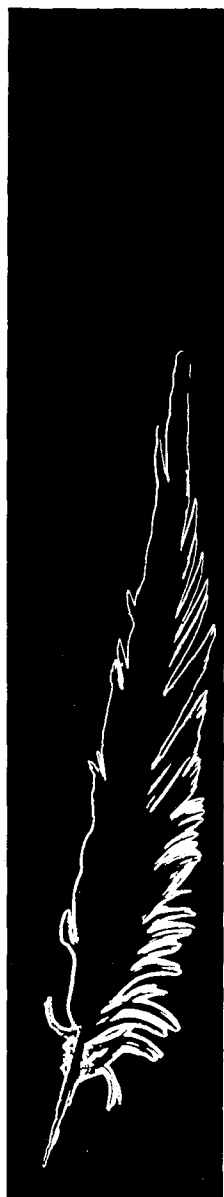
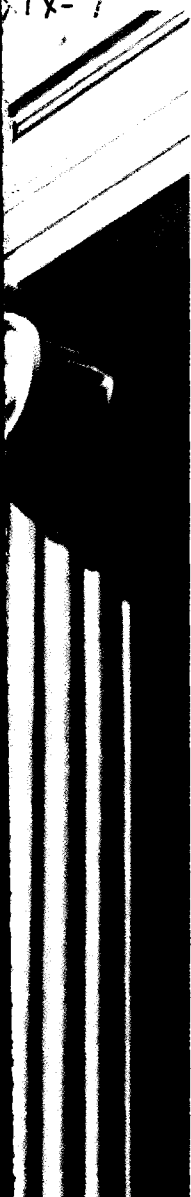


IX-7



**1966-1968**

**CORRESPONDENCE  
STUDY COURSES**

**GENERAL EXTENSION DIVISION**

### **THE GUIDE TO CORRESPONDENCE STUDY**

The Correspondence Study Department is a member of the Correspondence Division of the National University Extension Association. The division publishes a **GUIDE TO CORRESPONDENCE STUDY** which lists correspondence courses offered by 62 colleges, universities, and comparable educational agencies. It is available from the Business Office, National University Extension Association, 122 Social Science Building, University of Minnesota, Minneapolis, Minnesota 55455. For single copies, the cost is 50 cents.

# UNIVERSITY OF MINNESOTA

## Board of Regents

The Honorable Charles W. Mayo, M.D., Rochester, First Vice President and Chairman; The Honorable Marjorie J. Howard (Mrs. C. Edward), Excelsior, Second Vice President; The Honorable Daniel C. Gainey, Owatonna; The Honorable Bjarne E. Grottum, Jackson; The Honorable Albert V. Hartl, Fergus Falls; The Honorable Robert E. Hess, White Bear Lake; The Honorable Fred J. Hughes, St. Cloud; The Honorable Lester A. Malkerson, Minneapolis; The Honorable William K. Montague, Duluth; The Honorable George W. Rauenhorst, Olivia; The Honorable Otto A. Silha, Minneapolis; The Honorable Herman F. Skyberg, Fisher.

## Administrative Officers

O. Meredith Wilson, Ph.D., President

William G. Shepherd, Ph.D., Vice President, Academic Administration

Laurence R. Lunden, B.A., Vice President, Business Administration

Stanley J. Wenberg, M.A., Vice President for Educational Relationships and Development

## GENERAL EXTENSION DIVISION

### Administration

Willard L. Thompson, Ph.D., Dean of General Extension and Summer Session

Donald Z. Woods, Ph.D., Associate Dean of General Extension

Eleanor S. Fenton, M.A., Assistant to the Dean

## Correspondence Study Department

Harold Alford, M.A., Director, Correspondence Study Department

## Extension Departments and Directors

Audio-Visual Extension Service, Erwin C. Welke, 2037 University Avenue S.E.

Civil Defense, Robert Elliott, 202 Clay School

Conferences and Institutes, Fred E. Berger, 136 Nolte Center

Continuing Education in Art, Huldah Curl, 310 Nolte Center

Continuing Education in Business, Peter Rosko, 817 Business Administration Building

Continuing Education in Science and Technology, James Holte, 47 Electrical Engineering Building

---

Volume LXIX

Number 7

April 1, 1966

## UNIVERSITY OF MINNESOTA BULLETIN

Published semimonthly January 1 to December 15 inclusive. Second-class postage paid at Minneapolis, Minnesota. Send change of address notices and other communications to Office of Admissions and Records, University of Minnesota, Minneapolis, Minnesota 55455.

The contents of this bulletin and of other University bulletins, publications, or announcements are subject to change.

Continuing Legal Education, Austin Anderson, 205 Nolte Center  
Continuing Medical Education, W. Albert Sullivan, 1342 Mayo Memorial  
Drama Advisory Service, Sherwood Snyder, 320 Wesbrook Hall  
Duluth Extension Office, Gilford W. Remington, 110 New Garrick Building  
(RAndolph 2-1745)  
Evening and Special Classes, Albert M. Fulton, 56 Nicholson Hall (373-3992)  
Labor Education, John Flagler, 423 Business Administration Building  
Minneapolis Extension Office, 690 Northwestern Bank Building (332-0624)  
Municipal Reference Bureau, Orville Peterson, 314 Social Science Building  
Off-Campus Classes, Harold Alford, 315 Nolte Center  
Radio and Television (KUOM), Burton Paulu, 1 Eddy Hall  
St. Paul Extension Office, Paul Stam, 9th and Exchange (222-7355)  
State Organization Service, William C. Rogers, 167 Social Science Building  
World Affairs Center, William C. Rogers, 167 Social Science Building



# Correspondence Study

## GENERAL INFORMATION

### LOCATION

The Correspondence Study Department of the General Extension Division is housed in the east wing of Nicholson Hall on the Minneapolis Campus. The main office is 254 Nicholson Hall. The telephone number is 373-3256.

### ELIGIBILITY

The University's correspondence courses are open to everyone who can handle them successfully, but the department reserves the right to discontinue any courses if materials, textbooks, or instructors are not available and to cancel any registration for cause.

### COST

Tuition fees are \$11 per credit hour plus a \$3 per course fee for registrations originating outside Minnesota. The tuition fee for each course is stated in the course description section of this bulletin. Some courses have materials fees. Textbooks are not included in the tuition cost. Fees are subject to change without notice.

Applicants living outside Minnesota, except military personnel, must add the \$3 per course fee to their remittance. (See Application Blank in the back of this bulletin.)

### BOOKS

It is not feasible to list the required textbooks or textbook costs in this bulletin because book prices are not stable and are subject to change. The required books are listed in the introduction to each course study guide and a list of the textbooks for any course will be sent on request.

The Nicholson Hall Bookstore, University of Minnesota, has made a special effort to stock books required in correspondence courses, but texts may be purchased from other campus bookstores or from the publishers. The study guide contains an order blank for Nicholson Hall Bookstore which may be completed on the basis of the required textbooks and materials listed in the introduction to the study guide. Fifty cents per course should be added to cover the cost of mailing and handling, and the form should be sent to Nicholson Hall Bookstore, University of Minnesota, Minneapolis, Minnesota 55455.

Students must purchase or have constant access to the required textbooks and materials. The bookstore will normally purchase used texts.

## REGISTRATION

Complete the Application Blank on page 75 of this bulletin and send it with the proper fee to the Correspondence Study Department, University of Minnesota, Minneapolis, Minnesota 55455. Payment should be made by post office or express money order, personal check, or draft. Make remittance payable to the University of Minnesota for the *exact* amount of the fee.

No receipts for payments by check or money order will be issued unless requested. No receipts will be issued for cash payments of less than \$1.

## BEGINNING DATE

A correspondence course may be started at any time, as the department operates throughout the calendar year.

## COMPLETION DATE

You have 1 year from the date of registration for completion of your course. Students, teachers, and others working against a deadline for submission of credits must take full responsibility for arranging the work in such a manner as to allow ample time for their final grade. No 3-credit course is to be completed in less than 6 weeks from receipt of the first lesson, except as approved by the director, subject matter department, and instructor.

## REINSTATEMENTS

If a correspondence course is not completed in 1 year, reinstatements are provided as follows:

First 6-month extension, a fee of \$2 per course.

Second 6 months, or for any subsequent 6-month extension if permitted, a fee of \$3 per course

## LESSON SERVICE

At least 1 week is required for an assignment to be received on campus, read, graded, and returned to the department for distribution to the student. Note that "postage due" mail is delayed at least 2 days.

The department will make every effort to provide reasonable and prompt lesson service throughout the calendar year. Service may become delinquent, however, due to circumstances over which the department has no control. A critical period may be during the summer months or vacation periods when some lessons must be sent to off-campus addresses.

## CREDITS

*Degree Credit*—Most of the courses in this bulletin are listed for credit toward a degree in the appropriate college of the University of Minnesota, subject to limitations mentioned in this bulletin. *Credits are not applicable in the Graduate School.*

The credits are *quarter* credits: 3 quarter credits equal 2 semester credits.

*Extension Credit*—A few courses are listed for "Extension credit only." Such courses *cannot* be used in degree programs at the University of Minnesota or for teacher's certification from the Minnesota State Department of Education. Extension credits can be used only in Extension certificate programs.

## TRANSFER OF CREDITS AND TRANSCRIPTS

The Extension clerk in the University Office of Admissions and Records maintains an official record of credits and grades earned by correspondence study. Grades and credits are transferred to other University records on request at the time of the final examination. Transcripts can be requested through the Extension clerk or the Transcript Division, Office of Admissions and Records.

Students transferring credits to other universities and colleges should write to the Transcript Division or the Extension clerk for official grades, indicating that the credits were earned in correspondence study. Most colleges and universities will accept credits earned through correspondence, but the amount and application varies. The student should understand the credit policy of the school from which he expects to receive transfer credit for correspondence work.

## PROGRAM ADVISING

Advisers in the department will assist in the selection of courses and programs of study leading to occupational or educational objectives. They will also assist in making contact with advisers in the resident colleges at the appropriate stage of the educational program.

When you write or call for such advice, please give full information about your past training, educational and occupational experience, and your objectives.

## EXAMINATIONS

To earn credit in a correspondence course the student must pass the final examination.

All supervised examinations may be taken at the following offices or under the supervision of the following individuals; but the department reserves the right to approve or reject any supervisor.

1. Correspondence Study Department, 254 Nicholson Hall, University of Minnesota.
2. General Extension offices in Minneapolis, St. Paul, or Duluth.
3. Correspondence Study Department at any institution affiliated with the National University Extension Association (write for list).
4. School superintendent or principal; college instructor or administrator at an accredited institution.
5. Commissioned officers (for military personnel only).

## REFUNDS

To receive a partial refund of tuition, the student must make application within 6 months from the date of registration. This application must be submitted prior to the completion of half of the lessons in the course.

If the student is eligible for a refund, 20 per cent of the cost of the course and \$2 for each lesson serviced are nonrefundable from the tuition fee.

## HIGH SCHOOL COURSES

This bulletin carries a list of high school courses (see page 70). A more complete course description is contained in a separate high school bulletin.

These courses, with the approval of the local school authorities, may be used toward the completion of requirements for graduation from high school. The diploma, however, is granted by the local school, not the University.

High school deficiencies for admission to universities and colleges can be rectified by approved correspondence courses. See the high school bulletin for details.

## MILITARY PERSONNEL

Most of the courses in this bulletin are offered under special contract with the United States Armed Forces Institute. Under this contract, eligible military personnel can save more than half of the cost of each course. Write to the Correspondence Study Department for special USAFI folder, or to USAFI Headquarters, Madison, Wisconsin 53703.

## VETERANS

Although detailed information is not available, the provisions of the Veterans Readjustment Benefits Act *will* apply to correspondence study. For information, please write to the Correspondence Study Department, University of Minnesota, Minneapolis, Minnesota 55455.

## TEACHERS' CERTIFICATES

With some limitations, correspondence courses may be used to acquire and renew teachers' certificates. Note that the Correspondence Study Department can only provide the courses and *cannot evaluate teaching or educational experience for a certificate.*

Questions concerning the regulations related to teachers' certificates should be directed to the State Department of Education or similar agency. (In Minnesota—Director of Teacher Personnel, 4th Floor, Centennial Office Building, St. Paul, Minnesota 55101.)

## GRADES

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

There is a permanent grade of F (failure) indicating unsatisfactory completion of a course.

Official grade reports are sent by the Office of Admissions and Records.

## COURSE TRANSFERS

A student may transfer from one correspondence course to another correspondence course within 6 months from the date of registration. The transfer fee is \$3 per course and the student pays \$2 for each completed lesson. The balance of the original fee is applied to the tuition for the new course. The second course must be completed within the year from the original registration date, or be reinstated. When a transfer is recommended by this department, there is no charge, except for lessons serviced.

Transfers cannot be made from one individual to another.

## PERMITS

Students, including University of Minnesota students, expecting to earn additional credit through correspondence instruction should have the permission of their adviser or registrar. Submit approval with correspondence application or write for permit blank.

## TAPES AND RECORDINGS

Special records and tapes have been prepared to cover basic pronunciation for nearly all of the language courses in this bulletin. The size and content of each record varies. Recordings are sold at cost. No refunds are made on tapes or records.

## MISCELLANEOUS INFORMATION

**Postage**—The student prepays postage on all mail sent to the University; return mail to the student is prepaid by the Correspondence Study Department by surface mail rates.

**Air Mail Service**—For airmail service, add to registration fee:

Africa .....	\$10.00	Central America .....	\$5.00
Near and Far East .....	10.00	Canada .....	3.50
Europe .....	5.00	Mexico .....	3.50
South America .....	5.00	United States .....	3.50

Any balance upon completion of the course will be refunded.

**Maximum Registration**—It is recommended that a student enroll for no more than two courses at one time. Exceptions will be made on the basis of individual circumstances.

**Noncredit Registration**—A noncredit registration is made by writing "non-credit" in the credits column on the application blank. Noncredit students need not complete the examinations but must pay the regular fees.

**Course Numbers**—In general, courses listed for University credit numbered below 50 are completed during freshman and sophomore years (Lower Division), and courses numbered 50 or above during the junior and senior years of college (Upper Division).

**Academic Dishonesty**—Correspondence students are expected to do all of their own work. Evidence of academic dishonesty will be referred to the Committee on Student Scholastic Standing for appropriate action.

**Group Study**—Students who wish to form study groups to study the same subject, without receiving credit, may register as a group and pay a reduced tuition. For details, write to the Correspondence Study Department.

**Tuition Assistance Fund**—Through the Correspondence Tuition Assistance Fund a limited amount of money is available to offset the cost of tuition for those confined to institutions. Preference for assistance will be given to residents of Minnesota; but all applications will be considered. The fund is supported by contributions. You are invited to participate in this work, and contributions or inquiries should be sent to the Correspondence Tuition Assistance Fund, Correspondence Study Department, University of Minnesota, Minneapolis, Minnesota 55455.

## WORKING TOWARD A DEGREE BY CORRESPONDENCE

It is possible to meet some degree requirements by applying credits earned through correspondence study. The amount of applicable credit will depend upon the degree sought.

There are some limitations on the use of credits from the Correspondence Study Department for degrees from this University. No college of the University will grant a degree without a minimum of 1 year (45 quarter credits) of on-campus study. In some colleges all or nearly all of the credits for the senior year must be earned on campus. Moreover, many of the required courses for both the junior and senior years are not available by correspondence.

Credits earned by correspondence do not count as resident or on-campus credits, nor do they apply toward advanced degrees.

In the following section are some applications of correspondence work to degree programs at the University. 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. Consult the advisers in the department for assistance.

Credits may sometimes be transferred from one college to another, or from one accredited institution to this University, but requests for such transfers are always ruled on individually. Previous records or transcripts should be submitted at the time of inquiry.

### College of Liberal Arts

Leading to B.A. degree with a minimum of 180 quarter credits

The faculty has approved changes in these requirements, to take effect in 1967 or 1968. For further information write to the Correspondence Study Department or to the College of Liberal Arts.

All of the requirements (except the laboratory in Group D) for the first 2 years (Lower Division) could be accomplished by correspondence study.

#### A. Freshman English

Engl A-B-C (Freshman Literature and Composition, composition portion, 6 credits) or Comp 1-2-3 (Freshman Composition, 12 credits) or Comm 1-2-3 (Communication, 12 credits) or exemption from the requirement. All students are required to have an English Classification Card before registration for one of these courses.

