

The Bulletin of the
UNIVERSITY of MINNESOTA

Learn for Living



EXTENSION CLASSES

1945-46

CALENDAR

1945		
September	17 Monday	Fall semester registration begins
October	1 Monday	Classes begin
October	6 Saturday	Last day for registration without extra fee
December	21 Friday	Christmas recess begins
1946		
January	7 Monday	Classes resumed
January	28 Monday	Spring semester registration begins
February 4-9		Fall semester examinations
February	8 Friday	Fall semester closes
February	11 Monday	Spring semester classes begin
February	16 Saturday	Last day for registration without extra fee
June 3-7		Spring semester examinations
June	7 Friday	Spring semester closes
June	9 Sunday	Baccalaureate service
June	14 Friday	Commencement exercises

WHERE TO REGISTER

Minneapolis: (Campus)	402 Administration Building, University of Minnesota Main 8177, Julius M. Nolte, Director
Minneapolis: (Downtown)	690 Northwestern Bank Building, Marquette Ave. and Sixth St. South, Main 0624, W. H. Livers, Resident Manager
St. Paul:	500 Robert St., Extension Center, Cedar 6175, C. H. Dow, Resident Manager
Duluth:	504 Alworth Building, Melrose 7900, W. H. Livers, Resi- dent Manager

The Administration Building on the University campus may be reached by going one block north on Church Street from the Minneapolis-St. Paul car line, or two blocks south on 17th Avenue S.E., from the Oak-Harriet car line.

OFFICE HOURS

From September 24 to October 6, and from February 4 to February 16, 8:30 a.m. to 8:30 p.m., including Saturdays.

At other times, 8:30 a.m. to 5:00 p.m.; Saturday to 12:00 noon.

From September 17 to March 1 the campus office will be open from 8:30 a.m. to 8:30 p.m., except on Saturday.

REGISTRATION TIME

All registrations should be made and fees paid before the first week of each semester. Registrations made later than Saturday, October 6, for the fall semester, and Saturday, February 16, for the spring semester, are subject to a late registration fee.

Volume XLVIII

Number 33

September 5, 1945

Entered at the post office in Minneapolis as semimonthly second-class matter, Minneapolis, Minnesota. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 12, 1918.

The cover picture is by Harriet Heenan Witesman, instructor in extension classes in photography.

HOW TO STUDY INSTITUTE

The General Extension Division invites registered students and those who are about to register to attend without charge an institute on how to study expertly. Edward S. Bordin of the Student Counseling Bureau will be in charge of the institute. Meetings will be an hour and forty minutes in length, the first half for lectures by the instructor and the second for questions and discussion designed to clear up difficulties. The lectures will cover the following topics:

1. **Adult Learning**—A brief survey of the relation between age and learning. The importance of proper motivation and effective incentives.

2. **Basic Forms of Skill**—Importance of reading and vocabulary. Problems of concentration. Need for equating ambitions and abilities. Suggestions for fostering these forms of skill.

3. **Techniques of Study**—The assignment. Self-recitation. Outlines. Taking lecture notes. Preparing for examinations. Spaced study versus cramming. Practical applications of mental hygiene for Extension students.

Dates: September 24, 26, 28

Evenings: Monday, Wednesday, Friday

Hour: 7:00 to 8:40 p.m.

Place: Auditorium of Museum of Natural History

SUGGESTIONS FOR 1945-46

There's a new world in the making! These classes will help you do your share of the job.

	Page
Air Conditioning	44
Air Pilot's Ground School	40
Art Movements of Scandinavia	9
Building the World We Want (a film series)	25
Chinese (p. 12), French (p. 14), German (p. 16), Norwegian (p. 29), Portuguese (p. 26), Russian (p. 29), Spanish (p. 31), Swedish (p. 30)	
Community Health Education Programs	17
Contemporary Political Philosophies	23
Contemporary Russian Civilization	29
Ethics	21
Europe in the Twentieth Century	17
Exercise and Games for Physical Fitness	27
Fundamentals of Electrical Engineering	41
Geography of Asia	15
Government in Latin America	26
Home, School, and Family Relations	12
Humanities in the Modern World	14
Humanities in the United States	14
Intercultural Education	13
Labor Problems	38
Latin-American Culture	31
Major Governments of Europe	23
Modern Physics	22
New Developments in Postwar Living (a film series)	25
Our World and Our Times (a lecture series)	24
Philosophies of Social Reform	21
Planning Your Postwar Home	18
Plastics	45
Problems of Democracy	23
Problems of Postwar Reconstruction	23
Recent Social Legislation	23
Scandinavian Contributions to Civilization	30
Teaching of Science in the Elementary School	12
World Politics	23
Your Health	16

INFORMATION

Am I Eligible To Take These Classes?

The University's Extension classes are open to everyone who can handle them successfully. If you are in doubt, you are welcome to visit, without charge, the first meeting (but **only** the first meeting) of the class you are interested in and talk with the instructor.

How Much Do They Cost?

Most classes cost \$10 per semester. A few cost more or less than this amount, and some involve a small materials or laboratory fee. The fee for each class is designated in the description of the class further on in this bulletin. Checks should be drawn for the exact amount due, payable to the University of Minnesota.

When Do Classes Begin and How Long Do They Last?

Fall semester classes begin the week of October 1, 1945; spring semester classes, the week of February 11, 1946. Most classes start at 6:20 p.m. or 8:05 p.m., last an hour and forty minutes, and have seventeen weekly meetings. Variations are noted in class descriptions. Extension classes meet on **holidays** unless instructors and students agree otherwise.

Where Do Classes Meet?

At the University, or in downtown Minneapolis (690 Northwestern Bank Building) or in downtown St. Paul (500 Robert Street); see class descriptions. The map on the back cover shows location of buildings on the Main campus of the University.

Who Are the Instructors?

For the most part they are drawn from the university faculties; others are chosen from local professions and businesses because of special knowledge or experience. Instructors named in this bulletin will ordinarily teach as scheduled, but wartime conditions may interfere with these assignments.

How Do I Register for Extension Classes?

Simply fill out the registration form and pay the fee indicated in the description of the class you want.

Registration dates, offices, and office hours are indicated inside the front cover of this bulletin; registration may also be made **by mail**. Please note that **late registrations** are subject to penalty: \$1 per class for those which are one week late, \$2 per class for those two weeks late. After the third week of a semester, registration for credit may be made only with the approval of the Students' Work Committee.

A student who does not want to do all the required work of a class may register as **auditor** by writing "Aud." in the credit column of the registration form, or by asking his instructor, any time before the final examination, to record him as an auditor. Auditor's status carries no credit. Auditors pay the same fee as other students.

Transfers from one class to another may be made without charge by application to the main office of the General Extension Division.

Refunds of tuition fees are available on a pro-rata basis to students who cancel their registrations, provided the student requesting the refund has not attended more than half the meetings of the class. Application for refund should be in writing, accompanied by fee receipt, and submitted before the end of the semester during which registration was made.

EXTENSION CLASSES

To help you with your registration, here is a **sample class description**, with explanatory comment:

B.A.152-153† Cost Accounting. 3 credits each semester. \$10.

Principles used to determine the profitableness of each branch of manufacturing, and basis for judging the relative efficiencies of operation; materials, labor and burden; continuous process and production order costs; burden distribution methods, standard costs, etc. Prerequisite: Econ. 25L or equivalent.

Fall Semester

152 W 8:05 St. P. Ext. Center 216,
Tuttle

Spring Semester

153 W 8:05 St. P. Ext. Center 216,
Tuttle

The numbers and names of Extension classes are usually the same as those of corresponding day classes. Sometimes the letters **ex** follow the class number; this means that the extension class is a material modification of the corresponding day class for extension purposes. Capital letters preceding the class number refer to university colleges, divisions, and departments: B.A. means Business Administration, G.C. means General College, ArtEd. means Art Education, M.E. means Mechanical Engineering, etc.

The **dagger** (†) means that both B.A. 152 and B.A. 153 must be completed before credit is given for either. When a class runs through two semesters, as does B.A. 152-153, the second semester is a continuation rather than a repetition of the first semester unless otherwise indicated.

The name of the class is followed by the **credits** which the class carries. Note that these are **quarter credits**, notwithstanding the fact that Extension terms are organized as semesters rather than as quarters. Unless these credits are called Extension credits, they are understood to be valid toward a degree in the College under which the class concerned is organized; Extension credits count only toward Extension certificates, not toward degrees.

Then comes mention of the **tuition fee** (here, \$10) and of any **special fee** which may be involved. All fees are for one semester unless otherwise indicated.

Prerequisites refer to other classes which, in the judgment of the department concerned, should precede the class in question. These prerequisites may be waived in special cases. If you cannot meet the prerequisite of the class you want, consult the instructor.

The **time** and **place** of meeting of classes are indicated by abbreviations which in most cases will be obvious. For example, "W 8:05 St. P. Ext. Center 216" means that the class will meet on Wednesday at 8:05 in the St. Paul Extension Center, Room 216. The **instructor's name** follows the room number.

Where Can I Get Advice About a Program?

The Students' Work Committee in the General Extension Division's campus office in the Administration Building, gives advice on the selection of individual classes and of programs of study leading to Extension certificates, assists students to make contact with advisers in the various colleges of the University for information on programs of study leading to degrees, and arranges appointments for the testing and counseling services of the Student Counseling Bureau. The chairman of the Students' Work Committee keeps customary office hours and is also available till 8:30 p.m. during registration periods; at other times conferences may be arranged by appointment.

Are There Other Facts or Regulations Concerning Extension Classes Which I Might Want To Know?

Credits:

Validity—A class designated "3 credits" counts toward a university degree; a class designated "3 Extension credits" counts only toward an Extension certificate. Note that credits are ordinarily valid only in the college which offers the class in which they are earned.

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

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

Residence—Credits earned in undergraduate Extension classes in Minneapolis, St. Paul, and Duluth are "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 six quarter credits under Plan A or nine quarter credits under Plan B in courses numbered 100 and above offered by the Extension Division of the University of Minnesota in the Twin City area, and taught by regularly approved members of the graduate faculty (for this information, consult the chairman of the Students' Work Committee). Petition to transfer is limited to Extension credits earned since September, 1943. Such transfers of Extension credits will not give residence credit.

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

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

Certificates: See page 6.

Degrees: A student who wishes to become a candidate for a degree must meet the admission requirements of the University and the entrance and degree requirements of the college in which the degree is sought. The Students' Work Committee will assist the student to determine his status with regard to these requirements.

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

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

Reports of students' grades and credits are sent them by the university recorder and will not be furnished by the General Extension Division.

Maximum load: The maximum amount of Extension work, including both Extension classes and correspondence study courses, to be carried by students regularly employed is 9 or 10 credit hours, the equivalent of three 3-credit or two 5-credit classes, per semester. Permission to exceed this maximum must be sought from the Students' Work Committee.

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

A student who has been dropped by any unit of the University may not register for Extension classes until he has been readmitted to his unit.

Attendance: Attendance at every meeting of a class is expected; success in the work of the class is based on this attendance. Instructors or the Students' Work Committee may inquire into the causes of absence and the student's intentions and make appropriate recommendations. Such inquiry and recommendation is entirely in the interest of the student and in no sense disciplinary; Extension students are in classes for very definite purposes, are competent to govern their comings and goings, and may be trusted to give the attendance necessary to the accomplishment of their purposes.

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

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

Athletic Facilities and Season Tickets

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

Any student enrolled for at least five credits of Extension classes (but not correspondence study courses) may purchase one season ticket book if single, or two if married; fee \$8.00—checks not accepted in payment. Books may be bought at downtown Extension offices (see inside front cover) or at the Athletics office in Cooke Hall during the week before classes begin. Regulations governing purchase, transfer, and cancellation of these books are available on request.

Minneapolis Symphony Orchestra Tickets

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

Evening Students Association

The association sponsors such extracurricular activities as lectures, dances, sports, bridge, music, dramatics, etc. Consult your class representative or the Students' Work Committee.

Correspondence Study Courses

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

SPECIAL INFORMATION FOR VETERANS

Many veterans are eligible for financial aid for educational purposes under the G.I. or Rehabilitation bills. In order to get such aid for Extension classes, you need to do four things: (1) get a letter of eligibility, (2) get advice on a program of study, (3) register for Extension classes, (4) get a voucher to cover books and supplies.

Follow this procedure:

(1) Take a certified copy of your discharge papers to the Veterans Administration, 54th Avenue South and 48th Street, Minneapolis 6, and fill out Form 1950—or Form 526 if you have a service-connected disability. In return, you will receive your letter of eligibility.

(2) Take your letter of eligibility to one of these Extension offices: 402 Administration Building, Main Campus; 690 Northwestern Bank Building, Minneapolis; 220 Foot-Schulze Building, St. Paul; 504 Alworth Building, Duluth. At one of these offices, confer with an adviser about a program of study, register for the classes you want, and get a voucher to cover the necessary books and supplies.

(3) Take this voucher to one of the bookstores on the list given you by the adviser.

(4) Follow the procedure outlined in paragraphs 2 and 3 above whenever you begin a new semester of Extension classes.

(5) If you discontinue your program of study, notify one of the offices listed in paragraph 2 above or Mr. J. G. Pease at the Veterans Administration.

EXTENSION CERTIFICATES

The General Extension Division awards certificates for the satisfactory completion of approved programs of study. The work may be done in evening classes, correspondence study courses, or both. Special attention is invited to the four short certificates listed immediately below. For advice or information on programs of study leading to certificates, including **permission for substitutions**, consult the Students' Work Committee. Certificates are awarded to students who complete with a C average any of the following programs of study:

GENERAL CERTIFICATES

The Citizen's Tool-Kit (27 credits)

First Year

Engl. Comp. 4-5-6 Freshman Composition
Phil. 2 Logic
Speech 1 Fundamentals of Speech

Second Year

Psy. 1 or 1ex
Speech 2-3 Fundamentals of Speech
Phil. 54 or 63

American Studies Certificate: Know Ourselves (27 credits)

First Year

Humanities in the United States
Hist. 20-21-22 American History

Second Year

Political Science 1-2 American Government and Politics
Additional courses in American Geography, American Government, American History, or American Literature to make a total of 27 credits for the certificate

Latin-American Certificate: Know Our Neighbors (24 credits)

First Year

Spanish 1-2 Beginning Spanish
Spanish 7 Latin-American Culture
Pol.Sci. 90 Government in Latin America

Second Year

Spanish 3-4 Intermediate Spanish
Geog. 110 Geography of Latin America
Hist. 95a Latin America in the 20th Century

International Certificate: Know Our World (24 credits)

First Year

European History: 6-9 credits
Geography: 3-6 credits

Second Year

Pol.Sci. 25 World Politics
Pol.Sci. 30 Problems of Postwar Reconstruction
Pol.Sci. 85 Problems of World Politics
Econ. 166 International Economic Problems

Liberal Education Certificate (45 credits)

English requirement: Freshman Composition 4-5-6, or exemption
Spread requirement: at least 6 credits in each of the following fields

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

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

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

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

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

NOTE—The 90-credit Junior College and Liberal Education certificates have been discontinued, since most students interested in these certificates would probably prefer to work for the new 90-credit degree, associate in liberal arts, now granted by the College of Science, Literature, and the Arts. For information about this degree, consult the Students' Work Committee.

BUSINESS CERTIFICATES

Junior Certificate (45 credits)

Core requirement:

Business English or Composition 4, or exemption
B.A. 51 Business Law
Econ. 5 Elements of Statistics
Econ. 6-7 Principles of Economics
Econ. 20L-25L Principles of Accounting and Laboratory

EXTENSION CLASSES

Spread requirement: at least 3 credits in each of the following fields

Business Administration: B.A. 89 Production Management
Distribution: Advertising, Marketing and Merchandising, Traffic and Transportation
Finance
Labor and Personnel

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

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

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

Senior Certificate (90 credits)

Core requirement:

Bus. English or Composition 4-5-6, or exemption
B.A. 51-52 and either 53 or 54 Business Law
B.A. 89 Production Management
Econ. 3 Elements of Money and Banking
Econ. 5 Elements of Statistics
Econ. 6-7 Principles of Economics
Econ. 20L-25L Principles of Accounting and Laboratory
Econ. 161 Labor Problems and Trade Unionism

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

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

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

ENGINEERING CERTIFICATES**Junior Certificate (45 credits)**

Core requirement:

M.&M. 11 College Algebra
M.&M. 12 Trigonometry
M.&M. 13 Analytical Geometry
M.&M. 24 Differential Calculus
M.&M. 25 Integral Calculus
M.&M. 26 Technical Mechanics: Statics
Draw. and Des. Geom. 1-2 Engineering Drawing

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

Senior Certificate (90 credits)

Core requirement:

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

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

Aeronautical Engineering	Electrical Engineering
Civil Engineering	Mechanical Engineering

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

GENERAL CLASSES

ART

ArtEd. 4-5-6 Drawing from Still Life and Pose. To be offered 1946-47.

ArtEd. 15 Interior Decorating I. 3 credits. \$10 plus 50 cents laboratory fee.

