without penalty or change in objective.

They cannot, however, be enrolled in correspondence courses and evening or day time classes concurrently.

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Registrations—The normal registration period for any semester, quarter, or term is approximately the 2 week-period immediately preceding the opening day of classes. Consult the Registration Section of this bulletin for exact dates. It is urgent that all registrations be made during this period. No late fees will be refunded.

All registrations by Korean 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.

Korean 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.

When applying for Supplemental Certificate for Educational Training no copy of DD214 is necessary but last copy of VA Form 1907c-1 (purple ditto) issued to you when last in training will be helpful.

Original Certificate for Educational Training—A Korean veteran who has not applied previously for educational training under Public Law 550 is urged to use the facilities of the Veterans Office of the General Extension Division in completing his application for training (VA Form 7-1990) because (a) his Certificate for Education and Training (VA Form 7-1993) must designate an educational, professional, or vocational objective or goal; (b) his registration will be accepted in only those evening classes which are in keeping with this objective or goal; and (c) only one change may be made in his objective or goal.

A Korean veteran who has applied previously for a Certificate for Education and Training (VA Form 7-1993) must present this certificate at the time of initial registration for evening classes or submit evidence that such application has been made.

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 Korean 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) because his Supplemental Certificate for Education and Training (VA Form 7-1993) must designate the University of Minnesota as the authorized training institution. When the final educational objective remains the same (as previously desig-

nated on VA Form 7-1990) only Part I, Sections A and B, need to be completed on VA Form 7-1995. Part II, however, must be completed by the institution at which the Korean veteran was last enrolled. *Changes in place of training* may be made as often as necessary without penalty as long as the educational objective is not changed. (Note: Korean veterans previously enrolled at the University of Minnesota need not file VA Form 7-1995 in order to change to correspondence courses, evening or day time classes or vice versa. Consult paragraph on Korean veterans previously enrolled at the University of Minnesota.)

When the final educational objective is changed (as previously designated on VA Form 7-1990), Part I, Section C, must be completed on VA Form 7-1995. Part II must likewise be completed by the institution at which the Korean veteran was last enrolled.

No DD214 (copy of Separation from Military Service) is required when submitting VA Form 7-1995 to the Veterans Administration.

Korean veterans previously enrolled at the University of Minnesota may not need to file VA Form 7-1995. Consult the following paragraph.

Korean Veterans Previously Enrolled in the University of Minnesota—

Korean veterans previously enrolled at the University of Minnesota may enroll in correspondence courses, evening or day time classes on the Minneapolis or St. Paul campuses or 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 Korean veterans previously enrolled at any institution of higher learning must present a transcript of such work for evaluation to the Veterans Office, 56 Nicholson Hall, on or before time of registration.

Tuition and Fees—A Korean 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.)

Books, Supplies, and Equipment—All books, supplies, and required equipment must be purchased personally by the Korean veteran at a bookstore of his own choosing. The Veterans Administration will not refund the cost of these materials.

Monthly Educational Allowance—When a Korean 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

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a Korean 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 Korean veteran registered for evening classes. The following chart shows how payments are determined by the Veterans Administration.

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

Tuition Refund by the Veterans Administration—When a Korean 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 pro-rated monthly on the basis of monthly certifications (see paragraphs on Monthly Certifications).

Satisfactory Completion of Classes—A Korean veteran must complete all classes in which he is enrolled and maintain a minimum grade average of C. This means that final examinations must be taken. Any veteran who receives a grade of Y or Z (see explanation of grades, General Information section) will have his registration in the class concerned *automatically* cancelled retroactively to the date of last attendance as stated by the instructor concerned. If he has signed monthly certifications (VA Form 7-1996a) subsequent to that date without notifying the Veterans Office of the General Extension Division of his interruption of the class, 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 Korean veteran who drops out of any class, or fails to take the final examination in 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). Failure to do so may result in permanent termination of all educational benefits under Public Law 550. This rule does not apply to a Korean veteran who receives a grade of Incomplete.

Korean veterans are strongly advised to remember that signing monthly certifications is not a mere perfunctory act. Since all moneys 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 Korean 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. Such changes must be approved by the Veterans Office of the General Extension Division.

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 \$4.

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 scheduled at the campus office for specific evening and Saturday morning hours during these special registration periods. A student

Evening and Special Classes

wishing to see such an adviser should telephone 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 \$25 a term or \$50 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.

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 and Season Tickets

Recreational activities for men and women are listed in this bulletin. In addition, certain recreational facilities of the University may be used by Exten-

sion 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.

Any student enrolled for at least 5 credits of evening classes, with a minimum fee of \$35, 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:

9 a.m.-4:30 p.m.—Williams Arena Lobby
Wednesday, September 25
Friday, September 27
Tuesday, October 1

9 a.m.-9 p.m.—Williams Arena Lobby
Thursday, September 26
Monday, September 30

Ticket books will be issued in Williams Arena Lobby on Thursday, October 3, and Friday, October 4, from 9 a.m. to 4:30 p.m. Regulations governing purchase, transfer, and cancellation of these books are available on request to the Athletic Ticket office.

II. Course Offerings

AGRICULTURE

Explanation of symbol used in this section:

* Limited class. Registration must be made in person.

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.

Animal Husbandry (AnHu)

7. Principles of Livestock Production. 3 credits. \$21 plus \$2 laboratory fee.

An introduction to the livestock industry including the study of the basic principles involved in selection, feeding, breeding, management, and marketing of beef cattle, sheep, swine, and poultry. Practice in judging and evaluating breeding animals and the classification and grading of the various kinds of slaughter farm animals. (No prerequisite)

Fall Semester

T 7:00-8:40, Livestock Pavilion, St. Paul
Campus, Jordan

10. Selection and Utilization of Meats. 3 credits. \$21 plus \$2 laboratory fee.

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

Fall Semester

M 8:05-9:45, Meat Shop, St. Paul Campus,
Aunan

Dairy Husbandry (DyHu)

12. Dairy Stock Feeding and Management. 3 credits. \$21.

Principles of nutrition applied to practical feeding. Study of feeds, rations, and feeding problems. Consideration of types of dairy barns and management problems. (No prerequisite)

Spring Semester

Th 6:20-8:00, Haecker 9, St. Paul Campus,
Donker

Horticulture (Hort)

***10. Home Floriculture and Gardening.** 3 credits. \$21.

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 ama-

teurs as well as professional gardeners. An opportunity for gardeners to participate actively in plant culture throughout the year. (No prerequisite. Limited to 20 students)

Fall Semester

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

***24. Home Landscaping Planning.** 3 credits. \$21.

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. Limited to 20 students)

Fall Semester

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

***25. Home Landscape Planting and Construction.** 3 credits. \$21.

More or less a continuation of the course in Home Landscape Planning; however, a beginning student may take this course without being handicapped. Special emphasis is placed upon the recognition and use of plant materials in securing artistic landscape compositions and the planning and planting of ornamental gardens. An art course in landscaping and gardening presented in a practical way for the home owner, the landscape gardener, the student of art and nature. (No prerequisite. Limited to 20 students)

Spring Semester

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

***51. Garden Flowers and Home Gardening.** 3 credits. \$21.

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. Limited to 20 students)

Spring Semester

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

Soils (Soil)

Garden Soils. 3 Certificate credits. \$21.

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 204, Arneman

February 17-April 21

M 7:00-9:30, Soils 204, Arneman

ARTS AND SCIENCES

Explanation of symbols used in this section:

- * Limited class. Registration must be made in person.
- † To receive credit for this course, all courses listed ahead of the dagger must be completed.
- ‡ A sequence course, which need not be taken in order. (Otherwise, hyphens separating course numbers will indicate they must be taken in sequence.)
- § Credit is not given if the equivalent course listed after the section mark has been taken for credit.
- ¶ Prerequisite may be concurrent registration with course being described.
- ‡ Consent of instructor is required.
- ** 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.

Anthropology (Anth)

2A. Introduction to Anthropology: Cultural Anthropology. 3 credits. \$21.

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 ways in which primitive men organize their lives, directed toward a deeper and broader understanding of human capacities and purposes. (No prerequisite. Not open to students who have received credit in old course 1)

Fall Semester

W 8:05-9:45, Ford 130, Reining

164. Social Anthropology. 3 credits. \$21.

The forms of social structure, especially kinship systems and their relation to economic, religious, and politico-legal activities in primitive and folk culture. The theories and methods of structural analysis. (Prerequisite: Anth 2A or #)

Spring Semester

W 8:05-9:45, Ford 160, Reining

Art (Art)

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

1. Introduction to Art. 3 credits. \$21 plus \$1 materials fee.

An illustrated lecture course designed to give the student an understanding of art, including painting, sculpture, architecture, and the industrial arts. This understanding is based on the study of the principles involved in their creation, and recognition of the place of art in its social setting. Particular emphasis will be given to original works of art in Twin Cities art galleries and current exhibitions. (No prerequisite)

Fall Quarter

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

Winter Quarter

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

Course Offerings—Arts and Sciences

Art 10. Basic Photography I. See page 58.

Art 11. Basic Photography II. See page 58.

***23-24-25. First Year Drawing and Painting.** 2 credits each semester. \$21 plus \$3 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 credits each semester. \$21 plus \$3 laboratory fee.

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

Fall Semester

M 6:20-8:50, Jones 104, Youngquist

Spring Semester

M 6:20-8:50, Jones 104, Youngquist

40-41-42. Sculpture I (or 80-81-82, Sculpture II, see page 36). 2 credits each semester. \$21 plus \$5 laboratory fee.

40: Beginning course. An intensive study of structure in nature with emphasis on accurate observation. Life drawing prepares the student for each sculpture problem. The sculpture medium is clay. Some instruction in plaster casting. 41: Integrates basic principles examined in 40. Natural form is studied for its sculptural possibilities. A more imaginative approach to the study of nature is encouraged. In addition to clay, direct plaster construction is the principal medium. Drawing from life precedes each problem. 42: Design Workshop. Free exploration of wood, metal, and ceramics. Emphasis is placed on abstract application of structural principles. Fundamental hand and machine tools are introduced. (Prerequisite: 1 or ¶ or # for 40; 40 or ## for 41; 1 or # for 42)

Fall Semester

W 7:00-9:30, Holman 154, Soderlind

Spring Semester

W 7:00-9:30, Holman 154, Soderlind

***45-94-95. Ceramics.** 2 credits each semester. \$21 plus \$5 laboratory fee.

Introduction to materials, forming methods, and production processes. Model making by hand and machine methods. Problems in product design, such as dinnerware. Experience in industrial methods of forming, such as slip casting, jiggering, and pressing. Fundamentals of pottery including handbuilding and wheel throwing. (No prerequisite. Class limited to 20 students)

Fall Semester

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

Spring Semester

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

50. Introduction to the Visual Arts. 3 credits, \$1. \$21 plus \$1 materials fee.

This course is similar to Art 1 in organization and basic content. An expanded program of reading and more extensive contact with works of art. (No prerequisite)

Spring Quarter

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

Evening and Special Classes

60-61-62.

150-151-152 Second Year Drawing and Painting.** 2 credits each semester. \$21 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: First Year Drawing and Painting or ##)

Fall Semester

Th 7:00-9:30, Jones 200, Rollins

Spring Semester

Th 7:00-9:30, Jones 200, Rollins

80-81-82. Sculpture II. 2 credits each semester. \$21 plus \$5 laboratory fee.

Direct carving in stone and wood with attention given to possibilities of materials and sculptural design. Experimental work in metal, plastics, and combinations of sculptural materials. Some direct modeling in plaster. (Prerequisite: 42 or ## for 80; previous unit or ## for 81 and 82)

Fall Semester

W 7:00-9:30, Holman 154, Soderlind

Spring Semester

W 7:00-9:30, Holman 154, Soderlind

***83. Interior Design I.** 3 credits. \$21 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

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

Spring Semester

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

84. Interior Design II. 3 credits. \$21 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 buyers from loop stores and an optional field trip add interest. (Prerequisite: Art 83)

Spring Semester

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

***103-104. Seminar in Interior Design.** 3 credits. \$21.

A further expansion of subjects studied in Art 83-84. Students will work on individual projects under supervision. (Prerequisite: For 103, Art 84; for 104, 103. Class limited to 20 students. No auditors)

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

Fall Semester

W 8:05-9:45, Nicholson 107, Lewis

Architectural Drafting. See page 99.

Art Education. See page 92.

Engineering Drawing. See page 98.

Gardening and Landscaping. See page 32.

Modern Home Planning. See page 48.

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.

15A-B. Lettering. 2 credits each semester. \$21 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

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

February 10-June 5

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

20A-B. Basic Drawing. 4 credits each semester. \$42 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 students who have taken 20B without 20A, who now wish to take 20A, must register in Mr. Couch's section on MW. Spring term students who wish to take 20B without 20A must register in Mr. Couch's section on MW)

Fall Semester

A MW 7:00-9:30, Mpls School of Art,
Bradley
A MW 7:00-9:30, Mpls School of Art,
Couch
A TTh 7:00-9:30, Mpls School of Art,
Erickson

February 10-June 5

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

21A-B. Life Drawing. 2 credits. \$21 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

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

February 10-June 5

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

22A-B. Still Life Painting. 2 or 4 credits each semester. \$21 or \$42 plus \$3 or \$6 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: Art 20A-B)

Fall Semester

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

February 10-June 5

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

Evening and Special Classes

40A-B. Sculpture. 4 credits each semester. \$42 plus \$6 laboratory fee.

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

Fall Semester

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

February 10-June 5

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

50A-B. Painting II. 2 or 4 credits each semester. \$21 or \$42 plus \$3 or \$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

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

February 10-June 5

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

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

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

54A-B. Life Drawing. 2 credits each semester. \$21 plus \$3 laboratory fee.

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

Fall Semester

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

February 10-June 5

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

54C-D. Portrait. 2 credits each semester. \$21 plus \$3 laboratory fee.

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

Fall Semester

C M 7:00-9:30, Mpls School of Art, Ratner

February 10-June 5

D M 7:00-9:30, Mpls School of Art, Ratner

55A-B. Life Drawing. 2 credits each semester. \$21 plus \$3 laboratory fee.

An advanced class designed to acquaint the student with the relationships between abstract and realistic forms as related to those observed shapes in the human figure. (Prerequisite: Art 54A-B Life Drawing)

Fall Semester

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

February 10-June 5

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

60A-B. Watercolor. 2 credits each semester. \$21 plus \$3 laboratory fee.

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

Fall Semester

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

February 10-June 5

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

62A-B. Life Painting. 4 credits each semester. \$42 plus \$6 laboratory fee.

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

Fall Semester

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

February 10-June 5

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

Course Offerings—Arts and Sciences

74A-B. Fashion Illustration. 2 credits each semester. \$21 plus \$3 laboratory fee.

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

Fall Semester

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

February 10-June 5

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

75A-B. Graphic Arts (Layout). 2 credits each semester. \$21 plus \$3 laboratory fee.

An introduction to the problems of the commercial art field. The organization and composition of visual elements as used in newspaper, magazine, poster, and brochure presentation are stressed. (Prerequisite: Art 20 or 21 and 15)

Fall Semester

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

February 10-June 5

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

Courses at St. Paul Gallery and School of Art

Registrations will be taken only at Extension offices. The facilities of the Gallery will be available to students in certain courses who wish to use them for unsupervised studio work. Consult St. Paul Gallery for arrangements. The St. Paul Gallery is located at 476 Summit Avenue.

23-24-25. First Year Drawing and Painting. 2 credits each semester. \$21 plus \$3 laboratory fee. **Studio workshop**—See note above.

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

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

Spring Semester

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

33-34-35. Textile Design: Weaving. 2 credits each semester. \$21 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. (No prerequisite). 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 ##)

Fall Semester

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

Spring Semester

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

45-94-95. Ceramics. Not offered at St. Paul Gallery 1957-58.

60-61-62. Second Year Drawing and Painting. 2 credits each semester. \$21 plus \$3 laboratory fee. **Studio workshop**—See note above.

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: Art 20-21-22 or ##)

Fall Semester

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

Spring Semester

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

Evening and Special Classes

89. Textile Design: Weaving. 2 credits. \$21 plus \$3 laboratory fee.

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

Fall Semester

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

Spring Semester

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

101-102. Ceramics. (Not offered at St. Paul Gallery 1957-58)

Astronomy (Ast)

Students who wish to use astronomy to meet the natural science requirement for either the A.L.A. or B.A. degree in the College of Science, Literature, and the Arts may do so by completing Ast 11 and 13 and other physical sciences or mathematics courses (above Math 1) to a minimum of 10 credits. The combination must be approved by the S.L.A. Committee on Student Scholastic Standing.

11. Descriptive Astronomy. 3 credits. \$21.

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

Fall Semester

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

13. Practical and Stellar Astronomy. 3 credits. \$21.

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

Spring Semester

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

Chemistry

See Engineering and Technical Sciences, page 96.

Child Welfare (CW)

80. Child Psychology. 3 credits. \$21.

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

Fall Semester

M 6:20-8:00, Folwell 101, Bassham

Spring Semester

T 6:20-8:00, Folwell 101, Gratch

131. Development of Personality and Social Behavior in the Child. 3 credits. \$21.

Interpretation of the scientific literature. (Prerequisite: 12 credits in psychology, educational psychology, or equivalent)

Fall Semester

M 8:05-9:45, Folwell 101

Course Offerings—Arts and Sciences

132. Adolescent Development. 3 credits. \$21.

Growth, mental, social, emotional, and personality development. (Prerequisite: 12 credits in psychology, educational psychology, or equivalent)

Spring Semester

M 8:05-9:45, Folwell 101

140. Behavior Problems. 3 credits. \$21.

Types, origin, development and treatment of behavior problems in children and adolescents. (Prerequisite: 12 credits in psychology, educational psychology, or sociology. Repeated spring semester)

Fall Semester

T 8:05-9:45, Folwell 101, Bassham

Spring Semester

T 8:05-9:45, Folwell 101, Bassham

142. Psychology of Atypical Children. 3 credits. \$21.

Physical, sensory, and mental deviations and handicaps. Personal, social, and vocational adjustment. (Prerequisite: 12 credits in psychology or equivalent)

Spring Semester

M 6:20-8:00, Folwell 101, Bassham

143. Problems of Mental Deficiency. 3 credits. \$21.

Diagnosis, care, training; social and vocational problems; legal aspects. (Prerequisite: 12 credits in psychology or equivalent)

Fall Semester

T 6:20-8:00, Folwell 101, Gollin

190. Use and Interpretation of Tests for Children. 3 credits. \$21.

Survey of mental testing for the social worker, teacher, etc. (Prerequisite: 12 credits in psychology, educational psychology, or sociology)

Fall Semester

W 6:20-8:00, Folwell 101

English

English Placement Tests.

Admission to English classes (Engl 1b-2b-3b and Comm 1a-2a-3a) 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 1a*; (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 two years ago, report for testing at one of the following times and places.

Fall Quarter

7:00 Thursday, September 19, Nicholson 211

7:00 Wednesday, September 25, Nicholson 211

7:00 Wednesday, September 25, St. Paul Extension Center 206

Winter Quarter

7:00 Thursday, January 2, Nicholson 211

Spring Quarter

7:00 Wednesday, March 26, Nicholson 211

Evening and Special Classes

Composition (Comp)

Grammar Review. 3 Certificate credits. \$21 plus \$1 materials fee.

An intensive 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. This is not a substitute for Preparatory Composition—see English Placement Tests, page 41. Repeated spring semester)

Fall Semester

W 6:20-8:00, Folwell 105, Alford

Spring Semester

W 6:00-7:40, StP Ext Center 205, Alford

Preparatory Composition. No credit. \$21 plus \$1 materials fee.

Intensive drill on grammatical forms, structure, and theme writing. (No prerequisite. Note Comp 4-5-6 below and Comm 1a-2a-3a, page 48. Repeated winter and spring quarters)

Fall Quarter

T 5:30-8:00, Folwell 105

Th 5:30-8:00, Folwell 105

Th 5:30-8:00, Folwell 102

F 6:00-8:30, StP Ext Center 202

Winter Quarter

T 5:30-8:00, Folwell 105

Th 5:30-8:00, Folwell 102

Spring Quarter

Th 5:30-8:00, Folwell 105

Writing Projects. 3 Certificate credits. \$21.

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 short story and novel, 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

W 8:05-9:45, Folwell 103, Alford

Spring Semester

W 7:50-9:30, StP Ext Center 206, Alford

4-5-6. Freshman Composition. 3 credits each quarter. \$21. Not offered after 1957-58.

(See also English 1b-2b-3b, page 43)

This sequence satisfies the English requirement for graduation and is prerequisite to other English classes. Any student who receives a grade of A in Comp 4 or 5 may, upon recommendation of his instructor, be exempted from any further requirement in English. (Prerequisite: Preparatory Composition or satisfactory score on English Placement Test, explained on page 41)

Fall Quarter

5 T 5:30-8:00, Folwell 107, Donagan

6 T 5:30-8:00, Folwell 108, Tohtz

Winter Quarter

6 T 5:30-8:00, Folwell 107, Donagan

27-28. Advanced Writing. 3 credits each semester. \$21.

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: Comp 4-5-6, 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 205, Macdonald

Course Offerings—Arts and Sciences

101-102. Seminar in Writing (Advanced Short Story). 3 credits each semester. \$21.

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

Literature (Engl)

1b-2b-3b. Freshman English. 4 credits each quarter. \$28.

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 41)

Fall Quarter

1b TTh 6:20-8:00, Folwell 110, Lufkin
 TTh 6:20-8:00, Folwell 203, Schneider
 F 6:00-9:30, StP Ext Center 204, Jobses
 F 6:00-9:30, StP Ext Center 203

Winter Quarter

1b MW 8:05-9:45, Folwell 110, Tohtz
 TTh 6:20-8:00, Folwell 110, Schneider
 2b TTh 6:20-8:00, Folwell 204, Lufkin
 F 6:00-9:30, StP Ext Center 204, Jobses

Spring Quarter

1b MW 8:05-9:45, Folwell 114, Donagan
 TTh 6:20-8:00, Folwell 114
 2b MW 8:05-9:45, Folwell 110, Tohtz
 TTh 6:20-8:00, Folwell 110
 3b TTh 6:20-8:00, Folwell 204, Lufkin
 F 6:00-9:30, StP Ext Center 204, Jobses

52-53. English Novel. 3 credits each semester. \$21.