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

<i>Amount Presented from High School</i>	<i>Additional Amount Required in College</i>
None	15 credits in one language
1 year	(a) 10 college credits at a higher level in the same language (or) (b) 15 college credits in a different language
2 years in one language	(a) 5 college credits at a higher level in the same language (or) (b) 10 college credits in a different language
3 or more years in one language	No college requirement if the high school work is validated by the appropriate college department
2 years in each of two languages	No college requirement if one language is validated at the 2-year level by the appropriate college department

**C. Social Science**

At least 15 credits in two or more of the following departments. At least 5 credits must be offered in any one department to count.

- |  |  |
|--|--|
| 1. Anthropology                          | 5. Political Science                           |
| 2. Economics and Business Administration | 6. Psychology                                  |
| 3. Geography                             | 7. Sociology                                   |
| 4. History                               | 8. Social Science (interdisciplinary programs) |

**D. Natural Science**

At least 15 credits (of which a minimum of 8 must be in courses that include laboratory) from two or more of the following groups. At least 5 credits must be offered in any one department to count.

1. Biological Sciences: Botany, psychology, zoology, General Biology (Biol 1-2 or 1A-2A)
2. Physical Sciences: Astronomy, chemistry, earth sciences (geology), physics, Physical World (NSci 4-5, or old NSci 4-5-6)
3. Mathematics (except Math 5, 20)
4. Orientation in the Natural Sciences (NSci 1-2-3)  
(A student presenting credit in only NSci 1-2 must take his additional work in other than group D2)

**E. Humanities**

At least 15 credits from two or more of the following categories. At least 5 credits must be offered in any one department to count.

- |   |  |
|---|--|
| 1. Art  | 6. Humanities  |
| 2. English literature (including literature portions of freshman English courses) | 7. Mathematics (except Math 5, T. 20)                  |
| 3. Classics   | 8. Music   |
| 4. Foreign literature   | 9. Philosophy  |
| 5. History  | 10. Speech and theatre arts (except Spch 6, 9, and 39) |

**F. Health**

PubH 2 (Personal and Public Health, 2 credits) or PubH 3 (Personal Health, 2 credits) or PubH 50 (Personal and Community Health, 3 credits) or equivalent.

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

**Note**—Correspondence courses may be applied toward a degree and may be used in the major with the consent of the major department.

## School of Business Administration

Leading to B.S.B. degree with a minimum of 180 quarter credits

Nearly all the requirements in the prebusiness curriculum can be satisfied by correspondence courses.

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

1. **Business and Economics:** Acct 24-25-26, Principles of Accounting; Econ 1-2, Principles of Economics; QA 5, Elements of Statistics.
2. **Freshman English:** Engl A-B-C; or Comp 1-2-3; or Comm 1-2-3; or GC 31A, 31B, and 31C or 31D (with required score); or exemption. (Only Comp 1-2-3 offered by correspondence.)
3. **Mathematics:** Math 10 or 15 or equivalent (college algebra).
4. **Social Sciences:** 15 credits in two or more of the following departments (at least 5 credits must be taken in each department used to satisfy this requirement): anthropology, geography, history, political science, psychology, sociology (except Soc 45). SSci 1-2-3 and 5 credits in one of the above departments will satisfy this requirement.
5. **Natural Sciences:** 8-10 credits in a single natural science to be selected from botany, chemistry, geology, physics, zoology, NSci 4-5-6. All courses must include laboratory.
6. **Humanities:** 10 credits in two or more of the following (at least 5 credits must be taken in each department used to satisfy this requirement): art, English literature, foreign literature, history, humanities, music, philosophy, speech and theatre arts (except Spch 3, 6, 9, and 39), one foreign language.
7. **Electives:** Sufficient to complete the minimum of 90 credits required for admission.

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

The School of Business Administration also offers the degree of bachelor of science in economics. Consult the *Bulletin of the School of Business Administration* for more information on all these programs.

**Students who will enter fall quarter, 1967, or later**—The following courses in Lower Division will be required of students entering the prebusiness course in the fall of 1967, or later:

Psy 1 and 2, General Psychology; Soc 1, Man in Modern Society; one year of college mathematics, through elementary integral and differential calculus

For students entering fall quarter, 1967, or later, the following course will no longer be required:  
QA 5, Statistics

**Note**—No more than 12 credits of the required 78 credits in Upper Division courses (numbered 50 and above) may be earned through correspondence study.

## Institute of Technology

(College of Engineering, School of Architecture, School of Chemistry, School of Mineral and Metallurgical Engineering, School of Physics and Astronomy, School of Earth Sciences, School of Mathematics)

Leads to degrees in aeronautics and engineering mechanics; agricultural, civil, electrical, geological, mechanical, metallurgical, and mining engineering; chemistry, chemical engineering; applied mathematics; architecture; physics.



The first-year curriculum is the same for all students in the College of Engineering, School of Architecture, and some other units within the institute. The common first year of the College of Engineering is listed here to assist in guiding those who must or wish to begin their work through correspondence study. (See the *Bulletin of the Institute of Technology* for more details and the complete curriculum.)

**Note**—IT students must have approval of the dean to take courses by correspondence study.

### IT First-Year Curriculum

Math 21-22-23—Calculus I, II, III: Calculus and Analytic Geometry	Engl A-B-C, or Comp 1-2-3, Freshman English
EG 25—Engineering Graphics	Phys 21-22-23—General Physics

Note that all of the first-year subjects, except physics, can be completed by correspondence.

Following is a list of the correspondence courses that may be used for full credit in the Institute of Technology.

Comp 1-2-3—Freshman English	Math 31—Calculus IV: Calculus and Analytic Geometry
EG 25—Engineering Graphics	Math 32—Calculus V: Calculus, Linear Algebra, Differential Equations
Math 21—Calculus I: Calculus and Analytic Geometry	MM 35—Statics
Math 22—Calculus II: Calculus and Analytic Geometry	MM 36—Dynamics
Math 23—Calculus III: Calculus and Analytic Geometry	CE 146—Concrete and Concrete Materials

**Note**—Elementary and intermediate algebra and plane and solid geometry and trigonometry (4 high school units) are prerequisites for the college-level courses that begin with Math 21. For specific prerequisites, see course descriptions, page 52. Deficiencies in preparatory subjects may be made up by correspondence study.

Most of the required credits in the social-humanistic area (Groups II and III) may be satisfied by selecting correspondence courses in history, economics, psychology, philosophy, humanities, and English. Consult the *Bulletin of the Institute of Technology*, or write the Correspondence Study Department.

### College of Education

Leading to B.S. degree with a minimum of 186 quarter credits

Because of the variety of programs offered in this college it is not feasible to present a specific curriculum and to indicate appropriate correspondence courses. Here are two general suggestions that may be helpful.

1. If you have had no college experience, the 2-year program listed under the College of Liberal Arts could be used as a guide in completing many of the basic requirements in this college. Several credits must be earned in academic subjects, and these credits may be transferred to the College of Education.
2. Those with 2 or more years of college work should write to the College of Education or to the Correspondence Study Department for guidance.

Some correspondence courses will apply on professional or academic requirements.

### College of Agriculture, Forestry, and Home Economics and College of Veterinary Medicine

Leading to B.S. degree or other Bachelor's degrees with a minimum of 192 quarter credits

There are a number of programs within these colleges and no specific curriculum can be listed. Correspondence courses, however, may satisfy several general academic requirements as well as provide elective credits. The English, social science, humanities, personal health, and other requirements can be met through correspondence instruction. For additional information write to the Correspondence Study Department, or to the College Office, Coffey Hall, University of Minnesota, St. Paul, Minnesota 55101.

### General College

The General College of the University offers a 2-year program of liberal and general studies leading to the associate in arts degree. Credits earned in correspondence study can be used in this college in two important ways:

**Admission**—The General College is open to any resident of Minnesota who is a graduate of an accredited high school. Consideration is occasionally given to applications for admission submitted by non-high school graduates for whom return to secondary school seems inappropriate. Successful completion of correspondence courses in composition and mathematics will strengthen such applications, because the work will serve as a review, provide a basis for advanced courses, and give evidence of ability to succeed in college classes.

**Graduation**—The requirements for the associate in arts degree earned through the General College are unusually flexible: 90 credits of passing work, and satisfactory achievement as measured by a comprehensive examination. At least 1 year of study (totaling 45 credits) must be spent in residence. Credits earned in correspondence study courses can be applied toward the associate in arts degree if they are earned in Lower Division courses carrying degree credits which do not duplicate work completed in residence. The number of correspondence study course credits to be applied toward the degree depends upon a student's performance on the comprehensive examination. Interested students may obtain further information by writing to the Office of the Dean, General College, 106 Nicholson Hall, University of Minnesota, Minneapolis, Minnesota 55455.

### College of Medical Sciences and College of Pharmacy

No professional courses are offered by correspondence.

Several elective and some required courses in the premedical, pre dental, and prepharmacy curriculums could be done by correspondence instruction. Required courses in the basic sciences are ordinarily not offered by home study. Write to the Correspondence Study Department for additional details.

## Law School

It is recommended that students applying for admission to the University of Minnesota Law School obtain a Bachelor's degree from an accredited college or university. In this 4-year program the student may apply a *maximum* of 45 quarter credits that have been earned from accredited correspondence courses.

Students seeking admission to the Law School upon completion of a special 3-year prelaw course, *cannot* use credits earned through correspondence study. The special 3-year program *must be completed in residence*.

Students expecting to attend another law school should contact that school for admission requirements.

No accredited college or university attempts to teach professional law courses by correspondence.

## Graduate School

The University of Minnesota will not accept correspondence courses for advanced degrees, that is, Master's or Doctor's degrees. Graduate students may, however, use these courses to satisfy undergraduate requirements or for subject matter content, or for foreign language requirements.

## School of Nursing

It is recommended that individuals planning to seek admission to a nursing program contact the School of Nursing, 125 Owre Hall (telephone 373-3462) and ask for the assistance of an adviser. A limited amount of course work taken by correspondence is applicable to nursing programs, and decisions about the applicability are the responsibility of the Admissions Committee of the School of Nursing.

Registered nurses, however, will find many correspondence courses stimulating and of value in extending their general education.

## CERTIFICATES

The General Extension Division, which includes the Correspondence Study Department, awards certificates for satisfactory completion of approved programs. The work may be done by correspondence courses, evening classes, or both. Day school or Summer Session credits are approved where applicable. A student may also transfer credits from other accredited institutions, including those credits earned by correspondence study, provided a minimum of 25 per cent of the credits required for the certificate is earned at the University of Minnesota.

Certificate programs are organized at the collegiate level; students entering these courses should bring adequate educational preparation or other experience to work effectively with college materials.

The following three sections (designated as Extension Certificates, Section I-II-III) indicate those programs that are most accessible through University of Minnesota correspondence courses. Section I lists those certificates that can be earned *entirely* through completion of courses chosen from this bulletin. Section II indicates programs leading to certificates that can be *partially* accomplished by home study. In most instances, the student would have to earn credits in resident classes or have credits from accredited sources that

would be applicable to the requirements. Section III indicates other certificate programs of the General Extension Division. Correspondence study can be used for some of the requirements but is the least helpful in these programs. A list of the requirements will be sent on request.

### EXTENSION CERTIFICATES, SECTION I

All of the requirements for the following certificates can be met by completing courses selected from this bulletin.

#### Liberal Arts Certificate

(45 credits)

##### *English Requirement:*

Comp 1-2-3; or equivalent

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

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

**Sciences:** Astronomy, botany, chemistry, geology, mathematics, physics, psychology, zoology

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

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

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

#### Certificate in Engineering Mathematics and Science

(45 credits)

##### *Core Requirements:*

Basic Technical Writing I or Comp 1

Math 21—Calculus I: Calculus and Analytic Geometry

Math 22—Calculus II: Calculus and Analytic Geometry

Math 23—Calculus III: Calculus and Analytic Geometry

Math 31—Calculus IV: Calculus and Analytic Geometry

*Electives:* Additional credits approved by the Committee on Student Scholastic Standing to make a total of 45 credits, selected from the following areas:

Astronomy

Engineering graphics

Geology

Physics

Electrical engineering or technology

Mechanical engineering

Mechanics and materials

Civil engineering

#### Management of Administrative Services Certificates

The Management of Administrative Services Certificate Program has been developed by the General Extension Division in co-operation with the School of Business Administration and the National Office Management Association. In addition to the granting of the junior or senior certificate by the General

Extension Division on completion of the prescribed program, the student is entitled to the junior or senior N.O.M.A. management of administrative services certificate. (Only the junior certificate is available through Correspondence Study Department.)

### Junior Certificate

(45 credits)

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

#### Core Requirement (33 credits):

Review of Business English ‡; or Business Correspondence; or Comp I; or Comm 1 ‡; or exemption	Acct 24-25-26—Principles of Accounting
Econ 1-2—Principles of Economics	BLaw 58—Business Law: Contracts
QA 5—Elements of Statistics	OMgt 99—Management of Administrative Services
	Psy 1-2—General Psychology

*Electives:* Additional courses to be selected from the following:

IR 52—Modern Industrial Relations: Labor Marketing	BFin 56—Corporation Finance
IR 72—Modern Industrial Relations: Manpower Management	Acct 55C—Managerial Costs ‡
Ins 53—Insurance Principles	Acct 55D—Analysis of Financial Statements ‡
	BLaw 88—Business Law

### World Affairs Certificate

(45 credits)

This certificate is offered in co-operation with the University of Minnesota World Affairs Center, and approved by the Interdepartmental Committee on International Relations and Area Studies. Students transferring credits to this certificate program from other accredited institutions must take a minimum of 15 credits from the University of Minnesota, including at least 9 credits in political science.

#### Core Requirement:

Pol 1-2—American Government and Politics	Hist 95—American Diplomatic History
Pol 25—World Politics	Hist 120E—Russian History III
Pol 4C—United Nations	Pol 94—The Far East in International Relations
Hist 20 or 21 or 22—American History I or II or III	

#### Recommended:

Foreign Language—5 credits or equivalent

*Electives:* Selected from the following to make a total of 45 credits:

Anth 1A or 2A—Introduction to Anthropology	Hist 1 or 2 or 3 or 8C—Civilization in the Modern World (or) Foundations of Modern Civilization
Econ 1-2—Principles of Economics	Hist 93—American Diplomatic History I
Engl 4C—Masterpieces of World Literature	

‡ Not offered by correspondence.

Pol 55—Government of the Soviet Union  
 Pol 26—American Foreign Policy  
 Hist 119C—The Modern Near East  
 Hist 147A—Latin America in the Twentieth Century

Pol 89—Japanese Government and Politics  
 Soc 1—Introduction to Sociology  
 Soc 120—Social Psychology  
 Your Trip to Europe (Preparation for)

## Business Administration Certificates

### Junior Certificate

(45 credits)

This certificate, requiring the satisfactory completion of 45 credits of course work, offers a firm grounding in most of the basic fields of business administration. All of the credits received in completing the junior certificate are automatically credited toward a senior certificate and represent half of its required work load.

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

#### Prebusiness Requirement (35 credits):

Comp 1-2-3; or Comm 1-2-3 ‡; or exemption  
 Econ 1-2—Principles of Economics  
 QA 5—Elements of Statistics

Acct 24-25-26—Principles of Accounting  
 Math 10 or 15—College Algebra

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

Prod 50—Production Management  
 QA 51—Business Statistics  
 IR 52—Systems of Industrial Relations:  
 Labor Marketing  
 Ins 53—Risk Management and Insurance  
 Tran 54—Transportation I: Principles ‡  
 BFin 56—Corporation Finance  
 Mktg 57—Principles of Marketing ‡  
 BLaw 58—Business Law: Contracts

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

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

### Senior Certificate

(90 credits)

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

#### Prebusiness Requirement (35 credits):

Comp 1-2-3; or Comm 1-2-3 ‡; or exemption  
 Econ 1-2—Principles of Economics  
 QA 5—Elements of Statistics

Acct 24-25-26—Principles of Accounting  
 Math 10 or 15—College Algebra (or equivalent)

‡ Not offered by correspondence.