A study of traditional and modern furniture used today and of how to combine various styles. Additional subjects include room composition, color, floor coverings, wall treatments, window treatments. Some general discussions of new ideas and materials in home building. Interesting optional field trips. Drawing not emphasized. Slides and practical demonstrations are used in the regular class procedure. Each section is limited to 65 students, accepted in order of registration; additional sections may be organized as required. Repeated spring semester. No prerequisite.

Fall Semester		Spring Semester	
M 8:05	Jones 104, Lewis	Th 6:20	Jones 104, Lewis
T 6:20	Jones 104, Lewis		
T 8:05	Jones 104, Lewis		
W 6:20	St. P. Ext. Center 212, Lewis		

ArtEd. 17-18-19 Survey of Art in Life and Education. 3 credits each semester. \$10.

An introductory survey for the layman to develop appreciation and understanding through illustrated lectures, laboratory demonstrations and experiments. 17: The artist's contribution to our lives, his materials, technics, and basic modes of expression. 18: The importance of design in historic and modern art; influential ideas, individuals and movements; significant relationships between art and nature. 19: Social and educational significance of design in contemporary life; personal appearance, the home, architecture, city-planning, industrial design, advertising, theater, hobbies, etc. The number listed is the emphasis which prevails for the semester. A complete course is offered each semester, open to all. No prerequisite.

Fall Semester		Spring Semester	
17 W 6:20	Jones 203, Gayne	18 W 6:20	Jones 203, Gayne

ArtEd. 22 Interior Decorating II. 3 credits. \$10.

A study of decorative fabrics is an important part of the course. Students plan color schemes for specific rooms and have available beautiful fabrics and other materials. Such accessories as china, glass, silver, and movable wall decorations are included. Several talks are given by buyers from loop stores. Students are required to do some drawing and experimenting with paints; therefore, auditing is not advised. With special permission from the instructor, students may register for this course as ArtEd. 72. Prerequisite: Art Education 15.

Spring Semester	
M 8:05	Jones 203, Lewis
T 6:20	Jones 203, Lewis
W 6:20	St. P. Ext. Center 212, Lewis

ArtEd. 28, 61, 62 Painting Experiences Applicable to Designing and Appreciating. 3 credits each semester. \$10, plus \$1 model fee payable to instructor.

Collection and application of source material available in nature. Problems ranging from designs for simple handicrafts to the composition of mural paintings, selected in accordance with individual interests and abilities and organized to develop appreciation and enjoyment of the experiences of sketching from nature and of various studio practices. Advanced students may register for this course as ArtEd. 124-125-126 with the approval of the instructor. Consult instructor for number of course to register for. No prerequisite.

Fall Semester		Spring Semester	
Th 6:20	Jones 207, Rollins	Th 6:20	Jones 207, Rollins

ArtEd. 73-74-75 Ceramics. 4½ credits each semester. \$15 plus \$1.50 laboratory fee.

Emphasis upon ceramic sculpture. Class meetings are 2½ hours in length. No prerequisite.

Fall Semester		Spring Semester	
73-74 M 6:20	Jones 10, Rood	74-75 M 6:20	Jones 10, Rood

ArtEd. 153 Art Movements of 20th Century Scandinavia. 3 credits. \$10.

Illustrated lectures on the timely contributions of Scandinavia's public arts program with emphasis on the organization of the housing, art-in-industry and home-craft movements. The significant social role of the artist will be studied through such contemporary expression as the monumental mural form. No prerequisite.

Spring Semester	
W 6:20	Jones 2, Lien

ArtEd. 156 Intercultural Education through Art. 3 credits. \$10.

A lecture course designed to foster national unity and international understanding through recognition of the cultural contributions of diverse peoples to world-wide development and experience with special emphasis on 20th century exchange. Timely approaches towards understanding the fundamental problems arising out of current ethnic and racial conflicts will be considered in the light of specific needs of teacher, community worker, layman. No prerequisite.

Fall Semester

W 6:20 Jones 2, Lien

Fine Arts I Understanding the Arts. 3 credits. \$10.

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

Fall Semester

W 8:05 Jones 2, Cutts

Spring Semester

T 6:20 St. P. Ext. Center 212, Cutts

Life Drawing and Painting I-II. 1½-3 credits each semester. \$10.

Figure composition; pencil, pen, charcoal, oil pastels, and water colors; print making. Amount of credit to be arranged with instructor. Students may register for either class either semester. No prerequisite.

Fall Semester

W 8:05 Main Engineering 417, Burton

Spring Semester

W 8:05 Main Engineering 417, Burton

Freehand Drawing I-II. 1½ credits each semester. \$10.

Theory and practice of freehand drawing; perspective, design, and composition; drawing of geometric solids and ornaments in charcoal, pencil, pen and ink, water color, or other media. Students may register for either class either semester. No prerequisite.

Fall Semester

T 8:05 Main Engineering 417, Doseff

Spring Semester

T 8:05 Main Engineering 417, Doseff

Commercial Drawing I-II. 3 Extension credits each semester. \$10.

Elementary and advanced commercial art; design, lettering, layouts, posters in pen and ink, pencil, color, or other media. Solutions of practical problems stressed. Special attention to fashion drawing and design. Students may register for either class either semester. No prerequisite.

Fall Semester

M 8:05 Main Engineering 417, Doseff

Spring Semester

M 8:05 Main Engineering 417, Doseff

Drawing Your Postwar Home. See page 18.

Engineering Drawing. See page 40.

ASTRONOMY

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

11 Descriptive Astronomy and Principles of Celestial Navigation. 3 credits. \$10.

The general principles and fundamental facts of astronomy; illustrated by lantern slides, simple problems, and naked eye and telescopic observation. Higher mathematics not necessary. Discussion of the basic facts underlying celestial navigation in accordance with specifications of the Army Air Forces. No prerequisite.

Fall Semester

W 6:20 Physics 133, Luyten

13 Practical and Stellar Astronomy and Principles of Celestial Navigation. 3 credits. \$10.

Supplements Astronomy 11, which, however, is not prerequisite; higher mathematics not necessary. A detailed description of the constellations and individual stars, the 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. Discussion of the basic facts underlying celestial navigation in accordance with specifications of the Army Air Forces.

Spring Semester

W 6:20 Physics 133, Luyten

BACTERIOLOGY

53 General Bacteriology. 5 credits. \$17 plus \$2 laboratory fee.

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

Fall Semester

TTh 7:00 Millard 214, Skinner

104 Sanitary Bacteriology. 5 credits. \$17 plus \$2 laboratory fee.

A laboratory class in standard and approved methods for the bacteriological examination of water, milk, and foods; preparation and use of standard culture media; methods for standardization of germicides. Class meets 6 hours per week for 11 weeks. Prerequisite: Bacteriology 53.

Spring Semester

TTh 7:00 Millard 201, Skinner

CHEMISTRY

Note—The following chemistry classes, except Advanced Quantitative Analysis, meet for a minimum of one lecture, one recitation, and three hours laboratory a week. Class periods: 7:30 to 10:00 p.m., both Tuesdays and Thursdays except spring semester. These classes require a deposit of \$5, payable at Chemistry Department, of which \$2 is a laboratory fee and the remainder for breakage. The unused portion is returned.

9ex General Inorganic—Nonmetals. 5 credits. \$17.

The common nonmetallic elements and their principal compounds; the laws and theories of chemistry. Repeated spring semester. No prerequisite.

Fall Semester

TTh 7:30 Chemistry 315, 210, Geiger

Spring Semester

TTh 7:30 Chemistry 315, 210, Geiger

T 6:30-7:30 Chemistry 215, Geiger

Th 6:30-10:00 Chemistry 215, 210, Geiger

12ex Semimicro Qualitative Analysis. 5 credits. \$17.

The laws, theories, and calculations involved; systematic qualitative analysis. Prerequisite: Chem. 9ex or equivalent.

Spring Semester

TTh 7:30 Chemistry 315, 210, Geiger

1ex Quantitative Analysis—Gravimetric. 5 credits. \$17.

Principles and methods of gravimetric analysis; typical problems and proper laboratory practice. Prerequisite: Qualitative Analysis.

Fall Semester

TTh 7:30 Chemistry 310, 315, Geiger

2ex Quantitative Analysis—Volumetric. 5 credits. \$17.

General principles, methods, and calculations of volumetric analysis. Prerequisite: Qualitative Analysis.

Spring Semester

TTh 7:30 Chemistry 310, 315, Geiger

7ex Quantitative Analysis—Premedical. 4 credits. \$13.50.

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

Spring Semester

TTh 7:30 Chemistry 310, 315, Geiger

123-124-125ex Advanced Quantitative Analysis. 5 credits fall semester, \$17; 4 credits spring semester, \$13.50.

Prerequisite: Analytical Chemistry 1-2 or equivalent.

Fall Semester

123-124 TTh 7:30 Chemistry 310, Geiger

Spring Semester

124-125 TTh 7:30 Chemistry 310, Geiger

Chemistry of Resins. 3 Extension credits. \$10.

This course has been arranged in co-operation with the Twin City Plastics Association. It will cover: definition and explanation of pertinent chemical terms, symbols, and formulae; study of the typical chemical reactions and processes employed in resin formation; comprehensive study of development, preparation, and uses of a wide range of resins; study of the chemical and physical properties of resins, including their limitations; and causes of faults of resins under service conditions. No prerequisite.

Fall Semester

T 7:00 Chemistry 111, Agre

EXTENSION CLASSES

CHILD WELFARE

40 Child Training. 3 credits. \$10.

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

Fall Semester
M 8:05 St. P. Ext. Center 220, Cummings

Spring Semester
T 8:05 Mpls. N. W. Bank Bldg. 690

80 Child Psychology. 3 credits. \$10.

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

Fall Semester
T 6:20 Folwell 101, Kuenne

90 Home, School, and Family Relations. 3 credits. \$10.

Adjustment within and outside the family circle; relation of adults and children within the family; the establishment of the home; discussion of family problems such as finance, discipline, recreation, etc. Prerequisite: Psychology 1-2.

Fall Semester
T 8:05 Mpls. N. W. Bank Bldg. 690

Spring Semester
M 8:05 St. P. Ext. Center 219, Cummings

132 Later Childhood and Adolescence. 3 credits. \$10.

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

Spring Semester
T 6:20 Folwell 101, Kuenne

CHINESE

Beginning Chinese 1-2. 3 Extension credits each semester. \$10.

Distinctive features of Chinese language and elements of pronunciation, grammar, and translation. Emphasis upon basic vocabulary building and practice in daily conversation in Mandarin. No prerequisite.

Fall Semester
1 T 8:05 Folwell 205, Chu
Th 8:05 St. P. Ext. Center 216, Chu

Spring Semester
2 T 8:05 Folwell 205, Chu
Th 8:05 St. P. Ext. Center 217, Chu

EDUCATION

Ed. 51A Introduction to Secondary School Teaching. 3 credits. \$10.

The sequence 51A-B-C† covers objectives, organization, curricula, and methods of secondary schools and instruction with special reference to the fundamental facts of psychology involved therein. 51A emphasizes psychological fundamentals. Prerequisite: 6 credits in psychology.

Fall Semester
Th 6:20 Millard 129, Gjerde

Ed.C.I. 65 The Teaching of Science in the Elementary School. 3 credits. \$10.

An overview of the objectives, content, materials, philosophy, and methods of instruction and evaluation of science teaching in the elementary school, with particular attention to practical applications to the classroom situation. Prerequisite: Education 61A-B.

Fall Semester
M 6:20 U. High School 7, Anderson

Ed.C.I. 152 Supervision: The Adjustment of Schools to Individual Differences. 3 credits. \$10.

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

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

Ed.Psy. 60 Introduction to Measurement and Statistics. 3 credits. \$10.

This course includes a study of measures of central tendency, variability, and correlation. Prerequisite: 6 credits in psychology.

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

Ed.Psy. 113 Psychology of Elementary School Subjects. 3 credits. \$10.

Special attention to the psychology of reading in the elementary and junior high school grades. Prerequisite: 10 hours in psychology and education.

Spring Semester
W 6:20 St. P. Ext. Center 216, Van Wagenen

Ed.Psy. 159 Personality Adjustment in Education. 3 credits. \$10.

A survey course for educational workers, particularly teachers and counselors. Emphasis on an understanding of the factors involved in personality development and on the preventive rather than the remedial phases of mental hygiene. Attention given to the various types of maladjustments as well as to the conditions under which a teacher or counselor can safely attempt remedy or treatment. Prerequisite: 9 hours in education and psychology, including one recent course in psychology.

Fall Semester

Th 8:05 Eddy 202, Bordin

Ed.Psy. 183 Psychology of Gifted Children. 3 credits. \$10.

A study of the abilities and characteristics of intellectually gifted children. Prerequisite: Ed. 51A or equivalent.

Fall Semester

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

H.Ed. 110 Intercultural Education. 3 credits. \$10.

A co-operative study of problems and issues involved in racial, religious, and nationality group relations, with a view to educational action on the elementary, secondary, college, and adult levels. No prerequisite.

Fall Semester

M 6:20 Jones 207B, Brameid, Lien

ENGINEERING

See page 40.

ENGLISH

Classes in Composition

English Placement Tests.

Admission to composition classes above Preparatory Composition is based on satisfactory score in English Placement Test, or satisfactory completion of Preparatory Composition. Please note the following:

1. If you took the Placement Test in high school within the last four years, you must ask for assignment to the proper composition class a week before the first meeting of the class. (You need not take the test again.) Telephone, write, or call in person.
2. If you have not taken the test, report for it at the first date scheduled below:

Fall Semester

7:00 Thursday, September 27

Room 102, Folwell Hall

7:00 Thursday, October 4

Room 102, Folwell Hall

Spring Semester

7:00 Thursday, February 7

Room 102, Folwell Hall

Preparatory Composition. No credit. \$7.50.

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

Fall Semester

T 6:20 Folwell 209

4-5-6 Freshman Composition. 4½ credits each semester. \$15.

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

Fall Semester

4-5 M 6:20 Folwell 102, Scallon

4-5 T 6:20 Folwell 102, Grandy

4-5 W 6:20 St. P. Ext. Center 217

5-6 W 6:20 Folwell 207

Spring Semester

4-5 T 6:20 Folwell 212

5-6 M 6:20 Folwell 102, Scallon

5-6 T 6:20 Folwell 102, Grandy

5-6 W 6:20 St. P. Ext. Center 214

English Review. 2 Extension credits. \$7.50.

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

Fall Semester

Th 8:05 Folwell 209, Haug

Spring Semester

W 8:05 St. P. Ext. Center 214, Haug

EXTENSION CLASSES

Classes in Writing

27-28† Advanced Writing. 3 credits each semester. \$10.

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

Fall Semester
27 Th 8:05 Folwell 203, Christie

Spring Semester
28 Th 8:05 Folwell 203, Christie

91-92 Seminar in Writing (Advanced Short Story). 3 credits each semester. \$10.

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

Fall Semester
91 M 6:20 Folwell 203, Phelan

Spring Semester
92 M 6:20 Folwell 203, Phelan

See also **Business English**, p. 36, **Radio Writing**, p. 27, **Journalism**, p. 18.

Classes in Literature

35 Introduction to American Literature. 3 credits. \$10.

A general survey of American prose and poetry. Lectures and outside readings. Designed for non-majors in English. Prerequisite: Freshman Composition or its equivalent.

Fall Semester
M 6:20 St. P. Ext. Center 219, Randel

120 Interpretation of Poetry. 3 credits. \$10.

A study of how poetry gets its effect—what it says, how it says it, what it leaves unsaid, the devices it uses, including imagery, verse form, etc. An analysis of poems from the Elizabethans to our contemporary poets, including Robert Frost, John Crowe Ransom, T. S. Eliot, to discover the relationship between technique and expression. Prerequisite: consult instructor.

Fall Semester
W 6:20 Folwell 105, Warren

Humanities in the Modern World. 3 credits. \$10.

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

Fall Semester
M 6:20 Folwell 322, Castell

Humanities in the United States. 3 credits. \$10.

An interpretation of the past and the present civilization of the United States through history, literature, philosophy, and the related arts. Lectures, discussions, and readings on the three related themes of nationalism, regionalism, and internationalism.

Spring Semester
M 6:20 Folwell 209, McDowell, Turpie

Book Reviews. No credit. \$6.

A series of ten lectures on current books for persons interested in interpreting the world today, its scenes, personalities, and changing values as reported by the most able and significant of contemporary authors. No prerequisite.

Fall Semester
T 6:20 St. P. Ext. Center 212, Acker
Th 6:20 Folwell 113, Acker

Milton and Browning. See page 24.

Our World and Our Times. See page 24.

The Bible As Literature. See page 24.

FRENCH

1-2 Beginning French. 3 credits each semester. \$10.

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

Fall Semester
1 W 6:20 Folwell 227, Wilson
Th 6:20 St. P. Ext. Center 214

Spring Semester
2 W 6:20 Folwell 227, Wilson
Th 6:20 St. P. Ext. Center 214

3-4 Intermediate French. 3 credits each semester. \$10.

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

Fall Semester	Spring Semester
3 M 6:20 Folwell 213, Wilson	4 M 6:20 Folwell 213, Wilson

5-6 Spoken and Written French. 3 credits each semester. \$10.