52: The reading of novels by Defoe, Fielding, Smollett, Jane Austen, Scott, and the Brontës. 53: The reading of novels by Thackeray, Dickens, Trollope, George Eliot, Meredith, and Hardy. (Prerequisite: Comp 4-5-6 or Comm 1a-2a-3a, and 6 additional credits in English; or Engl A-B-C; or 9 credits in 21-22-23. Students may enter either semester)

Fall Semester

52 W 6:20-8:00, Folwell 208, Rice

Spring Semester

53 W 6:20-8:00, Folwell 208, Rice

55-56. Shakespeare. 3 credits each semester. \$21.

55: The reading of plays from Shakespeare's early and middle periods—*Richard II*, *A Midsummer Night's Dream*, *The Merchant of Venice*, *Much Ado About Nothing*, and 2 or 3 other plays selected by the instructor. 56: The reading of plays from Shakespeare's middle and later periods—*Twelfth Night*, *Hamlet*, *Macbeth*, *The Tempest*, and two other plays selected by the instructor. (Prerequisite: Comp 4-5-6, or Comm 1-2-3, and 6 additional credits; or Engl A-B-C; or 10 credits in 21-22-23. Students may take 56 before 55 if necessary)

Fall Semester

55 M 6:20-8:00, Folwell 107, del Plaine

Spring Semester

56 M 6:20-8:00, Folwell 107, del Plaine

73-74. American Literature. 3 credits each semester. \$21.

Notable American authors from the 17th century to the present. (Prerequisite: Comp 4-5-6 or Comm 1-2-3, and 6 additional credits; or Engl A-B-C; or 10 credits in 21-22-23)

Fall Semester

73 Th 6:20-8:00, Folwell 107, Bluestein

Spring Semester

74 Th 6:20-8:00, Folwell 107, Bluestein

85. Present-Day English. 3 credits. \$21.

Not a review of traditional "school grammar" nor a writing course, but a modern study of the living language designed to provide those insights that make for power and ease in

Evening and Special Classes

the use of English. Attention will be given to how its words have developed in form and meaning, to its structural patterns, and to the principles of good usage in grammar and pronunciation as contrasted with notions of "correctness." (Open to students with Senior College standing and to others by \$. Graduate credit available upon completion of special work)

Spring Semester

M 6:20-8:00, Folwell 105, Allen

162. Milton. 3 credits. \$21.

A study of *Areopagitica*, *Paradise Lost*, *Samson Agonistes*, and the minor poems. (Prerequisite: Engl 21-22 or 55-56)

Fall Semester

T 6:20-8:00, Folwell 102, Blum

174. American English. 3 credits. \$21.

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

Fall Semester

M 6:20-8:00, Folwell 105, Allen

French (Fren)

1-2. Beginning French. 3 credits each semester. \$21.

Grammar, pronunciation, reading, and practice in speaking. Where feasible, there will be 1 section emphasizing the conversational approach and 1 section the reading approach. (No prerequisite)

Fall Semester

1 W 6:20-8:00, Folwell 201, Sullivan
1 W 7:50-9:30, StP Ext Center 207
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
2 W 7:50-9:30, StP Ext Center 207

3-4. Intermediate French. 3 credits each semester. \$21.

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

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. \$25.

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 102

Spring Semester

17a M 6:20-8:00, Folwell 102
17b M 6:20-8:00, Folwell 201, Brackney

54-55. French Conversation. 3 credits each semester. \$21.

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

Fall Semester

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

Spring Semester

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

Geography (Geog)

41. Geography of Primary Production. 5 credits. \$35.

An introductory course in economic geography with special emphasis on commodities of commercial significance. Particular attention is given to the world patterns of raw material occurrence and production, as well as to the associated centers of industrial fabrication. *Note:* This course is a requirement for the General Sequence in Business Administration. Students needing this course should register this year as it cannot be offered annually. (No prerequisite)

Fall Semester

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

67. Geography of Minnesota. 3 credits, \$47. \$21.

A geographical survey of the physical resources, population, and commercial production of Minnesota. (Prerequisite: 5 credits in geography or #)

Fall Semester

W 6:20-8:00, Ford 285, Borchert

118. Geography of Africa. 3 credits, \$103. \$21.

The physical resources and their use, in the light of the competing cultures and economic forces which have helped shape the human geography of the continent. (Prerequisite: 5 credits in geography or #)

Spring Semester

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

Geology (Geol)

1. General Geology. 3 credits. \$21.

Geology Laboratory A. 2 credits. \$14.

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. (No prerequisite)

Fall Semester

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

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

Note—Registration may be made for the combined classes or for Geol 1, but it is recommended that they be taken together. Students who have completed 3 credits in Geol 1 or 8 may register for Geol A. To meet the Junior College natural science requirement, Geol 1 and 2 and Lab A and B must be completed.

2. General Geology (Historical). 3 credits. \$21.

Geology Laboratory B. 2 credits. \$14.

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

Spring Semester

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

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

Evening and Special Classes

23. Mineralogy. 3 credits. \$21.

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

Fall Semester

Th 6:20-8:00, Pillsbury 110, McGannon

25. Rock Study. 3 credits. \$21.

The occurrence and origin of rocks; their mineral and chemical composition and classification. (Prerequisite: Geol 23)

Spring Semester

Th 6:20-8:00, Pillsbury 110, McGannon

German (Ger)

1-2. Beginning German. 3 credits each semester. \$21.

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 language by systematic comparison between German and English. (No prerequisite for Ger 1; for Ger 2, Ger 1)

Fall Semester

1 M 6:20-8:00, Folwell 207, Weiss
1 Th 6:20-8:00, Folwell 207, Wood
2 M 6:20-8:00, Folwell 208, Prottengeier

Spring Semester

1 M 6:20-8:00, Folwell 206, Wood
2 M 6:20-8:00, Folwell 207, Weiss

3. Beginning German. 3 credits. \$21.

Readings from modern authors, review of essential grammar, with practice in spoken German. (Prerequisite: Ger 1-2, or 2 years of high school German)

Fall Semester

M 6:20-8:00, Folwell 208, Prottengeier

Spring Semester

M 6:20-8:00, Folwell 208, Prottengeier

4. Intermediate German. 3 credits. \$21.

Modern narrative prose. (Prerequisite: Ger 3)

Spring Semester

M 6:20-8:00, Folwell 208, Prottengeier

17a-b. German for Graduate Students. No credit. \$25.

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 of German in high school, or equivalent)

Fall Semester

17a M 6:20-8:00, Folwell 205, Menze
17b M 6:20-8:00, Folwell 206

Spring Semester

17a M 6:20-8:00, Folwell 104, Menze
17b M 6:20-8:00, Folwell 205

History (Hist)

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

Course Offerings—Arts and Sciences

1-2-3. Civilization of the Modern World. 3 credits each quarter. \$21.

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)

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
1 T 6:20-8:50, Ford 115, Cook	2 (same schedule as fall)	3 (same schedule as fall)

14-15-16. History of Ancient Civilization. (Or Hist 50-51-52. See note below) 3 credits each quarter. \$21.

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. (No prerequisite) 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. (No prerequisite, but student will find Hist 14 helpful in providing a background) 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 Hist 16 be preceded by Hist 14 and 15 in order that student may acquire a background for the history of the Roman period)

Note—Students who have the equivalent of 84 quarter credits and who wish Senior College credit may register for Hist 50-51-52 with consent of instructor. Additional work will be required for Senior College credit.

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
14 Th 5:30-8:00, Ford 115, Jones	15 (same schedule as fall)	16 (same schedule as fall)

20-21-22. American History. 4 credits each semester. \$28.

A survey of the political, economic, and social history of the United States with emphasis on the forces that resulted in the emergence of modern America. 20: Colonial and early national period; 21: Sectionalism and national development. 22: Modern America. (No prerequisite)

<i>Fall Semester</i>	<i>Spring Semester</i>
20 Th 5:30-7:45, StP Ext Center 204, Noble	21 Th 5:30-7:45, StP Ext Center 204, Noble
21 M 5:45-8:00, Ford 115, Beatty	22 M 5:45-8:00, Ford 115, Beatty

79-80. American History Since 1900. 3 credits each semester. \$21.

A concentrated study of the social, political, economic, and cultural development of the United States since 1900 and of the rise of the United States as a world power. 79: The Spanish-American War and America's overseas empire; the rise of big business; problems of the city; the Progressive Era of Reform; America in World War I. 80: Social and intellectual crises of the 1920's; prosperity and depression; the New Deal; the rise of organized labor; from isolation to intervention; the post-war scene. (No prerequisite)

<i>Fall Semester</i>	<i>Spring Semester</i>
79 Th 6:20-8:00, Ford 185, Chambers	80 Th 6:20-8:00, Ford 185, Chambers

95-93. American Diplomatic History. 3 credits each semester. \$21.

95: The United States as a world power. 93: American diplomacy, 1776-1848. (No prerequisite)

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

Evening and Special Classes

146-147. American Economic and Social History. 3 credits each semester. \$21.

146: Colonial life. 147: From the Revolution to 1860. (No prerequisite)

Fall Semester

146 T 6:20-8:00, Ford 160, Loehr

Spring Semester

147 T 6:20-8:00, Ford 160, Loehr

147a-148a. History of the South. 3 credits each semester. \$21.

147a: Covers the period 1840-1890. 148a: Covers the period since 1890.

Fall Semester

147a Th 7:50-9:30, StP Ext Center 204,
Noble

Spring Semester

148a Th 7:50-9:30, StP Ext Center 204,
Noble

Housing (Hous)

Planning Your Modern Home. 2 Certificate credits. \$14 plus 50 cents laboratory fee.

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

Fall Quarter

W 8:05-9:45, Ford 55, Gingold

Humanities

See page 49.

Interdisciplinary Studies

Communication (Comm)

1a-2a-3a. Communication. 3 credits each quarter. \$21 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. 1a: The fundamental patterns of meaning in English, word meaning, social meaning, good usage. 2a: The use of language to influence human behavior. 3a: Mass communication of press, film, and radio, and how to receive it with critical discrimination. The sequence is accepted by the University as meeting all requirements which are satisfied by Comp 4-5-6, Freshman Composition. (Prerequisite: Preparatory Composition or satisfactory score on English Placement Test, as explained on page 41)

Fall Quarter

1a Th 5:30-8:00, TNM 106, O'Hara

Winter Quarter

2a (same schedule
as fall)

Spring Quarter

3a (same schedule
as fall)

Course Offerings—Arts and Sciences

Family Life (FL)

1A. Preparation for Marriage. 3 credits. \$21 plus \$1 materials fee.

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

Fall Semester

T 6:20-8:00, Johnston 306, Hansen

Spring Semester

T 6:20-8:00, Johnston 306, Hansen

Humanities (Hum)

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

1.

51.** Humanities in the Modern World I. 3 credits. \$21.

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)

Fall Semester

M 7:50-9:30, StP Ext Center 204, Brown

T 8:05-9:45, Johnston 106, Ames

W 8:05-9:45, Johnston 106, Kliger

2.

52.** Humanities in the Modern World II. 3 credits. \$21.

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)

Spring Semester

M 7:50-9:30, StP Ext Center 204, Brown

T 8:05-9:45, Johnston 106, Ames

W 8:05-9:45, Johnston 106, Kliger

3.

53.** Humanities in the Modern World III. 3 credits. \$21.

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

M 6:20-8:00, Johnston 115, Kwiat

4.

54.** Humanities in the Modern World IV. 3 credits. \$21.

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

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

Evening and Special Classes

11.

61. The Greek Heritage.** 3 credits. \$21.

The Trojan War, the Golden Age in Athens, the fourth-century philosophers. The idea of the hero, tragedy and the human condition, concepts of beauty, goodness, reason, and justice. Readings from Homer, Aeschylus, Sophocles, Euripides, Plato, Aristotle. (No prerequisite)

Fall Semester

Th 8:05-9:45, Johnston 106, Vogelbaum

12.

62. The Medieval Heritage.** 3 credits. \$21.

The decline of Rome, epicureanism, stoicism, and the emergence of Christianity. Political, ethical, aesthetic, and intellectual content of the age of faith. Readings from Lucretius, Marcus Aurelius, New Testament, St. Augustine, Dante. (No prerequisite)

Spring Semester

Th 8:05-9:45, Johnston 115, Vogelbaum

13a. Renaissance Heritage. 3 credits. \$21 plus \$1 materials fee.

The 14th and 15th centuries in Italy; the age of Lorenzo the Magnificent in Florence; Tuscan art, architecture, literature, and political life. Readings from Petrarch, Alberti, Pico, Machiavelli, Cellini, and others. Color slides, films, and reproductions. (No prerequisite)

Fall Semester

Th 7:50-9:30, StP Ext Center 202, Ames

13b. Renaissance Heritage. 3 credits. \$21 plus \$1 materials fee.

The high renaissance, the Reformation in Germany, the Counter-reformation—16th and 17th centuries. Readings from Luther, Calvin, Loyola, Cervantes, Descartes, Pascal, Montaigne. Color slides, films, and reproductions of high renaissance and baroque art and architecture. (No prerequisite)

Spring Semester

Th 7:50-9:30, StP Ext Center 202, Ames

Slav 75. India. See *Slavic and Oriental Languages*, page 65.

Natural Science (NSci)

The two classes listed below are especially recommended for teachers and many professional people or college graduates concerned with objective thinking about the complex problems raised by some phases of modern science.

165. Science in World Affairs. 3 credits. \$21.

Social, cultural, moral, and intellectual problems raised by the advances of contemporary science with attention to proposed solutions. The following topics are analyzed with respect to the various components involved in their concern to modern man: atomic energy in war and peace; radiation and mutation—fallout; race—its scientific, social, and political and psychological aspects; also heredity and eugenics; population pressure and natural resources in developed and underdeveloped countries. (Prerequisite: 1 year of biological and of physical science in high school or college or ♯)

Fall Semester

Th 6:20-8:00, Physics 133, Graubard

175. Survey of Science History. 3 credits. \$21.

An analysis of the translated original works of several of the great scientists of Antiquity, the Middle Ages, and modern times—with special references to the man, his

***1. How to Study.** 2 credits (see below). \$21.

Practical assistance to the student in developing efficient methods of study and concentration, organizing material, preparing for examinations, and improving reading ability. Attention to the orientation of students in their attitudes and motivation, and the relation of these to satisfactory performance. (No prerequisite. Class limited to 20 students. Repeated spring semester. Students intending to use this course in a degree program should consult an adviser before registering)

Fall Semester

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

Spring Semester

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

Efficient Reading. See Study Skills, page 71.

Grammar Review. See English, page 42.

Speech Correction for Stutterers. See Speech and Theater Arts, page 70.

Speech for the Foreign-Born. See Speech and Theater Arts, page 71.

Vocabulary Building. See Study Skills, page 71.

Social Science (SSci)

1, 3. Introduction to Social Science. 4 credits each semester. \$28 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. 3: The quest for community. (No prerequisite)

Fall Semester

1 W 5:45-8:00, Johnston 115

Spring Semester

3 W 5:45-8:00, Johnston 115

Italian (Ital)

1a-2a. Beginning Conversational Italian. 3 credits each semester. \$21.

Conversational approach. (No prerequisite)

Fall Semester

1a T 6:20-8:00, Folwell 201, Pellegrini

Spring Semester

2a T 6:20-8:00, Folwell 201, Pellegrini

3a-4a. Conversational Italian. 3 credits each semester. \$21.

A continuation of Ital 1a-2a.

Fall Semester

3a Th 6:20-8:00, Folwell 201, Haigh

Spring Semester

4a Th 6:20-8:00, Folwell 201, Haigh

Journalism (Jour)

10. **Basic Photography I.** See page 58.

11. **Basic Photography II.** See page 58.

13. **Introduction to Journalistic Writing.** 3 credits. \$21.

Lectures and assignments in journalistic media and audiences; fundamentals of fact-gathering and fact-writing for newspapers, periodicals, broadcasting, and advertising. (Prerequisite: Comp 4-5-6 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 credits. \$21.

Theory, principles, and function of advertising; its role in the economic, social, and marketing structure. Newspapers, magazines, radio, and other advertising media. (Prerequisite: Jour 13 and Comp 28; or ##)

Fall Semester

T 6:20-8:00, Murphy 311, Mindak

*55. **Typography for Publications and Advertising.** 3 credits. \$21 plus \$5 laboratory fee.

Study of typefaces in current usage. Choosing typefaces for headline forms and text. Copyfitting projects. Practice in hand composition in typography laboratory. (Prerequisite: Jour 13 or #. Class limited to 20 students)

Spring Semester

M 6:20-8:00, Murphy 315-320, Wilson

*65. **Graphic Processes and Layout Techniques for Publications and Advertising.** 3 credits. \$21 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

*73. **Magazine Writing I.** 3 credits. \$21.

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: Comp 4-5-6, or ##. Class limited to 18 students. Repeated spring semester)

Fall Semester

Th 6:20-8:00, Murphy 308, Bush

Spring Semester

Th 6:20-8:00, Murphy 311, Bush

78. **Public Relations.** 3 credits. \$21.

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

Fall Semester

W 8:05-9:45, Murphy 308, Emery

Course Offerings—Arts and Sciences

79. Advertising Copy Writing. 3 credits. \$21.

Techniques of writing advertising copy for newspapers, magazines, direct mail, posters, brochures; planning advertising campaigns. (Prerequisite: Jour 18 or ##)

Spring Semester

T 8:05-9:45, Murphy 311

Library Science (Lib)

50. History of Libraries and Librarianship. 3 credits. \$21.

This course is prerequisite to graduate study and is also required for certification as a school librarian. (No prerequisite)

Winter Quarter

MW 4:30-6:00, Library 4A, Shove

53. School Library Management. 3 credits. \$21.

For certification as a school librarian only. (No prerequisite)

Winter Quarter

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

62. Reference I. 3 credits. \$21.

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)

Spring Quarter

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

74. Library Materials in the Classroom. 2 credits. \$14.

For College of Education students or postgraduates working for certification as school librarians. (No prerequisite)

Fall Quarter

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

83. Cataloging and Classification. 3 credits. \$21.

A beginning course, required as a prerequisite for work toward the M.A. degree. This course also can be counted as an elective toward certification as a school librarian. (No prerequisite)

Fall Quarter

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

171. Reading Guidance for Children. 3 credits \$21.

This course may be counted toward the graduate requirements for an M.A. degree, or it may be counted as one of the required courses in the certification program. (Prerequisite: Lib 70 or #)

Winter Quarter

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

172. Reading Guidance for Adolescents. 3 credits. \$21.

This course may be counted as graduate study toward a degree or as partial fulfillment of requirements for certification as a school librarian. (Prerequisite: Lib 70 or #)

Spring Quarter

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

Evening and Special Classes

259. Problems in Public Librarianship. 3 credits. \$21.

An advanced course in public library administration. (Prerequisite: Lib 55, 154, or #)

Spring Quarter

Th 4:30-6:30, Library 4B, Wezeman

Music (Mus)

Individual instruction in music, as well as study in the regular classes offered by the Department of Music, is open to registration through the General Extension Division by students not able to attend day classes full time. 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 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. 3 Certificate credits. \$21.

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)

Fall Semester

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

Spring Semester

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

1T-2T-3T. Music Theory. 3 credits each quarter. \$21.

Development of musicianship through both auditory and visual perception; basic rudiments; exercises in part-writing and harmonization of chorales in the style of Bach; ear training, sight singing. (No prerequisite for 1T; prerequisite for 2T and 3T: the previous quarter)

Fall Quarter

1T M 6:20-8:50, Scott 103, Fetter

Winter Quarter

2T (same schedule as fall)

Spring Quarter

3T (same schedule as fall)

*Piano Playing for Pleasure (Group Piano) I-II. 2 Certificate credits each semester. \$21.

Practical piano for the classroom teacher and the person who wishes to play the piano for pleasure. Emphasis on sight reading, transposition, harmonization, improvisation, accompanying. Student will learn to chord and to play simple tunes. (No prerequisite for I; prerequisite for II is I or #. Each section limited to 15 students)

Fall Semester

I T 7:00-9:00, MusEd 103, Duckworth
II Th 7:00-9:00, MusEd 103, Duckworth

Spring Semester

II T 7:00-9:00, MusEd 103, Duckworth
I Th 7:00-9:00, MusEd 103, Duckworth

*Singing for Pleasure (Group Singing). 2 Certificate credits. \$21.

The class vocalizes as a group and individually. Special emphasis is given to problems of tone, production, diction, breathing, interpretation, and literature. The class is

Course Offerings—Arts and Sciences

designed for both beginning and advanced students who have varying degrees of proficiency. (Class limited to 14 students)

Fall Semester

T 6:20-8:00, MusEd 4

Spring Semester

T 6:20-8:00, MusEd 4

34a-35a-36a. History of Music. 3 credits each semester. \$21.

Designed to give an understanding of musical masterpieces as part of the general development of western culture from the crusades to the present. Copious musical illustrations with emphasis on the style of the music itself rather than on theoretical questions. Parallels but does not duplicate Mus 34-35-36 in the College of Science, Literature, and the Arts. (No prerequisite. For nonmusic majors)

Fall Semester

34a-35a M 6:20-8:00, Scott 104

Spring Semester

35a-36a M 6:20-8:00, Scott 104

40-41-42. University Symphony Orchestra. 1½ credits each semester. \$10.50.

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: #)

Fall Semester

40-41 T 7:00-9:30, Northrop Aud. Oberg

Spring Semester

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

43. University Chorus. 1 credit each quarter. \$7.

Performances of major symphonic-choral works with the Minneapolis Symphony Orchestra, University Symphony Orchestra, and University Concert Band. (Students may register only with #)

Fall Quarter

T 7:30-9:30, Nicholson Aud, Aliferis

Winter Quarter

(same schedule as fall)

Spring Quarter

(same schedule as fall)

Introduction to Sacred Music I-II. 3 Certificate credits each semester. \$21.