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

Prod 50—Production Management	Econ 65—Intermediate Economic Analysis I: The Firm and Industry ‡
QA 51—Business Statistics	Econ 66—Intermediate Economic Analysis II: Income and Employment
IR 52—Systems of Industrial Relations: Labor Marketing	Econ 67—Money and Banking
Ins 53—Risk Management and Insurance	Econ 68—Elements of Public Finance ‡
Tran 54—Transportation I: Principles ‡	Econ 69—Government Regulation of Business ‡
BFin 56—Corporation Finance	
Mktg 57—Principles of Marketing ‡	
BLaw 58—Business Law: Contracts	
Mgmt 60—Business Policy and Management Control ‡	

**Electives in the School of Business Administration:** At least 12 additional credits in courses in business administration. These may be selected from the core group above or from other courses.

**Other Electives:**

- A. Satisfactory completion of the prebusiness degree requirements in either social sciences, natural sciences, or humanistic courses (see items 4, 5, and 6 on page 10).
- B. Additional courses approved by the Committee on Student Scholastic Standing to make a minimum of 90 credits for the certificate.

## Police Administration Certificate

(45 credits)

The Police Administration Certificate program was planned by departments of the General Extension Division in co-operation with the Public Administration Center and police administrators and other municipal officials. Increasing numbers of police officers are being selected from applicants with college experience. The certificate provides an organized program of study, most of which can be transferred to a degree curriculum.

*Some of the courses required in this certificate are available only through the Correspondence Study Department of the University of Minnesota. The courses are marked with a double asterisk \*\*. Although credits may be transferred to this program from other institutions accredited by the University of Minnesota, the courses so marked (\*\*) must be taken at the University of Minnesota.*

**English Requirement** (12 credits):

Comp 1-2-3; (or) Comm 1-2-3 ‡; (or) Comp 1 and 8 additional credits selected from Comp 2, Engl 4c\*\*, Hum 1, Hum 2 ‡, Hum 3, Hum 4, Basic Technical Writing I

**Core Requirement** (15 credits):

Soc 53—Elements of Criminology	Police 16c**—Methods in Criminal Procedure
Police 15c**—Methods in Police Supervision	

‡ Not offered by correspondence.

Police 17c\*\*—Methods of Police Planning, Management, and Organization

Police 18c\*\*—Methods of Criminal Investigation

*Spread Requirement (18 credits):*

Pol 1—American Government and Politics: Part I  
 Psy 1-2—General Psychology  
 Soc 1—Man in Modern Society  
 6 additional credits selected from:  
 Pol 2—American Government and Politics: Part II

Pol 25—World Politics  
 Soc 3—Social Problems  
 Soc 52—Juvenile Delinquency and Juvenile Courts  
 Hist 20, 21, 22—American History

## EXTENSION CERTIFICATES, SECTION II

The following certificate programs can be partially completed with appropriate courses from this bulletin. Students would have to present acceptable equivalent credit for some of the required courses or sequence of courses. Each course or sequence marked with the symbol ‡ is NOT listed in this bulletin.

### Accounting Certificates

#### *Junior Accounting Certificate*

(45 credits)

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

*Requirements:*

Comp 1-2-3; or Comm 1-2-3 ‡, or exemption  
 Econ 1-2—Principles of Economics  
 BFin 56—Corporation Finance

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

#### *Senior Accounting Certificate*

(91 credits)

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

*Requirements:*

Math 10 (or 15) and 40 (or 42) or equivalent  
 Comp 1-2-3; or Comm 1-2-3 ‡; or exemption  
 Comp 27—Advanced Writing  
 Acct 24-25-26—Principles of Accounting  
 Acct 105A-B-C—Intermediate Accounting ‡  
 Acct 115A-B—Cost Accounting ‡  
 Three additional accounting courses numbered 100 or above  
 BFin 56—Corporation Finance  
 Econ 1-2—Principles of Economics  
 QA 5—Elements of Statistics

QA 51—Business Statistics  
 BLaw 58—Business Law: Contracts  
 BLaw 78-88—Business Law (or approved substitutions in industrial management or industrial engineering)  
 Two courses from the following:  
 Prod 50—Production Management  
 IR 52—Systems of Industrial Relations: Labor Marketing  
 Ins 53—Risk Management and Insurance  
 Tran 54—Transportation I: Principles ‡  
 Mktg 57—Principles of Marketing ‡

‡ Not offered by correspondence.



Econ 65—Intermediate Economic Analysis I: The Firm and Industry ‡  
 Econ 66—Intermediate Economic Analysis II: Income and Employment

Econ 67—Money and Banking  
 Econ 68—Elements of Public Finance ‡  
 Econ 69—Government Regulation of Business ‡

## Assessment and Appraisal Administration Certificate

(45 credits)

The Assessment and Appraisal Administration Certificate program was planned by departments of the General Extension Division, the School of Business Administration, and persons professionally employed in assessment and appraisal.

The program, which can be completed in a 3-year period but may take longer, requires that the student spend a 2-week, on-campus session during the early fall of each of 2 succeeding years, for which he receives 15 credits. In the intervening months, the student would be expected to complete at least Econ 1 and Acct 24. The remaining 24 credits must be completed within the next 5 years and may be taken by correspondence, in day or evening classes or by television. Credits may also be transferred from other accredited institutions.

**Core Requirement (15 credits)** earned *in residence* at the Nolte Center for Continuing Education:

Basics of Public Finance  
 Fundamentals of Appraisal  
 Principles of Taxation

Basics of Valuation  
 Advanced Appraisal

**Spread Requirement (21 credits):**

Econ 1-2—Principles of Economics  
 Acct 24-25—Elements and Principles of Accounting

BLaw 58,98—Business Law  
 QA 5—Elements of Statistics  
 (or) Econ 67—Money and Banking

**Electives:** Additional courses selected from the following to make a minimum of 45 credits total for the certificate:

Comm 1-2-3—Communication ‡  
 Governmental Accounting  
 Organization for Management ‡  
 Math 20—Mathematics of Investment

Psy 1A—Application of Psychology to Living ‡  
 Psy 1-2—General Psychology

## Secretarial Certificate

(45 credits)

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

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

‡ Not offered by correspondence.

**Core Requirement (36 to 39 credits):**

Review of Business English ‡ and Business Correspondence;  
 (or) Comp 58, Business Reports and Letters ‡  
 Econ 1-2—Principles of Economics  
 Acct 24-25—Principles of Accounting  
 OMgt 36—Office Procedures ‡

BLaw 58, 88—Business Law  
 OMgt 79A—Administrative Secretarial Studies ‡  
 OMgt 99—Management of Administrative Services  
 Psy 1-2—General Psychology

**Electives:** Additional courses selected from the following or other approved courses to make a minimum of 45 credits total for the certificate.

QA 5—Elements of Statistics  
 Acct 26—Principles of Accounting  
 Ins 53—Risk Management and Insurance  
 Econ 67—Money and Banking

BLaw 78, 98—Business Law  
 OMgt 79B—Administrative Secretarial Studies ‡

**Industrial Relations Certificate**

(48 credits)

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

**Core Requirement (42 credits):**

Econ 1-2—Principles of Economics  
 IR 52—Systems of Industrial Relations: Labor Marketing  
 IR 72—Systems of Industrial Relations: Manpower Management  
 IR 182A—Intermediate Labor Marketing ‡  
 IR 182B—Intermediate Manpower Management ‡  
 Psy 1-2—General Psychology  
 Psy 122-123—Vocational Development and Personnel Psychology ‡  
 One of:  
 Psy 70—Principles of Psychological Measurement ‡

QA 5—Elements of Statistics  
 One of:  
 Econ 152—Economic History of Labor ‡  
 IR 162—Union Government and Policies ‡  
 One of:  
 Econ 192—Economics of Collective Bargaining ‡  
 IR 142—Conflict and Collective Bargaining ‡  
 One of:  
 Econ 172—Labor Market Behavior and Regulation  
 Econ 182—Economic Security

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

QA 5—Elements of Statistics  
 Econ 172—Public Policy: Labor Relations  
 Econ 182—Economic Security  
 Prod 50—Production Management  
 OMgt 99—Management of Administrative Services

Psy 144-145—Abnormal Psychology  
 Soc 120—Social Psychology  
 IR 30c—Supervision I  
 ME 17c—Industrial Plant Layout  
 ME 18c—Motion and Time Study Engineering

**Special Requirement:** To qualify for the certificate award, upon completion of the core and elective requirements, a student must pass an Industrial Relations Classification and Placement Test administered by the Department of Industrial Relations.

‡ Not offered by correspondence.

## Public Administration Certificate

(45 credits)

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

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

**Core Requirement** (15 credits from the following):

Legal and Political Environment of Public Administration #;	Public Personnel Administration (old Pol 62)
(or) Pol 1-2—American Government and Politics	(or) Federal Personnel Practices #
Organization and Management (old Pol 60);	Public Financial Administration (old Pol 63) #
(or) Organization Theory # and Administrative Behavior #	Problems of Public Administration (old Pol 66) #
Municipal Law and Administration (old Pol 61) #	Administrative Responsibility (old Pol 78) #
	Departmental Management #

**Spread Requirement** (15 credits from the following):

Governmental Accounting (old Pol 58)	Government Purchasing #
Administrative Analysis (old Pol 67) #	Human Relations in Administration #
Administrative Communication (old Pol 68) #	Intergovernmental Relations #
City and County Planning (old Pol 73) #	Performance Evaluation #
Government and Welfare (old Pol 74) #	Private Law for Public Administrators #
Business and Government (old Pol 76) #	Public Speaking and Conference Leadership #
Computer Based Management Systems #	Jour 78—Public Relations Methods
Employer-Employee Relations in Government #	QA 5—Elements of Statistics (or equivalent)

**Concentration Requirement:** At least 15 credits in one of the following fields or in any approved combination thereof to make a minimum of 45 credits total for the certificate:

Accounting	Industrial Relations	Recreation Leadership
Business Finance	Insurance	Social Work #
Child Psychology	Nursing #	Sociology
Economics	Political Science	Transportation #
Engineering	Psychology	

## Basic Engineering Certificate

(52 credits)

**Prerequisite:** High school graduate or equivalent; 2 years of algebra and 2 years of geometry including solid geometry and trigonometry; and satisfactory completion of the English Placement Test.

# Not offered by correspondence.

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

Note that college level physics, including laboratory, is required and not usually offered by correspondence study. Ordinarily this requirement can be satisfied only by resident classes in an accredited university or college.

The requirements for the Basic Engineering Science Certificate Program are listed below. No electives or substitutions are permitted in this program, nor will any prerequisite be waived. Credits earned in day school applicable to this program can be transferred. Transcripts of credits earned at other institutions of higher learning will be evaluated by the Advanced Standing Office of the University of Minnesota. Transfer of approved credits will be permitted. Certificates are awarded to students who complete with a minimum C average the prescribed program of study.

Math 21—Calculus I: Calculus and Analytic Geometry

Math 22—Calculus II: Calculus and Analytic Geometry

Math 23—Calculus III: Calculus and Analytic Geometry

EG 25—Engineering Graphics

Phys 11-12-12A-13—General Physics #

Comp 1-2-3—Freshman Composition

*Electives:* Courses from nontechnical or biological science electives, †† to make a minimum of 52 credits.

### EXTENSION CERTIFICATES, SECTION III

Below are listed other certificate programs of the General Extension Division. Correspondence courses are the least helpful in meeting these requirements, but some of the courses are offered through home study. A list of the requirements for these certificates will be sent on request.

Senior Management of Administrative Services Certificate (90 credits)

Senior Engineering Science Certificate (102 credits)

Senior Civil Engineering Technician Certificate (102 credits)

Senior Electrical Engineering Technician Certificate (102 credits)

Senior Industrial Engineering Technician Certificate (102 credits)

Senior Mechanical Engineering Technician Certificate (102 credits)

# Not offered by correspondence.

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

## COLLEGE COURSES

**Note**—There is a \$3 per course fee for registrations originating outside of Minnesota, except for military personnel. The letter (c) after the number of a course means that there is no parallel campus course or that the correspondence course is a modification of the campus course for extension purposes. Credits are quarter credits unless otherwise listed. Three quarter credits are equivalent to 2 semester credits.

### AGRICULTURE

Truman Nodland, Professor of Agricultural Economics

Mykola H. Haydak, Professor of Entomology, Fisheries, and Wildlife

**A4. Beekeeping.** Useful to the nonexperienced and experienced beekeeper. Some of the topics are the study of the honey bee colony and of the individual bee, fundamentals of bee behavior, the value of bees in pollination, colony development, apiary management, preparation of honey and wax for market, bee diseases and their control, and queen rearing. (No prerequisite)

Haydak — 3 Extension credits only — \$33 — 16 lessons

**AgEc 80. Farm Accounting.** Forms and procedure for recording inventories, cash receipts and expenses, crop acreages and yields, feed consumed by livestock, family living secured from the farm, and other information concerning the farm business. Calculation of measures of farm earnings and factors affecting earnings. (No prerequisite)

Nodland — 3 credits — \$33 — 16 lessons

**Agricultural Education (Rural Education).** See page 32

**Forestry.** See page 40

**Home Economics (Textiles).** See page 48

**Horticulture.** See page 48

**Parliamentary Procedure.** See page 55

### ANTHROPOLOGY (Anth)

O. Elden Johnson, Associate Professor of Anthropology

Ladislav P. Novak, Assistant Professor of Anthropology and Physiology

John J. Poggie, Jr., Teaching Assistant in Anthropology

Claude Stipe, Teaching Assistant in Anthropology

Gretel Whitaker, Teaching Assistant in Anthropology

**1A. Introduction to Anthropology: Prehistoric Man and Culture.** Origins of man and development of modern races. Growth and differentiation of the cultures of man from the Dawn Stone Age of early glacial times through the Old and New Stone Ages to the dawn of civilization in the Bronze and Iron Ages. (No prerequisite)

Poggie — 5 credits — \$55 — 27 lessons

- 2A. Introduction to Anthropology: Cultural Anthropology.** The varieties and range of human behavior as revealed through the study of primitive societies in all parts of the world. A scientific analysis of the ways in which primitive men organize their lives. (No prerequisite)  
Poggie — 5 credits — \$55 — 27 lessons
- 80. The American Indian.** Description of physical types, languages, prehistory, and cultures of the Americas. (Prerequisite: Anth 2A or equivalent)  
Stipe — 3 credits — \$33 — 16 lessons
- 90. Archaeology of North America.** A survey of the prehistoric archaeology of North America, north of Mexico. Emphasis is on analysis of the techniques, methods, and goals of prehistoric archaeology. (Prerequisite: Anth 1A)  
Johnson — 3 credits — \$33 — 16 lessons
- 165. Culture and Personality.** The cross-cultural study of the interaction of social, cultural, and psychological factors in the development and maintenance of personality. Personality theory and research in anthropology and psychology. (Prerequisite: Anth 2A or 100 or consent of instructor)  
Whitaker — 3 credits — \$33 — 16 lessons
- 175. Human Physical Growth and Development.** Period of growth—prenatal, birth, infancy, childhood, and adolescence. Sex differences in growth, skeletal maturation. Development and growth of the head. Growth and eruption of the teeth. (Prerequisite: 1A [waived for majors in child psychology])  
Novak — 3 credits — \$33 — 16 lessons

## ART

Lorenz E. A. Eitner, Professor of Art, Stanford University

Leah Lewis, Professor of Interior Design

Lewis G. Palmer, Assistant Professor of Mechanical Engineering

Lucile S. Robinson, Instructor in Handcrafts (Correspondence Study)

## Art (Art)

- 1. Introduction to Art.** Offers a survey of the visual arts—architecture, sculpture, painting, graphic techniques, photography, and film—combining a broad coverage of the main periods of art history with an exploration of fundamental problems of meaning, form, and style. It attempts to enable students to interpret works of art by relating them to their geographic, historical, and social origins and by explaining the aims which have motivated artists of the past and present. (No prerequisite)  
Eitner — 4 credits — \$44 — 21 lessons
- 4(c). Design I.** Fundamental principles of design applied to a series of interesting and practical problems using a variety of techniques; a basic course that is useful in public school teaching and as a foundation for art courses. (No prerequisite)  
Lewis — 3 credits — \$33 — 16 lessons
- 43A(c). General Handcrafts I.** A practical course which includes chip carving, leather work, block printing, stenciling, and puppets. Also included are projects and gift suggestions to be made from scraps of material such as paper, tin, yarn, and wire. For teachers, occupational therapists, camp and

playground workers, and homemakers. (No prerequisite; may precede or follow General Handcrafts II)