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

Fall Semester	Spring Semester
5 M 6:20 Folwell 304, Fermaud	6 M 6:20 Folwell 304, Fermaud

17 French for Graduate Students. No credit. \$10.

Fundamentals of grammar; reading of appropriate prose. Prepares for examinations in French. Students may enter or continue in spring semester. No prerequisite.

Fall Semester	Spring Semester
M 6:20 Folwell 101, Brackney	M 6:20 Folwell 101, Brackney

67-68 Advanced French Conversation. 3 credits each semester. \$10.

Practical spoken French, pronunciation, diction, stylistics, syntax. Open only to those who speak French fluently.

Fall Semester	Spring Semester
67 W 6:20 Folwell 203, Fermaud	68 W 6:20 Folwell 203, Fermaud

GARDENING**Indoor and Fall and Winter Gardening. 3 Extension credits. \$10.**

Preparing and planting lawn, planting fall bulbs, winter covering and other special autumn gardening activities. Plants that withstand adverse conditions in the house, care of house plants. Small greenhouses, cost to build and maintain. Some house and greenhouse plants that are different. Amateur hybridizing and its opportunities. Specialty gardening. Combining vegetables with flowers. New varieties and new methods for coming season. No prerequisite.

Fall Semester
M 8:05 Botany 4, Wilcox

Hort. 10 Home Floriculture. 3 credits. \$10.

Practical aspects of planning and growing for the practical home gardener. Planning the home grounds for ease of cultivation and utmost attractiveness. Soil improvement and preparations for planting. Selection of seeds and plants. Methods of reproduction. Annuals and perennial flowers, flowering shrubs and peonies, climbing vines, special attention to roses for Minnesota and surrounding states. Planting, transplanting, pruning, cultivation, weeding, watering, control of insects and diseases. No prerequisite.

Spring Semester
M 8:05 Botany 4, Wilcox

GEOGRAPHY**11 Human Geography. 5 credits. \$17.**

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

Fall Semester
T 6:20 Burton 103, Brown

120 Geography of Asia. 3 credits. \$10.

A study of human activities and their geographic basis in the significant areas of Asia. Special emphasis on Japan, China, and the Southwest Pacific areas. Prerequisite: Geography 11.

Spring Semester
T 6:20 Burton 103, Davis

GEOLOGY**1 General Geology (Dynamic). 3 credits. \$10.****A Dynamic Geology Laboratory. 2 credits. \$7.**

These classes, 1 and A combined, constitute Geology 1 of the College of Science, Literature, and the Arts. They consist of an introductory treatment of the materials of the earth, and the geologic processes; principles of earth sculpture, glaciation, volcanic activity, moun-

tain building, etc.; geologic occurrence of gems, ores, oil, and other economic mineral resources. No prerequisite.

Fall Semester

1 Th 6:20 Pillsbury 210
A Th 8:05 Pillsbury 22

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.

23 Mineralogy. 3 credits. \$10.

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

Fall Semester

Th 6:20 Pillsbury 110, Gruner

24 Mineralogy. 3 credits. \$10.

The crystal systems of the minerals. A continuation of the study of the minerals covering a larger variety of groups and species and application of more advanced methods. Prerequisite: Geol. 23.

Spring Semester

Th 6:20 Pillsbury 110, Gruner

GERMAN

1-2 Beginning German. 3 credits each semester. \$10.

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

Fall Semester

1 T 6:20 Folwell 207, Downs
1 Th 6:20 St. P. Ext. Center 218

Spring Semester

2 T 6:20 Folwell 207, Downs
Th 6:20 St. P. Ext. Center 218

3 Beginning German. 3 credits. \$10.

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

Fall Semester

T 6:20 Folwell 206, Wangness

4 Intermediate German. 3 credits. \$10.

Modern narrative prose. Prerequisite: German 3.

Spring Semester

T 6:20 Folwell 206, Wangness

17 German for Graduate Students. No credit. \$10.

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.

Fall Semester

M 6:20 Folwell 212, Meessen

Spring Semester

M 6:20 Folwell 212, Meessen

60 Modern Short Story. 3 credits. \$10.

Selected readings from Thomas Mann, Paul Ernst, Rudolf Binding, Waldemar Bonsels, Rainer Maria Rilke, and others. Prerequisite: German 4 or reading ability in German.

Fall Semester

T 6:20 Folwell 202, Prottengeier

62 Nineteenth-Century German Prose. 3 credits. \$10.

Reading complete Novellen by Gottfried Keller, Adalbert Stifter, Theodor Storm, Conrad F. Meyer, Wilhelm v. Riehl. Prerequisite: German 4 or reading ability in German.

Spring Semester

T 6:20 Folwell 202, Prottengeier

HEALTH

Your Health. 3 credits. \$10.

Everyone wants vigorous health but many find it difficult to obtain authentic health information, unbiased by sales talk, prejudice, and superstition. The aim of this course is to provide dependable information on the health problems most often encountered by adults in their personal, family, and community life, and to answer the questions on health which people most commonly ask. The lectures on personal health present information on such subjects as allergies, colds, cancer, heart disease, tuberculosis, venereal disease, mental hygiene, and suggested immunization programs. Those on family health include such topics as maternal welfare, care of the young child, selection of a family

physician, and health insurance plans. Those on public health discuss food and drug laws, sanitation of eating establishments, control of contagious disease, and plans for national medical care. The lectures will be illustrated by means of films, slides, and models. Corresponds to P.H. 50 Public and Personal Health; gives credit in all colleges and contributes to fulfilling College of Education requirements. Repeated spring semester. No prerequisites.

Fall Semester
T 6:20 Wesbrook 200, Potthoff

Spring Semester
M 8:05 St. P. Ext. Center 214, Potthoff

P.H. 53 Elements of Preventive Medicine. 5 credits. \$17.

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

Fall Semester
T 6:20 Millard 129, Cowan

P.H. 59 Health of the School Child. 3 credits. \$10.

Mental and physical growth; prevention and control of diseases common to the school-age child; health appraisal; correction of physical defects; emotional problems; care of the handicapped; the school environment and its effect on child health; accident prevention and emergency care; practical problems of health supervision and administration. Prerequisite: 3 and 4, or 3 and 51, or G.C. 10C and 4, or G.C. 10C and 51, or 50, or 53; will be waived for teachers and school nurses, but credit granted only after completion of prerequisites.

Fall Semester
Th 6:20 Medical Sciences 111, Grout, Todd

P.H. 61 Mental Hygiene. 3 credits. \$10.

Aspects of Public Health Nursing. (Same as Med. 133.) Discussion of emotional factors underlying wholesome family relations and of problems which interfere with successful adjustment in family and community life. Illustrative case material related to problems met by the public health nurse will be used. Prerequisite: 62 or experience.

Spring Semester
T 6:20 Medical Sciences 111, Shalit

P.H. 76 Nutrition in Public Health Nursing. 3 credits. \$10.

(Same as H.E. 76.) Principles of nutrition applied to family teaching, consideration of diet for normal living, at special periods in life, and for certain diseases. Discussion of diet problems of low income groups. Prerequisite: 62 or may be taken concurrently.

Spring Semester
Th 6:20 Medical Sciences 111, Donelson

P.H. 125 The Community Health Education Program. 3 credits. \$10.

A course intended primarily for those preparing for leadership in community health education to include organization, administration, and evaluation of community health education programs and the selection, preparation, and use of media commonly employed in health education. Prerequisite: 53 or 104, and 106, or to be taken concurrently with 106.

Spring Semester
T 6:20 Millard 129, Grout

HISTORY

1-2† European Civilization. 5 credits each semester. \$17.

Political, social, and economic factors. Course 1: 1500-1799; Course 2: 1799 to the present. No prerequisite.

Fall Semester
1 M 6:20 Folwell 104, Kane
W 6:20 St. P. Ext. Center 219, Kane

Spring Semester
2 M 6:20 Folwell 104, Kane
W 6:20 St. P. Ext. Center 219, Kane

20-21-22† American History. 4½ credits each semester. \$15.

For students who want to cover the entire sequence of History 20-21-22 in one year. Class meets for one period of 2½ hours each week. No prerequisite.

Fall Semester
20-21 T 6:20 Folwell 109, Kane

Spring Semester
21-22 T 6:20 Folwell 109, Kane

65-66 Europe in the Twentieth Century. 3 credits each semester. \$10.

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

Fall Semester
65 Th 6:20 Folwell 202, Kane

Spring Semester
66 Th 6:20 Folwell 202, Kane

EXTENSION CLASSES

83-84-85† American Economic History. 4½ credits each semester. \$15.

American economic life in the colonial, early, and later national periods. No prerequisite.

Fall Semester
83-84 W 6:20 Folwell 109, Loehr

Spring Semester
84-85 W 6:20 Folwell 109, Loehr

95a Latin America in the Twentieth Century. 3 credits. \$10.

A survey of the recent history of the Latin-American countries with special attention to their background and development, their internal problems and policies, their relations with Europe and the United States, their economic, social, and cultural development, especially as related to Pan-Americanism. No prerequisite.

Fall Semester
M 6:20 Burton 111, Tyler

HOUSING

Planning Your Postwar Home. 2 Extension credits. \$7.50 plus 50 cents laboratory fee.

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

Fall Semester
T 8:05 Main Engineering 320, Cerny

Drawing Your Postwar Home. 2 Extension credits. \$7.50.

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

Spring Semester
T 8:05 Main Engineering 320, Heath

JOURNALISM

13 Introduction to Reporting. 3 credits. \$10.

News, its sources, methods of finding and gathering; correct style of written presentation; brief survey of the place and purpose of the newspaper and the processes of newspaper production. Prerequisite: English Composition 4-5-6 or exemption.

Fall Semester
W 6:20 Murphy 311, Mickelson

73ex Magazine Writing. 3 credits. \$10.

The writing of nonfiction articles for general and specialized periodicals, and newspaper feature articles; subjects and materials; analysis of manuscript markets; study of magazine policies and practices; training in editing procedures; use of pictures. Repeated in spring semester. Prerequisite: consent of instructor.

Fall Semester
Th 6:20 Murphy 311, Kahm

Spring Semester
Th 6:20 Murphy 311, Kahm

97 Advertising Copy, Layout, and Typography. 3 credits. \$10.

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

Fall Semester
T 6:20 Murphy 311, Barnhart

LIBRARY SCIENCE

51 Origins of the Book. 2 credits. \$7.50.

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

Fall Semester
W 6:20 Library 5, Strout

52 History of Publishing. 2 credits. \$7.50.

A survey of publishers and publishing from the sixteenth century to the present, with special attention to the history of publishing in the U.S.A.; present-day publishing houses and their specialties; current trends in publishing and their effect upon libraries. Twelve meetings beginning January 9. No prerequisite.

Spring Semester

W 6:20 Library 5, Strout

MUSIC

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

Enjoying Music. 3 Extension credits each semester. \$10.

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

Fall Semester

M 8:05 Wesbrook 202, Hill

Spring Semester

M 8:05 Wesbrook 202, Hill

IT-2T-3T Music Theory. 3 credits each semester. \$15.

A correlated course including ear training, sight singing, melodic and harmonic dictation, keyboard and written harmony. 3T not offered in 1945-46. No prerequisite.

Fall Semester

1T MTh 6:20 Music 4, Malcolm

Spring Semester

2T MTh 6:20 Music 4, Malcolm

34-35-36 History of Music. 3 credits each semester. \$10.

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

Fall Semester

35-36 Th 6:20 Music 103, Ferguson

Spring Semester

36-34 Th 6:20 Music 103, Ferguson

40-41-42 University Symphony Orchestra. 1½ credits each semester. \$5.

Standard orchestral literature is performed. Open to players of orchestral instruments. Prerequisite: consent of instructor.

Fall Semester

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

Spring Semester

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

43-44-45 University Chorus. 1½ credits each semester. \$5 per semester.

The University Chorus is available to Extension students through the General Extension Division. Students may enter either semester upon consent of director.

Fall Semester

43-44 T 7:00 Burton Aud., Killeen

Spring Semester

44-45 T 7:00 Burton Aud., Killeen

56-57-58 Bach, Beethoven, Wagner, and Brahms. 3 credits each semester. \$10.

Critical study of selections from the master works of the four greatest composers; biographical readings, topics and analyses, giving historical and literary background to culminative periods in composition. 58 not offered in 1945-46. Prerequisite: History of Music 34-35-36.

Fall Semester

56 W 6:20 Music 103, Ferguson

Spring Semester

57 W 6:20 Music 103, Ferguson

Piano Playing for Pleasure. 3 Extension credits each semester. \$10 plus \$1 laboratory fee.

It is easy to play the piano. Within a semester's time enough of the art may be acquired to enable one to enjoy playing for one's own pleasure. The fundamentals will be taught to individuals in small groups. Open to all, without previous musical training, but limited to 20 students. Students may either begin or continue in the spring semester.

Fall Semester

W 8:05 Music 104, Twichell

Spring Semester

W 8:05 Music 104, Twichell

EXTENSION CLASSES

NATURAL HISTORY

Birds of Minnesota. 3 Extension credits. \$10.

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. Study will be based on the manual of Dr. T. S. Roberts, who will be responsible for the class. No prerequisite.

Spring Semester

Th 6:20 Museum of Natl. Hist. 309, Roberts
Breckenridge, Kilgore

Fish and Fishing in Minnesota. Extension credit by special arrangement. \$6.

A short course for sportsmen and others who want accurate—but nontechnical—knowledge of Minnesota fish; their habits and habitats, their feeding and propagation, their distribution and importance. Lectures, demonstrations, and discussion. 10 meetings beginning February 27. No prerequisite.

Spring Semester

W 8:05 Zoology 313, Eddy

Wild Game of Minnesota. 2 Extension credits. \$7.50.

A nontechnical survey of the upland game birds, waterfowl, and big game of Minnesota; their habits, characteristics, requirements, and the problems of increasing their numbers. Emphasis on the recognition of the more difficult plumages encountered by the hunter and on conservation of the principal game species. Illustrated lectures and demonstrations. 12 meetings beginning October 3. No prerequisite.

Fall Semester

W 6:20 Museum of Natl. Hist. 309, Brecken-
ridge

NURSING EDUCATION

60 Ward Administration. 3 credits. \$10.

Organization of the hospital; authority, responsibility and relationships of the head nurse, principles of administration; analysis and maintenance of a good nursing service; environment of the patient; selection, orientation, assignment, and motivation of personnel; planning clinical teaching programs. Repeated spring semester. Open to graduate nurses.

Fall Semester

M 5:00 Mpls. N. W. Bank Bldg. 1175,
Randall

Spring Semester

M 5:00 Medical Sciences 113, Randall

62 Personnel Work in Schools of Nursing. 3 credits. \$10.

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

Spring Semester

W 7:30 Mpls. N. W. Bank Bldg. 1175, Gordon

68 Construction and Use of Examinations and Other Measurement in Basic Nursing Courses. 3 credits. \$10.

Practice in making and scoring course examinations; study of criteria for judging and improving methods of measurement; discussion of examinations as aids to student progress; relation of examination scores to grading systems. Open to graduate nurses.

Fall Semester

W 5:00 Mpls. N. W. Bank Bldg. 1175, Gordon

72 Principles of Learning and Methods of Teaching. 3 credits. \$10.

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

Fall Semester

Th 6:20 Medical Sciences 113, Harrington

77 Principles of Teaching and Supervision in Schools of Nursing. 3 credits. \$10.

A more advanced and detailed study of methods and materials applicable to teaching in schools of nursing. Prerequisite: Nursing Education 72.

Spring Semester

Th 6:20 Medical Sciences 113, Harrington

82 Survey of Current Economic Problems. 3 credits. \$10.

The functioning of our economic system with respect to specific problems such as the impact of war on national and individual income; the significance of price level changes, labor union activity and government regulation upon employment and prosperity; the effect of domestic economic policies and problems upon international economic problems and world co-operation. Open to graduate nurses.

Fall Semester

T 5:00 Medical Sciences 111, Hines

Ed. 51A Introduction to Secondary School Teaching. See page 12.

PHILOSOPHY**1 Problems of Philosophy. 3 credits. \$10.**

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

Fall Semester

Th 8:05 Folwell 322, Conger

Spring Semester

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

2 Logic. 3 credits. \$10.

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

Fall Semester

W 6:20 St. P. Ext Center 216, Everett

Spring Semester

M 6:20 Folwell 322, Castell

3 Ethics. 3 credits. \$10.

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

Fall Semester

T 8:05 Folwell 322, Castell

54 Introduction to the Scientific Way of Thinking. 3 credits. \$10.

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

Fall Semester

Th 6:20 Folwell 322, Feigl

70 Modern Philosophies of Social Reform. 3 credits. \$10.

A historical and critical survey of social reformers from Adam Smith to the present, with special attention to the philosophical ideas underlying reform movements. No prerequisite.

Spring Semester

Th 8:05 Folwell 322, Shaw

Humanities. See page 14.