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)

Fall Semester

I T 6:20-8:00, Scott 4, Riedel

Spring Semester

II T 6:20-8:00, Scott 4, Riedel

73-74-75. Introduction to Opera. 3 credits each semester. \$21.

Designed to give an understanding of classical and romantic opera; centered on the weekly broadcasts of the Metropolitan Opera Company, and important presentations in the Twin Cities, including Minneapolis Symphony Orchestra performances, St. Paul Civic Opera productions, and the spring season of the Metropolitan in Northrop Auditorium. (No prerequisite. For nonmusic majors)

Fall Semester

73-74 W 6:20-8:00, Scott 4

Spring Semester

74-75 W 6:20-8:00, Scott 4

Song Interpretation. 2 Certificate credits. \$14, plus \$2 laboratory fee.

Preparation and performance of representative song literature from the American, British, German, French, and Italian repertoire. Class sessions consist of individual performance evaluation. Students desiring credit must prepare and perform repertoire assigned. (No prerequisite. Repeated each quarter)

Fall Quarter

T 6:20-8:00, Scott 104, Schlotz

Winter Quarter

(same schedule as fall)

Spring Quarter

(same schedule as fall)

Natural History (NatH)

***Birds of Minnesota.** No credit. \$21.

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 pre-requisite. Class limited to 20 students)

Spring Semester

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

Nursing

Nursing (Nurs)

101. Nursing in Disaster. 3 credits. \$21.

Nursing responsibilities in disaster; development of essential skills through in-service education; organization of nursing service for disaster situations; utilizing community resources in disaster planning. (Open to registered professional nurses)

Fall Semester

M 6:20-8:00, Millard 118, Miller and Aldrich

Nursing Administration (NuAd)

58. Introduction to Ward Administration. 3 credits. \$21.

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

Fall Semester

T 6:20-8:00, Owre 111, Grainger

85. Fundamentals of Nursing Service Administration. 3 credits. \$21.

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

Spring Semester

T 7:50-9:30, STP Ext Center 202, Miller

Nursing Education. See page 94.

Public Health Nursing. See page 92.

Philosophy (Phil)

1. Problems of Philosophy. 3 credits. \$21.

Introduction to the subject; the main fields of investigation; permanent problems; principal methods and schools of philosophy; historical and contemporary views. (No pre-requisite)

Fall Semester

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

Course Offerings—Arts and Sciences

2. Logic. 3 credits. \$21.

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

Th 8:05-9:45, Johnston 113, Maxwell

Spring Semester

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

3. Ethics. 3 credits. \$21.

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 113, Raab

10. Science and Religion. 3 credits. \$21.

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

Fall Semester

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

50A. Ancient Philosophy. 3 credits. \$21.

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 Phil 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

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

71.

171.** Philosophies of India. 3 credits. \$21.

An introduction to the study of the problems of Indian philosophy through readings in selected translations of philosophical texts. Emphasis will fall on the Upanishads, the *Bhagavadgita*, Buddhist epistemology, Nyaya theory of inference and the Indian syllogism, Vaisheshika pluralism, and Samkaracharya's Advaita Vedanta. (No prerequisite)

Spring Semester

M 8:05-9:45, Johnston 113, Potter

Slav 75. India. See page 65.

107. Philosophy in Modern Literature. 3 credits. \$21.

A survey of basic philosophical ideas in modern civilization as they are expressed in major works of literature. (Prerequisite: 9 credits in philosophy or literature or #)

Spring Semester

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

Evening and Special Classes

Photography (Phot)

Students in all photography classes must furnish their own cameras.

***Art 10. Basic Photography I.** (Same as Jour 10) 3 credits. \$21 plus \$5 laboratory fee.

A course for beginners, with little or no experience in photography. The course will include lectures and demonstrations dealing with basic photographic equipment and materials, general camera and darkroom techniques, history, and criticism. There will be some laboratory work in use of the camera, in contact printing, and enlarging. This class is of interest to people who need a working knowledge of photography in professions other than photography, and for those who want to know how to use a camera efficiently. (No prerequisite. Repeated spring semester. Limited to 24 students)

Fall Semester

M 6:20-8:00, Murphy 20, Agar

Spring Semester

M 6:20-8:00, Murphy 20, Agar

***Art 11. Basic Photography II.** (Same as Jour 11) 3 credits. \$21 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, Murphy 20, Agar

Spring Semester

W 6:20-8:00, Murphy 20, Agar

Color Photography I. 3 Certificate credits. \$21 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. \$21 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. \$21 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. Class limited to 25 students)

Fall Semester

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

***Motion Picture Production II.** 3 Certificate credits. \$21 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

Course Offerings—Arts and Sciences

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, Westbrook 50, Cain

Political Science (Pol)

1-2.† American Government and Politics: Parts I and II. 3 credits each semester. \$21 each semester.

1: All of us are aware of the impact of international events upon the American system of government and the tremendous part that government plays in our lives. This course is designed to provide an intelligent understanding of certain fundamental features of our governmental system: the nature of our constitution, the protection of individual rights and liberties, political parties, public opinion, nominations, and elections. Special attention will be given throughout to current developments. (No prerequisite) 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 185, Christensen

Spring Semester

2 M 6:20-8:00, Ford 185, Christensen

A-B.† The State in the Modern World. 3 credits each semester. \$21 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 T 6:20-8:00, Ford 185, McClosky

Spring Semester

B W 8:05-9:45, Ford 185, Turner

25. World Politics. 3 credits. \$21.

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

W 6:20-8:00, Ford 185, McLaughlin

50. Political Behavior } 3 credits. \$21.
167. Political Behavior** }

More and more attention is being turned to such matters as why people prefer one candidate or political party to another; how political attitudes and public opinions are formed and changed; and what factors influence elections. This course takes up these and such related matters as the psychological aspects of leadership; the nature of political organization, the effect of campaigns; opinion surveys; interest and pressure groups; and the role of personality. (No prerequisite)

Spring Semester

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

55. Government of the Soviet Union } 3 credits. \$21.
143. Government of the U.S.S.R. and Adjacent States** }

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

Evening and Special Classes

regime, institutional character; the organization of power; the role of the party; foreign, economic, and cultural policies; significance for Western Civilization. (No prerequisite)

Fall Semester

W 8:05-9:45, Ford 160, Turner

80. American National Government. 3 credits, §1-2 or 5. \$21.

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

Fall Semester

Th 7:50-9:30, StP Ext Center 203, Mitau

84. Problems of World Organization } 3 credits. \$21. 184. International Organization I }**

The fundamental factors underlying the organization of the world community. The nature of the United Nations and its successes and failures. (No prerequisite)

Fall Semester

M 6:00-7:40, StP Ext Center 204, Levi

85. Problems of World Politics (Southeast Asia) } 3 credits. \$21. 195. Colonial Government and the Problems of Imperialism }**

The prewar and postwar political and economic problems of Southeast Asia; nationalism and communism; interests and policies of the Western and Asiatic powers. (No prerequisite)

Spring Semester

W 6:20-8:00, Ford 170, Mills

94. The Far East in International Relations } 3 credits. \$21. 194. The Far East in International Relations }**

Political development of China, Japan, and Korea, with emphasis on the period since World War I; Western-Asiatic diplomacy; current problems and military conflict in Asia. (No prerequisite)

Spring Semester

M 6:00-7:40, StP Ext Center 204, Levi

Public Administration Courses

58. Governmental Accounting. (See BA 158, page 76) 3 credits. \$21.

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 158. Consult instructor)

Fall Semester

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

60. Organization and Management } 3 credits. \$21. 131. Public Administration }**

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 6:20-8:00, Ford 130, Warp

Course Offerings—Arts and Sciences

61. Municipal Law and Administration } 3 credits. \$21.
121. Municipal Administration }**

General principles of municipal administration; forms of administrative organization and control; the framework within which municipal government operates, including home rule charters and state statutes; liability of the municipality and its officers for wrongful acts; specific administrative services, such as personnel, budgeting and finance, research and planning, and public reporting. Emphasis is placed on Minnesota law and practice. (No prerequisite)

Spring Semester

M 6:20-8:00, Ford 150, Peterson

62. Public Personnel Administration. 3 credits. \$21.

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)

Fall Semester

W 6:00-7:40, StP Ext Center 203, Jackson

63. Public Financial Administration. 3 credits. \$21.

Survey of purchasing, contracting, revenues, taxation, special assessments, service charges, borrowing, expenditures, budgeting, accounting, cost accounting, auditing, and reporting. Emphasis on state and municipal practice. (No prerequisite)

Spring Semester

W 6:00-7:40, StP Ext Center 203, Robertson

66. Practice of Public Administration. 3 credits. \$21.

Through the study of actual cases in administration, basic problems are identified and analyzed in the processes of organization, policy formulation, and program execution. (No prerequisite)

Spring Semester

T 6:20-8:00, Ford 150, Warp

67. Administrative Analysis. 3 credits. \$21.

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)

Spring Semester

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

73. City and County Planning. 3 credits. \$21.

Purpose and nature of planning; organization of planning agencies; citizen participation in planning; the master plan; zoning; housing; urban redevelopment; fiscal planning; the capital budget and program; planning for various municipal functions; intergovernmental relationships in planning. (No prerequisite)

Fall Semester

W 6:20-8:00, Ford 73, Engelen

Psychology (Psy)

1a. Application of Psychology to Living. 3 credits. \$21.

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

Evening and Special Classes

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 203, 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 203, White
Th 6:20-8:00, Nicholson 216, White

1-2.† General Psychology. 3 credits each semester. \$21.

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 207, Mink
2 T 6:20-8:00, Nicholson 216, Mecherikoff

Spring Semester

2 W 6:20-8:00, Nicholson Aud, White
2 Th 6:00-7:40, StP Ext Center 207, Mink
1 T 6:20-8:00, Nicholson 216, Mecherikoff

*4-5.† Introductory Laboratory Psychology. 2 credits each semester. \$21.

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 Junior College. (Prerequisite: Psy 1-2 or ¶. Sections limited to 36 students)

Fall Semester

4 W 8:05-9:45, Psychology 211, Wrights-
man
Th 8:05-9:45, Psychology 211, Davenport

Spring Semester

5 W 8:05-9:45, Psychology 211, Wrights-
man
Th 8:05-9:45, Psychology 211, Davenport

70. Principles of Psychological Measurement. 3 credits. \$21.

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: Psy 1-2 or ‡)

Fall Semester

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

119. Psychology of Personality. 3 credits. \$21 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: Psy 1-2)

Spring Semester

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

122-123.† Vocational Development and Personnel Psychology. 3 credits each semester, \$Psy 160. \$21 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 pro-

Course Offerings—Arts and Sciences

moting 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

125-126. Psychology of Individual Differences. 3 credits each semester. \$21.

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

Fall Semester

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

Spring Semester

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

144-145.† Abnormal Psychology. 3 credits each semester. \$21.

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

155. Industrial Psychology. 3 credits. \$21.

Psychological problems in industrial production, biomechanics (the adaptation of the machine to the capacities and limitations of the operator), work and effort, and the role of communication in an industrial organization. (Prerequisite: Psy 1-2, and Math 15-16 or equivalent or 10 credits of statistics)

Fall Semester

T 8:05-9:45, Johnston 115, Dunnette

156. Psychology of Advertising. 3 credits. \$21.

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: Psy 1-2 and Econ 6-7)

Spring Semester

W 6:20-8:00, Johnston 122, Booman

Public Health (PubH)

50. Personal and Community Health. 3 credits. \$21.

Fundamental principles of health conservation and disease prevention. (No prerequisite. Open to students who have not taken 3, 4, 51, 52, 100 or GC 10C)

Fall Semester

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

59. Health of the School Child. 3 credits. \$21.

Disease control; health appraisal; emotional problems; school environment; accident prevention and emergency care. (Prerequisite: 3a and 4, or 3a and 51, or GC 10C and 4, or GC 10C and 51, or 50, or 52, or 100; exemption from 3a or 3b on basis of military service not acceptable as substitute for personal health course)

Spring Semester

T 6:20-8:00, Mayo 1250, Wallace

Evening and Special Classes

75. Introduction to Environmental Sanitation. 3 credits. \$21.

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

95. Human Nutrition. 3 credits. \$21.

Particular reference to public health. Nutritional values of foods, food utilization and requirements, food management, nutrition education. (Prerequisite: courses in chemistry and biology, or #)

Winter Quarter

M 6:00-8:30, Mayo 100, Stief

100. Elements of Preventive Medicine and Public Health. 5 credits. \$35.

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 7:00-8:40, St Joseph's Nursing Home,
Room 4, 436 Main St, StP, Schuman

Education for Public Health Nurses. See Education, page 92.

Radio and Television

See page 70.

Recreation

See page 113.

Scandinavian (Scan)

1-2. Beginning Norwegian. 3 credits each semester. \$21.

This course, intended for students who have little or no previous knowledge of Norwegian, gives equal emphasis to reading, writing, and speaking the language. The first semester includes a complete survey of basic Norwegian grammar. (No prerequisite)

Fall Semester

1 W 6:20-8:00, Folwell 12, Nelson

Spring Semester

2 W 6:20-8:00, Folwell 12, Nelson

3a-4a. Readings in Norwegian Literature. 3 credits each semester. \$21.

This course is designed for students who have completed Scan 4, but is open to anyone with a reading knowledge of Norwegian. Several works of classic Norwegian literature are given thorough study, and students are assigned outside reading on which they give class reports. (Prerequisite: Scan 2 or ##)

Fall Semester

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

Spring Semester

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

Course Offerings—Arts and Sciences

7-8. Beginning Swedish. 3 credits each semester. \$21.

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)

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 credits each semester. \$21.

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

17-18. Beginning Finnish. 3 credits each semester. \$21.

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

Fall Semester

17 T 8:05-9:45, Folwell 208, Halonen

Spring Semester

18 T 8:05-9:45, Folwell 208, Halonen

19-20. Intermediate Finnish. 3 credits each semester. \$21.

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: Scan 18)

Fall Semester

19 T 6:20-8:00, Folwell 208, Halonen

Spring Semester

20 T 6:20-8:00, Folwell 208, Halonen

Slavic and Oriental Languages

Russian (Russ)

1-2. Russian Reading. 3 credits each semester. \$21.

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

Fall Semester

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

Spring Semester

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

Slavic (Slav)

75. India. 3 credits. \$21 plus \$2 materials fee.

An introduction to the civilization of India. The main aspects of Indian life and culture, illustrated by motion pictures, slides, records, and selected readings. The approach will emphasize the relationship of contemporary Indian life to the cultural history of pre-Muslim India. Lectures on the history, political structure, social structure, religion, literature, art, music, geography, and languages of India. (No prerequisite)

Fall Semester

M 8:05-9:45, Johnston 106, Potter

Phil 71. Philosophies of India. See page 57.

Evening and Special Classes

Social Work (SW)

51. An Introduction to Social Work Under Public Auspices. 3 credits. \$21.

An analysis of social work functions, particularly those programs under public auspices, with a consideration of broad social policy, the role of the public agency and the philosophy of social work pertaining thereto. (Prerequisite: employment in a social agency or #)

Fall Semester

M 6:00-7:40, StP Ext Center 203

101. Emotional Problems of Children. 3 credits. \$21.

An analysis of the common emotional problems of childhood and the implications thereof for social work practice. (Prerequisite: employment in a social work position or #)

Fall Semester

M 8:05-9:45, Ford 244, Thorsen

102. Social Work with Families in Marital Conflict. 3 credits. \$21.

An analysis of the process and method of working with families in marital conflict and the use of social work methods in enabling solutions. (Prerequisite: employment in a social work position or #)

Spring Semester

M 8:05-9:45, Ford 244, Schneiderman

103. Vocational Counseling and Rehabilitation. 3 credits. \$21.

An analysis of the case method as applied in rehabilitation work with reference to employment, social and physical adjustment. An introduction to the problems, practices, and resources in vocational adjustment and rehabilitation. (Prerequisite: employment in a social or rehabilitation agency or #)

Spring Semester

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

Sociology (Soc)

Note—Students who expect to receive graduate credit for courses numbered 100 or above will be requested to do additional work.

1. Introduction to Sociology. 3 credits. \$21.

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 180, Taves
Th 7:50-9:30, StP Ext Center 207

Spring Semester

W 6:20-8:00, Ford 180, Taves

3. Social Problems. (Formerly Soc 49) 3 credits. \$21.

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

Fall Semester

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

Spring Semester

Th 7:50-9:30, StP Ext Center 207, Johnson

Course Offerings—Arts and Sciences

53. Elements of Criminology. 3 credits. \$21.

A general survey of the field of criminology. (Prerequisite: Soc 1 or ##)

Fall Semester

W 6:20-8:00, Ford 50, Donohue

112. World Population Problems. 3 credits. \$21.

A study of population policy, both historical and present day, in Europe, Asia, and other selected areas but with special emphasis on the United States. Some discussion is given to the field of population and power politics. (Prerequisite: Soc 1 or ##)

Spring Semester

M 6:20-8:00, Ford 244, Francis

120. Social Psychology. 3 credits. \$21.

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: Soc 1 or ##)

Spring Semester

T 6:20-8:00, Ford 130, Stone

123. Intergroup Relations. 3 credits. \$21.

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: Soc 1 or ##)

Fall Semester

M 6:20-8:00, Ford 150, Francis

140. Social Organization. 3 credits. \$21.

The organization and structure of social groups; basic culture patterns of economic, political, and social institutions. Integration and disintegration of social groups and institutions. Essentials of social dynamics. (Prerequisite: Soc 1 or ##)

Spring Semester

Th 6:20-8:00, Ford 244

145. Urban Sociology. 3 credits. \$21.

An introduction to the study of cities; urban ecology; urban institutions and the urban way of life. (Prerequisite: Soc 1 or ##)

Fall Semester

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

Spanish (Span)

1-2. Beginning Spanish. 3 credits each semester. \$21.

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

Fall Semester

1 M 6:20-8:00, Folwell 202, Grismer
1 M 6:00-7:40, StP Ext Center 205,
Mousolite
1 Th 6:20-8:00, Folwell 202, Rundorff
2 Th 6:20-8:00, Folwell 204

Spring Semester

1 Th 6:20-8:00, Folwell 203, Rundorff
2 M 6:20-8:00, Folwell 202, Grismer
2 M 6:00-7:40, StP Ext Center 205,
Mousolite

Evening and Special Classes

3-4. Intermediate Spanish. 3 credits each semester. \$21.

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

Fall Semester

3 M 7:50-9:30, StP Ext Center 205,
Mousolite
3 W 6:20-8:00, Folwell 204, Vazquez

Spring Semester

4 M 7:50-9:30, StP Ext Center 205,
Mousolite
4 W 6:20-8:00, Folwell 204, Vazquez

55a-55b. Spanish Conversation. 3 credits each semester. \$21.

Informal discussion of current affairs and everyday topics. (Prerequisite: Span 3-4 or 5)

Fall Semester

55a W 6:20-8:00, Folwell 203, Irving

Spring Semester

55b W 6:20-8:00, Folwell 203, Irving

67a-67b. Survey of Contemporary Spanish Literature. 3 credits each semester \$21.

This course deals with social, philosophical, and aesthetic questions relating to modern Spanish life as reflected in the drama, novel, essay, and poetry of contemporary writers. Readings will include works by Unamuno, Azorin, Baroja, Benavente, Martínez Sierra, Pérez de Ayala, Ortega y Gasset, Antonio and Manuel Machado and García Lorca. Lectures conducted entirely in Spanish. (Prerequisite: Span 4 or 5)

Fall Semester

67a M 6:20-8:00, Folwell 204, Floripe

Spring Semester

67b M 6:20-8:00, Folwell 204, Floripe

79. A Century of Latin American Thought: 1850-1957. 3 credits. \$21.

This course is an introduction to the men who have molded the thought of Latin America and to the ideas which have shaped the attitude of their countries toward freedom, democracy, and social progress. Since there is no surer way to the heart and soul of a culture than a knowledge of the men whom it calls great, this course is another step in the understanding of the Latin-American republics. The course is conducted entirely in Spanish. (Prerequisite: 5)

Fall Semester

T 6:20-8:00, Folwell 202, Cuneo

80. Spanish-American Novel and Social Problems. 3 credits. \$18.

This course deals with some of the outstanding social problems of Latin America as presented in the novels of its leading authors. These books not only capture the essence and dramatize in epic tones the social problems that characterize the Latin-American countries but also suggest possible solutions for them. Some of the basic problems to be studied are: the national integration of the Indian, the Latin-American dictator, man in the jungle, civilization vs. barbarism, the Mexican Revolution, foreign economic exploitation, and the new immigrants. This course will be conducted entirely in Spanish. (Prerequisite: 5)

Spring Semester

T 6:20-8:00, Folwell 202, Cuneo

Speech and Theater Arts (Spch)

*Beginning Practical Speech Making. 3 Certificate credits. \$21 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.

Course Offerings—Arts and Sciences

Voice recordings and an analysis of the speaking voice will be made. (No prerequisite. Each section limited to 20 students)

Fall Semester

M 8:05-9:45, Folwell 5, Fulton
W 6:20-8:00, Folwell 5, Fulton
Th 6:00-7:40, StP Ext Center 202, Seymour

Spring Semester

M 8:05-9:45, Folwell 5, Fulton
W 6:20-8:00, Folwell 5, Fulton
Th 6:00-7:40, StP Ext Center 202, Seymour

*Advanced Practical Speech Making. 3 Certificate credits. \$21 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 8, Fulton

*The Practice of Logic and Semantics in Speaking. 3 Certificate credits. \$21 plus \$5.50 laboratory fee.