Robinson — 3 credits — \$33 — 16 lessons

**43A(c). General Handcrafts II.** Similar to General Handcrafts I, but may precede or follow the first course. Lessons cover paper sculpture, stick printing, bead weaving, glass etching, clay craft, braiding, and simple book binding. Course may be taken for 1 or 2 credits. (No prerequisite)

Robinson — 1 credit — \$11 — 6 lessons

Robinson — 2 credits — \$22 — 12 lessons

**43B(c). Textile Crafts.** A practical course in needlework and other textile crafts such as hooked rug and braided rug making, crocheting, knitting, and simple weaving suitable for use in homes, schools, camps, playgrounds, social service, and for those interested in adult education. (No prerequisite)

Robinson — 3 credits — \$33 — 16 lessons

**83(c). Interior Design I.** Subject matter includes floors and floor coverings, walls and wall treatments, interior woodwork and finishes; also, how to build a color scheme, arrange furniture, combine styles, and how to create a focal point. Furniture styles studied are the traditional styles now in use; also use of contemporary design in furniture and other phases of the decorative arts is studied. The design principles covered apply to residential and commercial work. Trends are considered throughout the course. It is desirable but not required for students to have some periodicals in home furnishings for reference in addition to the text. (No prerequisite)

Lewis — 3 credits — \$33 — 16 lessons

**84(c). Interior Design II.** Special emphasis is given to the study of decorative fabrics for draperies, upholstery, and other interior use. The study of fibers and their special merits are considered. The importance of major accessories is emphasized. The use of fine arts in the home or office is growing. Window treatment is of major importance. Both custom-made and ready-made types of installation are considered. How to estimate yardage is included but not required subject matter. The right selections in a time of unlimited resources comes from special knowledge. The use of color is applied in several assignments. (Prerequisite: Art 83c)

Lewis — 3 credits — \$33 — 16 lessons

## Art Education (ArEd)

**21. Freehand Lettering.** Lessons in construction and spacing of single stroke vertical and inclined commercial gothic letters and numerals used in offices, stores, hospitals, libraries, schools, etc. (No prerequisite)

Palmer — 1 credit — \$11 — 6 lessons

## ASTRONOMY (Ast)

Willem J. Luyten, Professor and Chairman, Department of Astronomy

**11. Descriptive Astronomy.** A descriptive course designed to give accurate general information regarding the solar system and the stellar universe. Emphasizes the basic facts of the physical universe, rather than the technical details of the

work of a professional astronomer. A small telescope or even a field glass will be helpful but not essential. (No prerequisite)

Luyten — 5 credits — \$55 — 27 lessons

## BUSINESS ADMINISTRATION

**Note**—See page 10 for limitation on amount of credit earned by correspondence courses toward B.S.B. degree.

Richard L. Kozelka, Professor of Quantitative Analysis

Reuel I. Lund, Professor of Accounting

C. Arthur Williams, Jr., Professor of Economics and Insurance

C. F. Smythe, Associate Professor of Industrial Relations

J. Russell Nelson, Assistant Professor of Finance

Robert Curtis, Instructor in Accounting, Duluth Campus

Perry Jacobson, Instructor in Salesmanship (Correspondence Study)

Edward J. Moline, Instructor in Accounting (Correspondence Study)

Elvin Peterson, Instructor in Industrial Management (Correspondence Study)

Stephen Pugh, Instructor in Business Law (Correspondence Study)

Ruth Stanley, Instructor in Office Management (Correspondence Study)

George W. Ulseth, Instructor in Business Administration (Correspondence Study)

Richard Woods, Instructor in Industrial Relations (Correspondence Study)

George Whitmore, Teaching Assistant in Quantitative Analysis

Donald Schwab, Research Fellow in Industrial Relations

## Accounting (Acct)

24. **Elements of Accounting.** Recording, reporting, and interpreting business events. Use of accounting as a tool of business management. (No prerequisite)  
Lund — 3 credits — \$33 — 16 lessons
25. **Principles of Accounting I.** Continuation of Acct 24. (Prerequisite: Acct 24)  
Lund — 3 credits — \$33 — 16 lessons
26. **Principles of Accounting II.** Continuation of Acct 25. (Prerequisite: Acct 25)  
Lund — 3 credits — \$33 — 16 lessons
- 35(c). **Simplified Municipal Accounting.** An introduction is given to some of the general problems that arise in municipal service, related to the task of accounting for the funds involved. The text suggests fundamental and technical adaptation of governmental accounting procedures. The course attempts to give some practical answers, yet remains understandable to those with limited or no accounting knowledge. (No prerequisite)  
Moline — No credit — \$22 — 12 lessons
125. **Auditing Principles and Procedures.** A set of working papers and an audit report are prepared. The purposes and principles of auditing, and the verification and certification of published statements by public accountants are covered. Specific procedures and particular working papers are interrelated by the audit of a laboratory set calling for actual examination of records and accounts, the preparation of complete working papers, and an audit report. (Prerequisite: intermediate accounting or consent of instructor)  
Lund — 4 credits — \$44 — 21 lessons



**135. Income Tax Accounting.** The more common and important provisions of the federal income tax system as applied to individuals and corporations. Begins with a consideration of which types of income are taxable and which are not. Consideration is then given to gains and losses, dividends, and deductions. (Prerequisite: first-year elementary course in accounting at college level, or equivalent)

Curtis — 3 credits — \$33 — 16 lessons

**Governmental Accounting.** See page 61

**Data Processing.** See page 31

## Business Finance (BFin)

**1(c). Introduction to Investments.** A fundamental course for adult investors who wish a general background of information on the investment field. The course covers the nature of various securities, statistical and investment analysis, vocabulary and practices of the securities business, and investment practices suitable for various investor groups. (No prerequisite)

Nelson — 3 Extension credits only — \$33 — 16 lessons

**56. Corporation Finance.** Principles governing the planning, raising, and control of funds by a business enterprise. Topics investigated include cash-flows, valuation, capital structure, investment banking, dividend policy, mergers, and reorganizations. (Prerequisite: Acct 26; not recommended for students who have had Acct 106B)

Nelson — 3 credits — \$33 — 16 lessons

**146. Real Estate.** Valuation of urban real estate, problems of real estate financing, rent control, housing, land development, zoning, and other factors affecting real estate values. (Prerequisite: Econ 2 or equivalent; recommended to businessmen to whom it is open without prerequisite on a noncredit basis)

Ulseth — 3 credits — \$33 — 16 lessons

## Business Law (BLaw)

**58. Business Law—Contracts.** Deals with the basic law of contracts, the formation, operation, effect, and discharge of contracts. Inasmuch as a knowledge of the general rules of contract law is fundamental to all work in business law, this course must precede BLaw 78, 88, and 98. (Prerequisite: Econ 2 or equivalent, or consent of instructor)

Pugh — 3 credits — \$33 — 16 lessons

**78. Business Law—Agency, Partnerships, and Corporations.** The law of agency and a consideration of problems of partnerships and corporations, including business associations. Includes a study of the nature, creation, and terms of relationships, and rights and liabilities of the parties when doing business through agents, partnerships, and corporations. (Prerequisite: BLaw 58)

Pugh — 3 credits — \$33 — 16 lessons

**88. Business Law—Sales, Bailments, and Negotiable Instruments.** Law of sales of goods under the Uniform Sales Act and law of commercial paper under the Uniform Negotiable Instruments Law. Includes a study of negotiable notes, checks, drafts, etc., and rights of parties thereto. (Prerequisite: BLaw 58)

Pugh — 3 credits — \$33 — 16 lessons

98. **Business Law—Property Rights and Obligations.** Nature and classification of real and personal property; deeds and conveyances; landlord and tenant; recording and abstracting; Torrens titles; liens and mortgages; wills, probating of estates, and duties of administrators and executors. (Prerequisite: BLaw 58)  
Pugh — 3 credits — \$33 — 16 lessons

## Economics

See page 31

## Industrial Relations (IR)

See also Economics, page 31

- 30(c). **Supervision I.** A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors with emphasis upon human relations aspects of such problems. Deals with such problems as selection, induction, and training of new employees; employee appraisal, giving orders, handling grievances, discipline, and employee morale. (No prerequisite)  
Schwab — 3 Extension credits only — \$33 — 16 lessons
52. **Systems of Industrial Relations; Labor Marketing.** Introductory analysis of employment relationships, emphasizing economic analysis. Fundamentals of application and conservation of human resources in employment with consideration of related social and economic problems. Labor marketing, collective bargaining, unions and employer associations, industrial unrest and conflict, employment and unemployment, wage problems. (Prerequisite: Econ 2 or equivalent)  
Smythe — 3 credits — \$33 — 16 lessons
72. **Systems of Industrial Relations; Manpower Management.** Introductory analysis of personnel management and labor relations in the development and utilization of effective work-teams within firms and agencies. Overview of policy and practice in major manpower management functions of staffing, training, communications, motivation, compensation, and morale maintenance. (Prerequisite: Econ 2 or equivalent)  
Woods — 3 credits — \$33 — 16 lessons

## Insurance (Ins)

53. **Risk Management and Insurance.** An introductory course in risk management with emphasis on the insurance mechanism for handling risks. Recognition, measurement, and evaluation of insurable property, liability, and personnel risks. Tools of risk management: retention, loss prevention, transfer, and others with emphasis on insurance. Design and implementation of the optimum risk management program including the choice of insurers. Insurance pricing methods. Preparation for loss adjustments. Government regulation of insurance. (Prerequisite: Econ 2 or equivalent)  
Williams — 3 credits — \$33 — 16 lessons
73. **Life and Health Insurance.** The nature and relative importance of insurable personnel risks, analysis of life and health insurance contracts, programming,

estate planning, business insurance, pricing, underwriting, and marketing methods. (Prerequisite: Ins 53 or consent of instructor)

Williams — 3 credits — \$33 — 16 lessons

93. **Property and Liability Insurance I.** The nature and relative importance of property and liability risks, analysis of property and liability insurance contracts, insurance surveys—optimum property and liability insurance programs. (Prerequisite: Ins 53 or consent of instructor)

Williams — 3 credits — \$33 — 16 lessons

## Marketing (Mktg)

- 30(c). **Salesmanship.** Positive plan of action to develop confidence, earning potential. Includes selling principles, presentation, motivations, closing techniques. (No prerequisite)

Jacobson — 3 Extension credits only — \$33 — 16 lessons

## Office Management (OMgt)

99. **Management of Administrative Services.** Problems involving organization, planning, and control of administrative services; role of administrative services in the automated office; communications; records management; equipment analysis and control; forms and supplies; flow of work, layout, and environment; office personnel. (Prerequisite: Econ 2 or equivalent)

Stanley — 3 credits — \$33 — 16 lessons

## Production (Prod)

50. **Production Management.** The techniques, managerial problems, and decision-making processes in planning and controlling the production activity. Production as a function of the enterprise rather than as strictly a manufacturing activity. Research and development, the role of standards, physical facilities, systems and procedures analysis, work measurement, materials control, quality control, and production planning and control. (Prerequisite: Econ 2 or equivalent)

Peterson — 3 credits — \$33 — 16 lessons

## Quantitative Analysis (QA)

(Formerly Business Statistics)

5. **Elements of Statistics.** Sources and collection of data; tabular and graphic presentation; frequency distribution; probability; sampling; introduction to statistical estimation, decision-making, and index numbers. (Prerequisite: Math 10 or 15 or equivalent)

Whitmore — 3 credits — \$33 — 16 lessons

51. **Business Statistics.** Basic concepts of regression and correlations; statistical estimation and decision-making; applications to survey sampling and statistical quality control; time series analysis. (Prerequisite: QA 5 or equivalent or consent of the instructor)

Kozelka — 3 credits — \$33 — 16 lessons — Available August 1, 1966

## Small Business Management

See page 41

## CHILD PSYCHOLOGY (CPsy)

See also Education, page 32

See also Anthropology, page 24

John Hill, Assistant Professor of Child Psychology

Muriel Kerr, Teaching Assistant in Child Psychology

Nancy Ferguson, Research Assistant in Child Psychology

80. **Child Psychology.** Introduction to the science of child behavior. Emphasis is placed upon a critical review of theories and research in child psychology. (Prerequisite: Psy 1 and 2)  
Kerr — 3 credits — \$33 — 16 lessons
81. **Adolescent Psychology.** Social, physical, mental, emotional, and personality development during adolescence. (Prerequisite: Psy 1 and 2)  
Hill — 3 credits — \$33 — 16 lessons
86. **Psychology of the Gifted Child.** Psychology and development of high intellectual ability and of special talents. (Prerequisite: CPsy 80)  
Kerr — 2 credits — \$22 — 12 lessons
89. **The Psychology of Parent-Child Relationships.** Discussion of parent-child relationships and family situations. Evaluation of relevant research literature. (Prerequisite: CPsy 80)  
Ferguson — 2 credits — \$22 — 12 lessons

## CHINESE AND CHINESE CIVILIZATION (Chin)

Tao-chen Hsia, Research Assistant in Slavic and Oriental Languages

A 12-inch, 78-rpm Chinese pronunciation record, with script, is available for \$4.50. The recording is not required for Chin 1, but is strongly recommended. Available on tape (3.75 ips) for \$2. Order from the Correspondence Study Department.

1. **Beginning Chinese I.** Prepares for the reading and writing of colloquial Chinese (Mandarin), the language of conversation, modern fiction, and newspapers. Principles of pronunciation and intonation will be treated; principles of grammar will be implemented with ample exercises. (No prerequisite)  
Hsia — 5 credits — \$55 — 27 lessons
20. **Asian Civilization: China.** A readings course to introduce students to the best available translations of the major primary documents and some of the secondary studies in the fields of Chinese history, philosophy (including religion), literature, and art. Brief essays on specific problems raised in each field will be required in addition to a longer paper at the conclusion of the course. (No prerequisite)  
Hsia — 3 credits — \$33 — 16 lessons

## CLASSICS (Clas)

Michael Molitor, Instructor in Classics

48. **Technical Terms of Science, Medicine, and the Humanities.** Presentation in English contexts of Greek and Latin prefixes, suffixes, and root words in modern technical vocabularies; special attention to medical terminology. No previous acquaintance with Greek or Latin is required. (No prerequisite)

Molitor — 3 credits — \$33 — 16 lessons

## DATA PROCESSING

Leslie Knutson, Instructor (Correspondence Study)

- 1(c). **Introduction to Digital Computers and Computer Programming.** Introduction to number systems, Boolean algebra, computer components (input, output, arithmetic storage, and control) and programming—using both binary and decimal systems. Includes machine language, flow charting, problem solving, and common language programs.

Knutson — 5 Extension credits only — \$55 — 27 lessons

## ECONOMICS (Econ)

See also Industrial Relations, page 28

John Turnbull, Professor of Economics and Associate Dean, College of Liberal Arts

Ezzat El-Alfi, Instructor in Economics

George Keyt, Teaching Associate in Economics

Gary Rasmussen, Teaching Assistant in Economics

1. **Principles of Economics I.** Analysis of the principles determining the production (supply) and exchange (demand) of goods and services by individual firms and households. Determination of costs and prices under conditions of competition and monopoly. Economic activity of government. Economic significance of taxation and labor organizations; study of wages, rents, interest, and profit. (No prerequisite)

El-Alfi — 3 credits — \$33 — 16 lessons

2. **Principles of Economics II.** Analysis of national income, employment, and price level, with attention to aggregate consumption and investment. Financial organization of society, distribution of wealth and income. Fiscal and monetary policies, economic significance of banking, business cycles, foreign trade. Review of systems of economic organization: capitalism, socialism, fascism, and communism. (Prerequisite: Econ 1)

Keyt — 3 credits — \$33 — 16 lessons

66. **Intermediate Economic Analysis: Income and Employment.** Determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (Prerequisite: Econ 2 or equivalent)

Rasmussen — 3 credits — \$33 — 16 lessons

67. **Money and Banking.** Historical development, present pattern and economic role of financial institutions, with special emphasis upon commercial banks, the

money supply, and the Federal Reserve System. (Prerequisite: Econ 2 or equivalent)

Keyt — 3 credits — \$33 — 16 lessons

**172. Public Policy: Labor Relations.** Employer-employee-union relationships and their social control; legislative, executive, and judicial attempts to deal with these issues; economic and social implications. (Prerequisite: Econ 62 or equivalent)

Turnbull — 3 credits — \$33 — 16 lessons

**182. Economic Security.** Origins and development of economic and social problems of the individual worker, public and private attempts to deal with these issues, economic and social implications. (Prerequisite: Econ 62 or equivalent)

Turnbull — 3 credits — \$33 — 16 lessons

## EDUCATION

Adrian Dupuis, Professor of Education, Marquette University

Donovan Johnson, Professor of Education

Harry C. Johnson, Professor of Elementary Education, Duluth Campus

Robert B. Nordberg, Professor of Education, Marquette University

Gordon Swanson, Professor of Agricultural Education

Robert L. Jackson, Instructor in Elementary Education

**Note**—See Child Psychology, page 30, for courses in Child Psychology, Adolescent Psychology, The Gifted Child, and Parent-Child Relationships. These courses are accepted for credit in the College of Education. See page 57 for courses in physical education and page 62 for recreation courses.