PHOTOGRAPHY**Cameracraft. 3 Extension credits each semester. \$10 plus \$5 laboratory fee.**

Two informal classes—one for beginners and one for advanced amateur photographers. Both classes will enjoy the stimulating experience of working with other amateurs under the guidance of an experienced instructor. Both classes will use the extensive and modern photographic laboratory of the School of Journalism. Both classes offered both semesters; students may enter either semester. Sections limited to 25 students. No prerequisite, but consult instructor about choice of beginning or advanced class.

Fall Semester

Adv. M 6:20 Murphy 20, Witesman
Beg. W 6:20 Murphy 20, Witesman

Spring Semester

Adv. M 6:20 Murphy 20, Witesman
Beg. W 6:20 Murphy 20, Witesman

EXTENSION CLASSES

PHYSICS

7-8-9 General Physics. 5 credits each semester. \$17.

A general class in college physics for students majoring in physics, mathematics, chemistry, and in the Institute of Technology; includes mechanics, sound, heat, light, and electricity. Laboratory work an integral part of the class. Phys. 7 (Mechanics and Heat) fall semester; Phys. 8 (Electricity and Modern Physics) spring semester; Phys. 9 (Acoustics and Optics) spring semester of 1946-47. Prerequisite: completion of, or concurrent registration in, differential calculus but note that students who cannot meet this requirement may register for Phys. 1a-2a, 4 credits (Science, Literature, and the Arts) each semester, \$13.50.

Fall Semester

7 MW 7:00 Physics 166, Valasek

Spring Semester

8 MW 7:00 Physics 166, Valasek

Modern Physics. 3 Extension credits. \$10.

We are daily confronted with physical phenomena which we do not understand. Why is it, for example, that some of us need to wear glasses? What causes fog and hail? Why is the sky blue? How does your radio set work, or your refrigerator? What goes on in the famous "atom smasher" behind the Physics Building? What is radar and how does it detect submarines and distant aircraft? The aim of this class is to provide answers to such questions and to help you think intelligently about the physical world in which you live. Lectures and demonstrations. No prerequisite.

Fall Semester

Th 6:20 Physics 133, Members of department

POLITICAL SCIENCE

1 American Government and Politics: Part I. 3 credits. \$10.

All of us are aware of the impact of the war upon the American system of government and of 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 the current developments, wartime changes, and possible postwar problems. No prerequisite.

Fall Semester

Th 8:05 Burton 209

2 American Government and Politics: Part II. 3 credits. \$10.

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

Spring Semester

Th 8:05 Burton 209

3 American Government and Politics, Part III. 3 credits. \$10.

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

Spring Semester

W 6:20 Burton 209, Hawkins

10 Fundamentals of Government. 3 credits. \$10.

The expansion in modern times of the functions of the state makes it more imperative than ever that citizens of a democracy be acquainted with the "fundamentals" of the political process. This course is designed to acquaint the student with the principal ideas, terms, and functions of modern government and politics. Subjects discussed will include; the nature of political authority; types of governmental organization; the role of public opinion and political parties, the state and the family of nations; etc. Comparison of American government and politics with that of other countries will be made wherever possible. No prerequisite.

Fall Semester

W 6:20 Burton 209, Hawkins

25 World Politics. 3 credits. \$10.

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

Fall Semester

Th 6:20 Burton 209, Mills

30 Problems of Postwar Reconstruction. 3 credits. \$10.

Based on the significant hypothesis that we dare not blunder our way into peace, this course is designed to analyze some of the important international and domestic problems that confront the United States in the postwar period; to review proposals such as those made by Culbertson, Beveridge, and various planning agencies; to interpret the United Nations Charter; and to provide the general background that will help to understand the period through which we are passing. No prerequisite.

Fall Semester

W 8:05 St. P. Ext. Center 218, Levi

40 Contemporary Political Philosophies. 3 credits. \$10.

We are living on the thin edge of history and it is essential that we know something of the ideological background of the great political movements of the modern world—democracy, communism, nazism, socialism, fascism. This class, therefore, has as its objective the examination, comparison, and evaluation of the main ideas behind these various movements, together with an analysis of their origin and development, in order that the student may have a greater appreciation of the values inherent in the democratic system. No prerequisite.

Spring Semester

T 6:20 Burton 209, McClosky

44 Major Governments of Europe. 3 credits. \$10.

Recent developments in Europe—particularly the rise of Russia to the status of a first-rate power, the new labor government in England, the reorganization of French government, and the fall of fascism—raise problems which Americans must understand if they are to fulfill their obligations as citizens of a country which is a member of the United Nations. This course will analyze the new governments and significant political developments of Europe. No prerequisite.

Fall Semester

T 6:20 Burton 209, McClosky

45 Problems of Democracy. 3 credits. \$10.

It is essential—if we are to act intelligently as citizens—that we have an understanding of the nature of democracy and of the problems confronting it. This course, therefore, is designed to provide an analysis of the nature and operation of democratic government; an evaluation of the concept of democracy in relation to totalitarian dictatorship and an examination of the domestic and international problems that confront democracy today. No prerequisite.

Spring Semester

W 8:05 St. P. Ext. Center 218, Levi

71 Recent Social Legislation. 3 credits. \$10.

The acceptance of the concept of social security in the United States, the wide discussion of the Beveridge plan and the many programs relating to an international approach to the problems of economic security all indicate the importance of social welfare and social security plans in the world of today and tomorrow. This course is a survey of the theory and underlying principles of social welfare and social security legislation, and includes an analysis of the policies of other countries, particularly in Europe and in Latin-America. Special attention is given to the historical development of social legislation in the United States, the background, constitutional implications, and administrative problems involved, the Social Security Act and supplementary state legislation, and a consideration of probable future trends and developments. No prerequisite.

Spring Semester

M 6:20 Burton 209, Christensen

85 Problems of World Politics. 3 credits. \$10.

Continuation of Political Science 25 which, however, is not prerequisite. Special attention to the Far East, the Near East, and Europe. No prerequisite.

Spring Semester

Th 6:20 Burton 209, Mills

90 Government in Latin America. 3 credits. \$10.

A course for those interested in the problems and inter-relations of the American republics, emphasizing the historical background, constitutional history, and governmental organization of the Latin-American countries. Special attention will be given to the influence of the United States, not only upon the constitutional theory and organization of the other nations of America but also upon their current domestic, inter-American, and international politics. The general outlines of governmental organization of these countries will be compared with that obtaining in the United States, and particular emphasis will be placed upon the governments of Argentina, Brazil, Chile, and Mexico. No prerequisite.

Fall Semester

M 6:20 Burton 209, Christensen

LECTURE SERIES

OUR WORLD AND OUR TIMES

Two series of lectures on the artistic, economic, literary, philosophical, political, and social problems of our times. The lecturers are members of the university faculty. They and their subjects and dates will be announced in fall and spring issues of *The Interpreter*. The lectures will take place at 8:15 on Wednesday nights at the Center for Continuation Study. Register at the dormitory desk at the Center.

Fall series (10 lectures, October 10-December 12): \$6

Spring series (10 lectures, February 20-April 24): \$6

MILTON AND BROWNING

Dr. John W. Powell returns to the campus this year to give two series of lectures on these English poets. The fall series will be on the life and poetry of John Milton. The spring series will be devoted to the poetry of Robert Browning and its significance for the modern reader.

Both series will be given under the auspices of the Center for Continuation Study at 8:05 Thursday evenings at the Center. Register at the dormitory desk at the Center.

Fall series (12 lectures, October 4-December 20): \$7.50

Spring series (12 lectures, February 21-May 9): \$7.50

THE BIBLE AS LITERATURE

Dr. Powell will also present two series of lectures on *The Bible as Literature*, a popular adaptation of the material which he has taught so successfully under the same title for many years in Extension classes.

The fall series will be on the Old Testament: the Pentateuch (Genesis to Deuteronomy), the national heroes, the great prophets, and Hebrew poetry, institutions, and contributions. The spring series will be on the New Testament: the Greek and Roman Empires as historical background, the life and teachings of Jesus, the Gospels, the Book of Acts, the Epistles, and the Book of Revelations.

Both series will be given under the auspices of the Center for Continuation Study at 8:05 Tuesday evenings at the Center. Register at the Center.

Fall series (12 lectures, October 2-December 18): \$7.50

Spring series (12 lectures, February 19-May 7): \$7.50

FILM SERIES

Here are the films you have been waiting for:

NEW DEVELOPMENTS IN POSTWAR LIVING
ARMCHAIR TRAVELS IN LATIN AMERICA
BUILDING THE WORLD WE WANT
ARMCHAIR TRAVELS IN THE NORTHWEST

These four film series will be shown in the Auditorium of the Museum of Natural History according to the schedule below; titles of the fall series will be announced about October 10 and those for the spring series about February 20. Note that the present plan is to offer two shows each night: one from 7:00 to 8:00 for those who wish to combine a film with an 8:05 class, and one from 8:15 to 9:15 for those who wish to combine a film with a 6:20 class. Admission will be 25 cents a person per show, payable at the door.

FALL SEMESTER

New Developments in Postwar Living
8 Mondays, October 15-December 3
Shows at 7:00 and 8:15

Armchair Travels in Latin America
8 Tuesdays, October 16-December 4
Shows at 7:00 and 8:15

SPRING SEMESTER

Building the World We Want
8 Mondays, February 25-April 15
Shows at 7:00 and 8:15

Armchair Travels in the Northwest
8 Tuesdays, February 26-April 16
Shows at 7:00 and 8:15

EXTENSION CLASSES

PORTUGUESE

1-2 Beginning Portuguese. 3 credits each semester. \$10.

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

Fall Semester
1 Th 6:20 Folwell 205

Spring Semester
2 Th 6:20 Folwell 205

PSYCHOLOGY

1 ex Application of Psychology to Living. 3 credits. \$10.

This course is devoted to psychology in personal relationships and in the achievement of mental health. It centers, for the most part, around our fundamental needs—the source of all our actions and satisfactions—and it presents principles highly applicable in the life of every person. This course has no prerequisite, and it may be taken with the same satisfaction before or after Psychology 1-2. Repeated spring semester.

Fall Semester
M 6:20 St. P. Ext. Center 212, White
T 6:20 Folwell 301, White
F 6:20 Folwell 301, White

Spring Semester
M 8:05 Folwell 301, White
T 8:05 St. P. Ext. Center 212, White
F 6:20 Folwell 301, White

1-2† General Psychology. 3 credits each semester. \$10.

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

Fall Semester
1 W 6:20 Folwell 301, White
Th 8:05 St. P. Ext. Center 212, White

Spring Semester
2 W 6:20 Folwell 301, White
Th 8:05 St. P. Ext. Center 212, White

4-5 Introductory Laboratory Psychology. 2 credits each semester. \$10.

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

Fall Semester
4 W 6:20 Psychology 211, Stacey

Spring Semester
5 W 6:20 Psychology 211, Stacey

119 Personality: Facts and Theories. 3 credits. \$10.

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

Fall Semester
W 8:05 Psychology 115, Heron

122-123 Vocational Development and Personnel Psychology. 3 credits each semester. \$10 plus \$1 laboratory fee.

Deals with selecting, counseling, training, and maintaining an efficient labor force in industry. Theory and practice of giving, interpreting, and evaluating psychological tests and of interviewing; constructing and using rating scales; training, maintaining, and promoting employees. There will also be actual practice in the use of psychological tests. Not open for credit to those who have taken Psychology 160-161 for credit. No prerequisite altho Psychology 1-2 is recommended.

Fall Semester
122 T 6:20 Psychology 211, Longstaff

Spring Semester
123 T 6:20 Psychology 211, Longstaff

144-145 Abnormal Psychology. 3 credits each semester. \$10.

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

Fall Semester
144 M 8:05 Psychology 115, Bird

Spring Semester
145 M 8:05 Psychology 115, Bird

RADIO

Radio Writing I. 3 Extension credits. \$10 plus \$1 laboratory fee.

Fundamentals of writing "for the ear." Designed for amateurs in radio writing and for all writers; for educators, advertisers, and public service executives. Students are encouraged to select script subjects to fit their particular interests or jobs. Students begin with brief announcements and build longer radio programs of drama, interviews, music, etc. Handling of sound effects and music. Evaluation of current radio programs. Attention to "how to listen." Selected work may be presented on KUOM or other stations. Prerequisite: a good command of English.

Fall Semester

T 6:20 Murphy 302, Weaver

Radio Writing II. 3 Extension credits. \$10 plus \$1 laboratory fee.

Basic plan: writing a series of 15-minute or longer programs for consecutive presentation on the air. Students set up projects in their own fields of interest or employment. Used by active script writers to get unhampered criticism of their work. Experimentation is encouraged. Selected work frequently presented on KUOM or other stations. Prerequisite: I to precede II, II to precede III.

Spring Semester

T 6:20 Murphy 302, Weaver

Note—Radio Writing III, for those who have completed I and II, or equivalent, can be offered if sufficient students desire it.

Radio Speech (Speech 65). 3 credits. \$10 plus \$1 laboratory fee.

Speech art and psychology of the radio; announcing and broadcasting; radio speech; radio drama; interpretive reading, voice, diction, articulation, and pronunciation. Practice, exercises, projects, and reports on problems of appeal and audience response. Voice recordings will be made. Prerequisite: Speech 1-2-3.

Spring Semester

W 8:05 Murphy 302, Ziebarth

Radio Drama (Speech 66). 3 credits. \$10.

A study of the historical development of radio drama with an analysis of various types of radio drama including actual participation in production, direction, and acting. Prerequisite: Speech 1-2.

Fall Semester

W 8:05 Murphy 302, Wilkey

RECREATION

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

Activities Open Only to Women**Golf (Beginning)—for Women. \$5.**

Class and individual instruction in the use of the brassie, midiron, mashie, and putter. Discussion of rules, golf etiquette, and terminology. Last few lessons at University Golf Course. Sections limited to 25. Equipment (clubs and soft balls) furnished by students. Repeated spring semester.

Fall Semester

T 6:00 Norris Gym. 60, Jaeger

Spring Semester

T 6:00 Norris Gym. 60, Jaeger
T 7:00 Norris Gym. 60, Jaeger

Golf (Intermediate)—for Women. \$5.

First ten weeks: class and individual instruction in the use of the brassie, midiron, mashie, and putter; next seven weeks: supervised play at the University Golf Course. Students furnish own clubs. Sections limited to 25. Prerequisite: some knowledge of and experience in golf.

Spring Semester

W 6:00 Norris Gym. 60, Snell
W 7:00 Norris Gym. 60, Snell

Rhythmic Exercise and Recreational Games for Physical Fitness—for Women. \$5.

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

Fall Semester

W 6:30 Norris Gym. 153

Spring Semester

W 6:30 Norris Gym. 153

Swimming (Beginning)—for Women. \$5.

For beginners and those who want to increase their skill in strokes and diving. A health examination, for which a fee of 50 cents is charged, will be given at the first class meeting. University furnishes regulation suit and towel for a fee of 10 cents. Repeated spring semester.

Fall Semester
W 7:30 Norris Gym. 51, Eibner

Spring Semester
W 7:30 Norris Gym. 51, Eibner

Swimming (Intermediate and Advanced)—for Women. \$5.

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

Fall Semester
W 6:30 Norris Gym. 51, Starr

Spring Semester
W 6:30 Norris Gym. 51, Starr

Synchronized Swimming and Water Ballet—for Women. \$5.

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

Fall Semester
T 7:00 Norris Gym. 51, Starr

Spring Semester
T 7:00 Norris Gym. 51, Starr

Tennis (Beginning)—for Women. \$5 plus court fees (25 cents each time or \$1 for season, payable at courts).

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

Spring Semester
Th 6:00 Norris Gym. 151, Jaeger

Health Education. See page 16.

Activities Open to Both Men and Women**American Country Dancing—for Men and Women. \$5 plus \$1 laboratory fee.**

A recreational course reviving old American dances, the schottische, polka, and the more popular European folk dances. Repeated spring semester.

Fall Semester
W 7:00 Norris Gym. 151

Spring Semester
W 7:00 Norris Gym. 151

Badminton Club—for Men and Women. One period, 5 months, \$7.

Four periods per week, as scheduled below, will be devoted to playing the game. Registration will be by periods, with a maximum of 18 players accepted for each. Prospective students should register at the campus office of the General Extension Division to insure acceptance in any period. Registration may be for more than one period per week. Students furnish own rackets and shuttlecocks.

Periods: 6:00 to 7:30 p.m., and 7:30 to 9:00 p.m., Cooke Hall gymnasium, Monday and Friday, beginning October 1 and continuing through February with a recess at Christmas. In addition to the regular class periods, those registered may use the badminton courts when available for general intramural play. In charge: Smith, Bowman.

Play Leaders Laboratory—for Men and Women. No credit. \$10.

A course for those who are interested in leadership work on playgrounds or in play centers. Practical experience in leading games, conducting arts and craft work, singing, story telling, etc., are included. This course could serve as a refresher opportunity for experienced play leaders.

Spring Semester
Th 6:30-8:30 Norris Gym. 201

Activities Open Only to Men**Golf—for Men. \$5 plus \$1 laboratory 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 11. Lessons or appointments with competent golf instructors in the golf gymnasium will be scheduled for Tuesday, Wednesday, Thursday, or Friday evenings between February 12 and April 16. The last five meetings will be held, weather permitting, at the University Golf Course, where various professionals will assist. The outdoor schedule is adjusted to light. Students will furnish their own clubs.