A discussion class designed to promote more effective spoken communication by analyzing and illustrating the factors that lead to misunderstanding and trouble when people talk together. A series of six films: *Do You Know How to Make a Statement of Fact? Just What Is General Semantics? The Difference Between Words and Things, The Man Who Knows It All, What Is a Good Observer? Why Do People Misunderstand Each Other?* will be the basis of the discussions. All members of the class will participate each class session. (Prerequisite: Advanced Practical Speech Making, or ##. Class limited to 15 students)

Spring Semester

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

1-2†-3. Fundamentals of Speech. 3 credits each semester. \$21 plus \$1 laboratory fee.

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

Fall Semester

1 M 6:20-8:00, Folwell 306, Lammers
1 M 6:20-8:00, Folwell 308, Fletcher
2 M 6:20-8:00, Folwell 305
3 M 6:20-8:00, Folwell 305

Spring Semester

1 M 6:20-8:00, Folwell 308, Fletcher
2 M 6:20-8:00, Folwell 305
3 M 6:20-8:00, Folwell 305

31. Introduction to the Theater. 3 credits. \$21.

An orientation in the great dramatic tradition through a consideration of plays and playwrights from Sophocles to Tennessee Williams. It covers the history of theatrical customs, conventions and traditions as they affect modern stage production, and includes a view of the highlights of theater, architecture, scenic design, stagecraft, lighting, costumes, make-up, and special effects. (No prerequisite)

Fall Semester

W 6:20-8:00, Shevlin 110, Benson

32. Beginning Acting: Creative Approach. 3 credits. \$21. (Offered alternate years beginning 1957-58)

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 environ-

Evening and Special Classes

ment, and appreciation of the arts of acting are the primary objectives. (Prerequisite: Spch 31)

Spring Semester

W 6:20-8:00, Nicholson 304, Benson

***39. Parliamentary Procedures. 2 credits. \$21.**

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)

Fall Semester

T 6:20-8:00, Folwell 308, Shapiro

61. Personality Development Through Speech I. 3 credits. \$21.

A study of how early home and school training can create personality problems. Discussion of methods whereby speech behavior can be used to increase one's social adjustability. (Prerequisite: Spch 1-2, 5 or Beginning Practical Speech Making, Psy 1-2)

Fall Semester

T 6:20-8:00, Folwell 305, Moody

Personality Development Through Speech II. 3 Certificate credits. \$21.

Therapy; analysis of each student's problems of self-consciousness, stage fright, and general ineffective conversational speech; speech as a means of self and social control in daily living. (Prerequisite: Spch 61)

Spring Semester

T 6:20-8:00, Folwell 305, Moody

***65. Radio and Television Speech. 3 credits. \$21 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: Spch 1-2, or #. Class limited to 25 students)

Fall Semester

T 6:20-8:00, Murphy 302, McGraw

***66. Radio and Television Drama. 3 credits. \$21 plus \$2 laboratory fee. (Not offered 1957-58)**

106. Discussion. 3 credits. \$21.

Training in discussion participation and in discussion leadership. Planning and participating in small group discussion on problems of current interest, as: foreign aid and national security, church-state relationships, taxation, conservation, juvenile behavior, etc. (Prerequisite: 1-2 or 5 or #)

Spring Semester

M 6:20-8:00, Folwell 404, Smith

***Speech Correction for Stutterers. No credit. \$36 plus \$1 laboratory fee.**

Personalized treatment for the individual and group. Discussion of causes and the emotional effects of stuttering on your personality. Techniques for the removal of the handicap phases of stuttering so that your talking will be more effective socially. (Pre-

Course Offerings—Arts and Sciences

requisite: minimum age 18 years. Each section limited to 8 students. Section A must be filled before registrations for Section B will be accepted)

Fall Semester

A Th 6:20-8:00, Folwell 308, Clubb
B Th 8:05-9:45, Folwell 308, Clubb

*Speech Correction for Cleft Palate. No credit. \$42 plus \$1 laboratory fee.

Individualized treatment for persons with cleft palate. Specific work on speech sounds that are most difficult because of this condition. The goals of this course are speech improvement for the class members and comfort in situations which require talking. (Prerequisite: minimum age 18 years. Limited to 6 students)

Fall Semester

W 6:20-8:00, Folwell 308, Riecken

*Speech for the Foreign-Born. No credit. \$25 plus \$1 laboratory fee.

A course in speech improvement for persons with foreign-dialect speech. The purpose of the course is to (a) provide information about the peculiarities of American English speech, (b) increase the student's awareness of the important differences between his own speech and American speech, (c) supply supervised drill designed to alter existing speech patterns, and (d) establish the foundation for a program of continuing self-training following termination of the course. (Prerequisite: Conversational ability in the English language. Class limited to 15 students. Repeated spring semester)

Fall Semester

Th 6:20-8:00, Folwell 404, Fletcher

Spring Semester

Th 6:20-8:00, Folwell 404, Fletcher

Study Skills (SSk)

*Rhet 47. Efficient Reading. 3 credits in Ag., Educ., I.T., Ext.; 1 credit in S.L.A. \$21 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
M 8:05-9:45, Ford 15
T 6:20-8:00, Ford 15, Wright
T 8:05-9:45, Ford 15, Wright
W 6:20-8:00, Ford 15, Brown
W 8:05-9:45, Ford 15, Brown
Th 6:00-7:40, StP Ext Center 201
Th 7:50-9:30, StP Ext Center 201

Spring Semester

M 6:20-8:00, Ford 15
M 8:05-9:45, Ford 15
T 6:20-8:00, Ford 15, Wright
T 8:05-9:45, Ford 15, Wright
W 6:20-8:00, Ford 15, Brown
W 8:05-9:45, Ford 15, Brown
Th 6:00-7:40, StP Ext Center 201
Th 7:50-9:30, StP Ext Center 201

Efficient Listening. 3 Certificate credits. \$21.

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

W 8:05-9:45, Ford 60, Cashman

Spring Semester

W 8:05-9:45, Ford 60, Cashman

Evening and Special Classes

Vocabulary Building: How to Expand Your Word Power. 3 Certificate credits.
\$21 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 203, Sheldon
T 6:20-8:00, Nicholson 213, Sheldon
W 8:05-9:45, Nicholson 211, Stockdale

Spring Semester

M 7:50-9:30, StP Ext Center 206, Sheldon
T 6:20-8:00, Nicholson 213, Sheldon
W 8:05-9:45, Nicholson 211, Stockdale

Grammar Review. See English, page 42.

How to Study. See Interdisciplinary Studies, page 51.

Preparation for Marriage. See Interdisciplinary Studies, page 49.

Speech Correction for Stutterers. See Speech and Theater Arts, page 70.

Speech for the Foreign-Born. See Speech and Theater Arts, page 71.

BUSINESS ADMINISTRATION

Explanation of symbols used in this section:

- * Limited class. Registration must be made in person.
- † To receive credit for this course, all courses listed ahead of the dagger must be completed.
- ‡ A sequence course, which need not be taken in order. (Otherwise, hyphens separating course numbers will indicate they must be taken in sequence.)
- § Credit is not given if the equivalent course listed after the section mark has been taken for credit.
- ¶ Prerequisite may be concurrent registration with course being described.
- # Consent of instructor is required.
- ** 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.

Accounting

First Year Accounting Courses

The Extension Division offers two 3-unit courses in accounting at the beginning level: Applied Accounting Procedures A-B-C, and Principles of Accounting (Econ 24-25-26). These introductory courses are designed to fit the needs of two groups of students with differing basic study objectives. The descriptions of these courses are given below and we urge prospective students to study them carefully before deciding which one will best fit their personal needs.

Applied Accounting Procedures A-B-C is a 1-year course for those who do not expect to continue in advanced accounting study. Emphasis will be on the elementary techniques of the accounting process. The course is designed to enable the student to keep an adequate set of books for an average size business firm or to understand and interpret simple accounting statements in common usage. The full series A-B-C may be used to satisfy the accounting requirement of the Junior Business Certificate, but is not acceptable on the Senior Business Certificate or Business Administration degree programs. Qualified students who register initially for A-B-C but who decide to continue in advanced accounting courses are urged to petition for transfer to Econ 25 or 26 upon completion of A or B respectively.

Principles of Accounting (Econ 24-25-26). The three units of this first year introductory course are the same as the regular classes in the College of S.L.A. in content and credit. The courses are designed primarily for the student who intends to be a practicing accountant (and who expects, therefore, to continue with the second year and advanced accounting courses), or for the student who plans to use extensive accounting information for business management purposes. Persons with sufficient accounting background or training may petition for permission to take special examinations which will, if passed, qualify them for admission to Econ 25 or 26 and for credit in the preliminary unit or units.

To meet the needs of evening students, the three units of each of the introductory courses described above are scheduled on the following plans:

1. Regular semester class schedule, for 3 credits each of 3 semesters for full first year course. For students who wish regular class periods in order to take two classes the same evening or who prefer more time and less concentration in beginning an elementary technical study.

Evening and Special Classes

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 (Econ 24-25-26 only), meeting twice weekly in 2½-hour sessions. Full course completed 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 fall semester.

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

Applied Accounting Procedures A-B. 3 Certificate credits each unit. \$21 each semester.

An introduction to the recording procedure of accounting (semester basis). (No prerequisite for A; prerequisite for B, previous unit)

Fall Semester

A T 6:20-8:00, Ford 30, Carlson

Spring Semester

B T 6:20-8:00, Ford 30, Carlson

Applied Accounting Procedures C. (To be offered fall semester, 1958-59)

Applied Accounting Procedures A-B-C. 3 Certificate credits each unit. \$21 each quarter.

An introduction to the recording procedure of accounting, quarter basis. (No prerequisite for A; prerequisite for B and C, previous unit)

Fall Quarter

A M 5:30-8:00, Vincent 306, Mackey
A W 5:15-7:45, StP Ext Center 207,
Powell

Winter Quarter

B (same schedule as fall)

Spring Quarter

C (same schedule as fall)

Econ 24-25-26. Principles of Accounting. 3 credits each semester, §BA 54-55. \$21 each unit.

The first-year University course in accounting, semester basis. (No prerequisite for 24; prerequisite for 25 and 26, previous unit)

Fall Semester

24 M 6:00-7:40, StP Ext Center 206,
Creviere
24 T 6:20-8:00, Vincent 306, Kerns, Day
25 Th 6:20-8:00, Vincent 306, Thorsen
26 M 7:50-9:30, StP Ext Center 206,
Creviere
26 Th 6:20-8:00, Vincent 307, Jaedicke

Spring Semester

24 T 6:20-8:00, Vincent 307, Gibson
25 M 6:00-7:40, StP Ext Center 206,
Creviere
25 T 6:20-8:00, Vincent 306, Kerns, Day
26 Th 6:20-8:00, Vincent 301, Thorsen

Econ 24-25-26. Principles of Accounting. 3 credits each quarter, §BA 54-55. \$21 each unit.

The first-year University course in accounting, quarter basis. (No prerequisite for 24; prerequisite for 25 and 26, previous unit)

Fall Quarter

24 M 5:30-8:00, Ford 30, Zulauf, Urban
24 W 5:15-7:45, StP Ext Center 206,
Creviere

Winter Quarter

25 (same schedule
as fall)

Spring Quarter

26 (same schedule
as fall)

Course Offerings—Business Administration

Econ 24-25-26. Principles of Accounting (Combined). 9 credits, §BA 54-55. \$63.

This course offers Econ 24-25-26 complete in 1 semester. (No prerequisite. Registrations will be accepted for the entire course only)

Spring Semester

MF 6:20-8:50, Vincent 301, Lund
MF 6:00-8:30, StP Ext Center 201

Second Year Accounting Courses

BA 65. Analysis of Financial Statements. 3 credits, §BA 151 or 151C. \$21.

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

Spring Semester

W 7:50-9:30, StP Ext Center 203, Johnson
Th 6:20-8:00, Vincent 306

BA 66. Managerial Costs. 3 credits, §BA 152, 153. \$21.

A general survey of cost accounting from the point of view of the executive who must use cost information in the conduct of his business. (Prerequisite: Econ 26 or ##)

Spring Semester

Th 6:20-8:00, Vincent 307, Jaedicke

BA 150A-150B-150C. Intermediate Accounting. 3 credits each semester, §65 for 150C. \$21.

Second-year accounting for students intending to specialize in accounting or in business finance. Standard text and problems designed to build on principles of the first year course, developing accepted accounting practices in determination of periodic income and valuation of assets. (Prerequisite: Econ 26 or ## for 150A; 150A for 150B; 150A for 150C)

Fall Semester

150A W 6:00-7:50, StP Ext Center 204,
Johnson
150A W 6:20-8:00, Vincent 306, Lund,
Nelson
150C M 6:20-8:00, Vincent 307, Heller

Spring Semester

150B W 6:00-7:40, StP Ext Center 204,
Johnson
150B W 6:20-8:00, Vincent 306, Nelson

BA 152-153. Cost Accounting. 3 credits each semester, §BA 66. \$21.

Cost accounting with text, laboratory set, and problems, requiring outside preparation, covering job order process cost, and standard cost procedures and theory. (Prerequisite: Econ 26 or ##)

Fall Semester

152 W 7:50-9:30, StP Ext Center 204,
Tuttle
152 Th 8:05-9:45, Vincent 306, Jaedicke

Spring Semester

153 W 7:50-9:30, StP Ext Center 204,
Tuttle
153 Th 8:05-9:45, Vincent 306, Jaedicke

Special Interest and Advanced Accounting Courses

Business Data Processing by Electronics. See **Office Management**, page 88.

Elementary Functional Wiring for Punched Card Equipment. 3 Certificate credits. \$21.

A course for those interested in procedures for different types of machine operation. Major emphasis on a different specialized equipment each semester. (Prerequisite: #)

Fall Semester

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

Evening and Special Classes

BA 91. Intermediate Machine Accounting. 1 credit plus 2 Certificate credits. \$21.

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 118, 135. Auditing Procedure and Public Accounting. 3 Certificate credits each semester. \$21 each semester. (6 University credits on completion of both courses consecutively)

An introduction to auditing procedure with the preparation of a co-ordinated set of working papers based on examination of accounting and other records. The writing of short and long audit reports, development of auditing standards, S.E.C. and A.I.A. releases and audit case studies. C.P.A. examination questions in auditing. (Prerequisite: BA 151 or BA 150C for BA 118; BA 118 for BA 135)

Fall Semester

118 W 6:20-8:00, Vincent 307, Moberg

Spring Semester

135 W 6:20-8:00, Vincent 307, Moberg

BA 134A-134B. Income Tax Accounting. 3 Certificate credits each semester (4 University credits on completion of both courses consecutively). \$21.

Application of income tax laws to and preparation of both state and federal returns for individuals, partnerships, and corporations. (Prerequisite: BA 150A)

Fall Semester

134A M 8:05-9:45, Vincent 307, Rapoport
134A T 6:00-7:40, StP Ext Center 201,
Daly

Spring Semester

134B M 8:05-9:45, Vincent 307, Rapoport
134B T 6:00-7:40, StP Ext Center 201,
Daly

Advanced Cost Accounting A-B. 3 Certificate credits each semester. \$21.

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 152-153, or Cost Accounting I-II)

Fall Semester

A T 6:00-7:40, StP Ext Center 202, Tuttle

Spring Semester

B T 6:00-7:40, StP Ext Center 202, Tuttle

BA 154. Budgetary Control. 3 credits. \$21.

Fundamentals of establishing and operating a budget. Budgetary control and relationship to break-even analysis. (Prerequisite: BA 153)

Fall Semester

T 6:20-8:00, Vincent 307, Gibson

Spring Semester

T 7:50-9:30, StP Ext Center 204, Tuttle

BA 158. Governmental Accounting. (See Pol 58, page 60). 2 credits plus 1 Certificate credit. \$21.

(Prerequisite: BA 150C or #150C)

Fall Semester

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

BA 159. Advanced Accounting. 3 credits. \$21.

Branch accounting, consolidated statements, estates and trusts, concerns in financial difficulties, and other specialized problems. (Prerequisite: BA 151 or 150C or #)

Spring Semester

M 6:20-8:00, Vincent 205, Heller

Course Offerings—Business Administration

BA 181A. Internal Auditing. (To be offered 1958-59)

BA 182A. Systems and Procedures. (See Pol 67) 3 credits. \$21 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 in this co-ordinated program include University faculty members and members of the Systems and Procedures Association. (Prerequisite: #)

Spring Semester

Th 6:20-8:00, Ford 170, Magraw and others

Business English

Review of Business English. 3 Certificate credits. \$21.

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)

Fall Semester

T 6:00-7:40, StP Ext Center 204, Lippert
W 6:20-8:00, Ford 180, Lippert
Th 6:20-8:00, Ford 180

Spring Semester

M 6:20-8:00, Main Engineering 4, Lippert
T 7:50-9:30, StP Ext Center 204, Lippert
W 6:20-8:00, Ford 150, Lippert

Business Correspondence. 3 Certificate credits. \$21.

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 4, Haga

Spring Semester

T 6:00-7:40, StP Ext Center 204, Lippert
W 6:20-8:00, Main Engineering 4, Haga

Comp 58. (See description and statement in following course, **Communication in Management.**) 3 credits. \$21.

Communication in Management. 3 Certificate credits. \$21.

Note—On approval of petition by instructor and the School of Business Administration, University credit (not in excess of 3 credits) applicable for a B.B.A. 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)

Fall Semester

W 6:20-8:00, Main Engineering 4, Haga

Spring Semester

W 8:05-9:45, Main Engineering 4, Haga

Business Law

BA 51-52-53, 56. Business Law. 3 credits each semester. \$21.

Comprehensive course in the fundamental principles of law for the business and professional man. 51: Contracts—formation, operation, transfer, discharge. 52: Business associations—nature, creation and terms of the relation, rights, and liabilities of the parties when doing business through agents, partnerships, and corporations. 53: Law of sales of goods under the Uniform Sales Act and law of commercial paper under the Uniform Negotiable Instruments Law. 56: Nature and classification of real estate; deeds and conveyances; landlord and tenant; recording and abstracting; Torrens titles; liens and mortgages; wills, probating of estates, and duties of administrators and executors. (Prerequisite: BA 51 must precede or be taken in conjunction with either 52 or 53 unless § is obtained for a different sequence)

<i>Fall Semester</i>		<i>Spring Semester</i>	
51	T 7:50-9:30, StP Ext Center 206, VanValkenburg	51	T 6:00-7:40, StP Ext Center 206, VanValkenburg
51	W 6:20-8:00, Ford 120, Moss	51	W 8:05-9:45, Ford 120, Moss
52	T 6:00-7:40, StP Ext Center 206, VanValkenburg	52	T 7:50-9:30, StP Ext Center 206, VanValkenburg
52	W 8:05-9:45, Ford 120, Moss	52	W 6:20-8:00, Ford 120, Moss
53	T 6:20-8:00, Vincent 113, Thomas	53	T 6:20-8:00, Vincent 113, Thomas
		56	W 6:20-8:00, Ford 115, Carroll

Common Legal Problems I-II. 3 Certificate credits each semester. \$21 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)

<i>Fall Semester</i>		<i>Spring Semester</i>	
I	M 6:20-8:00. Ford 150, Thorfinnson and Clay	I	M 6:20-8:00, Ford 180, Thorfinnson and Clay
II	M 8:05-9:45, Ford 150, Thorfinnson and Clay	II	M 8:05-9:45, Ford 180, Thorfinnson and Clay

Parliamentary Law. See page 70.

Property and Casualty Claims Curriculum. See page 86.

Economics and Finance

Econ 1-2. Principles of Economics (formerly Econ 6-7). 3 credits each semester. \$21.

Principles underlying economic activity, prices, and the cost of production; the factors of production; division of labor and its relation to the development of industry; wages, rent,

Course Offerings—Business Administration

interest, profits; the level of national income and employment. (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 207
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, Smith

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 207
2 T 6:20-8:00, Vincent 207
2 W 6:20-8:00, Vincent 113
2 W 8:05-9:45, Vincent 113

Econ 5. Elements of Statistics. 3 credits. \$21.

Elementary concepts in statistical methods; averages, ratios, errors, sampling, index numbers, graphic representation, collection of material. (Prerequisite: [1957-58] Math 1 or ITM 9; [1958-59] Math 7 or 8 or 15 or ITM 11)

Fall Semester

M 7:50-9:30, StP Ext Center 207, Kawar
T 6:20-8:00, Vincent 2, Kawar
W 6:20-8:00, Vincent 113

Spring Semester

M 7:50-9:30, StP Ext Center 207, Kawar
T 6:20-8:00, Vincent 6, Kawar

Econ 57. Money and Banking. 3 credits, §Econ 3 (see Econ 64 below). \$21.

The 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 or 7)

Fall Semester

Th 8:05-9:45, Vincent 113, Smith

BA 58. Elements of Public Finance. 3 credits. \$21.

Public expenditures, revenues, debts, fiscal policy, and financial administration. Special attention is given to tax principles, practices, burdens, and co-ordination of national, state, and local finance. (Prerequisite: Econ 2 or 7)

Spring Semester

T 6:20-8:00, Vincent 1, Borak

Econ 64. Economics of Money and Banking. 3 credits. \$21.

Note: Students who have had Econ 3 should take 80 in the fall and 64 in the spring of this year. 64 will not be offered subsequently. See Econ 57 above for new course replacing 3 and 64.

The problems of a central bank and the theory of the value of money. Includes control of reserves, providing a scientific currency, regulation of credit, fluctuations of the general price level—their causes and possible reduction. (Prerequisite: Econ 3 and 80)

Spring Semester

Th 8:05-9:45, Vincent 207, Smith

Econ 73. Manpower Economics and Labor Problems. See Industrial Relations, page 82.

BA 74. Business Statistics. 3 credits. \$21.

Explanation and criticism of statistical techniques for dealing with time series; measurements of trend, seasonals, cycles; index numbers. Statistical control of quality on manufacturing operations. (Prerequisite: Econ 5)

Spring Semester

T 8:05-9:45, Vincent 6

Evening and Special Classes

Econ 75. Corporation Finance. 3 credits. \$21.

Incorporation. The various types of corporate securities and their uses. Financial plans for industrial, utility, and other types of corporations. Financial affairs of an established business. General financial problems of the holding company, consolidations, mergers, and reorganizations. (Prerequisite: Econ 2 or 7)

Fall Semester

M 6:20-8:00, Vincent 207, Sutton

Econ 80. Intermediate Economic Analysis: Income and Employment. 3 credits. \$21.