**HEd 4(c). Introduction to Philosophy of Education.** A study of the ideas influencing contemporary education in the United States. An effort will be made to show how these ideas might influence the day-to-day work of the teacher. This course is to help teachers clarify their thinking in respect to the many conflicting viewpoints in educational philosophy. (No prerequisite)

Nordberg — 4 credits — \$44 — 21 lessons

**AgEd 20. Rural Education and Community Leadership.** Appraisal of community educational agencies; process of and responsibilities for community leadership; role of the school in the rural community; co-ordination of the school with nonschool educational agencies. (No prerequisite; no credit if student has taken AgEd 120)

Swanson — 3 credits — \$33 — 16 lessons

**EPsy 60. Introduction to Measurement and Statistics.** Elementary statistical methods and their application to educational problems. The commonly used statistical terms and methods such as mean, median, mode, percentiles, graphs, standard deviation, correlation, standard scores, and test analysis are considered. An attempt is made to give the student some understanding of these terms, practice problems with educational data, and applications and interpretations of statistics. Emphasis is placed on the intelligent interpretation of statistical methods so that the student may interpret educational data correctly. (Prerequisite: 6 credits in psychology)

D. Johnson — 3 credits — \$33 — 16 lessons

**EdCI 65. Teaching Science in the Elementary Schools.** Designed to acquaint the elementary school teacher with objectives, methods, and materials of importance

in the teaching of science to children. Special attention is given to developing understanding of science concepts and scientific method among children. Those phases of science content of importance in elementary education are identified and special attention is given to their explanation. (Prerequisite: Ed 75A; 10 credits in natural science)

Jackson — 3 credits — \$33 — 16 lessons

**HEd 90. The School and Society.** Readings in social science and philosophy give the student an opportunity to integrate points of view in thinking about the role of the school in present-day society. (Prerequisite: senior)

Dupuis — 3 credits — \$33 — 16 lessons

**HEd 141. Critical Issues in Modern Education.** The principal aim is to answer the following: What are the outstanding points of view in education today? Such practical questions as discipline, freedom, indoctrination, teacher-pupil relations, progressive methods will be treated as they relate to underlying theory; but the central objective will be to appreciate the crucial agreements and differences among leading thinkers in contemporary education. (Prerequisite: senior; cannot be used for graduate credit at the University of Minnesota)

Dupuis — 3 credits — \$33 — 16 lessons

**EdCI 149. Teaching and Supervision of Mathematics in the Elementary School.** Present practices and trends in methods, materials, and curriculum development; review of curriculum studies; evaluation and diagnosis; literature on current issues and problems. (Prerequisite: 9 credits in education; cannot be used for graduate credit at the University of Minnesota)

H. C. Johnson — 3 credits — \$33 — 16 lessons

## ENGINEERING

Robert E. Summers, Dean of Admissions and Records and Professor of Mechanical Engineering

Immanuel C. Fischer, Professor of Engineering

Miles Kersten, Professor of Civil Engineering

Theodor W. Thomas, Professor of Civil Engineering

Sidney Larson, Associate Professor of Electrical Engineering

Russell S. Nyquist, Assistant Professor of Mechanical Engineering

Lewis G. Palmer, Assistant Professor of Mechanical Engineering

The Institute of Technology consists of the College of Engineering, the School of Architecture, the School of Chemistry, the School of Mineral and Metallurgical Engineering, the School of Physics and Astronomy, the School of Earth Sciences, and the School of Mathematics. See page 10 for the amount of credit that can be earned by correspondence courses toward a degree from the Institute of Technology.

### Civil Engineering (CE)

**54(c) Soils Engineering.** Intended for engineers and students who wish to become familiar with the basic principles of soil behavior: the terminology, the tests, and applications to practical problems. Soil development and maps, laboratory tests, constants, and classification. Surveys, frost action, compaction, stabilization, and flexible pavement design. Stress distribution, consolidation, and

shear strength. (Prerequisite: 1 year of college mathematics desirable; consult instructor)

Kersten — 3 Extension credits only — \$33 — 16 lessons

- 146. Concrete and Concrete Materials.** Includes a study of the materials from which concrete is made, methods of designing a concrete mixture, the principles of air-entrained concrete, methods of measuring and controlling the air content, the chemical constitution of cement, properties of concrete, the practical aspects of proportioning, mixing, placing, and curing concrete and other special related topics. (Prerequisite: MM 37, Deformable Body Mechanics, for degree credit; the prerequisite may be waived if extension credit only is desired, but a knowledge of algebra, physics, and chemistry is essential)

Thomas — 3 credits — \$33 — 16 lessons

## Data Processing

See page 31

## Electrical Technology

- 1(c). Elements of Electric Circuits.** Fundamental laws of direct current circuits, the magnetic field and magnetic properties of iron and steel, induced and generated electromotive forces. Fundamental laws of alternating current circuits, complex representation. Series and parallel circuits, polyphase circuits, power measurements in electric circuits. (Prerequisite: High school math through trigonometry)

Larson — 3 Extension credits only — \$33 — 16 lessons

- 2(c). Elements of Electronics.** Electronic emission, conduction through vacuums and gases; characteristics of vacuum tubes, of gas and vapor tubes. Amplifier circuits, oscilloscopes, and control circuits; application of electronic devices to industry. (Prerequisite: ET 1 [c] or equivalent)

Larson — 3 Extension credits only — \$33 — 16 lessons

- 4(c). Elements of Electric Control Systems and Devices.** Introduction to basic theory of operation of transformers and rotational electromechanical energy conversion devices—voltage-ampere and torque-speed characteristics. Control amplifiers and associated equipment, instrumentation, methods of measurement; introduction to feedback control systems, transfer functions and block diagrams — stability considerations. (Prerequisite: open to students who have completed ET 1 [c] with a grade of A or who have some background in college-level work in electric circuits)

Larson — 3 Extension credits only — \$33 — 16 lessons

- 5(c). Elements of Transistor Physics and Circuits I.** Study of semiconductors, crystal structure and properties, crystals with impurities. The physical action of transistors, transistor types. Review of electric circuits. The transistor as a circuit element. Small signal amplifiers. (Prerequisite: ET 1 [c] or equivalent in experience)

Larson — 2 Extension credits only — \$22 — 12 lessons

- 6(c). Elements of Transistor Physics and Circuits II.** Continuation of Part I. Power amplifiers—Class A-B-C, graphical analysis. Cascade amplifiers. Bias stability and direct current amplifiers. Feedback-gain, gain stability, noise—



general noise considerations. Transistor oscillators and multivibrators. (Prerequisite: ET 5 [c])

Larson — 2 Extension credits only — \$22 — 12 lessons

## Engineering Graphics (EG)

1. **The Slide Rule.** Theory and computation practice necessary for those who wish to use the slide rule in ordinary computations. Drills on fundamental processes. (No prerequisite)

Palmer — 1 credit (no credit for students registered in Institute of Technology) — \$11 — 6 lessons — Slide rule \$3.50 and up

- 4(c). **Engineering Graphics.** Engineering representation, orthographic and pictorial. Multiview drawings, auxiliary and sectional views, size description, standard practices and specifications. Axonometric, oblique, and perspective drawing; freehand sketching and shading. (No prerequisite)

Palmer — 3 Extension credits only — \$33 — 16 lessons

- 5(c). **Engineering Graphics.** Engineering representation, graphical analysis and synthesis, co-ordinate systems, auxiliary projection. Solution of space problems and vector applications with mathematical correlation. (Prerequisite: EG 4)

Palmer — 3 Extension credits only — \$33 — 16 lessons

**Note**—EG 4 and EG 5 which are certificate credit courses (Extension) are designed to provide an engineering drawing course sequence more directly applicable to industrial needs than EG 25. Students who satisfactorily complete them may, upon approval of the Division of Engineering Graphics, petition for a comprehensive examination if credit for EG 25 is desired.

25. **Engineering Graphics.** Engineering representation and analysis of systems of projection; the co-ordinate system, graphical solution of space problems, intersections, and developments. Precision in graphics and techniques of sketching; pictorial projection systems, size description, standard and simplified practices applied to graphic communication. (Prerequisite: Math 21 or concurrent registration in Math 21)

Palmer — 4 credits — \$44 — 21 lessons

## Mechanical Engineering (ME)

- 1(c). **Steam Power Plants I.** For boiler users or operators. Elementary theory applicable to steam generation, principles of equipment selection, and solution of related problems of power boilers. Fuels, combustion and combustion equipment, furnaces and firing, steam generators, pumps, pipes and fittings, insulation. Boiler room practices; operation and safety. Properties of steam; boiler-water conditioning. (Prerequisite: proficiency in arithmetic)

Summers — 3 Extension credits only — \$33 — 16 lessons

- 17(c). **Industrial Plant Layout.** Lessons on the application of industrial engineering principles in simplifying and improving the layout of manufacturing plants, shops, and warehouses, and in planning new layouts. Topics covered include types of layouts, analysis of flow, safety factors in layout work, determination of equipment and space requirements, service facilities, buildings. (No prerequisite)

Nyquist — 5 Extension credits only — \$55 — 27 lessons

- 18(c). **Motion and Time Study Engineering.** One of the most necessary and most used branches of industrial engineering, this work is absolutely essential for efficient plant operation and accurate wage determination. Beginning with the skeletal structure of the subject, which gives the student a firm grasp of the logical development of the subject matter, all phases are explained, first in terms of present practice, and then in terms of the most recently developed techniques. Some of the topics covered are the importance of motion and time study; the skeletal structure of, methods analysis; process analysis; operation analysis; micromotion study; motion study problems; the skeletal structure of time study; breakdown of job into elements; determination of time consumed; job rating; personal, fatigue, and delay allowances; new techniques in the field; timing techniques for typical industrial operations; time study problems. (No prerequisite)

Nyquist — 5 Extension credits only — \$55 — 27 lessons

## Mechanics and Materials (MM)

35. **Statics.** Vector algebra. Application of the equations of equilibrium to the analysis of simple engineering structures and machines. Nature and influence of friction. Elementary theory of statically determinate framed structures. Deformation of structures with axially loaded elements. (Prerequisite: Math 31 [or concurrent registration in Math 31], and Phys 21 or consent of instructor; MM 35 may be substituted for MM 92)

Fischer — 4 credits (no credit granted if credit was received for old MM 27) — \$44 — 21 lessons — Available October 1, 1966

36. **Dynamics.** Introduction to vector calculus. Kinematics. Application of principles of particle motion. Conservation principles. Dynamics of particle systems and plane rigid bodies. Technical applications. (Prerequisite: Math 32 [or concurrent registration in Math 32], and Phys 21)

Fischer — 4 credits (no credit granted if credit was received for old MM 28, or for Phys 100 or Phys 100A) — \$44 — 21 lessons

**Note**—The former MM 27 and MM 28 will be available for a limited time at \$33 per course. Write to the Correspondence Study Department for further information.

## ENGLISH

See also Humanities, page 49

Wendell P. Glick, Professor of English and Humanities, Duluth Campus

Harold J. Alford, Associate Professor of English

Lewis D. Levang, Associate Professor of English, Duluth Campus

Robert Owens, Associate Professor of English, Duluth Campus

Herbert L. Carson, Assistant Professor of Humanities, Ferris Institute

Clifford I. Haga, Assistant Professor of English

Sumner J. Ferris, Instructor in English (Correspondence Study)

Douglas R. George, Instructor in English

Richard Grant, Instructor in English, Morris Campus

Louise Klohn, Instructor in English (Correspondence Study)

Agnes Macdonald, Instructor in English (Correspondence Study)

Charles Norman, Instructor in English (Correspondence Study)

Justin O'Connell, Instructor in English (Correspondence Study)  
Robert E. Regnier, Instructor in English (Correspondence Study)

## English Literature (Engl)

- 4(c). **Masterpieces of World Literature.** A reading course for those who want to acquaint themselves with the world's great works of fiction. The lessons help the reader to interpret, appreciate, and respond to problems raised by the authors. Of interest to anyone who wants to increase his command of reading and intelligent discussion.  
Klohn — 2 Extension credits only — \$22 — 12 lessons
21. **Introduction to Literature I.** A chronological study of the leading English writers in poetry and prose and of their historical backgrounds, including an introduction to types of literature and literary ideas. The complete sequence of three terms (21, 22, 23) begins with Chaucer and ends with Arnold. Some knowledge of English history from Edward III to Victoria is required. The first term includes: Chaucer to Milton, Marlowe, Spenser, Shakespeare, Bacon, Browne, and Bunyan. (Prerequisite: Freshman English)  
Grant — 5 credits — \$55 — 27 lessons
22. **Introduction to Literature II.** Continuation of Engl 21. The Restoration and the 18th century. Pope, Swift, Addison and Steele, Johnson, Boswell, Fielding, and Sheridan. (Prerequisite: Freshman English)  
Grant — 5 credits — \$55 — 27 lessons
23. **Introduction to Literature III.** Continuation of Engl 22. The romantic movement and the Victorians. Wordsworth, Coleridge, Byron, Shelley, Keats, Carlyle, Tennyson, Browning, and Arnold. (Prerequisite: Freshman English)  
Grant — 5 credits — \$55 — 27 lessons
38. **Twentieth-Century Literature II.** The British and American novel in the 20th century: Dreiser, Lawrence, Joyce, Huxley, Faulkner, Hemingway, Steinbeck, Cary, and Bellow. (Prerequisite: Freshman English)  
Owens — 3 credits — \$33 — 16 lessons
52. **English Novel I.** The English novel from its 18th-century beginning to the early 19th century. Defoe, Richardson, Fielding, Smollett, Sterne, Austen, and Scott. (Prerequisite: Freshman English and 5 additional credits in English)  
Owens — 3 credits — \$33 — 16 lessons
53. **English Novel II.** The novel through the 19th century: Dickens, Thackeray, the Brontë sisters, George Eliot, Trollope, Meredith, Hardy, Conrad. (Prerequisite: Freshman English and 5 additional credits in English)  
Owens — 3 credits — \$33 — 16 lessons
55. **Shakespeare I.** The development of Shakespeare's dramatic art is traced chronologically from the earliest plays to two of the mature tragedies. The student becomes familiar with the various types of Shakespeare's drama: comedy, tragedy, and history. (Prerequisite: Freshman English and 5 additional credits in English)  
Levang — 3 credits — \$33 — 16 lessons
56. **Shakespeare II.** Continuation of Engl 55. Shakespeare's later career from 1600 to 1611. Tragedies, romantic comedies, romances, and one problem comedy. (Prerequisite: Engl 55 or consent of instructor)  
Levang — 3 credits — \$33 — 16 lessons

- 72. American Literature I.** The development of American literature and thought from the beginnings through the early American Renaissance. (Prerequisite: Freshman English and 5 additional credits, or 5 credits in Engl 21-22-23)  
Glick — 3 credits — \$33 — 16 lessons
- 73. American Literature II.** Continuation of Engl 72. American literature from the American Renaissance to the end of the 19th century. (Prerequisite: Engl 72)  
Glick — 3 credits — \$33 — 16 lessons
- 74. American Literature III.** Continuation of Engl 73. American literature from the end of the 19th century to the present. (Prerequisite: Engl 73)  
Glick — 3 credits — \$33 — 16 lessons
- 75. Chaucer.** A study of most of *The Canterbury Tales*, the last and most varied work by the founder of the English poetic tradition. The course emphasizes such matters as Chaucer's skill and versatility in narrative, his ability in characterization, his place as a representative (and critic) of medieval Christianity and culture, and his relation to the great authors who preceded and followed him. Opportunity is given for additional reading and for original critical writing. The reading is done in the original early English, but only such emphasis is put on the language as serves to illuminate the quality and meaning of the poetry. (Prerequisite: Freshman English and 5 additional credits in either English or humanities)  
Ferris — 4 credits — \$44 — 21 lessons

**Guided Reading.** See page 62.

**Selecting Books for Children.** See page 62.

## Composition (Comp)

**Grammar Review.** A step-by-step explanation of traditional grammar, punctuation, spelling, and vocabulary. Recommended both for those who have little or no knowledge of language fundamentals and for those, such as teachers or secretaries, who wish a systematic and complete review of basic principles. (No prerequisite)

Alford — No credit — \$22 — 12 lessons

**Remedial Writing.** The fundamentals of good English, with emphasis upon grammar, punctuation, and spelling and their application to written composition. Cannot be substituted for Comp X. No textbook required.