Spring Semester
M 7:00 Cooke Hall 205, Smith

Physical Development—for Men. \$5.

Exercises based on individual needs. Includes calisthenics, weight lifting, apparatus work, dual sports, and recreational activities. Adaptable for handicapped individuals.

Fall Semester
T 7:00 Cooke Hall 215, Osell

Swimming—for Men. \$5.

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.

Fall Semester

M 8:05 Cooke Hall, Thorpe

Spring Semester

M 8:05 Cooke Hall, Thorpe

See also Art, p. 9; Gardening, p. 15; Music, p. 19; Natural History, p. 20; Photography, p. 21.

ROMANCE LANGUAGES

See French, p. 14; Portuguese, p. 26; Spanish, p. 31.

RUSSIAN**1-2 Beginning Russian. 3 credits each semester. \$10.**

A beginning course with emphasis on reading and conversation. Useful for those who want an introduction to the Russian language, for those preparing for graduate reading examinations, for those wanting pronunciation training for singing, etc. No prerequisite.

Fall Semester

I Th 6:20 Folwell 109, Reichardt

Spring Semester

2 Th 6:20 Folwell 109, Reichardt

20-21 Advanced Russian Reading. 3 credits each semester. \$10.

Students will read Russian newspapers and selections from Russian literature. Advanced discussion of grammar and style. Prerequisite: 6 credits in Russian 1-2 or the five-credit class in Russian 1.

Fall Semester

20 Th 8:05 Folwell 109, Reichardt

Spring Semester

21 Th 8:05 Folwell 109, Reichardt

Elementary Scientific Russian. 3 Extension credits. \$10 plus \$1 materials fee.

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

Fall Semester

T 6:20 Medical Sciences 113, Corson

Advanced Scientific Russian. 3 Extension credits. \$10 plus \$1 materials fee.

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

Spring Semester

T 6:20 Medical Sciences 113, Corson

Contemporary Russian Civilization. 3 Extension credits. \$10.

A peaceful and prosperous postwar world may well depend upon the existence of friendly and co-operative relations between the United States and Soviet Russia. Such co-operation can be achieved only on the basis of mutual understanding. This course attempts to lay the foundation for such an understanding by presenting the facts in regard to modern Russian life, particularly in the cultural and scientific fields. Among the topics presented will be: foreign policy, education, science, public health, the press, literature, art, and music. The course will be directed by Mr. Samuel A. Corson and will be taught by a number of faculty members from various departments of the University. This course is given under the auspices of the Continuation Center. Register at the Center. No prerequisites.

Fall Semester

T 8:05 Continuation Center, Corson and associates

SCANDINAVIAN**1-2 Beginning Norwegian. 3 credits each semester. \$10.**

This course emphasizes spoken Norwegian with some attention to cultural backgrounds. It is intended for students who have little or no previous knowledge of the language. The intensive method, so successful in the AST programs, will be used.

Fall Semester

1 W 6:20 Mpls. Miller Vocational High 404, Farseth

Spring Semester

2 W 6:20 Mpls. Miller Vocational High 404, Farseth

EXTENSION CLASSES

5-8 Advanced Norwegian. 3 credits each semester. \$10.

Dramatic and narrative masterpieces of the 19th century, especially Ibsen's Peer Gynt and the novels of Bjornson and Kleiland. The first half hour of the class will be devoted to oral and aural drill in conversing in Norwegian about matters of contemporary Norway. Prerequisite: Norwegian 1-2 or equivalent.

Fall Semester
5 T 6:20 Mpls. Miller Vocational
High 404, Farseth

Spring Semester
6 T 6:20 Mpls. Miller Vocational
High 404, Farseth

21 The Scandinavian Contribution to Civilization. A cultural survey. 3 credits. \$10.

Discussion of the most eminent accomplishments of the Scandinavian nations in literature, fine arts, sciences, philosophy, etc. Required reading available in English. No prerequisite.

Fall Semester
M 6:20 Folwell 109, Reichardt

7-8 Beginning Swedish. 3 credits each semester. \$10.

Minimum of grammar, simple composition and conversation, reading of selected prose. No prerequisite.

Fall Semester
7 M 7:00 Swedish Art Institute, Lorenzen

Spring Semester
8 M 7:00 Swedish Art Institute, Lorenzen

SOCIOLOGY AND SOCIAL WORK**Classes in Sociology**

(Prerequisite to technical social work classes)

1 Introduction to Sociology. 3 credits. \$10.

A study of the characteristics of human group life. An analysis of the factors associated with the development of human group life and man's social environment; the structure of the social environment and its influence upon the individual's behavior; the processes involved in social change and the social problems that accompany social change. A survey of the fundamental social institutions, such as the family and the church; the development and decline of social institutions; change in the institutional functions and social disorganization. Repeated spring semester. No prerequisite.

Fall Semester
T 8:05 St. P. Ext. Center 219
W 6:20 Jones 104, Schneider

Spring Semester
Th 6:20 Jones 109, Schneider

2 Individual and Group Adjustment. Not offered 1945-46.**49 Social Pathology. 3 credits. \$10.**

A survey course in contemporary social problems with especial emphasis on personal demoralization and social disorganization. The scientific approach to the study of poverty, physical diseases and defectiveness, feeble-mindedness, insanity, vagrancy, etc. Repeated spring semester. Prerequisite: Sociology 1 or 10 credits in social science.

Fall Semester
W 6:20 Jones 109, Sletto

Spring Semester
W 6:20 Jones 109, Sletto

96 Recent Social Trends. Not offered 1945-46.**119 Contemporary Marriage Problems. Not offered 1945-46.****Classes in Social Work**

These classes are open to persons employed in social work positions who are recommended by the executive of the agency in which they are employed and approved by an adviser in the School of Social Work. In satisfaction of requirements for membership in professional social work organizations, the courses listed are accounted as "technical social work" courses.

80 The Social Worker and the School. 3 credits. \$10.

A consideration of the social services offered by the school to individual children; the co-ordination between school and social services offered by the community in treatment of children's problems; the relationship between social workers and school personnel. Prerequisite: 130 or equivalent.

Spring Semester
Th 6:20 Jones 2, Laabs

129 Principles of Social Case Work. 3 credits. \$10.

A study of the purposes, problems, and processes of generic social case work, including a study of the relationships between the individual and the social worker and community as contributory to the treatment of the problems presented.

Fall Semester
M 6:20 Jones 109, Porter

170 Introductory Psychiatry. 3 credits. \$10.

A lecture course, the subject matter of which includes a discussion of mental hygiene, mental mechanisms; psychiatric history taking; review of schools of psychiatry; classification of mental diseases.

Spring Semester

T 6:20 Jones 109, Hansen

176 Dynamics of Human Behavior Based on Psychoanalytic Theory. 3 credits. \$10.

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

Fall Semester

Th 6:20 St. P. Wilder Dispensary, Lippman

SPANISH

1-2 Beginning Spanish. 3 credits each semester. \$10.

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

Fall Semester

1 M 6:20 Folwell 227, Grismer
 T 4:40 Mpls. N. W. Bank Bldg. 1175
 T 6:20 St. P. Ext. Center 214, Sundheim
 Th 6:20 Folwell 227

Spring Semester

2 M 6:20 Folwell 227, Grismer
 T 4:40 Mpls. N. W. Bank Bldg. 1175
 T 6:20 St. P. Ext. Center 217, Sundheim
 Th 6:20 Folwell 227

1 Beginning Spanish. 5 credits. \$17.

This class is for students who want to begin Spanish in the spring semester. It meets for three hours once a week. Students who successfully complete this class and certain recommended readings during the following summer should be ready for Spanish 3 in the fall of 1946. No prerequisite.

Spring Semester

M 6:20 St. P. Ext. Center 212
 T 6:20 Folwell 227, LeFort

3-4 Intermediate Spanish. 3 credits each semester. \$10.

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

Fall Semester

3 T 6:20 Folwell 201, Brackney
 T 6:20 St. P. Ext. Center 219, Buss
 Th 4:40 Mpls. N. W. Bank Bldg. 1175

Spring Semester

4 T 6:20 Folwell 201, Brackney
 T 6:20 St. P. Ext. Center 219, Buss
 Th 4:40 Mpls. N. W. Bank Bldg. 1175

5-6 Written and Spoken Spanish. 3 credits each semester. \$10.

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

Fall Semester

5 Th 6:20 Folwell 213, Mills
 Th 6:20 St. P. Ext. Center 216

Spring Semester

6 Th 6:20 Folwell 213, Mills
 Th 6:20 St. P. Ext. Center 217

7 Latin-American Culture. 3 credits. \$10.

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

Fall Semester

Th 6:20 Folwell 201, LeFort

53-54 Spanish Composition and Conversation. 3 credits each semester. \$10.

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

Fall Semester

53 T 6:20 Folwell 213, Cuneo

Spring Semester

54 T 6:20 Folwell 213, Cuneo

55-56 Spanish Composition and Conversation. 3 credits each semester. \$10.

A continuation of Spanish 53-54 with continued drill in written and spoken Spanish. Prerequisite: Spanish 53-54.

Fall Semester

55 T 6:20 Folwell 205, Castro

Spring Semester

56 T 6:20 Folwell 205, Castro

Government in Latin America. See page 23.

SPEECH

1-2-3 Fundamentals of Speech. 3 credits each semester. \$10 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			Spring Semester		
1	M	8:05 Folwell 305, Ziebarth	1	M	8:05 Folwell 305, Ziebarth
	Th	6:20 St. P. Ext. Center 212, Gilkinson		Th	6:20 St. P. Ext. Center 212, Gilkinson
2	M	8:05 Folwell 305, Ziebarth	2	M	8:05 Folwell 305, Ziebarth
	Th	6:20 St. P. Ext. Center 212, Gilkinson		Th	6:20 St. P. Ext. Center 212, Gilkinson
3	M	8:05 Folwell 305, Ziebarth	3	M	8:05 Folwell 305, Ziebarth
	Th	6:20 St. P. Ext. Center 212, Gilkinson		Th	6:20 St. P. Ext. Center 212, Gilkinson

Beginning Practical Speech Making. 3 Extension credits. \$10 plus \$1 laboratory fee.

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

Fall Semester		Spring Semester	
M	6:20 Folwell 5, Nichols	M	6:20 Folwell 5, Nichols
W	6:20 Folwell 5, Nichols		

Advanced Practical Speech Making. 3 Extension credits. \$10 plus \$1 laboratory fee.

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

Spring Semester	
W	6:20 Folwell 5, Nichols

61 Speech Hygiene. Not offered 1945-46.

65 Radio Speech. See page 27.

66 Radio Drama. See page 27.

Vocabulary Building I. 1½ Extension credits. \$5 plus \$1 materials fee.

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

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

Vocabulary Building II. 1½ Extension credits. \$5 plus \$1 materials fee.

A more advanced and detailed study of words. Includes written composition, exercises, reports, tests; not a recitation class; home study recommended. May be taken as a continuation of Course I, or together with it. Meets weekly for one hour. No prerequisite.

Spring Semester	
T	6:20 St. P. Ext. Center 214, Dreher
T	8:05 Folwell 308, Dreher

Vocabulary Building III. 1½ Extension credits. \$5 plus \$1 materials fee.

The course, offered for the first time, is designed primarily for those students who have taken Vocabulary Building I and II and want to continue to increase their vocabularies. Not a recitation class. Meets weekly for one hour. No prerequisite.

Fall Semester	
Th	6:20 Folwell 308, Dreher

THEATER

Introduction to the Theater (Speech 31). 3 credits. \$10.

This class is a prerequisite for students majoring in speech sequence B. It is designed to acquaint students with the theater of today. Demonstrations, projects, and excursions to Twin City theaters. A survey of modern theater practices to develop a keen appreciation of the theater. Individual and group exercises for the student. Prerequisite: Speech 1-2-3 or 5-6, or concurrent registration, or consent of instructor.

Fall Semester	
Th	8:05 Music 19, Whiting

Beginning Acting (Speech 32). 3 credits. \$10 plus \$1 laboratory fee.

Creative and technical approaches. Designed particularly for the student interested in gaining skill in self-expression. A study of the art of pantomime based upon observation and memory recall. Underlying principles of stage technique and voice. Exercises and projects in characterization and work in University Theatre. Students may register for either class either semester and are eligible for tryout in construction and acting phases of University Theatre activities. Prerequisite: Speech 1-2-3 (or 5-6) or concurrent registration, and Speech 31, or consent of instructor.

Spring Semester

Th 8:05 Music 19, Whiting

Radio Drama. See page 27.

ZOOLOGY**1-2ext† General Zoology. 5 credits each semester. \$17.**

Structure, physiology, embryology, classification, genetics, and evolution of animals. Equivalent to Zoology 1-2-3 in day class. No prerequisite.

Fall Semester

1 MW 6:20 Zoology 211, Osterud

Spring Semester

2 MW 6:20 Zoology 211, Osterud

Birds of Minnesota. See page 20.

Fish and Fishing in Minnesota. See page 20.

Wild Game of Minnesota. See page 20.

BUSINESS CLASSES

ACCOUNTING

Accounting classes are listed in two groups: Sequence Classes and Special Interest Classes. Students who are beginning the study of accounting should take the Introductory Sequence (consisting of the basic class, Econ. 20L-25L Principles of Accounting and Accounting Laboratory, and B.A. 150-151 Accounting Practice and Procedure) and then go on with the advanced sequences: Cost Accounting, Auditing, Advanced Accounting. Students with special interests will want to take certain of the Special Interest Classes.

Sequence Classes

Introductory Accounting Sequence

Econ. 20L-25L Principles of Accounting and Accounting Laboratory. 4 credits each semester. \$13.50 plus \$1 materials fee.

Lectures and discussion with working out of selected cases; compilation of accounting data; balance sheets; operating statements, accounting records, adjustment of accounts, accounting work sheets; the principles underlying the computation of profit and loss and the statement thereof. Class period is four hours long. No prerequisite.

Fall Semester			Spring Semester		
20L	M 6:20	Vincent 307, Smith	25L	M 6:20	Vincent 307, Smith
	M 6:20	St. P. Ext. Center 218, LeBorious		M 6:20	St. P. Ext. Center 218, LeBorious
	T 6:20	Vincent 307, Ostlund		T 6:20	Vincent 307, Ostlund
	Th 6:20	Mpls. N. W. Bank Bldg. 1175, Smith		Th 6:20	Mpls. N. W. Bank Bldg. 1175, Smith
	F 6:20	St. P. Ext. Center 218, Montgomery		F 6:20	St. P. Ext. Center 218, Montgomery

NOTE—The following combined course offers Accounting 20L-25L complete in one semester—20L the first eight weeks and 25L the second eight weeks. Fees: \$13.50 each course plus \$1 materials fee in both 20L-25L in St. Paul and in 20L only in Minneapolis. Registration and fees accepted for combined course or for one class at a time, either class.

Spring Semester		
MF	6:20	Vincent 306, Sevenich
MTh	6:20	St. P. Ext. Center 216, Mont- gomery and LeBorious

B.A. 150-151† Accounting Practice and Procedure A and B. 3 credits each semester. \$10 plus \$1 materials fee.

Practice in the peculiar accounting problems of business and the particular skills of the practicing accountant. Prerequisite: Economics 20L-25L or equivalent.

Fall Semester			Spring Semester		
150	M 8:05	Vincent 113, Houston	151	M 8:05	Vincent 113, Houston
	T 6:20	St. P. Ext. Center 218, LeBorious		T 6:20	St. P. Ext. Center 218, LeBorious

Advanced Accounting

Advanced Accounting Problems. 3 Extension credits. \$10.

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

Fall Semester		
Th	8:05	Vincent 313, Sevenich

B.A. 135 Auditing and Public Accounting. 3 credits. \$10.

The application of principles and technical methods used in professional auditing practice. Typical frauds and errors in accounting records; auditors' working papers, financial exhibits, certificates, and reports are studied. Prerequisite: B.A. 139 or 150-151.

Fall Semester		
T	6:20	Vincent 113, Reighard
W	8:05	St. P. Ext. Center 218, Tuttle

Cost Accounting Sequence

B.A. 152-153† Cost Accounting I-II. 3 credits each semester. \$10.

Principles used to determine the profitableness of each branch of manufacturing, and basis for judging the relative efficiencies of operations; materials, labor, and burden; continuous process and production order costs; burden distribution methods, standard costs, etc. Prerequisite: Economics 25L or equivalent.

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

Cost Accounting III-IV. 3 Extension credits each semester. \$10.

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: B.A. 152-153.

Fall Semester

C T 6:20 St. P. Ext. Center 216, Tuttle

Spring Semester

D T 6:20 St. P. Ext. Center 216, Tuttle

B.A. 133 Standard Costs. 3 credits. \$10.

Methods of standard costs; meaning of standards; setting of standards for materials, labor, and overhead; analysis of and accounting for variations; development and application of standards to distribution as well as to production activities, 8 weeks. Prerequisite: see instructor.