The determinants of national income, employment, and the price level, with particular attention to aggregate consumption and investment. (Prerequisite: Econ 2 or 7)

Fall Semester

W 6:20-8:00, Vincent 301, Coen

Econ 81. Intermediate Economic Analysis: Firms. 3 credits. \$21.

The analysis of individual decision-making by firms under conditions of monopoly, competition, and monopolistic competition. (Prerequisite: Econ 2 or 7)

Spring Semester

W 6:20-8:00, Vincent 205, Coen

Econ 85. Government Regulation of Business. 3 credits. \$21.

A general course on the economic aspects of legislation affecting the pricing process and the distribution of the national income; origins of limitations on free competition; regulation of public utilities, trusts and combinations, and "unfair competitive practices"; positive assistance to industrial groups. (Prerequisite: Econ 81 for business or economics majors, suitable background in law or political science for others, or #)

Fall Semester

W 6:20-8:00, Vincent 207, Boddy

Econ 129. Economic Issues of Today. 3 credits. \$21.

A special survey of some of the current controversies over economic policy and of the problems that lie behind the controversies. (Prerequisite: Econ 2 or 7)

Fall Semester

Th 6:20-8:00, Vincent 113, Smith

BA 146. Investments. 3 credits. \$21.

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

Spring Semester

M 6:20-8:00, Vincent 113, Sutton

BA 148. The Securities Market. 3 credits. \$21.

Consideration of behavior over time or "longitudinal" analysis of prices of individual and groups of securities. Emphasis is placed upon the relationship of economic conditions to security values, particularly the effects of cyclical fluctuation. (Prerequisite: BA 146 or #)

Fall Semester

M 8:05-9:45, Vincent 207, Sutton

Course Offerings—Business Administration

Econ 149. Business Cycles. 3 credits. (Offered 1958-59)

BA 156. Finance Management. 3 credits. \$21.

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: Econ 75 or 155)

Spring Semester

M 8:05-9:45, Vincent 207, Sutton

Econ 176. International Economics. 3 credits. \$21.

An introduction to the techniques of international economic analysis with special consideration to Minnesota's economy. The relevance of the theory to current problems; the balance of payments; the foreign exchanges; free trade versus protection; techniques of trade control; international commercial policies; contemporary international economic problems and institutions. (Prerequisite: Econ 2 or 7)

Spring Semester

Th 6:20-8:00, Vincent 207, Smith

Fundamentals of Investment Banking I. 3 Certificate credits. \$21.

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, Johnston 114, Power

Industrial Engineering

See page 102.

Industrial Management and Administration

BA 89. Production Management. 3 credits. \$21.

Location and layout of industrial plants; types of operating organization; shop personnel; standards of operation; purchasing and inventory control; routing, scheduling, and dispatching of products; scientific management; practical problems in production control. Included in core group requirement for all candidates for a degree in business. (Prerequisite: Econ 2 or 7)

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 184. Scientific Management in Industry. 3 credits. \$21.

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

Spring Semester

M 8:05-9:45, Johnston 122, Peterson

Evening and Special Classes

***Executive Development and Management Administration. 5 Certificate credits. \$35.**

A complete analysis of all techniques of management and executive development. The analysis of educational theory as applicable to industrial management. Analysis and practice of modern techniques of role playing, coaching, guided experience, etc. Use of case studies to develop and use the concepts of management by objective. Development of the management matrix and its use in analysis of industrial companies from which students are registered. Principles of managing are identified and related to student current experiences. Review of identification of objectives, programming and details of all the functions of execution. Problems of company organization, management selection, incentives and compensation are carefully reviewed. Substantial outside case preparation. (Prerequisite: BA 167 or #. Limited to 20 students)

Fall Semester

Th 6:20-9:20, Ford 75, Mold

Industrial Relations

Econ 73. Manpower Economics and Labor Problems. 3 credits. \$21.

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 Econ 161. For information, consult the Committee on Student Scholastic Standing.

Fall Semester

M 7:50-9:30, StP Ext Center 202, Mahoney

W 6:20-8:00, Vincent 2, Heneman

Spring Semester

T 8:05-9:45, Ford 180, Mahoney

Econ 164. Labor Legislation: Collective Bargaining. 3 credits. \$21.

Consideration of the social control of employer-employee-union relationships by the legislative, executive, and judicial branches of government. Analysis of economic and social impact of present public policy toward collective bargaining. (Prerequisite: Econ 73 or 161)

Fall Semester

Th 6:20-8:00, Vincent 2, Turnbull

Econ 166. Settlement of Industrial Disputes. 3 credits. \$21.

Examination and consideration of the economic impact and implications of principal methods of settling labor disputes including mediation, conciliation, fact-finding, and voluntary and compulsory arbitration. (Prerequisite: Econ 73 or 161)

Spring Semester

Th 6:20-8:00, Vincent 205, Turnbull

BA 167. Introduction to Industrial Relations. 3 credits. \$21.

Evaluation of managerial policies and devices for the control of personnel; determination of labor needs; methods of dealing with workers; selective devices; training and safety programs; compensation; collective bargaining; governmental personnel programs. (Prerequisite: Econ 73 or 161)

Spring Semester

W 6:20-8:00, Vincent 2, Heneman

BA 168. Advanced Personnel Administration. 3 credits. \$21.

Advanced analysis of industrial relations in unions and managements. Consideration of mechanisms, practices, and procedures of manpower management, policy determination

Course Offerings—Business Administration

and review; personnel records and reports; and evaluation of industrial relations programs. (Prerequisite: BA 167)

Spring Semester

W 8:05-9:45, Vincent 2, Heneman

Current Problems in Industrial Relations. 3 Certificate credits. \$21.

Lecture and discussion workshop for advanced students concerned with current problems in industrial relations. Topics for discussion are chosen from consideration of current and developing trends in industrial relations. Topics planned for 1957-58 include the impact of automation, adjustment to shorter work week, right-to-work legislation, white collar unionism, management development, etc. New techniques for use in industrial relations will also be presented and discussed. (Prerequisite: BA 167 or #)

Fall Semester

W 8:05-9:45, Vincent 2, Heneman

Supervision I: Elements of Supervision. 3 Certificate credits. \$21 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 202, Mahoney
T 6:20-8:00, Ford 50, Jerdee

Spring Semester

M 7:50-9:30, StP Ext Center 202, Jerdee
T 6:20-8:00, Ford 50, Jerdee

Supervision II: Advanced Techniques of Supervision. 3 Certificate credits. \$21.

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 6:20-8:00, Ford 50, Jerdee

Spring Semester

M 6:00-7:40, StP Ext Center 202, Jerdee
T 6:20-8:00, Ford 180, Mahoney

Supervision III: Techniques of Employee Training. 3 Certificate credits. \$21.

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 8:05-9:45, Ford 50

Economics of Collective Bargaining. 3 Certificate credits. \$21.

An analysis of the process of collective bargaining. Appraises the bargaining situation, examines the economic basis of different stands and arguments, and analyzes implications of different bargaining settlements. Consideration is also given to procedural aspects of collective bargaining. Provides a framework and method of analysis of collective bargaining in terms of economic implications. (Prerequisite: Econ 73 or 161; or ##)

Fall Semester

Th 8:05-9:45, Vincent 2, Turnbull

Evening and Special Classes

Human Relations in Industry. 3 Certificate credits. \$21.

Primary emphasis is on the characteristics of the human relations movement in industry today. Designed to answer questions concerning employee motivation, human aptitudes and their measurement, supervision and leadership, problems of plant morale and communications. Biomechanics (fitting the machine to the man) is also considered in lectures and case problems. (No prerequisite)

Spring Semester

Th 8:05-9:45, Ford 160, England

Personnel Methods. 3 Certificate credits. \$21.

A detailed analysis and evaluation of a limited number of specific technical techniques of professional personnel management—job evaluation, wage surveys, incentive systems, supervisory training, morale surveys, testing. (Prerequisite: BA 167 or #)

Fall Semester

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

Executive Development and Management Administration. See page 82.

Insurance

Econ 50. Insurance Principles. 3 credits. \$21.

An analysis of the role insurance plays in combating risk; fundamentals of personal, property, and liability insurance contracts; sales, underwriting, actuarial, investment, and claims functions of insurers; types of insurers; regulation, and social insurance. Designed primarily for the insurance consumer. (Prerequisite: Econ 2 or 7 or #. Repeated spring semester)

Fall Semester

M 8:05-9:45, Vincent 6, Williams

Spring Semester

M 8:05-9:45, Vincent 6, Williams

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 1957-58 will be Bernard C. Bengtson, Ca 4-3737)

I.I.A. Paris A, B, and C. 3 Certificate credits each semester. \$21.

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

Course Offerings—Business Administration

CPCU Part I. Insurance Principles and Practices, A-B. 3 Certificate credits each semester. \$21.

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 120, Bengtson

Spring Semester

B M 6:20-8:00, Ford 120, Bengtson

CPCU Part II. Insurance Principles and Practices, A-B. 3 Certificate credits each semester. \$21.

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: 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 120, Bengtson

Spring Semester

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

CPCU Part III. General Education, A-B. 3 Certificate credits each semester. \$21.

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 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, Strand

Spring Semester

B Th 6:20-8:00, Ford 130, Strand

CPCU Part V. Accounting and Finance A-B. 3 Certificate credits each semester. \$21.

This course is designed as a preparation for examination V for the Chartered Property and Casualty Underwriter (CPCU) award. The course covers principles of accounting, principles of business and personal finance, and business organization and agency management. (Prerequisite: acceptance of special registration application or completion of one or more parts of the CPCU program)

Fall Semester

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

Spring Semester

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

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 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—Wilbert C Green, 1110 Wesley Temple Building, Fe 2-1567

St Paul—W F Stone, 1300 Pioneer Building, Ca 2-3703

Evening and Special Classes

CLU Part I. Fundamentals of Life Insurance and Annuities, A-B. 3 Certificate credits each semester. \$21.

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 M 4:00-5:40, 430 Oak Grove, Preston

Spring Semester

B M 4:00-5:40, 430 Oak Grove, Preston

CLU Part IV. Economics and Business and Family Finance, A-B. 3 Certificate credits each semester. \$21 each semester.

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 M 4:00-5:40, NW Bank Bldg 690, Strand
A M 4:00-5:40, STP Ext Center 206,
Wheeler

Spring Semester

B M 4:00-5:40, NW Bank Bldg 690, Strand
B M 4:00-5:40, STP Ext Center 206,
Wheeler

Property and Casualty Claims Curriculum.

In co-operation with the Twin City Casualty Claims Managers Council, the General Extension Division is offering Property and Casualty Claims courses covering the investigation, adjustment, settlement, and preparation for trial of direct damage and casualty claims. The courses are intended for those actively engaged in insurance claims handling as well as attorneys and others who deal with insurance claims problems in their everyday work. The fields covered will include automobile liability and direct damage, workmen's compensation, public liability, products liability, and other lines of insurance coverage. The lecturers will include insurance company personnel, lawyers, and doctors who are outstanding in their respective fields. (Co-ordinator will be C. A. Williams, Jr., Fe 2-8158, Ext. 7073)

PCC Part II. Workmen's Compensation and Public Liability Coverages. No credit. \$21 plus \$2 materials fee.

An intensive course covering recent modifications of the Minnesota Workmen's Compensation Act; the Manufacturers' and Contractors' Policy; owners, landlords and tenant policy; elevator, contractual and independent contractors liability coverages; host and guest cases; products liability coverages; professional or malpractice liability coverages; recent Minnesota Supreme Court decisions bearing on casualty insurance.

Fall Semester

M 6:20-8:00, Ford 155, Williams, co-ordinator

Marketing and Merchandising

BA 76. Credits and Collections. 3 credits. \$21.

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

Fall Semester

Th 6:20-8:00, Vincent 6, Kerns

Course Offerings—Business Administration

Principles of Credits and Collections II. 3 Certificate credits. \$21.

This course is designed to follow BA 76 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: BA 76 or equivalent)

Spring Semester

Th 6:20-8:00, Vincent 6, Kerns

BA 77. Survey in Marketing. 3 credits. \$21.

Survey course including descriptive analysis of (a) marketing institutions and their control; (b) market areas; (c) marketing costs; (d) the operation of supply and demand in marketing. (Prerequisite: Econ 2 or 7)

Fall Semester

M 6:20-8:00, Vincent 2

Spring Semester

M 8:05-9:45, Vincent 2

BA 111. Purchasing. Will be offered 1958-59.

BA 113. Sales Management. 3 credits. \$21.

Organization and direction of sales methods and men from the sales manager's point of view; determination of selling policy; product and market research; sales planning and research; selection of distribution methods; sales campaigns and quotas; incentives and compensation for salesmen; training in salesmanship; supervision and control. Case studies and discussions. (Prerequisite: BA 77)

Fall Semester

M 6:20-8:00, Vincent 205, Lewis

Geography of Primary Production. See page 45.

GC 18A-B-C. Retailing and Selling. 5 credits each quarter (classwork, 3 credits; work experience, 2 credits). \$21 plus \$1 materials fee.

Open to full-time store employees who can arrange to attend Monday morning lectures. Instruction in the field of retailing with salesmanship receiving the greatest emphasis. Other phases of merchandising covered will enable one to perform with greater understanding at various capacities in a retail business. The student may follow specific interests through directed studies. Assigned laboratory meetings include demonstration, reports, group discussions, and observation trips into a variety of distributive businesses. Speakers from local stores, related businesses, and consumer groups provide current information and business contacts of importance. The three units should be taken in sequence but registration in any single unit may be approved by instructor. 18A: Salesmanship; personnel policies; store system; consumer credit; stock control; distributive vocations. 18B: Historical background of retailing; types of retail outlets; store organization; nonselling activities in merchandising. 18C: Selling through promotion; display, advertising, store services; trends in retailing; merchandising research, labeling, standardization; consumer education; co-ordination of retail store activities. (Prerequisite for all units: #)

Fall Quarter

A Lect M 9:30-10:20 a.m., Burton 103,
Crisp
A Lab T 6:30-10:00 p.m., Burton 103,
Crisp

Winter Quarter

B (same schedule
as fall quarter)

Spring Quarter

C (same schedule
as fall quarter)

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

Evening and Special Classes

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
Econ 24-25-26, Principles of Accounting
Business Correspondence
BA 76, 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

BA 51-52, Business Law
BA 53, Business Law

Credit Management Problems
Financial Statement Analysis
Psychology (Applied, General, or Business)

Beginning Practical Speech Making
Basic Salesmanship, or
BA 77, Survey in Marketing
No equivalent course
BA 65, 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
Supervision I
BA 86, Office Management

Techniques of Supervision
Office Management or
Personnel Management
Electives

See footnote below

Office Management

Business Data Processing by Electronics I-II. No credit. \$30 each quarter.

A two-unit course designed to introduce the programming and procedures necessary for different types of equipment. Course I is descriptive of equipment, processing and programming for limited and flexible high-speed electronic equipment. Course II, while not fully dependent on I as a prerequisite, will be a series of case studies of applications to sales, billing, inventory, payrolls, and adjustments for permanent records. This course should be of special interest to systems development personnel, statisticians, accountants, and others concerned with present and prospective planning and operation of electronic machine installations. (Prerequisite: \$. To keep the class within a reasonable enrollment of qualified students, registration will be based on prior applications available at extension offices, subject to selective approval of instructor)

Fall Quarter

I T 7:00-9:30, Johnston 113, Locks

Winter Quarter

II (same schedule as fall)

†† 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).

Course Offerings—Business Administration

Scientific Management in the Office. 3 Certificate credits. \$21.

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 86. Survey of Office Management. 3 credits. \$21.

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 or 7)

Spring Semester

T 6:20-8:00, Vincent 301, Baillie

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, 616 Third Avenue South, Minneapolis.

Fundamentals of Real Estate Practice. 3 Certificate credits. \$21.

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 Sales Brokerage. 3 Certificate credits. \$21.

A study of the basic principles and practices involved in the conduct of real estate sales from beginning to end; evaluation, listing, advertising, contracts and leases, financing and taxes, property showing, selling techniques, code of ethics. (No prerequisite)

Fall Semester

W 6:20-8:00, Ford 20, Rice, co-ordinator

Real Estate Appraisal. 3 Certificate credits. \$21.

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 Financing and Insurance. 3 Certificate credits. \$21.

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)

Spring Semester

W 6:20-8:00, Ford 20, Rice, co-ordinator

Evening and Special Classes

Real Estate Law (BA 56, Business Law). See **Business Law**, page 78.

Planning Your Modern Home. See page 48.

Building Material Estimating. See page 101.

Salesmanship

Basic Salesmanship. 3 Certificate credits. \$21.

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 170, Stanchfield
Th 6:00-7:40, StP Ext Center 203,
Stanchfield

Spring Semester

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

***Advanced Salesmanship.** 3 Certificate credits. \$21.

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: Basic Salesmanship or #. Class limited to 35 students)

Spring Semester

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

Secretarial

Refresher Course in Business Theory for Secretaries. No credit. 4 units; each unit. \$12.

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 with which a secretary should be familiar. It will consist of 24 sessions covering the following 4 units of 6 sessions each: I. Secretarial Accounting. II. Secretarial Procedures and Business English. III. Economics and Business Administration. IV. Business Law and Human Relations. The refresher course will begin October 1 and conclude about April 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 10.

T 6:20-8:50, Ford 120, Peterson and staff
Unit I, October 1 through November 5
Unit II, November 12 through December 17
Unit III, January 14 through February 18
Unit IV, February 25 through April 1

See **BA 86, Office Management**, page 89.

Textiles

Textiles. 3 General College or Certificate credits. \$21 plus \$2 materials fee.

A class for consumers and for those making or selling clothing and home furnishings. Woven and knitted fabrics of cotton, linen, wool, silk, rayon, and the new fibers; manu-

Course Offerings—Business Administration

facturing and finishing processes; qualities, tests, uses, maintenance; explanation of technical terms and of characteristics determining comparative values; application to men's, women's, and children's apparel as well as to household items such as draperies, rugs, upholstery fabrics, blankets, linens. The content of the course is somewhat flexible depending upon the needs and interests of the students enrolled (No prerequisite)

Spring Semester

W 7:00-8:40, Ford 70, Carlson

Traffic and Transportation

BA 71. Transportation I: Principles. 3 credits. \$21.

Survey and economic aspects of national transportation policy; rail, highway, air, and water transportation facilities, services, rates, regulations, and current transportation problems. (Prerequisite: Econ 2 or 7)

Fall Semester

M 6:20-8:00, Vincent 1, Nightingale

BA 129. Highway Transportation. 3 credits. \$21.

Intensive study of economic aspects of the American highway transportation system and motor transportation; national policy; the 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: BA 71)

Spring Semester

M 6:20-8:00, Vincent 2

BA 174. Transportation II: Traffic Management. 3 credits. \$21.

Principles of traffic management and their application within the individual firm. Analysis of principles relating to construction, interpretation, and application of rail, motor, water, express, and air freight classifications and tariffs. Analysis of railway freight structure. Problems relating to determination of charges on typical movements within and between major railway freight rate territories. (Prerequisite: BA 71)

Spring Semester

M 6:20-8:00, Vincent 1, Nightingale

BA 180I-181I. Senior Topics: Transportation. 3 credits each semester. \$21.

Advanced industrial and carrier traffic management. Effects of rate structures on the individual firm, including problems thereon. Analysis of important current cases and decisions affecting users of the service and carriers. (Prerequisite: BA 174)

Fall Semester

180I M 8:05-9:45, Vincent 1, Nightingale

Spring Semester

181I M 8:05-9:45, Vincent 1, Nightingale

Interstate Commerce Practice and Procedure I-II. 3 Certificate credits each semester. \$21.

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: BA 174 and BA 180I)

Fall Semester

I W 6:20-8:00, Vincent 205, Nightingale

Spring Semester

II W 6:20-8:00, Vincent 2, Nightingale

EDUCATION

Explanation of symbols used in this section:

Consent of instructor is required.

Prerequisite may be equivalent experience, with consent of instructor.

Art Education (ArEd)

- 18. Design Activities for Elementary Education.** 3 credits. \$21 plus \$2 materials fee.

Relationship between art and nature. Problems in invention, arrangement and decoration, color, lettering, posters, bulletin board displays, etc. (No prerequisite)

Fall Semester

W 6:20-8:00, TSF 259, Gayne

- 19. Functional Arts and Crafts for Elementary Education.** 3 credits. \$21 plus \$2 materials fee.

Provides a background 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

Education (Ed)

- 81. Education for Public Health Nurses.** 3 credits. \$21.

Emphasis is on principles, methods, and materials of teaching adult classes. (Prerequisite: PubH 61, 100, 133. Not open to candidates for degree in education)

Fall Quarter

M 6:00-8:30, Mayo 1250, Grout

Curriculum and Instruction (EdCI)

- 103. The Teaching of Science in the Elementary School.** 3 credits. \$21.

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, Johnston 114, Boeck

- 105. Audio-Visual Materials in Education.** 3 credits. \$21 plus \$6 laboratory fee.