Klohn — No credit — \$22 — 12 lessons

**Business Correspondence.** A practical course for people in business or those preparing to enter it. The ways of developing effective letter-writing habits are analyzed and presented in a study of diction, grammar, and the mechanics of letter forms. (No prerequisite)

Haga — 3 Extension credits only — \$33 — 16 lessons

**Basic Technical Writing I.** Review of basic English and introduction to technical writing. Designed for people in the technical industries. Includes sentence design, spelling, and punctuation. Covers basic techniques of definition, description, process, procedure, and analysis writing. Organization and correlation into text of tables, diagrams, and illustrations. Emphasis on accuracy, brevity, simplicity, and layout. (No prerequisite)

O'Connell — 3 Extension credits only — \$33 — 16 lessons

**The Writing of Poetry.** The student will be given an opportunity to write both traditional and free verse. The student's work will be evaluated by the instructor. The aim of the course is to develop an appreciation of poetry and the student's ability in the writing of poetry. (Prerequisite: Freshman English or equivalent)

Carson — No credit — \$22 — 12 lessons

**X. Preparatory Composition.** Intensive drill on grammatical forms, structure, and theme writing. Recommended for those whose primary need is organization and development of themes; any passing grade admits students to Engl 1B. (No prerequisite)

Norman — No credit — \$33 — 16 lessons

**1-2-3. Freshman Composition.** Concentrates upon developing the student's skill in writing exposition, with some reading in expository literature chiefly as a means of providing subject matter for the writing.

1. Freshman Composition. (Prerequisite: Comp X or a satisfactory score on the English Placement Test)

George — 4 credits — \$44 — 21 lessons

2. Freshman Composition. (Prerequisite: Comp 1 or Engl 1B)

Regnier — 4 credits — \$44 — 21 lessons

3. Freshman Composition. (Prerequisite: Comp 2 or Engl 2B)

Regnier — 4 credits — \$44 — 21 lessons

**27. Advanced Writing I—Exposition.** Study and writing of essays with emphasis on critical analysis, structure, and organization. Study assignments are drawn from the student's own reading and from a variety of current periodicals. The student chooses his own major essay subjects. (Prerequisite: Freshman English or equivalent)

Alford — 3 credits — \$33 — 16 lessons

**28. Advanced Writing II—Narration and Description.** The principles of description and narration with analysis of specimens and exercises in writing. (Prerequisite: Freshman English or equivalent)

Alford — 3 credits — \$33 — 16 lessons

**69. Short Story Writing I.** A basic study of short story technique, with emphasis on the student's completion of several original stories. Manuscripts will be carefully read, and suggestions for improvement will be offered. The textbook is the work of a successful author, and the stories studied illustrate a variety of writing methods. (Prerequisite: Comp 27-28)

Macdonald — 3 credits — \$33 — 16 lessons

**70. Short Story Writing II.** The student should here reap the benefits of what he has learned in Comp 69. He will write four stories, in all approximately 10,000 words, and these stories will be carefully read and criticized. He will read a number of useful stories and consider such things as style, tone, pace, suggestion, and symbols. (Prerequisite: Comp 69)

Macdonald — 3 credits — \$33 — 16 lessons

**80(c). Independent Writing.** Consists of manuscript criticism. There are no assignments or lesson materials. It is intended for advanced students who want criticism and suggestions on their own projects. The instructor will read approximately 16,000 words divided into lessons as the student wishes.

Poetry is not covered in the course. (Prerequisite: Comp 27 or 28 or equivalent)

Alford — 3 Extension credits only — \$33 — 16 lessons

**Vocabulary Building.** See page 67

**Playwriting.** See page 67

## FAMILY STUDIES (FamS)

Maurine Hansen, Instructor in Family Studies

**1(c). Building a Better Marriage.** The goals of marriage and of participation in a satisfying family life. Includes self-understanding, changing roles, choice of mate, engagement, marriage adjustments, family relationships. (No prerequisite)

Hansen — 3 credits — \$33 — 16 lessons

## FINNISH

Elina Holst, Instructor in Finnish (Correspondence Study)

**Scan 17. Beginning Finnish.** For beginners with little or no previous knowledge of Finnish. Stresses fundamentals of grammar, the facility to read and write easy Finnish. Recording available to aid in basic pronunciation. (No prerequisite)

Holst — 5 credits — \$55 — 27 lessons

## FORESTRY (For)

Harold Scholten, Instructor in Forestry

**1A. Conservation of Natural Resources.** Current status, utilization, and sound management of natural resources with emphasis on those which are renewable. Conservation principles and their application to soil, water, forests, grasslands, wildlife, and minerals. (No prerequisite; not open to students who have taken a similar course)

Scholten — 3 credits — \$33 — 16 lessons

## FRENCH (Fren)

John Fadell, Instructor in Romance Languages

A recording, "The Sounds of French," Part I, has been prepared to accompany the correspondence courses. Sounds are articulated by an authentic voice. As it is difficult to teach French pronunciation by correspondence, the student is strongly urged to purchase the record and to hear it repeatedly, imitating the sounds as accurately as possible. The record is available from the EMC Recordings Corp., 180 East 6th Street, St. Paul, Minnesota 55106. The 33½-rpm record is \$2.50; on phonotape (3¾ ips) it is \$3.

**1. Beginning French I.** Essentials of the French language: grammar, reading, pronunciation, easy composition. (No prerequisite)

Fadell — 5 credits — \$55 — 27 lessons

2. **Beginning French II.** Continuation of Fren 1. (Prerequisite: Fren 1, or 1 year of high school French)  
Fadell — 5 credits — \$55 — 27 lessons
3. **Intermediate French I.** Review of grammar, composition, reading of representative authors. (Prerequisite: Fren 2, or 2 years of high school French)  
Fadell — 5 credits — \$55 — 27 lessons
- 17A. **French For Graduate Students.** Fundamentals of grammar, reading of appropriate prose. Prepares for graduate reading examination in French. (No prerequisite)  
Fadell — No credit — \$33 — 16 lessons
25. **Intermediate French II.** Continuation of Fren 3. (Prerequisite: Fren 3, or 3 years of high school French)  
Fadell — 5 credits — \$55 — 27 lessons

## GENERAL COLLEGE (GC)

David Gardner, Research Assistant in Business Administration

- 17(c). **Operation of a Small Business.** The practical problems of operating a small business. Covers all phases of organization and management, including advertising, layout, financing, location, buying, pricing, personnel. Emphasis is on retailing. (No prerequisite)  
Gardner — 3 credits in General College — \$33 — 16 lessons

## GEOGRAPHY (Geog)

Leverett P. Hoag, Associate Professor of Geography, Duluth Campus

Fredric R. Steinhauser, Associate Professor of Geography

- 7(c). **Geography of Minnesota.** Provides an opportunity for the study of Minnesota's people and culture, physical resources, and problems in making a living. Emphasis is placed upon the major differences among Minnesota's regions.  
Steinhauser — 4 credits — \$44 — 21 lessons
- 50(c). **Geography of South America.** The South American continent as a unit, followed by the study of major regions within individual countries. Both natural and cultural elements will be studied in their regional associations.  
Hoag — 4 credits — \$44 — 24 lessons
- 51(c). **Geography of the United States and Canada.** An introductory treatment of economic development and geographical association in the United States and Canada. Emphasis is upon the ways of making a living and the location of production. Problems considered on both the national and regional basis.  
Steinhauser — 4 credits — \$44 — 24 lessons

Conservation of Natural Resources. See page 40

## GEOLOGY (Geo)

George R. Rapp, Jr., Associate Professor of Geology

Robert E. Sloan, Associate Professor of Geology

Richard L. Bartels, Instructor in Geology

- 1(c). **Physical Geology.** A first course in geology for science majors and an introduction to the scientific method and the nature of the earth for others. Survey of the main features of the physical world and of the processes that have evoked them. (No prerequisite; high school chemistry or physics recommended)  
Sloan — 5 credits — \$55 — 27 lessons
- 2(c). **Historical Geology.** Evolution of the earth from its origin to the present, with special attention to the succession of physical and biological events of the past 600 million years, with emphasis on the geological history of the North American continent. (Prerequisite: Geo 1 or Geo 1[c] or Geo 11)  
Sloan — 3 credits — \$33 — 16 lessons
- 62(c). **Mineralogy and Lithology.** An introduction to crystallography, mineralogy, and petrology. The nature, structure, and chemical composition of minerals. The origin and classification of rocks. Lessons will include a study of specimens of crystals, minerals, rocks, and some fossils. (Prerequisite: Geo 1 or Geo 1[c] or Geo 11; high school chemistry; one term of college chemistry recommended)  
Rapp and Bartels — 5 credits — \$55 plus \$20 for specimen sets (if student does not wish to keep the specimen sets, \$15 will be refunded when all sets are returned) — 27 lessons — Available April 1, 1967

## GERMAN (Ger)

Edwin F. Menze, Professor and Chairman, Department of German  
Herman Ramras, Professor of German

A 10-inch, 33 $\frac{1}{3}$ -rpm German pronunciation record, with script, is available for \$3.50. A tape recording of the same material (3.75 ips) is \$3. The recording is not required but is strongly recommended. Order from the Correspondence Study Department.

1. **Beginning German I.** Grammar and easy composition. Aims to give the student a knowledge of the elements of German grammar, the facility to read easy German, and to write simple German sentences. (No prerequisite)  
Ramras — 5 credits — \$55 — 27 lessons
2. **Beginning German II.** Continuation of Ger 1. (Prerequisite: Ger 1, or 1 year of high school German)  
Ramras — 5 credits — \$55 — 27 lessons
3. **Beginning German III.** Grammar and composition continued; selected readings in easy prose. (Prerequisite: Ger 2, or 2 years of high school German)  
Menze — 5 credits — \$55 — 27 lessons
- 4-5. **Intermediate German.** The combination of Ger 4 and 5 corresponds to the regular departmental course offerings at the intermediate German level in the College of Liberal Arts. 4: Intermediate German, Selected Readings from Literature, 3 credits. 5: Intermediate German, Elementary Composition, 2 credits. A student must register for both courses in the Correspondence Study Department. (Prerequisite: Ger 1, 2, and 3, or 3 years of high school German)  
Menze — 5 credits — \$55 — 27 lessons
- 17A. **German for Graduate Students.** Designed to help the graduate student acquire a reading knowledge of basic German as rapidly as possible. (It is not intended to be preparation for the Graduate German Reading Examination—it is merely the first step toward that objective.) This course assumes no knowledge



of German on the part of the student. Grammar is reduced to an essential minimum. The course progresses from intensive reading of simple, graded material to selections of moderate difficulty. Vocabulary building and word formation are emphasized. (No prerequisite)

Menze—No credit—\$33—16 lessons

- 17B. **German for Graduate Students.** Designed to give the graduate student the experience in intensive reading of German literary texts necessary to enable him to satisfy the German language requirement for an advanced degree by achieving a grade of "B" or better in the final examination which is part of the course. (Prerequisite: Ger 17A or 2 quarters of beginning German or 2 years of high school German)

Menze—No credit—\$44—21 lessons

57. **Elementary Composition I.** A review of the fundamentals of German grammar with particular attention to the idioms and characteristics of written German. Practice in writing original compositions. (Prerequisite: Ger 4-5)

Menze—2 credits—\$22—12 lessons

58. **Elementary Composition II.** A review of the fundamentals of German grammar with particular attention to the idioms and characteristics of written German. Practice in writing original compositions. (Prerequisite: Ger 57)

Menze — 2 credits — \$22 — 12 lessons

59. **Elementary Composition III.** Intensive practice in the use of conversational and written German, and in the writing of original compositions. (Prerequisite: Ger 58)

Menze—2 credits—\$22—12 lessons

73. **Drama: The Classical Period.** Selected plays of Lessing, Schiller, and Goethe, with assigned readings and reports. (Prerequisite: Ger 4-5 or consent of instructor)

Menze—3 credits—\$33—16 lessons

74. **Drama: The Nineteenth Century.** Selected plays of Kleist, Grillparzer, and Hebbel, with assigned readings and reports. (Prerequisite: Ger 73 or consent of instructor)

Menze—3 credits—\$33—16 lessons

75. **Drama: The Modern Period.** Selected plays representing the more recent movements in German literature—naturalism, impressionism, expressionism—with assigned readings and reports. (Prerequisite: Ger 74 or consent of instructor)

Menze—3 credits—\$33—16 lessons

76. **German Prose of the Nineteenth Century.** Selected Novellen by Grillparzer, Stifter, Keller, and Storm, with assigned readings. (Prerequisite: Ger 4-5 or consent of instructor)

Menze—3 credits—\$33—16 lessons

77. **German Prose of the Nineteenth and Twentieth Centuries.** Selected Novellen by Gerhart Hauptmann, Arthur Schnitzler, Thomas Mann, Ricarda Huch, Wilhelm Schäfer, and Hermann Hesse, with assigned readings. (Prerequisite: Ger 76 or equivalent)

Menze—3 credits—\$33—16 lessons

78. **German Prose of the Twentieth Century.** Selected Novellen by Franz Kafka, Robert Musil, Wolfgang Borchert, Heinrich Böll, and other renowned mid-

century prose writers, with assigned readings. (Prerequisite: Ger 77 or equivalent)

Menze—3 credits—\$33—16 lessons

## GREEK (Grk)

See also Classics, page 31

Susan Cole, Teaching Assistant in Classics

1. **Beginning Greek I.** Introduction to the classical Greek language: alphabet, vocabulary texts, and idioms. Selected short readings of moderate difficulty in ancient Greek authors. Written translation exercises, Greek to English and English to Greek. (No prerequisite)

Cole — 5 credits — \$55 — 27 lessons

2. **Beginning Greek II.** Review of the fundamentals of classical Greek. Readings in authentic selections from the body of ancient Greek literature. Written translation exercises, Greek to English and English to Greek, of greater extent and scope than in Grk 1. Successful completion of course should enable students to read classical Greek well, and New Testament Greek very well, with the aid of a dictionary. (Prerequisite: Grk 1 or equivalent or consent of instructor)

Cole — 5 credits — \$55 — 27 lessons

## HEALTH (PubH)

Murray Bates, Assistant Professor of Public Health

3. **Personal Health.** Elementary principles of normal body function, predisposing and actual causes of disease, ways in which disease may be avoided. (No prerequisite; not open to students who have taken GC 10C [Human Biology] in General College or PubH 2, 4, 5, 50 or 51)

Bates—2 credits—\$22—12 lessons

50. **Personal and Community Health.** Causes of diseases and of physical defects, fundamental principles and working methods of health conservation and disease prevention. (No prerequisite; not open to students who have taken GC 10C in General College or PubH 2, 3, 4, 5 or 51)