Fall Semester

W 6:20 Vincent 115, Rotzel

W 6:20 St. P. Ext. Center 218, Tuttle

B.A. 180A Accounting Topics—Budgetary Control. 3 credits. \$10.

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

Spring Semester

W 6:20 Vincent 115, Rotzel

Industrial Engineering Accounts and Accounting. Statistical Methods Section. 3 Extension credits. \$10.

A special course to parallel the course in Standard Costs. The determination of cost trends by statistical means, in relation to the volume of business as measured by sales income and/or other criteria of volume such as direct labor or direct labor hours in the case of manufacturing costs. Useful in the better determination of standard costs, in connection with the study of standard cost accounting. Applications in the determination of fixed and variable capital in relation to volume. A treatise, mimeograph charts, and problems. Prerequisite: see instructor.

Fall Semester

W 8:05 Vincent 115, Rotzel

Industrial Engineering Accounts and Accounting. Budgetary Control Section. 3 Extension credits. \$10.

That which properly determines satisfactory operation; proper product apportioning; determination of manufacturing capacity, of selling capacity; product fixed gross profit vs. product variable gross profit; variable net profit. A continuation of Statistical Methods Section but not dependent upon it. A treatise, mimeograph charts, and problems. Prerequisite: see instructor.

Spring Semester

W 8:05 Vincent 115, Rotzel

Special Interest Classes

Elements and Principles of Accounting (A.I.B.) I and II. 3¼ credits each semester. \$12.50.

A special class, primarily for members of the American Institute of Banking, Minneapolis, chapter, covering the essentials of Econ. 20L and 25L, for which see p. 34. Students completing receive 7½ credits and may continue with advanced classes in accounting. Begins October 2. No prerequisite.

Fall Semester

I TF 6:30 McKnight Bldg. 250, Lund

Spring Semester

II TF 6:30 McKnight Bldg. 250, Lund

B.A. 134 Income Tax Accounting I-II. First eight weeks, 3 credits; next sixteen weeks, 3 credits for certificate. Students must register for both I and II; fee: \$20.

Application of income tax laws to various business conditions; possible errors in preparation of income tax reports; state and federal problems. Course I meets once a week for three hours and twenty minutes from October 1 to November 19; Course II, which is a continuation of Course I, meets once a week for one hour and forty minutes from November 26 to March 18. Prerequisite: B.A. 151.

October 1—November 19

I M 6:20 St. P. Ext. Center 216, Connolly

T 6:20 Vincent 105, Connolly

November 26—March 18

II M 6:20 St. P. Ext. Center 214, Connolly

T 6:20 Vincent 105, Connolly

B.A. 134ex Income Tax Accounting Survey. 2 credits. \$7.50.

A brief survey of current regulations and principles governing the preparation of tax returns from accounting and other records. Eleven meetings beginning January 3. No prerequisite.

January 3—March 14
Th 6:20 Vincent 113, Reighard

ADVERTISING.**Psy. 56 Psychology of Advertising. 3 credits. \$10.**

Analysis of advertising, national and local, from the standpoint of attention, memory, desire, and action; experimental techniques for investigating advertising problems. Of fundamental value to all advertisers. Prerequisite: Psychology 1-2 and Economics 6-7.

Fall Semester
W 6:20 Psychology 115

B.A. 88 Elementary Advertising. 3 credits. \$10.

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

Spring Semester
W 6:20 Vincent 113

97 Advertising Copy, Layout, and Typography. 3 credits. \$10.

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

Fall Semester
T 6:20 Murphy 311, Barnhart

BUSINESS ENGLISH**1 Business English. 3 Extension credits. \$10.**

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

	Fall Semester	Spring Semester
M 8:05	St. P. Ext. Center 219, Randel	T 6:20 Vincent 101, Haga
T 8:05	Vincent 101, Haga	
W 6:20	Vincent 101, Randel	

2 Business Correspondence. 3 Extension credits. \$10.

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

Spring Semester
T 8:05 Vincent 101, Haga

BUSINESS LAW**B.A. 51-52-53†, 54 Business Law. 3 credits each semester; 51, 52, 53 must be completed before credit for degree is granted; 51, 52, and either 53 or 54 for the 90-credit business certificate. \$10 plus \$1 materials fee.**

Comprehensive course in the fundamental principles of law for the business and professional man. B.A. 51: contracts—formation, operation, transfer, discharge; agency—creation, nature, and terms of the relation, rights, and liabilities of the parties. B.A. 52: organization, management, and responsibility of association; business trusts; partnerships and corporations; bankruptcy. B.A. 53: personal property and transactions concerning it; law of sales, of bailments, and the Uniform Negotiable Instruments and Bills of Lading acts. B.A. 54: 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. No prerequisite but B.A. 51 should precede or go along with 52, 53, or 54.

	Fall Semester	Spring Semester
51 M 6:20	St. P. Ext. Center 217	51 M 8:05 St. P. Ext. Center 217
T 6:20	Vincent 221	T 8:05 Vincent 221
52 W 6:20	Vincent 221	52 M 6:20 St. P. Ext. Center 217
53 M 8:05	St. P. Ext. Center 217	T 6:20 Vincent 221
T 8:05	Vincent 221	54 W 8:05 Vincent 221

ECONOMICS

Econ. 5 Elements of Statistics. 3 credits. \$10.

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

Fall Semester

W 8:05 Vincent 105, Graves
W 8:05 St. P. Ext. Center 214, Berrettoni

Econ. 6-7† Principles of Economics. 3 credits each semester. \$10.

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

Fall Semester

6 M 6:20 St. P. Ext. Center 214
Th 8:05 Vincent 207, Graves

Spring Semester

6 W 6:20 Vincent 207, Graves
7 M 6:20 St. P. Ext. Center 219
Th 8:05 Vincent 207, Graves

Econ. 103-104† Advanced Economics—Competition, Monopoly, and Inequality of Incomes. 3 credits each semester. \$10.

An advanced course in economic theory, prices, and costs; the value theory; the distribution of wealth—causes and effects of inequality; the distribution of income—inequality, rent, wages, interest, and profits. May be substituted for B.A. 101-102 in requirements for degree in business. Prerequisite: consult instructor.

Fall Semester

103 Th 6:20 Vincent 205, Waite

Spring Semester

104 Th 6:20 Vincent 205, Waite

Econ. 175 Government Regulation of Business. 3 credits. \$10.

A general course on the economic aspects of legislation affecting the pricing process and the distribution of the national income. Topics studied include economic origins of modern business limitations on free competition; regulation of public institutes, trusts and combinations, and "unfair competitive practices"; positive assistance to industrial groups. Prerequisite: 20 credits in social science including Economics 6-7 or 83.

Spring Semester

Th 6:20 Vincent 211, Hines

FINANCE

Econ. 3 Elements of Money and Banking. 3 credits. \$10.

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

Fall Semester

W 6:20 St. P. Ext. Center 214, Berrettoni
Th 6:20 Vincent 115, Stehman

B.A. 58 Elements of Public Finance. 3 credits. \$10.

Public expenditures, revenues, and debts. Special attention is given to tax principles, practices, and burdens. This is a condensed course given especially for School of Business Administration students. Prerequisite: Economics 6-7.

Spring Semester

T 8:05 Vincent 115, Nightingale

INSURANCE

Econ. 50ex Insurance Principles. 3 credits. \$10.

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

Spring Semester

W 8:05 Vincent 2, Graves

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

The University of Minnesota co-operates with the American Institute for Property and Liability Underwriters, Inc. by offering an educational program that provides the basic courses needed by those who wish to take the institute's examinations for the Chartered

EXTENSION CLASSES

Property Casualty Underwriter (C.P.C.U.) award. Complete details of this program of training are printed in the institute's annual announcements, copies of which may be obtained from the General Extension Division of the University of Minnesota. Following is an outline of the program, with a list of the appropriate courses offered by the General Extension Division.

Parts I-II Insurance Principles and Practices

Econ. 50ex Insurance Principles
B.A. 60 Fire and Marine Insurance
B.A. 61 Casualty Insurance Suretyship

Part III General Education
Economics
Government
Social Legislation
English

Econ. 6-7 Principles of Economics
Pol.Sci. 1-2 American Government
Econ. 164 Labor Legislation and Social Insurance
English Review or Business English
B.A. 51-52-53-54 Business Law (does not include Law of Negligence)

Part IV Law

Part V Accounting and Finance
Accounting
Finance
Business Organization

Econ. 20L-25L Principles of Accounting
Econ. 3 Elements of Money and Banking
B.A. 89 Production Management and
B.A. 52 Business Law

LABOR AND PERSONNEL RELATIONS

Econ. 161 Labor Problems and Trade Unionism. 3 credits. \$10.

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

Fall Semester

Th 8:05 Vincent 205

B.A. 167 Personnel Administration. 3 credits. \$10.

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. 161.

Spring Semester

Th 8:05 Vincent 205

Psy. 122-123 Vocational and Personnel Psychology. 3 credits each semester. \$10 plus \$1 laboratory fee.

Deals with selecting, counseling, training, and maintaining an efficient labor force in industry. Theory and practice of giving, interpreting, and evaluating psychological tests and of interviewing; constructing and using rating scales; training, maintaining, and promoting employees. There will also be actual practice in the use of psychological tests. Not open for credit to those who have taken Psychology 160-161 for credit. No prerequisite altho Psychology 1-2 is recommended.

Fall Semester

122 T 6:20 Psychology 211, Longstaff

Spring Semester

123 T 6:20 Psychology 211, Longstaff

Special labor classes for union members. Ask for announcement.

MARKETING AND MERCHANDISING

Salesmanship. 3 Extension credits. \$10.

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

Fall Semester

M 8:05 Vincent 205, Faragher

Spring Semester

W 8:05 St. P. Ext. Center 212, Faragher

M 8:05 Vincent 205, Faragher

B.A. 68 Sales Management. 3 credits. \$10.

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

Spring Semester

M 8:05 Vincent 205

Wholesale Credit and Collection Curriculum. In co-operation with the National Institute of Credit.

The University of Minnesota co-operates with the Minneapolis and St. Paul chapters of the National Institute of Credit in a program of educational training leading toward the awards of associate and fellow of the National Institute of Credit. The National Institute of Credit is the educational branch of the National Association of Credit Men. Course registrations may be made through the association offices, 420 Rand Tower, Minneapolis 2.

and 801 Guardian Building, St. Paul 1. Registration in the National Institute of Credit is required for credit toward awards of associate and fellow. Transfer credit may be applied for courses completed previously in recognized colleges, up to 50 per cent of the requirements listed below.

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

Classes in Association Curriculum

- Associate Award
- Economics
- Fundamentals of Accounting
- Business English
- Credits and Collections
- Fellow Award (in addition to courses above)
- Business Law
- Marketing
- Public Speaking
- Problems of Credit Management

Equivalent Extension Classes

- Econ. 6-7 Principles of Economics
- Econ. 20L-25L Principles of Accounting
- 2ex Business Correspondence
To be announced
- B.A. 51-53 Business Law
- B.A. 77 Survey in Marketing
- Beginning Practical Speech Making
- To be announced

Advertising. See page 36.

REAL ESTATE

The University of Minnesota co-operates with the National Associations 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. This year the University will offer two courses in the fall semester and two courses in the spring semester. Other courses in real estate will be added to this curriculum if there is a reasonable demand for them.

Fundamentals of Real Estate Practice. 3 Extension credits. \$10.

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

Fall Semester

M 6:20 Vincent 101

Real Estate Appraisal. 3 Extension credits. \$10.

Detailed consideration of principles and practices involved in appraising various types of real property for various purposes. Factors determining valuations; making and reporting appraisals. Appraisal procedures in various legal actions. Prerequisite: consult instructor.

Spring Semester

M 6:20 Vincent 101

Planning Your Postwar Home. 2 Extension credits. \$8.00.

For description see page 18.

Fall Semester

T 8:05 Main Engineering 320, Cerny

Real Estate Law (Business Law 54). 3 credits. \$10, \$1 material fee.

For description see page 36.

Spring Semester

W 8:05 Vincent 221

TRAFFIC AND TRANSPORTATION

B.A. 71-72. Transportation: Services and Charges. 3 credits each semester. \$10.

The rail, water, air, and highway transportation facilities, services, rates, and laws, and their relation to business establishments; problems in handling freight, express, and parcel-post shipments; scope, selection, and use of the facilities and services of common carriers; rate structures; problems involving freight classification and use of tariffs. 71 to precede 72. Prerequisite: Economics 6-7.

Fall Semester

71 M 6:20 Vincent 1, Nightingale

Spring Semester

72 M 6:20 Vincent 1, Nightingale

B.A. 180-181 Senior Topics: Transportation. 3 credits each semester. \$10.

Advanced study of tariffs and tariff construction, of rate structures, and of auxiliary services, including problems thereon. Analysis of important current cases and decisions affecting shippers and carriers. Prerequisite: 71-72.

Fall Semester

180 M 8:05 Vincent 1, Nightingale

Spring Semester

181 M 8:05 Vincent 1, Nightingale

Advanced Traffic and Transportation I-II. 3 Extension credits each semester. \$10.

Advanced study of state and federal regulatory laws governing rail and highway transportation. Detailed study of highway rates and problems. Attention to practice and procedure before rate and classification committees, state commissions, and the Interstate Commerce Commission. Preparation of informal, formal, and investigation and suspension cases before regulatory commissions. Prerequisite: B.A. 71-72 and B.A. 180 or equivalent.

Fall Semester

I T 6:20 Vincent 1, Nightingale

Spring Semester

II T 6:20 Vincent 1, Nightingale

ENGINEERING

AERONAUTICAL ENGINEERING

Aeronautics I: Airplane Construction. 3 Extension credits. \$10.

Nomenclature; theory of lift and drag; wind tunnel; airfoil characteristics; airplane performance; stability and control; types of airplanes; demonstration and inspection of airplane and its parts; materials and their properties; principles in propeller theory. Prerequisite: elementary mathematics.

Fall Semester

T 7:30 Armory 105, Ruszaj

Aeronautics II: Elementary Navigation and Meteorology. 3 Extension credits. \$10.

Navigation instruments; principles of celestial navigation; laying out and checking course; dead reckoning; radio use; magnetic compass and its use; maps and charts; the atmosphere and clouds; reading of weather maps. Prerequisite: elementary mathematics.

Spring Semester

T 7:30 Armory 105

10 Air Pilot's Ground School. 3 credits. \$10.

An air pilot's course in navigation and civil air regulations, the primary objective being to prepare for the portions of the Civil Aeronautics Administration's written examination for the federal Private Pilot Certificate. Pilotage, dead reckoning, and radio methods of air navigation. Effects of wind. Charts, their limitations and uses. Navigation aids. Use of basic navigation instruments and equipment. Air traffic rules. Pilot and aircraft certification. Pilot privileges, responsibilities and limitations. Lecture and laboratory work. Repeated spring semester. No prerequisite.

Fall Semester

Th 6:20 Armory 105, Hamilton

Spring Semester

W 6:20 Armory 105, Hamilton

11 Air Pilot's Ground School. 3 credits. \$10.

An air pilot's course in meteorology and general service and operation of aircraft, the primary purpose being to prepare for the portions of the Civil Aeronautics Administration's written examination for the federal Private Pilot Certificate. Meteorological processes. Fog. Clouds and their significance. Aircraft and carburetor icing. Winds, surface, and aloft. Air masses and fronts. Weather bureau facilities and how to use them. Analysis of weather maps and related teletype reports. Aerodynamic and physical principles of flight and flight maneuvers. Airplane components and equipment. Stability. Loading requirements. Load factors. Structural considerations. Propellers. Aircraft engines and their operation. Inspection and servicing of the airplane and its power plant. Instruments. Parachutes. Lecture and laboratory work. Repeated spring semester. No prerequisite.

Fall Semester

Th 8:05 Armory 105, Hamilton

Spring Semester

W 8:05 Armory 105, Hamilton

12 Commercial Pilot's Ground School. 3 credits. \$10.

A ground course intended primarily for the air pilot who is seeking a federal Commercial Pilot Certificate and Instrument Rating. Advanced study of aircraft engines, theory of flight, aeronautical meteorology, radio and dead-reckoning navigation, instruments and civil air regulations pertaining to both contact and instrument flight. Lecture and laboratory work. Prerequisite: Aeronautics 10 and 11, or consent of instructor.

Spring Semester

Th 6:20 Armory 105, Hamilton

Airplane Engines. See page 44.

DRAWING AND DESCRIPTIVE GEOMETRY

1 Engineering Drawing. 3 credits. \$10.

Elements of drafting, geometry, sketching, lettering, dimensioning, conventions, working drawings, tracing. Repeated spring semester. No prerequisite.

Fall Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Mech. Arts High 101, Dow
Th 7:30 Main Engineering 201, Myers

Spring Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Mech. Arts High 101, Dow
Th 7:30 Main Engineering 201, Myers

2 Engineering Drawing. 3 credits. \$10.

Detail drawings, auxiliary views, sectional views, assembly drawings, tracing. Repeated spring semester. Prerequisite: Drawing 1 or consent of instructor.