Characteristics, advantages, limitations, and practical schoolroom use of visual materials of nonprojection and projection types. Practice in operation of projection machines. (No prerequisite)

Note: This course, together with EdCI 109 listed below, will be offered during the fall of 1957-58 at the Sibley Junior High School in West St. Paul and at the North St. Paul area schools. It is expected that these courses will be conducted in 2 successive 5-week sessions of late afternoon and early evening weekly meetings. The days and times for the classes in each location will be announced later; consult the St. Paul Extension Center.

interests in reading, difficulty of reading materials, principles of selection and use of books in the elementary school. Survey of current books for children. (Prerequisite: senior or teaching background)

Spring Semester

Th 6:20-8:00, Johnston 114, Odland

144. Teaching of Reading in Secondary Schools. 3 credits. \$21.

Procedures, objectives, and materials, with special consideration for teaching reading in subject-matter fields. (Prerequisite: 9 credits in education)

Spring Semester

Th 6:00-7:40, StP Ext Center 203, Kegler

Educational Psychology (EPsy)

60. Introduction to Measurement and Statistics. 3 credits. \$21.

A study of measures of central tendency, variability, and correlation as well as principles of test construction. (Prerequisite: 6 credits in psychology)

Fall Semester

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

159. Personality Development and Mental Hygiene. 3 credits. \$21.

This course purports to give the teacher a fresh way of looking at his task and at his relations with students by drawing upon modern concepts of mental health. The thesis is developed that emotional and intellectual growth in the classroom can best be fostered when the teacher understands and comes to grips with the motives and values which characterize his students. Topics treated include a description of the person in good mental health, an analysis of adjustment processes and of common sources of conflict and anxiety, psychological descriptions of the major grade-range groups in our schools and the mental health implications for dealing with them in the classroom, typical distinctions in the psychological makeup of successful and unsuccessful teachers, examination of sources of frustration in teaching and of behavior conducive to sound mental health in teaching. (Prerequisite: senior, graduate, or #)

Fall Semester

Th 6:20-8:00, Johnston 114, Borow

187. The Education of the Crippled Child. 3 credits. \$21.

Study of the characteristics and abilities of crippled children, with discussion of methods and materials for their training, and observation of teaching situations involving these groups. Personal consultation will be scheduled in addition to regular class hours. (Prerequisite: EPsy 182 or ##)

Fall Quarter

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

Evening and Special Classes

193. Principles of Psychology of Human Learning. 3 credits. \$21.

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 #)

Spring Semester

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

Nursing Education (NuEd)

62. Introduction to Personnel Work in Nursing. 3 credits. \$21.

Principles, techniques, and application of personnel point of view to nursing; psychological principles; individual differences; counseling techniques appropriate for nursing staff and faculty. Open to registered professional nurses.

Fall Quarter

T 6:00-8:30, Owre 113, Johnston

ENGINEERING AND TECHNICAL SCIENCES

Explanation of symbols used in this section:

- * Limited class. Registration must be made in person.
- † To receive credit for this course, all courses listed ahead of the dagger must be completed.
- ‡ A sequence course, which need not be taken in order. (Otherwise, hyphens separating course numbers will indicate they must be taken in sequence.)
- § Credit is not given if the equivalent course listed after the section mark has been taken for credit.
- ¶ Prerequisite may be concurrent registration with course being described.
- # Consent of instructor is required.
- ** 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.

Aeronautics

Air Pilots' Ground School

The University Extension Division operates continuously a ground school for pilots who are seeking a Private Pilot certificate or a Commercial Pilot certificate or an Instrument rating or a Flight Instructor rating. The course is open to all pilots and prospective pilots, regardless of their educational background. The full course (4 "terms") provides thorough instruction in air navigation (including the use of computers), aeronautical meteorology, flight theory, analysis of flight maneuvers, airplane structures, aircraft engines, civil air regulations, aircraft instruments, radio aids, and related subjects. Three Certificate credits are awarded for each term satisfactorily completed.

The primary objective of the course is to prepare students for the Civil Aeronautics Administration's commercial-pilot written examination, but the course also covers most of the subject matter in the CAA written examinations for the instrument rating and the flight-instructor rating. From time to time, depending upon the demand, supplementary short courses are offered for pilots who have completed the commercial-pilot ground-school course, or its equivalent, and who are preparing for the CAA written examination for the instrument rating or the flight instructor rating. Also, when there is sufficient demand, special courses are offered for pilots who are in need of a full course of instruction for the CAA written examination for the instrument rating or the flight instructor rating. Special bulletins are issued whenever such supplementary or special courses are to be offered, listing the tuition fees and other pertinent information.

The University ground school meets all requirements of, and is fully approved by, the CAA as an Approved Advanced Ground School, and offers to its students all of the privileges extended by the CAA to such approved schools. (Flight students should bear in mind that if they have completed their ground training in a CAA Approved Advanced Ground School they may take their CAA written examinations at any time, regardless of how little flight experience they have had. It is to the student's advantage to start his ground-school studies as early as possible in his training program.)

Each term lasts 5 weeks, the class meeting on Tuesday and Thursday evenings, from 7:00 p.m. to 10:00 p.m., in Aeronautical Engineering 216 on the Minneapolis Campus of the University. In addition to these scheduled meetings, there are some extra meetings, by special arrangement, for those who need special help or who are unable to attend all of the regular class meetings. The instructor is Sam R. Hamilton.

A student may enter the ground school at or near the beginning of any term; however, a student entering the ground school at the beginning of Term II is advised to confer with the instructor before enrolling, as the work in Term II is a continuation of the radio and instrument work in Term I. A student may enroll for only 1 term or for any combination of terms, according to his needs. The fee is \$21 per term, making a total of \$84 if all 4 terms are taken. Registration may be made through any of the General Extension Division offices, or through the instructor in the classroom.

The current schedule follows. For information regarding succeeding schedules, or regarding the supplementary and special courses referred to above, consult any Extension Division office or call Mr. Hamilton at Midway 8-2559.

Evening and Special Classes

Term I: Radio Aids to Navigation, Aircraft Instruments, and Civil Air Regulations. Dates: September 24, 1957, through October 24, 1957. February 11, 1958 through March 13, 1958. July 1, 1958, through July 31, 1958.

Term II: Navigation (other than Radio Navigation) and the Use of Computers. Dates: October 29, 1957, through November 28, 1957. March 18, 1958, through April 17, 1958. August 5, 1958, through September 4, 1958.

Term III: Aeronautical Meteorology. Dates: December 3, 1957, through January 2, 1958. April 22, 1958, through May 22, 1958. September 9, 1958, through October 9, 1958.

Term IV: Flight Theory, Analysis of Flight Maneuvers, and Aircraft Engine Operation. Dates: January 7, 1958, through February 6, 1958. May 27, 1958, through June 26, 1958. October 14, 1958, through November 13, 1958.

Chemistry

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

Analytical Chemistry (AnCh)

51-52.‡ Quantitative Analysis. 2 credits each semester. \$14.

Introductory lecture courses covering the general principles and theoretical foundations of quantitative analysis. 51: Gravimetric analysis. 52: Volumetric analysis. (Prerequisite: InCh 26)

Fall Semester

51 T 6:00-8:00, Chemistry 325, Herr

Spring Semester

52 T 6:00-8:00, Chemistry 325, Herr

53-54.‡ Quantitative Analysis Laboratory. 3 credits each semester. \$21.

Introductory course covering the methods of quantitative analysis. 53: Gravimetric analysis. 54: Volumetric analysis. (Prerequisite: 51 or ¶ for 53; 52 or ¶ for 54)

Fall Semester

53 Th 6:30-10:30, Chemistry 310, Herr

Spring Semester

54 Th 6:30-10:30, Chemistry 310, Herr

57. Quantitative Analysis. 4 credits. \$28.

Introductory course covering the general principles and methods of gravimetric and volumetric analysis. Typical problems are assigned and attention is given to proper laboratory practice. Primarily for premedic students. (Prerequisite: InCh 11 or 26)

Spring Semester

Lect T 8:00-10:00, Chemistry 325, Herr
Lab Th 6:30-10:30, Chemistry 310, Herr

58. Quantitative Analysis. 3 credits. \$21.

Laboratory course for chemical engineers. (Prerequisite: 51 or ¶, 52 or ¶. Repeated spring semester)

Fall Semester

Th 6:30-10:30, Chemistry 310, Herr

Spring Semester

Th 6:30-10:30, Chemistry 310, Herr

Course Offerings—Engineering and Technical Sciences

123. Advanced Analytical Chemistry. 3 credits. \$21.

Analysis of complex materials by modern methods. (Prerequisite: 51, 52, 53, 54, or #. Repeated spring semester)

Fall Semester

Lab Th 6:30-10:00, Chemistry 310, Herr
Lect Th 10:00-11:00, Chemistry 325, Herr

Spring Semester

Lab Th 6:30-10:00, Chemistry 310, Herr
Lect Th 10:00-11:00, Chemistry 325, Herr

Inorganic Chemistry (InCh)

24-25†-26. Introduction to Chemical Principles. 5 credits each semester. \$35.

The lecture material deals primarily with the basic theories of chemistry: atomic structure, kinetic theory, chemical stoichiometry, and the chemical bond, oxidation-reduction, solution theory, chemical equilibrium. Examples are drawn from all fields of chemistry. A considerable portion of the laboratory program involves qualitative analysis, including cation and anion analysis. (No prerequisite)

Fall Semester

24 Lab T 7:00-10:00, Chemistry 310, Herr
Lect Th 7:00-9:00, Chemistry 325, Herr
26 Lect T 8:00-10:00, Chemistry 325, Herr
Lab Th 7:00-10:00, Chemistry 310, Herr

Spring Semester

25 Lab T 7:00-10:00, Chemistry 310, Herr
Lect Th 7:00-9:00, Chemistry 325, Herr

Civil Engineering (CE)

Surveying I. 3 Certificate credits. \$35.

Lectures and field problems in the use of tape, transit and level, adjustment of instruments, computation and plotting of field notes, area and earthwork computations, and elements of land surveying. (Prerequisite: ITM 12 or *. ITM 12 required 1958-59)

Fall Semester

W 6:20-9:40, Main Engineering 217, Fant

Surveying II. 3 Certificate credits. \$35.

Lectures and field problems in horizontal and vertical curves, setting slope stakes for earthwork, topographic mapping by transit stadia surveys, and determination of azimuth by solar observation. (Prerequisite: Surveying I. Class meets 4 hours 1 night a week in a drafting room, with some of the class periods at arranged hours for field work)

Spring Semester

W 6:20-9:40, Main Engineering 217

Soil Engineering. 5 Certificate credits. \$35.

A course intended for students who wish to become familiar with the basic soil properties and use of soil information in highway and structural engineering. Origin and nature of soil, soil maps, properties and tests, texture, Atterberg limits, compaction, solid-volume relationships, permeability, engineering classification, frost action, thickness of flexible pavements, consolidation and shearing strength. Subject material is demonstrated by problems and by laboratory work and demonstrations. (Prerequisite: ITM 11 or †. ITM 11 required 1958-59)

Fall Semester

M 6:20-9:20, Experimental Engineering 193,
Kersten

Highways and Pavements I. 3 Certificate credits. \$21.

An elementary course relating to economics, planning, design, and construction of highways and pavements. Textbook assignments, lectures, and problems. Emphasis on

Evening and Special Classes

economics, planning, and geometric design for first semester. (Prerequisite: ITM 11 or $\bar{1}$. ITM 11 required 1958-59)

Fall Semester

T 6:20-8:00, Experimental Engineering 193,
Thomas

Highways and Pavements II. 3 Certificate credits. \$21.

Continuation of Highways and Pavements I. Textbook assignments, lectures, and problems. Emphasis on bituminous materials and mixtures. (Prerequisite: Highways and Pavements I)

Spring Semester

T 6:20-8:00, Experimental Engineering 193,
Thomas

Prestressed Concrete Design. 3 Certificate credits. \$21.

Applications to buildings, bridges, tanks, and domes will be included in the course. Subjects covered will include: materials for prestressed concrete; loss of prestress; analysis and design of sections for flexure; shear and bond stresses; allowable stresses and load factors; applications to building and bridge members; circular prestressing and its application to tanks and domes. (Prerequisite: a course in reinforced concrete or $\bar{2}$)

Fall Semester

M 7:00-8:40, Experimental Engineering 10, Graves

Refresher Course for Civil Engineers. No credit. \$25.

Designed as a review course for practicing civil engineers. Lectures and problem sessions. (Prerequisite: BCE or equivalent degree, or completion of Parts I and II of the State Board Examination)

Winter Quarter

M 7:00-9:00, Chemical Engineering 132, Civil
Engineering Staff

Drawing and Descriptive Geometry (Draw)

2. Engineering Drawing. 3 credits. \$21. (Not offered after fall semester 1957)

Continuation of Draw 1, dealing with advanced problems in shape and size descriptions. (Prerequisite: Draw 1)

Fall Semester

M 7:00-9:00, Main Engineering 18, Drawing
Department Staff
T 7:00-9:00, Main Engineering 18, Drawing
Department Staff
W 7:00-9:00, Main Engineering 18, Drawing
Department Staff
W 7:00-9:00, StP Ext Center 202, Springer

3. Descriptive Geometry. 3 credits. \$21. (Not offered after spring semester 1958)

Elementary course in the graphical solution of space problems by means of orthographic projection. (Prerequisite: Draw 2)

Fall Semester

W 7:00-9:00, Temporary North Court En-
gineering 120, Drawing Department Staff

Spring Semester

W 7:00-9:00, Temporary North Court En-
gineering 120, Drawing Department Staff

Course Offerings—Engineering and Technical Sciences

14. Engineering Graphics. 3 credits. \$21.

Engineering representation and analysis including systems of projection, co-ordinate system representation and graphic solution of space problems with mathematical correlation. Engineering geometry, shape description, techniques of sketching and pictorial construction. (Prerequisite: ITM 10, Solid Geometry, or equivalent, or ♪)

Fall Semester

M 7:00-9:00, Main Engineering 101, Drawing Department Staff
T 7:00-9:00, Main Engineering 101, Drawing Department Staff
W 7:00-9:00, Main Engineering 101, Drawing Department Staff
W 7:00-9:00, StP Ext Center 201, Springer

Spring Semester

M 7:00-9:00, Main Engineering 101, Drawing Department Staff
T 7:00-9:00, Main Engineering 101, Drawing Department Staff
W 7:00-9:00, Main Engineering 101, Drawing Department Staff
W 7:00-9:00, StP Ext Center 201, Springer

15. Engineering Graphics. 3 credits. \$21.

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: Draw 14, Engineering Graphics and ITM 11 or ♪)

Spring Semester

M 7:00-9:00, Main Engineering 18, Drawing Department Staff
T 7:00-9:00, Main Engineering 18, Drawing Department Staff
W 7:00-9:00, Main Engineering 18, Drawing Department Staff
W 7:00-9:00, StP Ext Center 202, Springer

16. Engineering Graphics. 3 credits. (Not to be offered until 1958-59)

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: Draw 15, Engineering Graphics, and ITM 12 or ♪)

21. Applied Graphics (Mechanical Engineering). 3 credits. \$21.

Further applications of graphical theory and representation and drafting techniques. Interchangeable assembly drawings, surface quality specification, standard conventions and practices involved in engineering design. Engineering applications involving surface intersections and development and bending allowance theories. (Prerequisite: Draw 16, Engineering Graphics, or equivalent)

Spring Semester

T 7:00-9:00, Temporary South Court Engineering 100

22. Applied Graphics. (Civil Engineering). 3 credits. (Offered fall semester 1958-59)

Applications to civil engineering problems. Reinforced concrete detailing. (Prerequisite: Draw 16, Engineering Graphics, MM 128 or equivalent)

23. Applied Graphics. (Civil Engineering). 3 credits. (Offered spring semester 1958-59)

Structural steel and timber detailing. (Prerequisite: Draw 16, Engineering Graphics, MM 128 or equivalent)

Architectural Drafting I-II-III-IV. 3 Certificate credits each semester. \$21.

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

Evening and Special Classes

plans. III. Pictorial presentation, perspective. IV. Calculations for beams, etc. (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

Electrical Engineering (EE)

Elements of Electric Circuits. 6 Certificate credits. \$42.

Fundamentals of direct and alternating current circuits. Network theorems. Network analysis-single phase and polyphase. Power and energy concepts. Electric and magnetic fields. (Prerequisite: ITM 12. ITM 25 required 1958-59. 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. 6 Certificate credits. \$42.

Electronic emission, conduction through vacuum and gases. Characteristics of vacuum and gas tubes. Amplifier circuits, oscillators. Applications of vacuum and gas tube devices. Transistors. (Prerequisite: Elements of Electric Circuits. Repeated spring semester)

Fall Semester

Lect T 6:20-8:00, Electrical Engineering
238
Lab Th 6:20-8:00, Electrical Engineering
238

Spring Semester

Lect T 6:20-8:00, Electrical Engineering
238
Lab Th 6:20-8:00, Electrical Engineering
238

Elements of Electric Machines and Control Systems. 6 Certificate credits. \$42.

Theory of direct and alternating current machines including transformers and magnetic amplifiers. Operating characteristics and applications. Elementary control systems. (Prerequisite: Elements of Electric Circuits)

Spring Semester

MW 6:20-8:00, Electrical Engineering 237

Electronic Devices. 6 Certificate credits. \$42.

Study of amplifiers, oscillators, rectifiers, etc. Transistors and transistor circuits, semi-conductors. (Prerequisite: Elements of Electronics)

Spring Semester

TTh 6:20-8:00, Electrical Engineering 335

Refresher Course for Electrical Engineers. No credit. \$25.

Designed as a review course for practicing electrical engineers. Lectures and problem sessions. (Prerequisite: B.E.E. or equivalent degree, or completion of Parts I and II of the State Board Examination)

Winter Quarter

Lect W 7:00-10:00, Electrical Engineering 238,
Electrical Engineering Staff

Engineering English (Engl)

***85(IT). Advanced Technical Communication. 3 credits. \$21.**

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 style; use of numbers,

Course Offerings—Engineering and Technical Sciences

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: Comp 4-5-6. Limited to 25 students)

Fall Semester

M 8:05-9:45, Main Engineering 4, Lippert
T 7:50-9:30, StP Ext Center 204, Lippert
W 8:05-9:45, Ford 180, Lippert

Spring Semester

W 8:05-9:45, Ford 180, Lippert

***86(IT). Advanced Technical Communication. 3 credits. \$21.**

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 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. \$21.

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, Ford 150

Spring Semester

II W 8:05-9:45, Ford 150

Business English. See page 77.

Other courses in **English.** See page 41.

General Engineering (GE)

70. The Slide Rule. 1 credit. \$10.50.

Theory and computation practice necessary for those who wish to use the slide rule in ordinary computations. Drills on fundamental processes. (No prerequisite)

Fall Semester

Th 6:00-7:00, Main Engineering 217, Self
Th 7:00-8:00, Main Engineering 217, Self

Building Material Estimating. 3 Certificate credits. \$21.

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

Industrial Engineering (IE)

Elements of Industrial Engineering and Management. 5 Certificate credits. \$35.

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,
Lundy

Spring Semester

W 6:20-9:20, Mechanical Engineering 18,
Lundy

Production Planning and Control. 5 Certificate credits. \$35.

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: Elements of Industrial Engineering and Management or ##)

Fall Semester

M 6:20-9:20, Mechanical Engineering 202,
Block

Manufacturing Cost Analysis. 3 Certificate credits. \$21.

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: Elements of Industrial Engineering and Management)

Fall Semester

Th 6:20-8:00, Mechanical Engineering 110,
Rudell

***Elements of Work Simplification. 5 Certificate credits. \$35.**

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: Elements of Industrial Engineering and Management or ##. Required for advanced work in industrial engineering. Class limited to 20 students)

Fall Semester

T 6:20-9:20, Mechanical Engineering 102,
Ware
Th 6:20-9:20, Mechanical Engineering 102,
Mold

Spring Semester

Th 6:20-9:20, Mechanical Engineering 102,
Mold

***Materials Handling and Packaging. 5 Certificate credits. \$35.**

Investigation of principles and analytic techniques for the development of better methods of storing, moving, positioning, and packaging materials in and between work stations and plants. (Prerequisite: Elements of Work Simplification or ##. Class limited to 25 students)

Fall Semester

W 6:20-9:20, Mechanical Engineering 110,
Lundy

***Work Measurement and Production Standards (Time Study).** 3 Certificate credits. \$21 plus \$1 laboratory fee.

Determination of time standards for repetitive work, 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: Elements of Work Simplification. 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

***Industrial Plant Layout.** 5 Certificate credits. \$35.

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

Spring Semester

M 6:20-9:20, Mechanical Engineering 102,
Lundy

Elements of Quality Control. 5 Certificate credits. \$35.

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: #)

Fall Semester

M 6:20-9:20, Mechanical Engineering 110,
McElrath

Advanced Topics in Quality Control. 5 Certificate credits. \$35.

Additional topics in industrial sampling inspection methods including discussions of classification of defects, MIL-STD-105A, variables inspection. An introduction to applications of sequential sampling for attributes and measurements. Some industrial significance tests including elementary analysis of variance. Latest developments in quality control techniques. (Prerequisite: Elements of Quality Control, or ITM 90, Elementary Engineering Statistics, or BA 74, Business Statistics, or ##)

Spring Semester

M 6:20-9:20, Mechanical Engineering 110,
McElrath

***Methods-Time Measurement (M.T.M.).** 5 Certificate credits. \$35 plus \$10 special fee.

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

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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, $\frac{1}{2}$. Class limited to 15 students)

Spring Semester

Th 6:20-9:20, Mechanical Engineering 180,
Storeygard

Industrial Safety and Health. 3 Certificate credits. \$21.

Study of mechanical, electrical, and other hazards frequently found in industrial plants, and means for eliminating hazards and educating employees on safe practices. Field and laboratory methods used in the study and control of occupational disease hazards created by toxic dusts, fumes, gases, vapors, mists, noise, and ionizing radiation. Organization and administration of safety and health programs. (No prerequisite. Qualified students may receive credit in PubH 74 on petition; consult instructor)

Fall Semester

W 6:20-8:00, Mechanical Engineering 114,
Michaelsen

Executive Development and Management Administration. See page 82.

Mathematics (ITM)

Placement Examination in High School Algebra

Admission to 11, College of Algebra and Trigonometry I, is based on satisfactory completion of ITM 9, Higher Algebra, or equivalent and satisfactory score in the Placement Examination in High School Algebra.