Bates—3 credits—\$33—16 lessons

## HISTORY (Hist)

See also Chinese and Chinese Civilization, page 30

See also Travel, page 68

Maude L. Lindquist, Professor and Head, Department of History, Duluth Campus

Clarke A. Chambers, Professor of History

Tom B. Jones, Professor of History

David W. Noble, Professor of History

Donald F. Warner, Professor of History, Central Washington State College

Jeanne C. Lupton, Associate Professor of History

Theofanis G. Stavrou, Associate Professor of History  
George Olkhovsky, Assistant Professor of History, George Washington University  
Mary L. White, Instructor in History (Correspondence Study)

1. **Civilization in the Modern World I.** A survey of European history from 1500 to 1763. The emphasis is upon the rise of the state. (No prerequisite)  
White—3 credits—\$33—16 lessons
2. **Civilization in the Modern World II.** A survey of European history from 1763 to 1870. Emphasis is placed upon the struggle for control of the state. (No prerequisite)  
White—3 credits—\$33—16 lessons
3. **Civilization in the Modern World III.** A survey of European history from 1870 to the present. Emphasis is placed upon impact of industrialism in 19th-century civilization and the development of the problems that have upset world civilization in the 20th century. (No prerequisite)  
White—3 credits—\$33—16 lessons
4. **English History I.** Conquest and settlement, the feudal age, foreshadowings of limited monarchy and popular government. (No prerequisite)  
White—3 credits—\$33—16 lessons
5. **English History II.** Tudors and Stuarts, parliament versus king, colonization. (No prerequisite)  
White—3 credits—\$33—16 lessons
6. **English History III.** The coming of democracy, Britain and Europe, Empire and Commonwealth. (No prerequisite)  
White—3 credits—\$33—16 lessons
- 7(c). **Survey of Minnesota History.** The political, social, and economic development of Minnesota from the period of European explorations to the present. Access to W. W. Folwell's *History of Minnesota* and the *Minnesota History* magazine and other publications of the State Historical Society will be required. (No prerequisite; not open to those who have completed Hist 97)  
Lindquist—4 credits—\$44—21 lessons
- 8(c). **The Foundations of Modern Civilization.** An insight into the development of human institutions and practices which comprise what is called modern civilization. A study of primitive man, civilizations of the Ancient Near East, Greece, and Rome; the decline of Rome and, with it, ancient civilization in the West; the development of modern civilization which may be said to have been launched by A.D. 1500. Throughout, emphasis is placed on culture traits, such as religion, art, literature, science, economics, political institutions, and whatever else made up a civilization at a given time. (No prerequisite; not open for credit to those who have completed Hist 1, 2, 3)  
White—4 credits—\$44—21 lessons
14. **History of Ancient Civilization I.** A survey of the rise of civilization in the Ancient Near East from the earliest times to 500 B.C. Emphasis is placed upon the origin of culture and its development in complexity from the primitive to the civilized stage. Special attention is given to the civilizations of Babylonia, Egypt, Indus Valley, Syria, Palestine, and Crete. (No prerequisite)  
Jones—3 credits—\$33—16 lessons
- 14A. **Basic Readings in Ancient Civilization I.** An introduction to ancient history as a discipline: the principles of historical analysis and criticism as well as the methods and techniques used in the reconstruction of the past. Among the

topics considered are archaeological excavation; uses of evidence provided by pottery, coins, and other artifacts; type problems posed by literary sources and ancient Near Eastern literature and the Greek epic and the meaning of the Old Testament as a literary and historical document. (Prerequisite: Hist 14 or concurrent registration)

Jones—2 credits—\$22—12 lessons

15. **History of Ancient Civilization II.** The history of the rise and flowering of Greek civilization from the earliest times to the death of Alexander the Great in 323 B.C. Special emphasis is placed on Greek civilization in the fifth century (Age of Pericles) with attention to the political, social, literary, artistic, and philosophic achievements of that period. (No prerequisite; Hist 14 helpful in providing a background for the Greek period)

Jones—3 credits—\$33—16 lessons

- 15A. **Basic Readings in Ancient Civilization II.** An introduction to the major authors of the classical Greek period. Selections from the poets, the dramatists, Herodotus, Thucydides, Xenophon, the orators, Plato and Aristotle. (Prerequisite: Hist 15 or concurrent registration)

Jones—2 credits—\$22—12 lessons

16. **History of Ancient Civilization III.** The climax of ancient civilization during the Hellenistic Age (323-133 B.C.) and the Roman Imperial Period followed by the decline of Rome and of ancient civilization (to about A.D. 300). The three main topics to be considered are (a) the civilization of the ancient world at its peak, (b) the rise and flowering of Roman culture, and (c) the reasons for the decline of ancient civilization. Special attention will be paid to political institutions, art, literature, economics and society, philosophy, and ancient science. (No prerequisite; recommended that Hist 16 be preceded by Hist 14 and 15 in order that the student may acquire a background for the history of the Roman period)

Jones—3 credits—\$33—16 lessons

- 16A. **Basic Readings in Ancient Civilization III.** An introduction to the literature of the Hellenistic and Roman periods. Selections from poetry, drama, history, biography, science, philosophy, oratory, and letters. The New Testament and early Christian writings will be considered in their relation to pagan literature. (Prerequisite: Hist 16 or concurrent registration)

Jones—2 credits—\$22—12 lessons

20. **American History I, 1600-1844.** Colonial establishments; social, economic, and political development of the colonies; mercantilism; problems of empire; the Revolution; the Constitution; westward expansion; development of the American party system; foreign relations and the Monroe Doctrine; problems of nationalism and sectionalism. (No prerequisite)

Lupton—4 credits—\$44—21 lessons

21. **American History II, 1844-1896.** Manifest destiny and the Mexican War; slavery, sectionalism, Civil War; Reconstruction; the passing of the frontier; industrial capitalism; labor, immigration, agriculture; the Populist revolt. (No prerequisite)

Noble—4 credits—\$44—21 lessons

22. **American History III, 1896 to Present.** Manifest destiny and the Spanish-American War; social problems; progressivism; Roosevelt, Taft, and Wilson; World War I; Harding, Coolidge, and Hoover; isolationism; the New Deal; Pearl Harbor; problems of peace; Truman and Eisenhower. (No prerequisite)

Chambers—4 credits—\$44—21 lessons

**Note**—Beginning in October, 1966, Hist 20, 21, 22 will be replaced with a 2-quarter sequence. Write for details.

- 92. History of the Far West.** The discoveries, exploration, and settlement of the Far West with special emphasis on the frontiers of the cattleman, miner, farmer, and rancher, and the Indian problems; the course of western economy and its relationship to the national scene. (Prerequisite: a basic course in American history)

Lindquist—3 credits—\$33—16 lessons

- 93. American Diplomatic History I. (1776-1846)** Traces the early history of our foreign policy. Three principal aspects are treated: the origins and basic principles of American foreign policy, the fight for survival and recognition after the Revolution, and the drive for continental expansion. (No prerequisite)

Warner—3 credits—\$33—16 lessons

- 95. American Diplomatic History III.** A survey of the history of American foreign policy since 1909. The principal emphasis is placed upon the causes and consequences of our entry into the two world wars and our shift from isolationism to world leadership in foreign affairs. (No prerequisite)

Warner—3 credits—\$33—16 lessons

- 103A. History of the Ancient East I.** The first civilization in the Ancient Near East. Main topics: the sources of our knowledge about the past with special attention to the role of archaeology; the beginnings of agriculture and the advent of civilization in the great river valleys; the Old Kingdom in Egypt and Sumerian period in Mesopotamia; the Egyptian Middle Kingdom; the Age of Hammurabi; characteristics of ancient Near Eastern civilization: literature, art and architecture, law, religion, economics, society, and technology. (Prerequisite: 9 credits in history; open to juniors and seniors without prerequisite)

Jones—3 credits—\$33—16 lessons

- 104A. History of the Ancient Near East II.** The Age of Empires: 1600-1000 B.C. Main topics: the New Kingdom (Empire) in Egypt; the Hittite Empire; developments in Syria and Palestine with special attention to the Canaanites, Philistines, and Hebrews; the spread of civilization to Asia Minor and Aegean lands. (Prerequisite: same as for Hist 103A)

Jones—3 credits—\$33—16 lessons

- 105A. History of the Ancient Near East III.** A survey of developments in the period 1000-500 B.C. Main topics: Phoenicians, Hebrews, the Assyrian Empire, Assyrian civilization, the Age of Nebuchadnezzar, Saite period in Egypt, the Lydian kingdom, contacts between Greece and the Near East, the Persian Empire. (Prerequisite: same as for Hist 103A)

Jones—3 credits—\$33—16 lessons

- 118E. Russian History I.** A survey of Russian history to the time of Peter the Great, including the origins of the Russian state, Kievan Russia, and the rise of Muscovy. (Prerequisite: Hist 1, 2, and 3 or equivalent)

Olkhovsky—3 credits—\$33—16 lessons

- 119E. Russian History II.** Covers the period from Peter the Great through the Crimean War and includes the study of the Europeanization of Russia and the crystallization of the Empire. (Prerequisite: Hist 1, 2, and 3 or equivalent)

Olkhovsky—3 credits—\$33—16 lessons

- 119G. The Modern Near East.** Covers the period from the Treaty of Jassy (1792) to the Congress of Berlin (1878). (No prerequisite)  
Stavrou—3 credits—\$33—16 lessons
- 120E. Russian History III.** A survey of the last years of the Russian Empire, the background of the revolution, and the establishment and history of the Soviet state. (Prerequisite: Hist 1, 2, and 3 or equivalent)  
Olkhovsky—3 credits—\$30—16 lessons
- 147A. Latin America in the Twentieth Century.** A survey of the political, social, and economic development of the major nations of Latin America with particular attention to inter-American relations. Although attention is given to political problems and developments, the social problems—health, education, food, etc.—are considered. In addition, pertinent geographic factors which have influenced Latin-American experiences are included. Particular attention is devoted to industrial expansion and the impact of industry on society. (No prerequisite)  
Lupton—3 credits—\$33—16 lessons

## HOME ECONOMICS (HE)

Gladys Babcock, Associate Professor of Home Economics, Carnegie Institute

- 2(c). Introduction to Textiles.** For consumers and people in the field of merchandising. A study of textiles commonly used in clothing and home furnishings, including fiber identification and properties, yarn and fabric construction, fabric finishing, determination of fabric quality in relation to use, and care of fabrics. (No prerequisite)  
Babcock—3 credits—\$33 plus \$1.50 for materials—16 lessons

## HORTICULTURAL SCIENCE (Hort)

Robert A. Phillips, Assistant Professor of Horticulture

- 51. Garden Flowers and Home Gardening.** A broad general study of the principles and practices of gardening especially prepared for beginners but also valuable for the advanced or experienced gardener. There will be textbook assignments and practical home projects in propagating plants for the garden. Some of the topics covered will be planting, transplanting, seeds, soils, fertilizers, preparing beds and planting areas, selecting a good garden site, controlling insects and diseases, weeding, watering, cultivating, pruning, tools, and equipment. Lists of recommended varieties of annuals, perennials, bulbs, and roses for northern gardens will be supplied. Similar lists for other areas of the country can be secured from state agricultural colleges and experiment stations and from the U.S. Department of Agriculture. (No prerequisite)  
Phillips—3 credits—\$33—16 lessons
- 60. Home Landscape Planning.** Planning home grounds for greater use and enjoyment, with an introduction to the principles of landscape design and their application and importance in the use and decoration of the home grounds. Uses an artistic approach to the problems and prospects of home landscaping which will also serve as a background for the pursuit of the popular hobby of gardening. There will be an independent student project of planning either a hypothetical home plot or the home place of the student. In this project the student will be guided by the instructor. A practical program of study for

nurserymen, teachers, homeowners, and others interested in home landscaping.  
(No prerequisite)

Phillips—3 credits—\$33—16 lessons

## HUMANITIES (Hum)

See Chinese Civilization, page 30

Eugene Atkin, Teaching Assistant in Humanities

Albert Milgrom, Teaching Associate in Humanities

Clara Kanun, Instructor in Humanities (Correspondence Study)

1. **Humanities in the Modern World I.** Examination of the mainstream of western European intellectual history from the early 18th century to the first few decades of the 19th century. The Age of Reason and neoclassicism. The old regime, the French Revolution, the rise and fall of Napoleon, the rise of romanticism. Authors: Mandeville; Pope, *An Essay on Man*; Voltaire, *Candide*; Wordsworth; Goethe, *Faust*; Rousseau, *The Social Contract*; Burke, *Reflections on the Revolution in France*; Tolstoy, *War and Peace*. (No prerequisite)

Hult—3 credits—\$33—16 lessons

3. **Humanities in the Modern World III.** The impact of science—especially Darwinism—on philosophy, religion, and the prevailing values of western Europe from about the middle of the 19th century to the opening of World War I. The examination of the intellectual roots of existentialism. Writings by the influential scientists and philosophers of the age, including essays by Lamarck, Darwin, Wallace, G. B. Shaw, and others. Full-length works by Kierkegaard, *Fear and Trembling*; Nietzsche, *Thus Spake Zarathustra*; Tolstoy, *The Death of Ivan Ilych*; Joyce, *The Dead*; Mann, *Death in Venice* and *Magic Mountain*. (No prerequisite)

Kanun—3 credits—\$33—16 lessons

4. **Humanities in the Modern World IV.** Civilization between two wars; the impact of psychoanalysis; a critique of communism; a prediction of the future. Period: from World War I to the present. Authors: Huxley, Bellamy, Freud, O'Neill, Lenin, Malraux, Koestler. (No prerequisite)

Milgrom—3 credits—\$33—16 lessons

## INTERIOR DESIGN

See Art, page 24

## JAPANESE (Jpn)

Fumiko Yasaka, Teaching Assistant in Japanese

A 10-inch, 33 $\frac{1}{3}$ -rpm basic Japanese pronunciation record is available from the Correspondence Study Department for \$3.75. A tape recording is also available for \$3 (3.75 ips).

1. **Beginning Japanese I.** An introduction to reading and writing modern Japanese. Provides the basic grammar and vocabulary for learning to read modern fiction,

newspapers, magazine styles, as well as for conversational Japanese. (No prerequisite)

Yasaka—5 credits—\$55—27 lessons

## JOURNALISM (Jour)

Harold W. Wilson, Professor of Journalism

John C. Sim, Associate Professor of Journalism

Robert Lindsay, Assistant Professor of Journalism

1. **Introduction to Mass Communications.** The nature, functions, and responsibilities of communication agencies, with emphasis upon the newspaper. Study of audiences, determinants of news values. Exercises in writing simple news stories, fact-gathering. (Prerequisite: Freshman English or equivalent)  
Sim—3 credits—\$33—16 lessons
14. **Newspaper Reporting I.** Continued study of news-gathering and the writing of the "straight" news story; the human interest or feature story; analysis of newspapers; special types of reporting; advanced interviewing. Numerous writing assignments. (Prerequisite: Jour 1, or old Jour 13)  
Sim—3 credits—\$33—16 lessons
50. **Interpretive Reporting.** Study of newspaper law, including libel, rights of the press, study of "privilege," and other legal regulations affecting the press; advanced reporting; the interpretive story; the newspaper feature story. Numerous writing assignments. (Prerequisite: Jour 14 or consent of instructor)  
Sim—3 credits—\$33—16 lessons
57. **Typography for Publications and Advertising.** Planning layouts with typography, illustrations, color, print, paper, and process. Design principles. Students will work in publication format and design or advertising layout in accordance with their interest. (Prerequisite: consent of instructor)  
Wilson—3 credits—\$33—16 lessons
73. **Magazine Articles I.** A study in the writing of factual and opinion articles, interviews, and expository articles, both serious and feature, for newspapers and magazines. Main emphasis is on the journalistic type of article rather than the essay type. (Prerequisite: Jour 50 or old Jour 15)  
Lindsay—3 credits—\$33—16 lessons
78. **Public Relations Methods.** Publicity, external and internal communication, use of media; techniques and application of institutional promotion and communication, including use of company publications, institutional advertising, and trade journals. Projects and campaigns. (Prerequisite: Jour 50, or old Jour 15 or consent of instructor)  
Lindsay—3 credits—\$33—16 lessons
86. **Radio and Television Script Writing.** Introduces the student to the lines of experience in both major fields of broadcasting. Starts with the simplest kind of scriptwriting and progresses by logical steps to more complex radio and television work. Numerous writing assignments are made, and optional exercises are provided for additional experience. (Prerequisite: Freshman English or consent of instructor)  
Lindsay—3 credits—\$33—16 lessons
150. **Institutional Public Relations.** Principles and practices of public relations in the business setting and in education, social work, public health, and other



community service fields. Use of the mass media and journalistic implications of the public relations process. (Prerequisite: Jour 78 or consent of instructor)

Lindsay—3 credits—\$33—16 lessons

## LATIN (Lat)

See also Classics, page 31

James ReVeal, Teaching Assistant in Classics

James Svendsen, Teaching Assistant in Classics

The following courses represent a graded sequence completing Lower Division requirements, or the equivalent of 4 years of high school Latin. The prerequisite for each course (except Lat 1) is the course immediately preceding, or equivalent credit. Students who have completed the first three courses or the equivalent, however, may register for Lat 4, 5, or 6. Those who wish to increase aural-oral facility may want to supplement their course work by using drill-practice records or tapes. While these are not required for the courses outlined, students will find their individual study made easier, more interesting, and more satisfying if they are able to make use of these audio-aids. There are at least two private sources making recordings in Latin. Names and addresses will be sent on request. Write to the Correspondence Study Department or to the Classics Department, University of Minnesota.