Fall Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Mech. Arts High 101, Dow
Th 7:30 Main Engineering 201, Myers

Spring Semester

W 7:30 Main Engineering 101, Potter
W 7:30 St. P. Mech. Arts High 101, Dow
Th 7:30 Main Engineering 201, Myers

3 Descriptive Geometry. 3 credits. \$10.

Elementary course in the methods of representation, correlated in part with analytical geometry. Graphical and algebraic solutions. Lectures, demonstrations, and drafting. Prerequisite: Drawing 2, Mathematics and Mechanics 11.

Fall Semester

W 7:00 Main Engineering 201, Quaid

20 Advanced Mechanical Drawing. 2 Extension credits. \$7.50.

Working drawings, gearing, cams, developments, multiple auxiliary views, special projections. St. Paul class repeated spring semester. Prerequisite: Drawing 1.

Fall Semester

W 7:30 Main Engineering 201, Quaid
W 7:30 St. P. Mech. Arts High 101, Dow

Spring Semester

W 7:30 St. P. Mech. Arts High 101, Dow

29 Aeronautical Drafting. 2 credits. \$7.50.

Detail, assembly, and layout drawings. Standard practices in the aircraft industry. Army-Navy standards and specifications; tolerances and allowances; graphical integration. Prerequisite: Drawing 2 or consent of instructor.

Fall Semester

W 6:20 Main Engineering 201, Quaid

38 Reading Drawings. 2 credits. \$7.50.

Calculations of areas, volumes, and weights from drawings. Tabulation of quantities. Problems concerned with fabrication, manufacture, and construction. Repeated spring semester. Prerequisite: Drawing 1 or equivalent experience.

Fall Semester

W 7:30 Main Engineering 104, Potter

Spring Semester

W 7:30 Main Engineering 104, Potter

55 Production Illustration. 3 Extension credits. \$10.

Pictorial drawing as used in industry. Detail and assembly drawing in pictorial form by the use of isometric, oblique, axonometric, and prospective projection. Prerequisite: Drawing 1.

Spring Semester

W 7:30 Main Engineering 217, Doseff

75 Industrial Design. 3 Extension credits. \$10 plus \$2 materials fee.

This course takes up the fundamental principles of practical design, as applied to plastics, leather and other materials, used in the commercial field. It deals mostly with three dimensional designs by carving or by modeling in plastacine, altho it is preceded by study of two dimensional design through drawing. No prerequisite.

Fall Semester

W 7:30 Main Engineering 217, Doseff

CIVIL ENGINEERING

31-32 Stress Analysis. 2 credits each semester. \$7.50.

Analytical and graphic analysis of various types of bridge roof trusses and portals for fixed and moving loads. Prerequisite: Mathematics and Mechanics 26.

Fall Semester

31 M 6:20 Main Engineering 229

Spring Semester

32 M 6:20 Main Engineering 229

141-142 Reinforced Concrete. 3 credits each semester. \$10.

Principles of reinforced concrete. Theory of beams, slabs, and columns, and the application to ordinary structures. Prerequisite: Civil Engineering 33.

Fall Semester

141 Th 6:20 Main Engineering 229

Spring Semester

142 Th 6:20 Main Engineering 229

ELECTRICAL ENGINEERING

1-2 Fundamentals of Electrical Engineering. 5 Extension credits each semester. \$20.

Fundamental laws of direct-current circuits, the magnetic field and magnetic properties of iron and steel, induced and generated electromotive forces, electric fields, storage batteries. Fundamental laws of alternating-current circuits, complex representation of AC quantities, series and parallel AC circuits, polyphase AC circuits, power measurements in AC circuits. No prerequisite.

Fall Semester

1 TTh 7:00 Electrical Engineering 237, Cartwright

Spring Semester

2 TTh 7:00 Electrical Engineering 237, Cartwright

3-4 Fundamentals of Electronics. 5 Extension credits each semester. \$20.

Electronic emission, conduction through vacuums and gases; characteristics of vacuum tubes, of gas and vapor tubes, and of mercury pool tubes; amplifier circuits, trigger circuits, oscilloscopes, and control circuits; application of electronic devices to industry; electronic power devices. Prerequisite: 1-2 or equivalent.

Fall Semester

3 TTh 7:00 Electrical Engineering 138,
Caverley

Spring Semester

4 TTh 7:00 Electrical Engineering 138,
Caverley

5-6 Fundamentals of Radio. 5 Extension credits each semester. \$20.

First semester: vacuum tube characteristics, gas tube characteristics, audio amplifiers, R.F. amplifiers, oscillators, amplitude modulators, detection, power supplies, trigger and sweep circuits, oscilloscopes. Second semester: radio receivers, transmitters, frequency modulation, transmission lines, antennas, television, ultra high frequency tubes and circuits, wave guides. Prerequisite: 3-4 or equivalent.

Fall Semester

5 TTh 7:00 Electrical Engineering 36,
Larson

Spring Semester

6 TTh 7:00 Electrical Engineering 36,
Larson

NOTE—Beginning in 1946-47, an advanced sequence in electrical engineering will be offered. This sequence will commence with E.E. 11-16 Elements of Electrical Engineering in 1948-47 and will continue in succeeding years through 111-116 Junior Electrical Engineering and 121-126 Senior Electrical Engineering. Students who want to take Electrical Engineering 111 must have completed Calculus or take Calculus at the same time as 111; the prerequisites for Calculus are College Algebra, Trigonometry, and Analytic Geometry.

MATHEMATICS AND MECHANICS**Basic Mathematics. 3 Extension credits. \$10.**

A practical course for shop men in defense or machine work, and for those who need an elementary background in mathematics for entrance into various branches of the armed services. The work includes arithmetic through fractions, decimals, percentage; elementary geometry involving areas of plane figures, proportion, volumes and weights; elementary algebra; elementary trigonometry and logarithms. The course is also valuable as a refresher in elementary secondary mathematics and to teachers of applied mathematics under the Smith-Hughes or defense education acts. Repeated spring semester. Prerequisite: grade school arithmetic.

Fall Semester

M 6:20 Main Engineering 106, Fischer

Spring Semester

M 6:20 Main Engineering 106, Fischer

Elementary Algebra I-II½ Credit toward entrance. \$10.

Elements of algebra to quadratic equations. No prerequisite.

Fall Semester

I M 6:20 Main Engineering 104, Teeter

Spring Semester

II M 6:20 Main Engineering 104, Teeter

Solid Geometry. Credit toward entrance. \$10.

Standard theorems and exercises; practice in special proofs and original exercises. Class will finish December 17; extra sessions arranged to complete semester's work. Prerequisite: plane geometry.

Fall Semester

M 6:20 Main Engineering 136, Schuck

9 Higher Algebra. 5 credits. \$17.

A review and collegiate treatment of the topics of elementary algebra, which is prerequisite. Not open for credit to those who present higher algebra for entrance to college in Institute of Technology. Repeated spring semester. Prerequisite: elementary algebra.

Fall Semester

M 7:00 Main Engineering 107, Snyder
Th 7:00 St. P. Ext. Center 219, Dow

Spring Semester

M 7:00 Main Engineering 107, McEwen

11 College Algebra. 5 credits. \$17.

Quadratic equations; logarithms; mathematics of investment; simultaneous quadratic equations; graphical representation; progressions; mathematical induction; binomial theorem; permutations; combinations; probability; determinants; theory of equations; partial fractions. Repeated spring semester. Prerequisite: higher algebra.

Fall Semester

W 7:00 Main Engineering 107, McEwen

Spring Semester

W 7:00 Main Engineering 107, Snyder
Th 7:00 St. P. Ext. Center 219, Dow

12 Trigonometry. 5 credits. \$17.

Logarithms and plane and spherical trigonometry. Prerequisite: college algebra, or satisfactory performance on placement test.

Fall Semester

W 7:00 Main Engineering 106, Fischer

13 Analytical Geometry, Plane and Solid. 5 credits. \$17.

Elements of plane analytical geometry including conic sections; brief introduction to solid analytical geometry. Prerequisite: trigonometry.

Spring Semester

W 7:00 Main Engineering 106, Fischer

24 Differential Calculus. 5 credits. \$17.

Limit; derivative; simple applications of derivative; maxima and minima; differentials; rates; change of variable; radius of curvature; mean value; indeterminate forms; partial differentiation; series; expansion of functions. Prerequisite: analytical geometry.

Fall Semester

T 7:00 Main Engineering 106, Fischer

25 Integral Calculus. 5 credits. \$17.

Standard elementary forms; definite integral; partial fractions; integrations by substitution, by parts; reduction formulas; integration a process of summation; double and triple integration. Prerequisite: differential calculus.

Spring Semester

T 7:00 Main Engineering 106, Fischer

128a-128b Strength of Materials. 5 credits for 128a-128b combined. \$17.

Mechanical and elastic properties of materials of construction: beams, shafts, and columns; hollow cylinder rollers; plates, curved bars, and springs; combined stresses, dynamic stresses, and true stresses. Prerequisite: calculus and technical mechanics.

Fall Semester

T 7:00 Main Engineering 104, Teeter

129a-129b Hydraulics. 4 credits for 129a-129b combined. \$13.50.

Elements of hydraulics including flow through tubes, pipes, conduits, and rivers; principles of turbines and pumps; open channel flow. Prerequisite: integral calculus.

Spring Semester

T 7:00 Main Engineering 104, Teeter

151 Differential Equations. Credit: see below. \$10.

A study of the standard types of differential equations and solutions, with particular reference to the linear equations of importance in engineering and physics. Symbolic and operational methods are introduced. Three elective credits may be allowed for the satisfactory completion of this course upon approval of a petition addressed to the Students' Work Committee of the Institute of Technology. Prerequisite: Integral Calculus.

Fall Semester

M 8:05 Main Engineering 106, Fischer

MECHANICAL ENGINEERING

Use of Mechanical Engineering Handbooks I-II. 3 Extension credits. \$10.

The purpose of this course is to train and acquaint those engaged in industrial work with the technical information readily available in the various mechanical engineering handbooks. Special emphasis is given to the application of handbook data and information to the solution of a wide variety of practical problems. The course includes a review of the various current mechanical handbooks and classification of these as to type of technical data. Typical problems involve standard specifications, design data, selection of mechanical equipment and other general mechanical subjects. It is an excellent refresher course for engineers and a practical basic course for others in the industrial field. Part II is a continuation of Part I in which more emphasis is given to the solution of comprehensive problems utilizing handbook information alone and the many shortcuts in problem solution possible through the efficient use of handbook data are stressed. No prerequisite.

Fall Semester

I T 7:00 Experimental Engineering 201, LaJoy

Spring Semester

II T 7:00 Experimental Engineering 201, LaJoy

Tool Design I-II. 3 Extension credits each term. \$10.

Analysis of piece parts and selection of proper tools and machines for the various operations. Determination of machining speeds and estimating the production time for various types of jigs and fixtures. Selection and design of the best type of jig, fixture, and special gages for the manufacture of the piece parts. Twelve 3-hour meetings, beginning January 8 and April 2. Prerequisite: Product Analysis I or Quality Control, or equivalent in shop experience.

Fall Semester

January 8—March 12

I T 7:00 Mechanical Engineering 151, Crowder

Spring Semester

April 2—June 4

II T 7:00 Mechanical Engineering 151, Crowder

27 Machine Design. 3 credits. \$10.

Fundamental principles of design of machine elements; lubrication, theory and application; friction drives, shafts, screws, gears, belts, connectors, springs, flywheels, machine frames, shrink fits. Prerequisite: Analytical Geometry.

Fall Semester

M 7:30 Main Engineering 104, Herrick

Internal Combustion Engines. 3 Extension credits. \$10 plus \$1 laboratory fee.

Mechanical principles of construction of reciprocating, radial and in-line engines of all types; elementary thermodynamics of engines; diesel, otto, compression-ignition and gas turbine cycles; petroleum fuels, bottled gas, gas producers, natural gas, synthetic fuels; combustion of fuels, temperature and pressure relations in various types of engines; electrical principles, ignition, generators, starters, motors, lighting systems; lubrication, oils, oil deterioration; oil and fuel laboratory; engine testing. This course is a prerequisite for courses in airplane, diesel and automotive engines. No prerequisite.

Fall Semester

W 7:30 Oak Street Lab., Robertson

Airplane Engines. 3 Extension credits. \$10 plus \$1 laboratory fee.

Types and development; mechanical details of modern aircraft engines, radial, twin-row, corn-cob, in-line, etc.; lubrication, cooling and air systems; aircraft fuels and carburetors; geared superchargers; turbo-superchargers, elementary fundamentals of jet propulsion; aircraft fuel specifications; altitude performance; aircraft engine testing. Prerequisite: Internal Combustion Engines or equivalent experience.

Spring Semester

M 7:30 Oak Street Lab., Robertson

Diesel Engines. 3 Extension credits. \$10 plus \$1 laboratory fee.

A study of diesel principles and the construction and operation of modern diesel engines, diesel fuels, fuel pumps, injection nozzles and combustion systems; stationary, industrial and marine diesels; automotive and aircraft diesels, diesel locomotives; diesel operation and maintenance. Prerequisite: Internal Combustion Engines or equivalent experience.

Spring Semester

W 7:30 Oak Street Lab., Robertson

Heating, Ventilating and Air Conditioning I-III†. 3 Extension credits each semester. \$10.

A course designed to present the fundamentals of heating, ventilating and air conditioning to those interested in designing, installing, selling or recommending the modern type of appliances for heating, ventilating and air conditioning installations. The subject matter of this course deals with heat transfer; heat transmission coefficients, heat transmission losses and heating loads; psychrometry and humidification; warm air, steam, hot water, vapor, vacuum, panel and fan system of heating; fuels and combustion; boilers, radiators, oil burners, gas burners and stokers; air duct design; air flow and air distribution; cooling loads and cooling load calculations. No prerequisite.

Fall Semester

I W 7:30 Experimental Engineering 110,
Algren

Spring Semester

II W 7:30 Experimental Engineering 110,
Algren

Heating, Ventilating I and Air Conditioning III-IV†. 3 Extension credits each semester. \$10.

A continuation of Heating, Ventilating and Air Conditioning—I-II. The application of the principles of heating, ventilating and air conditioning to practical problems, the design of system to meet the requirements of occupied spaces and industrial plants; fan characteristics; controls; exhaust systems. Instructor will decide whether students have equivalent preparation. Prerequisite: I-II or equivalent.

Fall Semester

III Th 7:30 Experimental Engineering 110,
Algren

Spring Semester

IV Th 7:30 Experimental Engineering 110,
Algren

Refrigeration I-II. 4½ credits each semester. \$15 plus \$1 material fee.

An elementary course for those engaged in the design, construction, maintenance, manufacture, and sale of refrigeration equipment. Fundamental terms, concepts, definitions; basic refrigeration cycles including compression, steam jet and absorption refrigeration; compressors, evaporators, and condensers; refrigeration controls, thermostatic and automatic expansion valves, high and low side-float systems and capillary tubes; psychrometry; refrigerants; high, intermediate and low temperature applications of refrigeration; determination of cooling and refrigeration loads; calculation of heat transfer coefficients; laboratory demonstrations of refrigeration equipment. Prerequisite: consult instructor.

Fall Semester

I T 7:00 Experimental Engineering 110,
Jordan

Spring Semester

II T 7:00 Experimental Engineering 110,
Jordan

Time Study. 3 Extension credits. \$10 plus \$1 laboratory fee.

Detailed study of fundamental steps in time study procedure; breaking job into elements, performance rating, selection of elemental times, and allowances. Twelve 3-hour meetings, beginning October 3. Repeated spring semester, beginning April 3. No prerequisite.

Fall Semester

W 7:00 Mechanical Engineering 104,
Laitala

Spring Semester

W 7:00 Mechanical Engineering 104,
Laitala

Motion Study. 3 Extension credits. \$10.

Study and application of principles of work simplification to manufacturing and other activities. Process charts, operation charts, and micromotion studies. Lectures are followed by laboratory problems. Class limited to 25 students accepted in order of registration. Twelve 3-hour meetings, beginning January 9. No prerequisite.

January 9—March 27

W 7:00 Mechanical Engineering 202, Laitala

1-2-3 Product Analysis. 4½ Extension credits each semester. \$15 plus \$1 laboratory fee.

Lecture and laboratory covering the selection and use of jigs, fixtures, gages, and machine tools for the manufacture of a ½ H.P. electrical motor. Selection of the proper cutting tools and determination of the machine speeds for various materials. Preparation of manufacturing analysis and estimation of the machining time for the manufacture of metal products in small and large quantities. The laboratory project (ordinarily an electric motor) can be purchased at cost of material. Class limited to 20 students, accepted in order of registration. Prerequisite: for 2 and 3, previous quarter's work or equivalent.

Fall Semester

1-2 M 7:00 Mechanical Engineering 202,
Crowder

Spring Semester

2-3 M 7:00 Mechanical Engineering 202,
Crowder

Production Control. 3 Extension credits. \$10.

Detailed study of basic principles underlying economical production of manufactured goods; production planning, routing, scheduling, dispatching, and follow up. Relationship of various departments to production control. No prerequisite.

Fall Semester

T 6:20 Mechanical Engineering 202, Laitala

Quality Control. 3 Extension credits. \$10.