If you have completed ITM 9, Higher Algebra, or equivalent, register for 11, College Algebra and Trigonometry I, and take the Placement Examination in High School Algebra on one of the dates listed below. You will be advised on or before the first meeting of your class in 11, College Algebra and Trigonometry, if you must transfer to ITM 9, Higher Algebra. (ITM 9, Higher Algebra, carries a 5-credit equivalent for purposes of determining a Korean Veteran monthly educational allowance or tuition refund by the Veterans Administration)

Fall Semester

7:00 Friday, September 20, Nicholson 211
7:00 Thursday, September 26, Nicholson 211
7:00 Thursday, September 26, StP Ext Center 206

Spring Semester

7:00 Monday, February 10, Nicholson 211
7:00 Thursday, February 13, Nicholson 211
7:00 Thursday, February 13, StP Ext Center 206

Basic Mathematics. 5 Certificate credits. \$35.

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,
Serbyn

Spring Semester

MTh 6:20-7:45, Main Engineering 227,
Serbyn

Course Offerings—Engineering and Technical Sciences

Elementary Algebra A-B (Combined). Entrance credit. \$42.

Elements of algebra to quadratic equations, equivalent to 1 year of 9th grade algebra. (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 205,
Burgstahler

TTh 6:20-8:00, Main Engineering 205, Rang

Spring Semester

MW 6:20-8:00, Main Engineering 205,
Burgstahler

TTh 6:20-8:00, Main Engineering 205, Rang

Plane Geometry A-B (Combined). Entrance credit. \$42.

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

9. Higher Algebra. Entrance credit. \$35.

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,
Jorgensen

TTh 6:00-7:25, StP Ext Center 205,
Wonderly

Spring Semester

MW 6:20-7:45, Main Engineering 104,
Walczak

TTh 6:20-7:45, Main Engineering 104,
Jorgensen

TTh 6:00-7:25, StP Ext Center 205,
Wonderly

10. Solid Geometry. Entrance credit. \$21.

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

T 7:50-9:30, StP Ext Center 205, Barich
Th 6:20-8:00, Main Engineering 206, Barich

Spring Semester

T 7:50-9:30, StP Ext Center 205, Barich
Th 6:20-8:00, Main Engineering 206, Barich

Survey of Freshman Mathematics. 5 Certificate credits. \$11, 12. \$35.

A survey of college algebra, trigonometry, and part of analytic geometry. Valuable also as a refresher course over these subjects. Includes factoring, fractions, rectangular co-ordinates, graphs, linear equations, exponents, radicals, quadratic equations, variation, binomial theorem, logs, right triangles, oblique triangles, identities, trigonometric equations, complex numbers and other topics. (Prerequisite: ITM 9 or equivalent)

Fall Semester

T 6:20-9:20, Main Engineering 106, Loye

11. College Algebra and Trigonometry I. 5 credits. \$35.

Review of elementary algebra, factoring, fractions, functions, and graphs, linear equations, 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:

Evening and Special Classes

ITM 9 or equivalent and satisfactory score on placement examination in high school algebra; explained on page 104. Repeated spring semester)

Fall Semester

M 6:20-9:20, Main Engineering 106, Loye
W 6:20-9:20, Main Engineering 106, Culmer
Th 6:20-9:20, Main Engineering 203, Stenberg
Th 6:00-9:00, StP Ext Center 206, Braden

Spring Semester

M 6:20-9:20, Main Engineering 305, Scott
T 6:00-9:00, StP Ext Center 207, Wilcox
W 6:20-9:20, Main Engineering 203, Harris
Th 6:20-9:20, Main Engineering 203, Stenberg

12. College Algebra and Trigonometry II. 5 credits. \$35.

Progressions, logarithms, trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations, complex numbers. Theory of equations, permutations, combinations, probability, partial fractions, hyperbolic functions. (Prerequisite: ITM 11. Repeated spring semester)

Fall Semester

M 6:20-9:20, Main Engineering 203, Thompson
M 6:00-9:00, StP Ext Center 201, Polansky
W 6:20-9:20, Main Engineering 203, Harris

Spring Semester

M 6:20-9:20, Main Engineering 106, Loye
W 6:20-9:20, Main Engineering 106, Culmer
Th 6:00-9:00, StP Ext Center 206, Braden

13. Analytic Geometry. 5 credits. \$35.

Rectangular co-ordinate systems, locus and equations, straight line, conic sections. Transformation of co-ordinates. Polar co-ordinates, higher plane curves. Empirical equations, solid analytic geometry. (Prerequisite: ITM 11 and 12)

Fall Semester

T 6:20-9:20, Main Engineering 203, Culmer
W 6:00-9:00, StP Ext Center 205, Wilcox

Spring Semester

M 6:20-9:20, Main Engineering 203, Thompson
M 6:00-9:00, StP Ext Center 203, Polansky

Survey of Calculus. 5 Certificate credits, §ITM 24, 25. \$35.

A short terminal course in calculus similar to ITM 91, including derivative, slope, rates, maxima and minima, integration, definite integral, areas, volumes, and other applications. (Prerequisite: ITM 13 or Survey of Freshman Mathematics. Students wishing degree credit may register for ITM 91, 4 credits. Cannot be used as prerequisite for MM 26)

Spring Semester

T 6:20-9:20, Main Engineering 106, Loye

24. Calculus I: Differential. 5 credits, §ITM 91. \$35.

Limit, derivative, slope, maxima and minima, differentials, rates, radius of curvature, indeterminate forms, partial differentiation. (Prerequisite: ITM 13)

Fall Semester

T 6:20-9:20, Main Engineering 227, Fischer
F 6:00-9:00, StP Ext Center 205, Wilcox

Spring Semester

T 6:20-9:20, Main Engineering 203, Culmer

25. Calculus II: Integral. 5 credits, §ITM 91. \$35.

Integration, definite integral, geometric applications, liquid pressure, work centroids, moments of inertia, multiple integrals, infinite series, expansion of functions. (Prerequisite: ITM 24)

Fall Semester

T 6:20-9:20, Main Engineering 206, Miller

Spring Semester

T 6:20-9:20, Main Engineering 227, Fischer
F 6:00-9:00, StP Ext Center 205, Wilcox

Course Offerings—Engineering and Technical Sciences

80. Elementary Differential Equations. 3 credits. \$21.

Equations of first order, singular solutions; linear equations with constant coefficients, simultaneous equations, integration in series, numerical solutions. (Prerequisite: ITM 25)

Spring Semester

M 6:20-8:00, Main Engineering 215, Fischer

90. Elementary Engineering Statistics. 3 credits. \$21.

Probability, permutations, and combinations. Frequency distributions. Introduction to sampling significance tests, regression charts. (Prerequisite: ITM 25)

Fall Semester

W 6:20-8:00, Main Engineering 227, Johnson

Refresher Course in Mathematics, Mechanics and Materials. No credit. \$25.

A review course in mathematics, mechanics, fluid mechanics and materials for engineers. Designed especially for those planning to take parts I and II of the State Board Examination. (Prerequisite: credit in these subjects)

Winter Quarter

Th 6:20-9:20, Main Engineering 305, ITM
Mathematics Staff

151a. Calculus V: Intermediate Calculus. 3 credits, §ITM 147, 148, 149. \$21.

Limit concept, derivative, Riemann integral, numerical integration, partial differentiation, multiple integrals. (Prerequisite: ITM 25)

Fall Quarter

T 6:20-9:00, Main Engineering 215

152. Calculus VI: Advanced Calculus. 3 credits, §ITM 147, 148, 149. \$21.

Maxima and minima in several variables, vector algebra and calculus, Green's and Stokes' theorems, integrals depending upon a parameter. (Prerequisite: ITM 151a)

Winter Quarter

T 6:20-9:00, Main Engineering 215

153. Calculus VII: Advanced Calculus. 3 credits, §ITM 147, 148, 149. \$21.

Infinite series, computation with series, series with variable terms, uniform convergence, power series, Fourier series and orthogonal functions, special functions. (Prerequisite: ITM 151a)

Spring Quarter

T 6:20-9:00, Main Engineering 215

Mechanical Engineering (ME)

*Use of Mechanical Engineering Handbooks I-II. 4 Certificate credits each semester. \$28 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.

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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 prerequisites. Class limited to 28 students)

Fall Semester

I Th 7:00-9:15, Mechanical Engineering 325,
LaJoy

Spring Semester

II Th 7:00-9:15, Mechanical Engineering 325,
LaJoy

*Instrumentation and Automatic Control. 5 Certificate credits. \$35.

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 or ♯. ITM 11 required 1958. Class limited to 28 students)

Fall Semester

M 6:20-9:20, Mechanical Engineering 302, LaJoy

*Servomechanisms. 4 Certificate credits. \$28 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 7:00-9:15, Mechanical Engineering 302, LaJoy

Tool Design I-II. 5 Certificate credits each semester. \$35 plus \$1 laboratory fee each semester.

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: Basic Mathematics or equivalent or ♯. Basic Mathematics required fall 1958. Students with training or experience in machine tool work or tool making procedures should omit Part I and take Part II)

Fall Semester

I T 6:20-9:20, Mechanical Engineering 325,
Crowder

Spring Semester

II T 6:20-9:20, Mechanical Engineering 325,
Crowder

*Machine Tool Operation I-II. 5 Certificate credits each semester. \$35 plus \$3 laboratory fee each semester.

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

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to commercial standards necessary to manufacture a 14-inch all-g geared head lathe with quick change gear box. (Prerequisite: Basic Mathematics or \dagger or equivalent. Students with training or experience in machine tool work or tool making procedures should omit Part I and take Part II. Class limited to 24 students)

Fall Semester

I M 6:20-9:20, Mechanical Engineering 114,
Crowder

Spring Semester

II M 6:20-9:20, Mechanical Engineering 114,
Crowder

Press Working of Metals I-II. 3 Certificate credits each semester. \$21 plus \$1 materials fee each semester.

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. (Prerequisite: Basic Mathematics or \dagger or equivalent)

Fall Semester

I M 6:20-8:00, Mechanical Engineering 214,
Benson

Spring Semester

II M 6:20-8:00, Mechanical Engineering 214,
Benson

Residential Heating and Air Conditioning I-II. \dagger 5 Certificate credits each semester. \$35 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 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. (Prerequisite: ITM 11 or \dagger . ITM 11 required 1958)

Fall Semester

I W 6:20-9:20, Mechanical Engineering 214,
Borry

Spring Semester

II W 6:20-9:20, Mechanical Engineering 214,
Borry

Refrigeration and Air Conditioning I-II. \dagger 5 Certificate credits each semester. \$35 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 controls; properties of refrigerants; design problems involving estimating requirements and selecting equipment for various air conditioning and refrigeration applications. (Prerequisite: ITM 11 or \dagger . ITM 11 required 1958)

Fall Semester

I Th 6:20-9:20, Mechanical Engineering 208,
Threlkeld

Spring Semester

II Th 6:20-9:20, Mechanical Engineering 208,
Threlkeld

Machine Design I-II. 5 Certificate credits each semester. \$35 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

Evening and Special Classes

problems to be solved in class. Laboratory experiments will be used whenever possible. Special movies will be used. (Prerequisite: ITM 11 or ♪. ITM 11 required 1958)

Fall Semester

I T 6:20-9:20, Mechanical Engineering 308,
Larsen

Spring Semester

II T 6:20-9:20, Mechanical Engineering 308,
Larsen

Gas Turbines—Automotive and Aircraft. 3 Certificate credits. \$21 plus \$2 laboratory fee.

Basic theory of operation of gas turbines. Design and construction of units used in automobiles, aircraft, industrial, marine, and locomotive service. Characteristics of principal components; compressors, turbines, combustion chambers, regenerators, and intercoolers. Study of properties of high temperature materials used in hot section of engine. Performance of fuels and lubricants, types of fuel systems, high speed bearings and types of lubrication systems. (Prerequisite: ITM 11 or ♪. ITM 11 required 1958)

Spring Semester

Th 6:20-8:00, Mechanical Engineering 321,
Murphy

Automotive Engineering. 3 Certificate credits. \$21 plus \$2 laboratory fee.

A study of design and construction of principal parts of the vehicle; engine, transmission, chassis, suspension system, brakes, and body shell. Engine performance as governed by design of cylinder, combustion chamber, induction system, ignition system, carburetion or fuel injection system as well as performance of fuels, lubricants, and coolants. Construction and operation of automatic transmissions. Selection and characteristics of suspension systems and brakes. Styling as related to engineering design. Prerequisite: ITM 11 or ♪. ITM 11 required 1958)

Fall Semester

Th 6:20-8:00, Mechanical Engineering 321, Murphy

Kinematics and Mechanisms I-II. 3 Certificate credits each semester. \$21 each semester.

The study of the motions of mechanical linkages with respect to displacements, velocities, accelerations, and forces. Cyclic characteristics of motions of common linkages. Applications of elementary and compound mechanisms to machine design. Part II covers the theory and application of gears and gear trains. Advanced study of mechanical linkages with respect to design of speed reducers, cams, and feeder mechanism. Curve and function generators. Basic mechanical computing devices. (Prerequisite: ITM 11 or ♪)

Fall Semester

I W 6:20-8:00, Mechanical Engineering 302,
Palmer

Spring Semester

II W 6:20-8:00, Mechanical Engineering 302,
Palmer

Fundamentals of Foundry Practice. 5 Certificate credits. \$35 plus \$5 laboratory fee.

A lecture and laboratory course dealing with the molding techniques, core making, melting, and cleaning of ferrous and nonferrous castings. Engineering properties of castings, casting design, standard foundry material tests. (No prerequisite)

Fall Semester

M 6:20-9:20, Mechanical Engineering 102, Holtby

Beginning Plastics. 4 Certificate credits. \$28 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 114,
Holtby

Spring Semester

Th 6:20-9:00, Mechanical Engineering 114,
Holtby

Course Offerings—Engineering and Technical Sciences

Refresher Course for Mechanical Engineers. No credit. \$25.

Designed as a review course for practicing mechanical engineers. Lectures and problem sessions. (Prerequisite: B.M.E. or equivalent degree, or completion of Parts I and II of the State Board Examination)

Winter Quarter

W 7:00-9:00, Mechanical Engineering 106,
Mechanical Engineering Staff

Mechanics and Materials (MM)

26. Engineering Statics. 5 credits. \$35.

Resolution of force systems, equilibrium of rigid bodies, and analysis of framed structures. Centroids. Graphical methods. Friction. Virtual work. Moments of inertia. Prerequisite: ITM 25. Repeated spring semester)

Fall Semester

Th 6:20-9:20, Main Engineering 215,
Fischer

Spring Semester

T 6:20-9:20, Main Engineering 206,
Doeringsfeld

127. Engineering Dynamics. 5 credits. \$35.

Kinematics of structural elements. Dynamics of particles and of rigid-bodies. Work and energy. Impulse and momentum. Introduction to mechanical vibrations. (Prerequisite: MM 26. Repeated spring semester)

Fall Semester

Th 6:20-9:20, Main Engineering 106,
Doeringsfeld

Spring Semester

Th 6:20-9:20, Main Engineering 215,
Fischer

128. Engineering Solid Mechanics. 5 credits. \$35.

Introduction to static strength properties of structural materials. Stress and strain. Applications to tension and torsion members, beams, columns, and joints. Design considerations. Statically indeterminate members. State of stress at a point, combined stress, and Mohr's circles. (Prerequisite: MM 26)

Fall Semester

M 6:20-9:20, Main Engineering 215, Fischer

Metallurgical Engineering (MetE)

Physical Metallurgy I-II. 3 Certificate credits each semester. \$21 each semester.

An introductory course for those engaged in heat treating, metal working, specification writing, inspection, buying, or selling of metal products. The structure of metals and alloys and the effect of working and heat treatment on structure and properties; steels, cast irons, surface hardening. Spring semester: hardenability and weldability; alloy, stainless and tool steels; aluminum and other nonferrous alloys. (No prerequisite. I must precede II, or ##. Lecture course only. No laboratory work involved)

Fall Semester

I T 6:20-8:00, Appleby 109, Jerabek

Spring Semester

II T 6:20-8:00, Appleby 109, Jerabek

Physics (Phys)

11-12-13. General Physics for Engineers. 5 credits each unit. \$35 each unit plus \$5 laboratory fee for 12 and 13.

11: Mechanics; lecture, discussion groups, 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: ITM 11 or 5 for Phys 11; ITM 12 for Phys 12; ITM 13 for Phys 13)

Fall Semester

11 MW 7:00-9:00, Physics 145, Wertz
12 MW 7:00-9:00, Physics 166, Harris

Spring Semester

12 MW 7:00-9:00, Physics 145, Wertz
13 MW 7:00-9:00, Physics 166, Harris

101A-103A-105A.‡ Theoretical Physics. 3 credits each quarter. \$42 each quarter.

Note: This sequence of courses comprises the final offering under the former Graduate Extension Program in Engineering which is being discontinued this fall. Students who have been officially admitted to the program during previous years may complete the 18 credits allowable in extension under the program through registration in any of these units not already taken; other students may enroll if they have the necessary prerequisites but they will be subject to the regular restrictions on transfer to the Graduate School of credits earned through extension classes. See Credits—Graduate, page 17.

An analytical survey of fundamental principles of mechanics, thermodynamics, kinetic theory of gases, electricity, and magnetism, designed to supplement the general course and to prepare students for more specialized graduate courses. (Prerequisite: Phys 9 or 51, differential equations or ‡)

Fall Quarter

101A T 7:00-9:30, Physics 145,
Verbrugge

Winter Quarter

103A (same schedule
as fall)

Spring Quarter

105A (same schedule
as fall)

RECREATION

Explanation of symbol used in this section:

* Limited class. Registration must be made in person.

Note that the recreational activities are offered in three groups: for children only, for women only and for men only. Unless otherwise designated, all classes meet for one 45-minute session per week, carry no credit, and require no pre-requisite. 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.

Activities Open to Children

*Swimming for Small Girls. \$13 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. \$13 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, Mueller

Activities Open Only to Women

Exercise for Conditioning and Fitness—for Women. \$13 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

Evening and Special Classes

with individual help to those who have special needs and problems in muscle toning and relaxation.

Fall Semester

T 5:30-6:15, Norris Gym 153, Reiter
T 6:15-7:00, Norris Gym 153, Reiter

***Golf (Beginning)—for Women. \$13 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, an indoor practice ball, and one golf ball. (Each section limited to 20 students. Repeated spring semester)

Fall Semester

T 5:30-6:15, Norris Gym 60, Lampe

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 (Advanced Beginning)—for Women. \$13 plus \$2 special fee.**

For those who have had some experience. Review and improvement of strokes. Motion pictures and slides.

Fall Semester

T 6:15-7:00, Norris Gym 60, Lampe

***Golf (Intermediate)—for Women. \$13 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. \$13 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, Larson
T 6:50-7:35, Norris Gym 51, Tinker

Spring Semester

T 5:30-6:15, Norris Gym 51, Tinker
T 6:15-7:00, Norris Gym 51, Larson
W 5:30-6:15, Norris Gym 51, Larson

***Swimming (Advanced Beginning)—for Women. \$13 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 7:00-7:45, Norris Gym 51, Tinker
T 7:00-7:45, Norris Gym 58, Larson
W 6:15-7:00, Norris Gym 51, Larson

Course Offerings—Recreation

***Swimming (Intermediate and Advanced)—for Women. \$13 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 58, Larson

Spring Semester

T 6:15-7:00, Norris Gym 58, Tinker

W 7:00-7:45, Norris Gym 58, Larson

Tennis (Beginning)—for Women. \$13 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; working with tennis robot. 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, Reiter

W 6:15-7:00, Norris Gym 151, Reiter

Activities Open Only to Men

Golf—for Men. \$13 plus \$2 special fee.

The fundamentals of golf. Motion pictures or stereopticon slides show proper form of stroke. Eight to ten meetings for pictures, lectures, etc., will be held on Monday nights beginning February 17. Lessons or appointments with competent golf instructors in the golf gymnasium will be scheduled for Tuesday or Wednesday evenings, February 18 to April 1. 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.

Spring Semester

M 7:00-7:45, Physics 155, Bolstad and staff

Swimming—for Men. \$13 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

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.