Lecture and laboratory covering the organization and operation of piece part and tool and gage inspection departments. The selection and use of precision measuring instruments for the control of dimensions and surface finishes in the manufacture of metal products. Class limited to 20 students accepted in order of registration. No prerequisite.

Fall Semester

T 7:00 Mechanical Engineering 104, Crowder

Plant Layout. 3 Extension credits. \$10 plus \$2 laboratory fee.

A study of plant design location and arrangements of departments and equipment to obtain orderly and economical flow of work through plant. Materials-handling methods and equipment. Lectures and laboratory. Class limited to 25 students accepted in order of registration. Twelve 3-hour meetings, beginning April 2. Prerequisite: Motion Study.

Spring Semester

T 7:00 Mechanical Engineering 202, Laitala

Beginning Plastics. 3 Extension credits. \$10 plus \$2 materials fee.

A laboratory and lecture course dealing with the materials, equipment, and methods used in the fabrication of plastic products. Repeated spring semester. No prerequisite.

Fall Semester

T 7:30 Mechanical Engineering 153, Holtby

Spring Semester

Th 7:30 Mechanical Engineering 153, Holtby

Advanced Plastics. 3 Extension credits. \$10 plus \$2 materials fee.

A continuation of Beginning Plastics which is prerequisite.

Spring Semester

T 7:30 Mechanical Engineering 153, Holtby

Chemistry of Resins. See page 11.

Petroleum Products and Testing. 3 Extension credits each semester. \$10.

A practical class in refining and testing of petroleum products—gasoline, kerosene, gasoline oils, lubricating oils, road oils, etc. Lectures will cover the chemistry of petroleum, the unit processes, such as acid treatment, solvent refining, and cracking; the characteristics and properties of the products, with laboratory tests; the significance of the test results. Both semesters necessary for complete results. No prerequisite.

Fall Semester

T 7:30 Experimental Engineering 215,
Peterson

Spring Semester

T 7:30 Experimental Engineering 215,
Peterson

METALLOGRAPHY

1-2ex Metallography and Heat Treatment of Iron and Steel. 3 Extension credits each semester. \$10.

A beginning course for those engaged in practical heat treatment, in writing specifications, and in purchasing or selling iron or steel. Lectures, demonstrations, and laboratory work in pyrometry, thermal analysis, preparation of alloys, microscopic examination of metal alloys; preparation of photomicrographs. The theory of heat treating, and its relation to practice; welding. No prerequisite but 1 must precede 2 unless the student has had experience in heat treatment.

Fall Semester

1ex W 7:30 Appleby Hall 306, Dowdell

Spring Semester

2ex W 7:30 Appleby Hall 306, Nagler

FACULTY

James L. Morrill, B.A., LL.D., President
Julius M Nolte, B.A., LL.B., Director of University Extension
Richard R. Price, M.A., Ed.D., Director of University Extension Emeritus
Watson Dickerman, Ph.D., Program Director
Charles H. Dow, C.E., Assistant Professor of Civil Engineering
Immanuel C. Fischer, M.S., Assistant Professor of Engineering
F. Lloyd Hansen, M.A., Assistant Professor and Student Adviser
Edward M. Kane, M.A., Instructor in History
Leah M. Lewis, B.S., Assistant Professor of Art Education
Clare L. Rotzel, B.C.S., C.P.A., Associate Professor of Accounting
Bess D. Stein, M.A., Instructor in English
Thomas A. H. Teeter, B.S.(C.E.), Associate Professor of Engineering
Wendell White, Ph.D., Associate Professor of Psychology
Helen G. Acker, M.A., Instructor in English
Courtland L. Agre, Ph.D., Instructor in Chemistry
Axel B. Algren, M.S.(M.E.), Assistant Professor of Mechanical Engineering
Kenneth E. Anderson, M.A., Instructor in Education
Thomas F. Barnhart, M.A., Professor of Journalism
Francis B. Barton, Docteur de l'Universit  de Paris, Professor of Romance Languages
Julio N. Berrettoni, Ph.D., Instructor in Economics and Statistics
Charles Bird, Ph.D., Professor of Psychology
Edward S. Bordin, Ph.D., Counselor and Assistant Professor of Psychology
Ethel Bowman, Assistant in Athletics
Emmert M. Brackney, Ph.D., Assistant Professor of Romance Languages
Theodore Brameld, Ph.D., Associate Professor of Educational Philosophy
Walter J. Breckenridge, Ph.D., Curator, Museum of Natural History
Ralph H. Brown, Ph.D., Associate Professor of Geography
S. Chatwood Burton, M.A., Professor of Fine Arts
Anna Buss, M.A., Instructor in Romance Languages
Paul A. Cartwright, B.E.E., Instructor in Electrical Engineering
Alburey Castell, Ph.D., Assistant Professor of Philosophy
Margarita Castro, M.A., Instructor in Romance Languages
Loyst C. Caverley, M.S.(E.E.), Associate Professor of Electrical Engineering
Robert G. Cerny, M.Arch., Assistant Professor of Architecture
Asher N. Christensen, B.A., Associate Professor of Political Science
Ruth Christie, M.A., Instructor in English
Chien Chu, M.S., Instructor in Chinese
George P. Conger, Ph.D., Professor of Philosophy
John L. Connolly, LL.B., Instructor in Income Tax Problems
Samuel A. Corson, Ph.D., Instructor in Russian
Donald W. Cowan, M.D., M.S., Assistant Professor of Public Health
Bert A. Crowder, B.S.(M.E.), Assistant Professor of Mechanical Engineering
Pearl T. Cummings, B.S., Instructor and Extension Worker, Institute of Child Welfare
James A. Cuneo, Ph.D., Assistant Professor of Romance Languages
Anson B. Cutts, M.A., Instructor in Fine Arts
Darrell H. Davis, Ph.D., Professor of Geography
Eva G. Donelson, Ph.D., Associate Professor of Nutrition
Ivan Doseff, B.S., Assistant Professor of Drawing and Descriptive Geometry
Ralph L. Dowdell, Met.E., Ph.D., Professor of Metallurgy
Lynwood G. Downs, Ph.D., Assistant Professor of German
Helen T. Dreher, B.S., Instructor in Vocabulary Building
Samuel Eddy, Ph.D., Associate Professor of Zoology
Marie F. Eibner, B.S., Instructor in Physical Education
Millard S. Everett, Ph.D., Assistant Professor of Philosophy
Reginald G. Faragher, B.A., Instructor in Salesmanship
E. Pauline Farseth, B.A., Instructor in Scandinavian
Herbert Feigl, Ph.D., Professor of Philosophy
Donald N. Ferguson, M.A., Professor of Music
Jacques A. Fermaud, Ph.D., Associate Professor of Romance Languages
Clifton A. Gayne, Jr., M.A., Instructor in Art Education
I. William Geiger, Ph.D., Associate Professor of Analytical Chemistry
Howard Gilkinson, Ph.D., Assistant Professor of Speech

Clayton M. Gjerde, B.A., Instructor in Education
 H. Phoebe Gordon, M.S., Assistant to Director of School of Nursing
 Adah G. Grandy, B.L., Instructor in English
 Richard A. Graves, M.A., Assistant Professor of Economics and Insurance
 Raymond L. Grismer, Ph.D., Associate Professor of Romance Languages
 Ruth E. Grout, Ph.D., C.P.H., Consultant in Health Education
 John W. Gruner, Ph.D., Associate Professor of Geology
 Clifford I. Haga, B.A., Instructor in Business English
 Sam R. Hamilton, B.S., B.E.E., Assistant Professor of Aeronautical Engineering
 Harold Hansen, M.D., Instructor in Psychiatry
 Ruth Harrington, R.N., M.A., Assistant Professor of Nursing Education
 Ralph A. Haug, M.A., Instructor in English
 Carroll J. Hawkins, M.A., Instructor in Political Science
 Ernest A. Heilman, Ph.D., Professor of Accounting
 William T. Heron, Ph.D., Professor of Psychology
 Carl A. Herrick, M.E., Associate Professor of Mathematics and Mechanics
 Gerald Hill, B.A., Instructor in Music
 Lawrence G. Hines, M.A., Instructor in Economics
 Fulton Holtby, M.E., M.S., Assistant Professor of Mechanical Engineering
 G. Sidney Houston, Instructor in Accounting
 Eloise M. Jaeger, M.Ed., Instructor in Physical Education for Women
 Richard C. Jordan, Ph.D., Associate Professor of Mechanical Engineering
 Harold S. Kahm, Instructor in Journalism
 William Kilgore, Curator, Museum of Natural History
 Earle G. Killeen, M.Mus., Professor of Music
 Margaret R. Kuenne, Ph.D., Instructor in Child Welfare
 Alma Laabs, M.A., Lecturer in Social Work
 Everett Laitala, M.S.(M.E.), Assistant Professor of Mechanical Engineering
 Millard H. LaJoy, M.S.(M.E.), Assistant Professor of Mechanical Engineering
 Sidney C. Larson, Assistant Professor of Electrical Engineering
 William LeBorious, Instructor in Accounting
 Emilio C. LeFort, Ph.D., Associate Professor of Romance Languages
 Werner Levi, Ph.D., Assistant Professor of Political Science
 Marie E. Lien, Ph.D., Assistant Professor of Art Education
 Hyman S. Lippman, M.D., Ph.D., Clinical Associate Professor of Pediatrics and
 Psychiatry
 Howard P. Longstaff, Ph.D., Associate Professor of Psychology
 Rodney C. Loehr, Ph.D., Instructor in History
 Reuel I. Lund, Ph.D., C.P.A., Instructor in Economics and Accounting
 Willem J. Luyten, Ph.D., Professor of Astronomy
 Lilly E. Lorenzen, Instructor in Scandinavian
 Mary Malcolm, B.S., Instructor in Music
 Herbert McClosky, B.A., Instructor in Political Science
 Tremaine McDowell, Ph.D., Professor of English
 William R. McEwen, M.A., Assistant Professor of Mathematics
 Hubert J. Meessen, Ph.D., Assistant Professor of German
 Siegfried Mickelson, M.A., Lecturer in Journalism
 Lennox A. Mills, Ph.D., Associate Professor of Political Science
 Margarita Mills, M.A., Instructor in Romance Languages
 Theodore D. Montgomery, M.B.A., Instructor in Accounting
 Howard D. Myers, B.S.(C.E.), Associate Professor of Drawing and Descriptive
 Geometry
 Ralph G. Nichols, M.A., Instructor in Rhetoric
 Edmund A. Nightingale, Ph.D., Assistant Professor of Economics and Trans-
 portation
 Paul M. Oberg, Ph.D., Professor of Music
 Clarence R. Osell, M.A., Assistant Professor of Orthopedics
 Kenneth L. Osterud, Ph.D., Instructor in Zoology
 Harry J. Ostlund, B.A., Associate Professor of Accounting
 Marshall A. Peterson, Ch.E., Instructor in Petroleum and Petroleum Products
 Anna H. Phelan, Ph.D., Assistant Professor of English
 Betty Porter, M.S.S., Instructor in Social Work
 Orrin W. Potter, E.M., M.S.(Met.), Assistant Professor of Drawing and Descrip-
 tive Geometry

Carl J. Potthoff, M.D., M.P.H., Associate Professor of Biological Studies
 John W. Powell, B.A., D.D., S.T.D., Lecturer Emeritus in English Literature
 Alvin E. Prottengeier, M.A., Instructor in German
 Lloyd J. Quaid, B.S.(E.E.), Instructor in Drawing and Descriptive Geometry
 Margaret L. Randall, R.N., B.S., Instructor in Nursing
 William P. Randel, M.A., Instructor in English
 Konstantin Reichardt, Ph.D., Professor of Russian
 John J. Reighard, M.A., C.P.A., Professor of Accounting
 Thomas S. Roberts, M.D., D.Sc., Professor of Ornithology
 Burton J. Robertson, E.E., Professor of Internal Combustion Engines
 Josephine Lutz Rollins, M.A., Instructor in Art Education
 John Rood, Lecturer in Art Education
 Norbert F. Ruzsaj, M.S.(Aero.E.), Instructor in Aeronautical Engineering
 Margaret A. Scallon, M.A., Instructor in English
 F. Joseph Schneider, Ph.D., Instructor in Sociology
 Robert F. Schuck, B.S.(E.E.), Associate Professor of Drawing and Descriptive
 Geometry
 Roman R. Sevenich, B.S., LL.B., C.P.A., Instructor in Accounting
 Pearl Shalit, M.S.S., R.N., Instructor in Public Health
 Mary J. Shaw, Ph.D., Assistant Professor of Orientation
 Edward H. Sirich, Ph.D., Professor of Romance Languages
 Charles E. Skinner, Ph.D., Assistant Professor of Bacteriology
 Raymond F. Sletto, Ph.D., Associate Professor of Sociology
 Arthur V. Smith, C.P.A., Instructor in Accounting
 W. Ray Smith, B.A., Assistant Professor and Director of Intramural Athletics
 Catherine Snell, M.A., Assistant Professor of Physical Education for Women
 Warren Snyder, B.S.(M.E.), Instructor in Mathematics
 Chalmers L. Stacey, M.A., Instructor in Psychology
 Helen M. Starr, M.A., Associate Professor of Physical Education for Women
 J. Warren Stehman, Ph.D., Professor of Economics and Finance
 Donald E. Strout, Ph.D., Assistant Professor of Library Instruction
 Borghild Sundheim, Ph.D., Instructor in Romance Languages
 Niels Thorpe, B.S., Assistant Professor of Physical Education for Men
 Ramona L. Todd, Ph.D., M.D., Instructor in Public Health Nursing
 Mary Turpie, Ph.D., Instructor in English
 Robert H. Tuttle, Instructor in Accounting
 Kate M. Twichell, Instructor in Music
 Alice F. Tyler, Ph.D., Associate Professor of History
 Joseph Valasek, Ph.D., Professor of Physics
 Marvin J. Van Wagenen, Ph.D., Associate Professor of Educational Psychology
 Warren C. Waite, Ph.D., Professor of Agricultural Economics
 Gina O. Wangsness, M.A., Instructor in German
 Robert Penn Warren, Ph.D., Professor of English
 Luther Weaver, B.A., Instructor in Radio Script Writing
 Frank M. Whiting, Ph.D., Assistant Professor of Speech
 Richard Wilcox, Instructor in Gardening
 Gene Wilkey, B.A., Instructor in Speech
 Lawrence A. Wilson, Ph.D., Instructor in Romance Languages
 Harriet H. Witesman, B.S., Instructor in Photography
 E. W. Ziebarth, Ph.M., Instructor in Speech

INDEX TO CLASSES

	Page		Page
Accounting	34	Latin America	18, 26
Acting	34	Lecture series	24
Advertising	36	Library Science	18
Aeronautical Engineering	40	Logic	21
Algebra	42	Machine Design	43
Art	9, 10	Magazine Writing	18
Art Education	9, 10	Marketing	38
Astronomy	10	Mathematics	42
Bacteriology	11	Mechanical Engineering	43
Badminton	23	Metallography	45
Birds of Minnesota	20	Music	19
Book Reviews	14	Natural History	20
Business classes	34	Norwegian	29
Business English	36	Nursing	17, 20
Business Law	36	Painting	9, 10
Calculus	43	Personnel Work	
Cameracraft	21	Administration	26, 38
Ceramics	9	Nursing	20
Chemistry	11	Petroleum Products	45
Child Welfare	12	Philosophy	21
Chinese	12	Photography	21
Dancing, Folk	26	Physics	22
Diesel Engines	44	Plastics	11, 45
Drama	27	Political Science	22
Drawing	10, 41	Portuguese	26
Economics	37	Postwar	18, 23, 25
Education	12, 20	Production Control	45
Electrical Engineering	41	Psychiatry	31
English	14	Psychology	26
Business	36	Child	12
Composition	13	Educational	12, 13
Literature	14	Laboratory	26
Placement tests	13	Public Speaking	32
Review	13	Radio	27
Ethics	21	Drama	27
Film series	25	Fundamentals of	42
Finance	37	Writing	26, 27
Fish and Fishing	20	Speech	27
French	14	Real Estate	39
Gardening	15	Recreation	27, 28, 29
Geography	15	Refrigeration	44
Geology	15	Romance Languages	
Geometry	41	French	14
German	16	Portuguese	26
Golf	27, 28	Spanish	31
Health	16	Russian	29
History	17	Salesmanship	38
Housing	18	Scandinavian	29
Human Behavior	31	Social Work	30
Humanities	14	Sociology	30
Insurance	37	Spanish	31
Intercultural Education	10, 13	Speech	27, 32
Interior Decorating	9	Statistics	37
Journalism	18	Strength of Materials	43
Labor Problems	38	Swedish	30
Languages and Literature		Swimming	28, 29
English	13, 14	Technology classes	40
Chinese	12	Tennis	28
French	14	Theater	32, 33
German	16	Tool Design	43
Norwegian	29, 30	Transportation	39
Portuguese	26	Trigonometry	42
Russian	29	Vocabulary Building	32
Spanish	31	Ward Administration	20
Swedish	30	Wild Game of Minnesota	20
		Zoology	33