Frank Agar, Jr., Lecturer in Photography
Margaret M. Aldrich, B.S., Lecturer, School of Nursing
James Aliferis, Ph.D., Professor of Music
Harold B. Allen, Ph.D., Associate Professor of English
Robert J. Ames, Ph.D., Assistant Professor, Interdisciplinary Studies
Harold F. Arneman, Ph.D., Associate Professor of Soils
Thomas S. Arntsen, B.M.E., Lecturer in Industrial Engineering
Woodrow J. Aunan, Ph.D., Assistant Professor of Animal Husbandry
Leonard T. Baillie, M.A., Lecturer in Office Management
Steve S. Barich, M.A., Assistant Professor of Drawing
Robert Bassham, M.A., Instructor in Child Welfare
W. Donald Beatty, Ph.D., Associate Professor of History
Bernard C. Bengtson, B.A., Lecturer in Insurance
Harland Benson, Instructor in Mechanical Engineering
Philip A. Benson, B.A., Teaching Assistant in Speech
Marthe Blinoff, Associate Professor of Romance Languages
Stanley M. Block, Ph.D., Assistant Professor of Mechanical Engineering
Eugene Bluestein, M.A., Instructor in English
Morgan Blum, M.A., Assistant Professor, Interdisciplinary Studies
Francis M. Boddy, Ph.D., Professor of Economics
Clarence H. Boeck, Ph.D., Associate Professor of Education
Lester H. Bolstad, B.A., Assistant Professor of Physical Education and Athletics
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 R. Borchert, Ph.D., Professor and Chairman, Geography Department
Henry Borow, Ph.D., Professor of Education
John Bowditch, Ph.D., Associate Professor of History
Emmert M. Brackney, Ph.D., Professor of Romance Languages
Charles M. Braden, M.S., Assistant Professor of Mathematics
Byron Bradley, Lecturer in Art
Walter J. Breckenridge, Ph.D., Director, Museum of Natural History
David N. Brown, B.A., Teaching Assistant, Interdisciplinary Studies
James I. Brown, Ph.D., Professor of Rhetoric
Paul W. Bullen, B.S.C.E., Assistant Professor of Drawing
Sylvan Burgstahler, M.S., Instructor in Mathematics
George S. Bush, M.A., Instructor in Journalism
Donald G. Cain, B.A., Production Manager, Audio-Visual Education Service
Ann P. Callahan, M.A., Assistant Professor, Library School
Dean Carlson, B.B.A., Lecturer in Accounting
Mary E. Carlson, M.A., Assistant Professor of Home Economics
Paul A. Cartwright, M.S., Assistant Professor of Electrical Engineering
Paul H. Cashman, Ph.D., Assistant Professor of Rhetoric
Clarke A. Chambers, Ph.D., Associate Professor of History
Asher N. Christensen, B.A., Professor of Political Science
Charles H. Clay, LL.B., Lecturer in Business Law
Elsie M. Clubb, M.A., Lecturer in Speech Correction
Edward Coen, Ph.D., Associate Professor of Economics
John Q. Cook, Ph.D., Instructor in History
Urban Couch, Lecturer in Art

J. Orville Creviere, Lecturer in Accounting
Evelyn D. Crisp, M.A., Assistant Professor of Retailing
William J. A. Culmer, M.A., Instructor in Mathematics
James A. Cuneo, Ph.D., Associate Professor of Romance Languages
Edward J. Cushing, B.A., Teaching Assistant in Geology
Dennis D. Daly, LL.B., Lecturer in Accounting
Donald G. Davenport, B.A., Instructor in Psychology
Lyle H. Day, M.A., Instructor in Accounting
Frances K. del Plaine, M.A., Assistant Professor of English
Harry A. Doeringsfeld, C.E., Professor of Mechanics and Materials
Cyril Dolan, Lecturer in Accounting
Alan Donagan, Ph.B., Associate Professor and Chairman, Philosophy Department
Barbara L. Donagan, B.A., Teaching Assistant in English
Ernestine C. Donaldson, M.A., Associate Professor of Secretarial Training
John D. Donker, Ph.D., Associate Professor of Dairy Husbandry
Gordon Duckworth, M.A., Assistant Professor of Music
Marvin D. Dunnette, Ph.D., Assistant Professor of Psychology
Lorenz Eitner, Ph.D., Associate Professor of Art
Rodney E. Engelen, M.A., Lecturer in Public Administration
George W. England, Ph.D., Research Associate in Psychology
Austin Erickson, Lecturer in Art
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
Paul Fetler, Ph.D., Assistant Professor of Music
William Fletcher, Ph.D., Associate Professor of Speech
Rodolfo O. Floripe, Ph.D., Associate Professor of Romance Languages
Roy G. Francis, Ph.D., Associate Professor of Sociology
Clifton Gayne, Jr., Ph.D., Professor of Art Education
Douglas Gibson, M.A., Lecturer in Accounting
H. Robert Giles, M.A., Associate Professor of Physical Education
Benjamin Gingold, B.Arch., Lecturer in Architecture
Eugene Golling, Ph.D., Assistant Professor of Child Welfare
Margaret F. Grainger, M.A., Assistant Professor of Nursing Education
Paul Granlund, Lecturer in Art
Mark Graubard, Ph.D., Associate Professor, Interdisciplinary Studies
Walter T. Graves, Ph.D., Associate Professor of Civil Engineering
Wilbert C. Green, C.L.U., Lecturer in Insurance
Raymond L. Grismer, Ph.D., Professor of Romance Languages
Ruth E. Grout, Ph.D., Professor of Public Health
Alrik Gustafson, Ph.D., Professor and Chairman, Scandinavian Department
Robert B. Gunderson, B.B.A., Lecturer in Industrial Engineering
Clifford I. Haga, B.A., Assistant Professor of English
Arne Halonen, M.A., Lecturer in Scandinavian
Adriana M. Haigh, Lecturer in Romance Languages
Sam R. Hamilton, B.E.E., M.A., Aeronautical Ground Instructor
Maurine Hansen, M.A., Instructor, Interdisciplinary Studies
J. Merle Harris, M.A., Assistant Professor of Physics
William A. Harris, M.S., Instructor in Mathematics
Keith Havens, Lecturer in Art
Keith R. Heller, M.B.A., Instructor in Accounting
Herbert G. Heneman, Jr., Ph.D., Professor of Economics and Assistant Director, Industrial Relations Center
Wesley N. Herr, Ph.D., Associate Professor of Chemistry
Cyril Hoyt, Ph.D., Associate Professor of Education
Thomas B. Irving, Ph.D., Associate Professor of Romance Languages
Paul S. Ivory, Ed.D., Associate Professor of Music
John Jackson, M.S., Civil Service Commissioner, State of Minnesota
Robert K. Jaedicke, Ph.D., Assistant Professor of Accounting
Henry S. Jerabek, Ph.D., Associate Professor of Metallurgy
Thomas Jerdee, M.A., Research Fellow, Industrial Relations Center
Donald N. Jobs, B.A., Teaching Assistant in English
Alfred E. Johnson, B.S., Lecturer in Drawing
Arthur L. Johnson, Ph.D., Associate Professor of Sociology
Wallace T. Johnson, B.B.A., C.P.A., Lecturer in Accounting
Whitney L. Johnson, B.S., Instructor in Mathematics
Ruth V. Johnston, Ph.D., Associate Professor of Nursing
Tom B. Jones, Ph.D., Professor of History
Robert M. Jordan, Ph.D., Assistant Professor of Animal Husbandry

Evening and Special Classes

Roy A. Jorgensen, Jr., M.S., Instructor in Mathematics
Butrus Kavar, M.A., Lecturer in Economics
Stanley B. Kegler, Ph.D., Instructor in Education
Theodore Kellogg, Ph.D., Assistant Professor of Education
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Miles S. Kersten, Ph.D., Professor of Civil Engineering
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Paul Kramer, Lecturer in Art
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Alixandria MacKenzie, Lecturer in Art
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Peter Mousolite, Ph.D., Lecturer in Romance Languages
Clarence E. Mueller, Assistant Professor of Physical Education
Marion John Nelson, M.A., Instructor in Scandinavian
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Gene Newhall, B.A., Lecturer in Journalism
June Newhouse, Lecturer in Art
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David W. Noble, Ph.D., Assistant Professor of History
Paul Oberg, Ph.D., Professor of Music
Norine R. Odland, Ph.D., Instructor in Education
Robert O'Hara, M.A., Instructor, Interdisciplinary Studies
Paul Olsen, Lecturer in Art
Maurice Ostrander, M.Ed., Associate Professor of Physical Education
Lewis G. Palmer, M.A., Assistant Professor of Drawing

Neville P. Pearson, M.A., Instructor in Education
 Livia Pellegrini, M.S., Instructor in Romance Languages
 Elvin L. Peterson, B.B.A., Lecturer in Industrial Management
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 Karl H. Potter, Ph.D., Assistant Professor of Philosophy
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 George Power, B.A., Lecturer in Economics and Finance
 Robert Preston, B.A., Lecturer in Insurance
 Alvin E. Prottengeier, M.A., Assistant Professor of German
 Birney Quick, Lecturer in Art
 Francis V. Raab, Ph.D., Assistant Professor of Philosophy
 Edward R. Rang, M.S., Instructor in Mathematics
 Leonard A. Rapoport, LL.B., C.A.P., Lecturer in Accounting
 David Ratner, Lecturer in Art
 Priscilla S. Reining, M.S., Lecturer in Anthropology
 Mary Jo Reiter, M.A., Instructor in Physical Education
 Bernard G. Rice, B.A., Lecturer in Real Estate
 Mary L. Rice, Ph.D., Instructor in English
 Frances R. Riecken, B.S., Lecturer in Speech Therapy
 Johannes Riedel, Ph.D., Associate Professor of Music
 Joseph Robertson, M.A., Lecturer in Political Science
 Josephine L. Rollins, M.A., Associate Professor of Art
 Allan L. Rudell, B.B.A., Lecturer in Industrial Engineering
 Dorothy Rundorff, M.A., Instructor in Romance Languages
 Louis T. Safer, M.A., Associate Professor of Art
 Aksel Schiotz, M.A., Assistant Professor of Music
 Mary B. Schneider, M.A., Instructor in English
 Leonard Schneiderman, M.A., Lecturer in Social Work
 Wilko B. Schoenbohm, M.A., Lecturer in Education
 Leonard M. Schuman, M.D., Associate Professor of Public Health
 Burton D. Scott, M.S., Instructor in Mathematics
 Morris W. Self, M.S.C.E., Lecturer, General Engineering
 William D. Serbyn, M.S., Instructor in Mathematics
 Paul J. Seymour, M.A., Instructor in Rhetoric
 George L. Shapiro, M.A., Instructor in Speech
 Solomon Shapiro, M.A., Lecturer in Social Work
 Dorothy L. Sheldon, M.A., Assistant Professor of Literature and Writing
 Raymond H. Shove, M.A., Associate Professor, Library School
 Wesley Simonton, M.A., Assistant Professor, Library School
 Robert E. Sloan, Ph.D., Assistant Professor of Geology
 Donald K. Smith, Ph.D., Associate Professor of Speech
 Harlan Smith, Ph.D., Associate Professor of Economics
 Daniel Soderlind, Lecturer in Art
 Richard D. Springer, B.C.E., Associate Professor of Mechanical Engineering
 Steele S. Stanchfield, B.A., Lecturer in Salesmanship
 Lee D. Stauffer, M.P.H., Sanitarian and Instructor in Public Health
 Warren B. Stenberg, Ph.D., Assistant Professor of Mathematics
 Ruth E. Stief, M.P.H., Lecturer in Public Health
 Donald Stieper, Ph.D., Lecturer in Psychology
 William A. Stockdale, M.A., Assistant Professor of Literature and Writing
 Gregory P. Stone, M.A., Instructor in Sociology
 Murray S. Stopol, Ph.D., Lecturer in Psychology
 Normann Storeygard, B.S.I.E., Lecturer in Industrial Engineering
 John M. Sullivan, M.A., Assistant Professor of Romance Languages
 Ben B. Sutton, Ph.D., Professor of Economics and Finance
 Marvin J. Taves, Ph.D., Associate Professor of Sociology
 D. Burnham Terrell, Ph.D., Assistant Professor of Philosophy
 Frederick W. Thomas, LL.B., Lecturer in Business Law
 Theodor W. Thomas, M.S.C.E., Associate Professor of Civil Engineering
 James E. Thompson, Ph.D., Assistant Professor of Mathematics
 Stewart C. Thomson, M.S., Professor and Associate Director, School of Public Health
 Ross L. Thorfinnson, LL.B., Lecturer in Business Law
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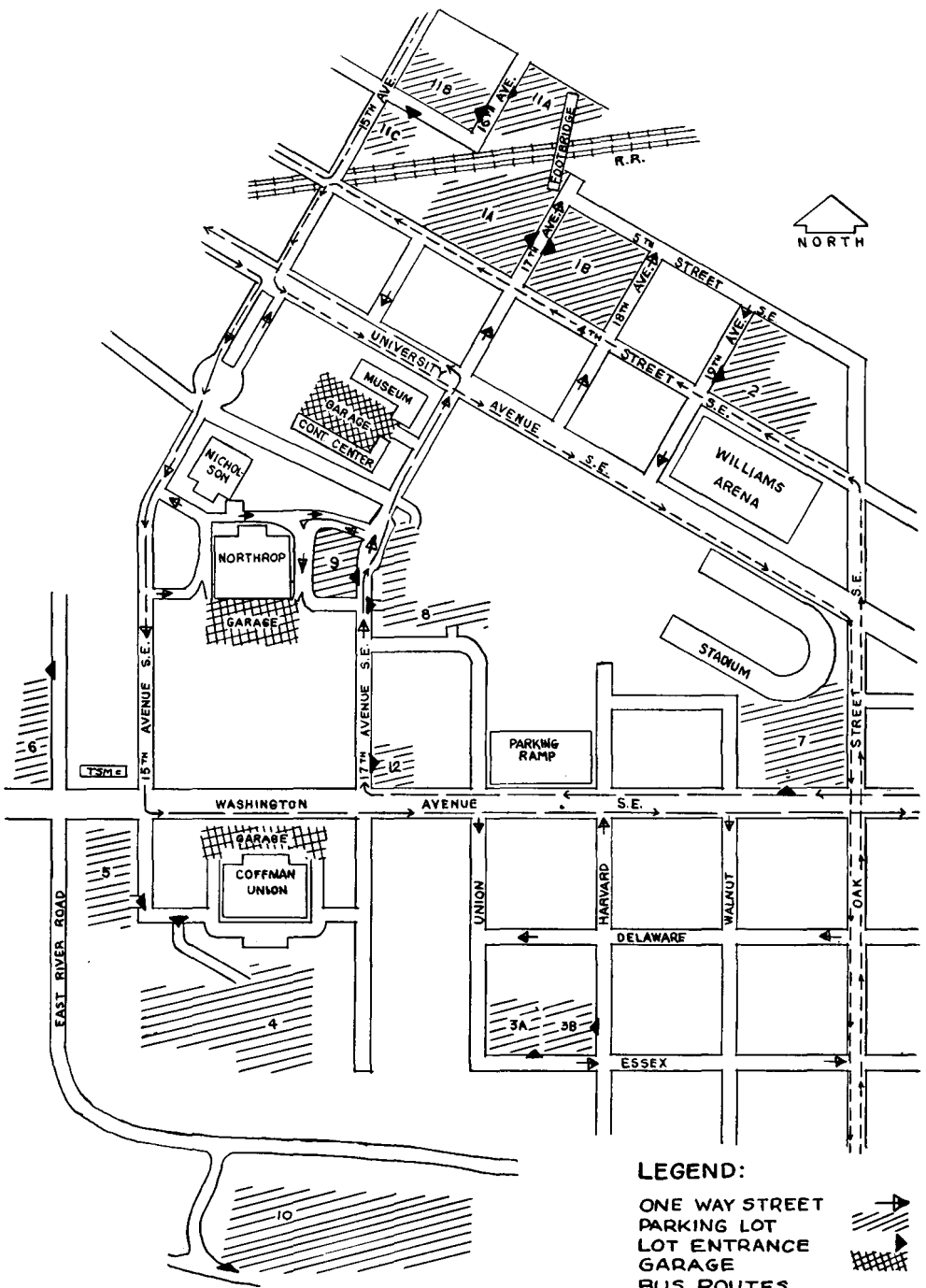
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






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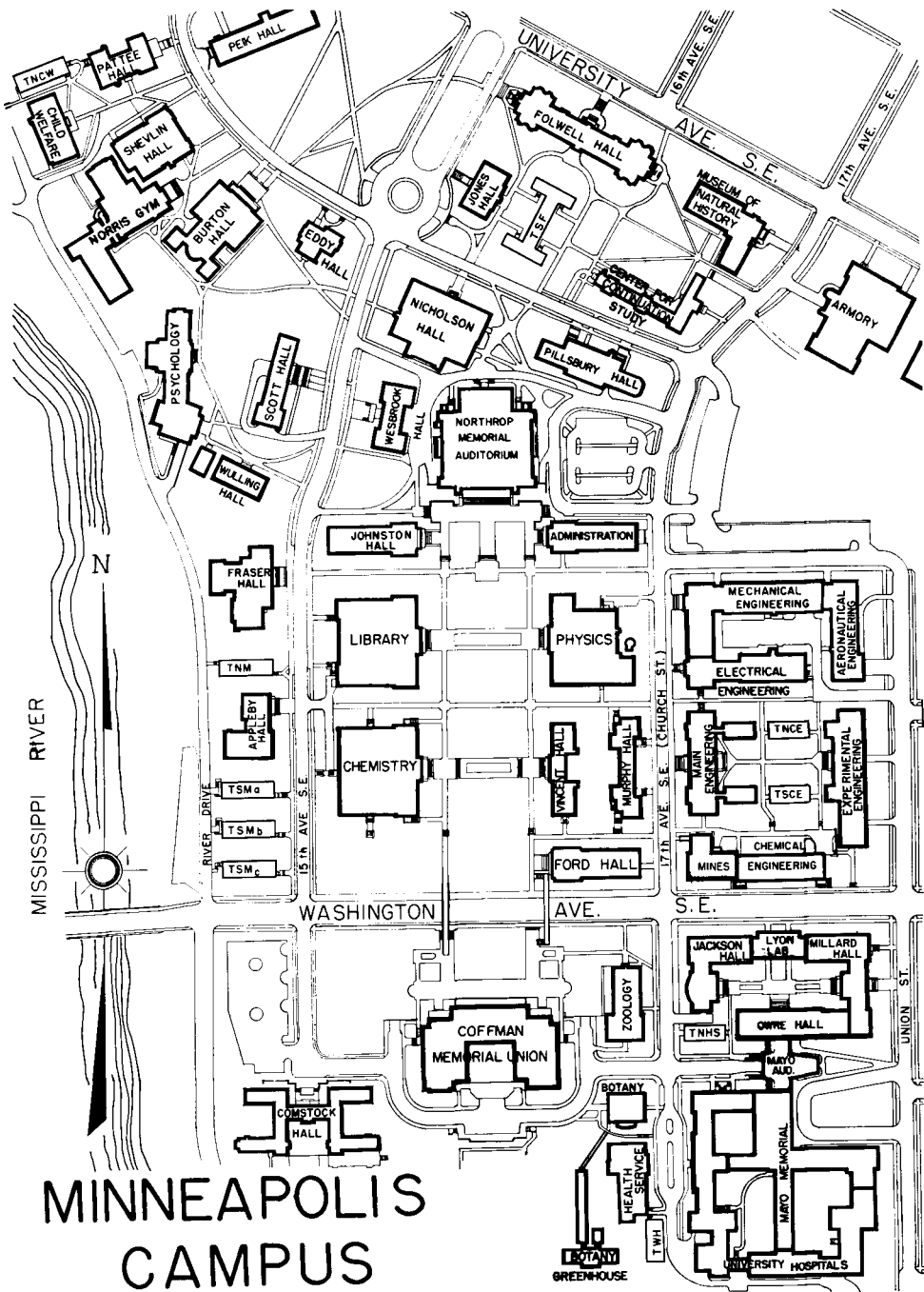
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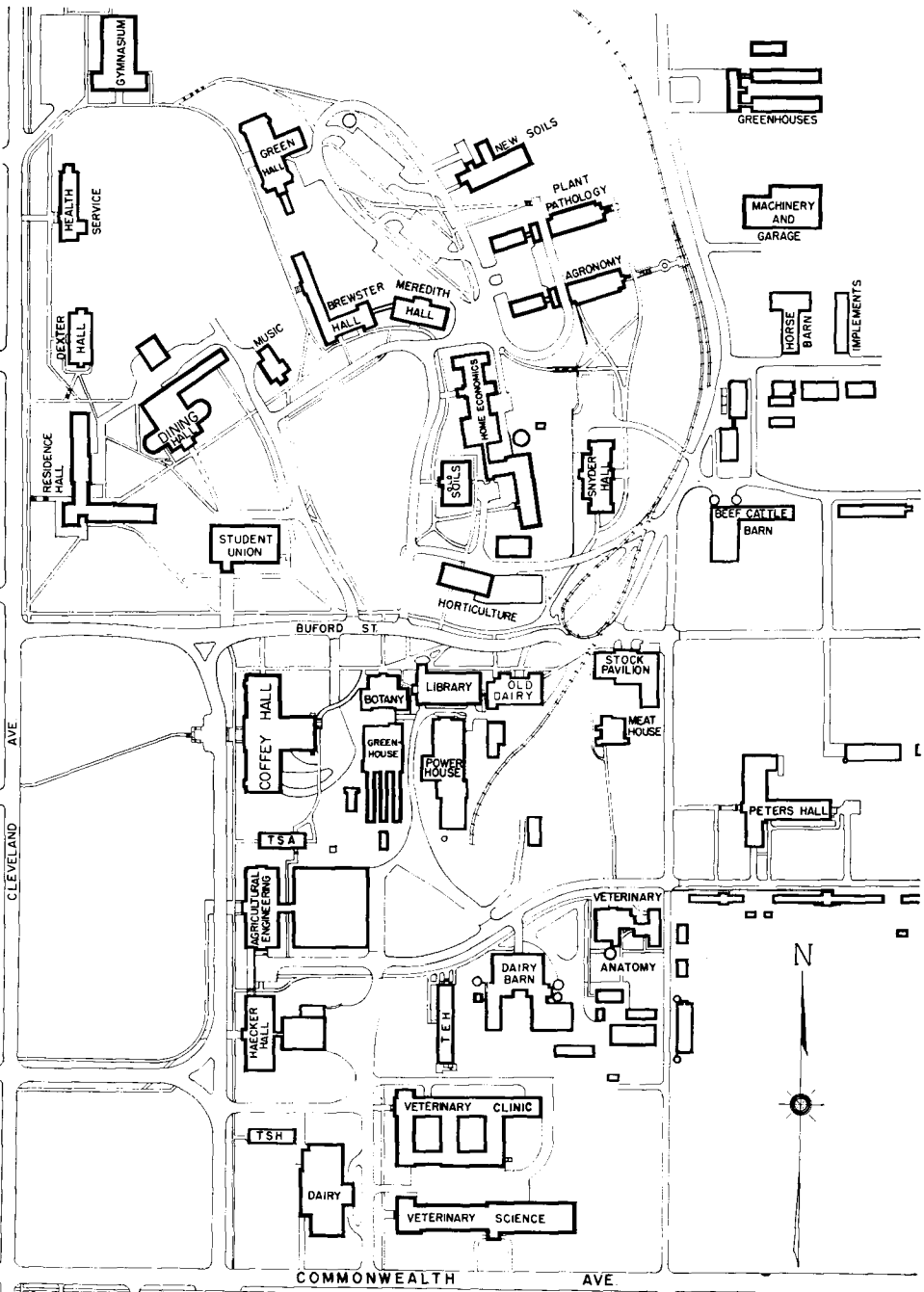
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- ONE WAY STREET 
- PARKING LOT 
- LOT ENTRANCE 
- GARAGE 
- BUS ROUTES
- MINNEAPOLIS - ST. PAUL 
- FRANKLIN - NORTH LYNDALE 
- COMO - XERXES - FRANCE 

PARKING AND BUS ROUTES



MINNEAPOLIS CAMPUS



ST. PAUL CAMPUS

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