1. **Beginning Latin I.** Basic grammar and vocabulary, practice in reading and writing Latin, workbook exercises, easy Latin readings and Roman legends. (No prerequisite)  
ReVeal—5 credits—\$55—27 lessons
2. **Beginning Latin II.** Continuation of Lat 1. Similar in content and method, leading to connected reading in *Fabulae Faciles* (Easy Stories). (Prerequisite: Lat 1 or equivalent)  
ReVeal—5 credits—\$55—27 lessons
3. **Intermediate Latin Reading.** A review of the elements of Lat 1 and 2, with a shift of emphasis to longer passages of continuous reading on Roman life. A considerable amount of historical and literary background is presented in English to orient the student to the material. (Prerequisite: Lat 2 or equivalent)  
Svendsen—5 credits—\$55—27 lessons
4. **Selections from Latin Prose and Poetry.** The student has an opportunity to read selections from the most famous public addresses of Cicero, and to gain, through the English descriptive passages, an understanding of their importance then and now. Through reading some of the *Tales of Ovid* in the original Latin verse, he may become better acquainted with mythology and its influence upon the literature of our time. Other poets and prose writers are included. These selections have been made from the standpoint of present-day interest. (Prerequisite: Lat 3 or equivalent)  
Svendsen—3 credits—\$33—16 lessons
5. **Vergil's Aeneid.** Readings of selections from Books I-II; background reading in Roman life and thought is included in the text. (Prerequisite: Lat 3 or equivalent)  
Svendsen—5 credits—\$55—27 lessons

6. **Cicero.** Readings from the most famous humanistic essays. (Prerequisite: Lat 3 or equivalent)

Svendsen—3 credits—\$33—16 lessons

## LIBRARY SCIENCE (Lib)

Joyce Davenport, Instructor in Library Science (Correspondence Study)

52. **Descriptive Cataloguing.** The forms and principles involved in making a dictionary card catalogue. Based primarily on *Akers Simple Library Cataloguing*. Directions for the use of printed cards prepared by the Wilson Company and the Library of Congress. (No prerequisite; recommended that Lib 52 precede Lib 54)

Davenport—3 credits—\$33 (plus rental and materials, \$2.50)—16 lessons

54. **Elementary Classification and Subject Heading.** Based on the unabridged edition of the *Dewey Decimal Classification* and *Sears List of Subject Headings for Small Libraries*. Aims to give an understanding of methods of classification and the principles of assigning subject headings to books in a library. Attention is given to modifications and adaptations useful in school or small public libraries. Includes use of Cutter-Sanborn author numbers and preparation of a shelf list. (No prerequisite)

Davenport—3 credits—\$33 (plus rental, \$2.50)—16 lessons

Selecting Books for Children. See page 62

Using Books and Libraries. See page 62

**Note**—The courses in library science do not earn credit in the University of Minnesota Library School, which is a graduate program leading to a Master's degree. The credits are acceptable in other undergraduate colleges at Minnesota, usually as electives. Most states will accept the credits for teacher certification. If you have questions about the transfer of credits write to your State Department of Education or similar agency.

## MATHEMATICS (Math)

Immanuel C. Fischer, Professor of Engineering

Edward S. Loye, Associate Professor of Mathematics

Erna M. Yackel, Instructor in Mathematics (Correspondence Study)

**Note**—It is essential that the student have a working knowledge of the prerequisites to each course as well as credit in the preparatory subjects. If there has been a time lapse since the previous course in mathematics, the student should review thoroughly or repeat the prerequisite. It is impossible to make progress in mathematics without a sound knowledge of previous concepts and applications.

- 1(c). **Basic Mathematics Review I.** A thorough review of grade school arithmetic, square and cube root. A good foundation in elementary algebra, the fundamental operations involving positive and negative numbers, fractions, the solution of simple equations and fractional equations, exponents, symbols of grouping, special products and factoring, and simplification of fractional expressions. (No prerequisite)

Fischer—No credit—\$33—16 lessons

3(c). **Basic Mathematics Review II.** Covers the material of the second semester of high school algebra and the numerical part (called mensuration) of plane and solid geometry, plus numerical trigonometry and logarithms. *In algebra:* simultaneous linear equations; exponents and radicals; solution of quadratic equations, irrational equations; ratio, proportion, variation; graphical representation of statistical data and of equations; and the use of formulas. *In geometry:* formulas from plane and solid geometry and how to apply them. *In trigonometry:* logarithms and how to use them; the trigonometric functions; and solution of right and oblique triangles. (Prerequisite: equivalent of Math 1[c])

Fischer—No credit—\$33—16 lessons

8. **Solid Geometry.** Standard theorems and exercises. Practice in special proofs and original exercises to develop imagination and initiative. (Prerequisite: Plane geometry A-B or 1 year of high school plane geometry)

Fischer— $\frac{1}{2}$  entrance unit—\$25—20 lessons

11. **Intermediate Algebra.** Fundamental operations, factoring, fractions, functions and graphs, linear equations, exponents and radicals, quadratic equations, ratio and variation, progressions, binomial theorem, logarithms. (Prerequisite: 1 year of elementary algebra in high school, or equivalent)

Loye—1 entrance unit—\$55—27 lessons

12. **College Algebra and Trigonometry.** Trigonometric functions, right triangles, oblique triangles, radian measure. Trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations. Inequalities, exponential and logarithmic functions, complex numbers. (Prerequisite: Math 11 or equivalent)

Loye—1 entrance unit—\$55—27 lessons

Note—Math 8, 11, and 12 fulfill the present entrance requirements in mathematics for the Institute of Technology (engineering courses).

T. **Trigonometry.** Analytic trigonometry emphasizing identities, equations, and properties of the functions; right and oblique triangles without logarithmic computation. (Prerequisite: Plane geometry and 11 or high school higher algebra)

Loye — 3 credits — \$33 — 16 lessons

15. **College Algebra.** (May be substituted for Math 10) Quadratic equations, simultaneous quadratic equations, progressions, the binomial theorem, mathematical induction, inequalities, complex numbers, theory of equations, permutations and combinations, probability, and determinants. (Prerequisite: Math 11 or high school algebra)

Yackel—5 credits—\$55—27 lessons

20. **Mathematics of Investment.** The mathematical theory of simple interest, simple discount, compound interest, and annuities certain. The applications deal with promissory notes, banking practice in the lending of money, the discharge of debts by periodic payments, depreciation funds, perpetuities, capitalization problems, and bonds. (Prerequisite: Math 10 or Math 15)

Yackel—5 credits—\$55—27 lessons

21. **Calculus I: Calculus and Analytic Geometry.** Review of algebra, inequalities, relations and functions, graphs, line, linear inequalities, preview of calculus, limits, continuity, differentiation of algebraic functions, applications, differential. (Prerequisite: Math 12 or 4 years of high school mathematics divided approxi-

mately into 2 years of algebra and 2 years of geometry, including solid geometry and trigonometry)

Love—5 credits—\$55—27 lessons

22. **Calculus II: Calculus and Analytic Geometry.** Trigonometric review. Definite integral; lines and circles, conics; calculus of trigonometric, exponential, logarithmic, and hyperbolic functions. (Prerequisite: Math 21)

Love—5 credits—\$55—27 lessons

23. **Calculus III: Calculus and Analytic Geometry.** Review of theory of equations, complex numbers. Parametric equations, arc length, polar co-ordinates. Formulas and methods of integration, applications. (Prerequisite: Math 22)

Loye—5 credits—\$55—27 lessons

31. **Calculus IV: Calculus and Analytic Geometry.** Solid analytic geometry, vectors in three dimensions. Multiple integration, application. Partial differentiation, directional derivative. Maxima and minima, exact differentials, line integrals. (Prerequisite: Math 23)

Fischer—5 credits—\$55—27 lessons

32. **Calculus V: Calculus, Linear Algebra, Differential Equations.** Infinite series, Taylor's series. Determinants and matrices, general linear systems. Differential equations, separable, homogeneous, exact, general linear first order, linear equations with constant coefficients. (Prerequisite: Math 31)

Fischer—5 credits—\$55—27 lessons

33. **Calculus VI: Calculus, Linear Algebra, Differential Equations.** Functions defined by integrals, vector field theory, Green's and Stokes' theorems. Matrix methods for systems of differential equations, series solution of differential equations. (Prerequisite: Math 32)

Fischer—5 credits—\$55—27 lessons—Available December 1, 1966

62. **Theory of Equations I.** Complex numbers, solution of algebraic equations, properties of polynomials, isolation of the real zeros of a real polynomial, determinants, and linear equations. (Prerequisite: Math 22 or old 43)

Yackel—3 credits—\$33—16 lessons

106. **Differential Equations.** Equations of first order, singular solutions; linear equations with constant coefficients, simultaneous equations, integration in series. (Prerequisite: Math 31 or old 44)

Loye—3 credits—\$33—16 lessons

High School Mathematics. See page 71

**Note**—Although not listed in this bulletin, several discontinued mathematics courses are available for students who must complete sequences. Write for details.

## MUSIC (Mus)

Paul Fetler, Professor of Music

Mary E. Malcolm, Professor of Music

4. **Harmony I.** Intervals, triads, major and minor scales, the structure and progression of four-part chords based upon the triad and its inversions, part-writing, melody harmonization, modulation, analysis. (No prerequisite)

Malcolm—3 credits—\$33—16 lessons

5. **Harmony II.** Continuation of Mus 4, with the addition of nonharmonic tones and diatonic seventh chords. (Prerequisite: Mus 4)  
Malcolm—3 credits—\$33—16 lessons
6. **Harmony III.** Continuation of Mus 5, with the addition of chromatically altered nonharmonic tones, chromatically altered chords, and modes. (Prerequisite: Mus 5)  
Malcolm—3 credits—\$33—16 lessons

**Note**—Mus 4, 5, 6 correspond to the written portion of Music Theory for resident students in the Department of Music, University of Minnesota.

- 9(c). **Counterpoint.** Counterpoint is the creative study of writing one or more independent melodies against each other in a strict style. Such a study is of great value particularly to the student of composition. Course is based directly on the 16th-century polyphony. Works of Lassus and Palestrina are examined and the rules for writing formulated accordingly. An elementary course. The student learns the writing of good melodic lines and gradually continues with two-voice counterpoint. The writing of canon is an important part of this course. (Prerequisite: general knowledge of music theory)  
Fetler—3 credits—\$33—16 lessons

## NORWEGIAN

Marion J. Nelson, Associate Professor of Scandinavian

- Scan 1. **Beginning Norwegian I.** A complete survey of Norwegian grammar. Composition. Reading of easy prose. (No prerequisite)  
Nelson—5 credits—\$55—27 lessons
- Scan 2. **Beginning Norwegian II.** Study of folk tales and short stories; reading and composition. (Prerequisite: Scan 1 or equivalent)  
Nelson—5 credits—\$55—27 lessons

## PARLIAMENTARY PROCEDURE

Ralph E. Miller, Associate Professor of Rhetoric, College of Agriculture, Forestry, and Home Economics

- Rhet 25. **Parliamentary Procedure.** The fundamental principles and practices of parliamentary procedure are presented in recognition of a need for leadership training on the part of presiding officers and members of various rural and urban organizations. How to open and close a meeting, draft a constitution, discuss unfinished business and introduce new business, entertain motions in order of their precedence, handle amendments, appoint committees, dispose of committee reports, and nominate and elect officers are among the topics presented. (No prerequisite)

Miller—1 credit—\$22—12 lessons

## PERSONAL ORIENTATION (PO)

David Wark, Assistant Professor, Student Counseling Bureau

1. **How to Study.** Practical assistance in developing efficient methods of study and concentration, organizing material, preparing for examinations, and improving

reading ability and vocabulary. Attention to the orientation of students in their attitudes and motivation, and the relation of these to satisfactory performance. (No prerequisite; credit must be added to degree requirements at the University of Minnesota)

Wark—2 credits—\$22—12 lessons

## PHILOSOPHY (Phil)

A. Carl Ahlen, Professor of Philosophy, Northwestern Lutheran Theological Seminary

Charles Kielkopf, Assistant Professor of Philosophy, Ohio State University

Daniel D. Merrill, Instructor in Philosophy, Knox College

**1A. Problems of Philosophy.** Is there any principle or set of principles in terms of which we can understand man, experience, and the world? Does life have a meaning? What, if anything, can we know? What are good and evil? Is the nature of reality discoverable? Is political organization a purely natural development, or is it an artificial human invention? Is there any "ideal" form of social organization? How, if at all, are religion, science, art, and politics interrelated? Attempts to answer these questions are considered. Proposed solutions by the world's great minds, ancient and modern, are examined. The student is encouraged to do critically reflective thinking of his own concerning these basic issues. (No prerequisite)

Ahlen—3 credits—\$33—16 lessons

**2A. Logic.** There is a difference between "straight" and "crooked" thinking. Logic is the study of these differences. What is a fallacy? How many pitfalls beset the attempt to think straight? When is a term properly defined? Why are sound definitions important? What is meant by a "syllogism"? What is meant by a "dilemma"? What do you understand by proof? When is proof of a statement called for? When is it complete? What is a hypothesis? How many of these do you use in an average conversation? What is meant by "scientific thinking"? Logic is the systematic analysis of these and other related questions. The study of logic will show you what is involved in straight thinking. (No prerequisite)

Ahlen—3 credits—\$33—16 lessons

**3A. Ethics.** A study of the principles and problems of right and wrong in human relationships. The course will include such topics as the following: The history of moral development, the ethical theories of classical philosophy, the problems of free-will, the nature of man, the ethical problem involved in international relations and in other social problems, the relationship of religion to ethics. (No prerequisite)

Ahlen—3 credits—\$33—16 lessons

**10. Science and Religion.** A historical and philosophical inquiry into the conflict between modern science and religion, attempting to find grounds of conflict and/or reconciliation. (No prerequisite)

Merrill—2 credits—\$22—12 lessons

**50, 51, 52, 53. General History of Western Philosophy.** Survey of major developments in Western philosophic thought from its beginnings among the Greeks to the end of the 19th century.

50. Greek philosophy: Socrates, Plato, Aristotle. (No prerequisite)

Kielkopf—4 credits—\$44—21 lessons

51. Stoicism, Epicureanism, and Medieval Christian Synthesis. (No prerequisite)  
Kielkopf—4 credits—\$44—21 lessons—Available January 1, 1967
52. Early modern philosophy from Descartes through Hume. The impact of science. Backgrounds of contemporary philosophical problems. (No prerequisite)  
Kielkopf—4 credits—\$44—21 lessons—Available November 1, 1966
53. Later modern philosophy from Kant through Nietzsche. (No prerequisite)  
Kielkopf—4 credits—\$44—21 lessons—Available September 1, 1966

## PHYSICAL EDUCATION

See also Recreation, page 62

Richard J. Donnelly, Professor and Director, School of Physical Education

Helen M. Slocum, Professor of Physical Education

Jeralyn Plack, Instructor in Physical Education

**PE 61. History of Physical Education.** The influence of social, economic, political, and religious factors in the development of physical education from primitive times to the present. Origin and development of games and sports. (No prerequisite)

Donnelly—3 credits—\$33—16 lessons

**Hlth 83. School Health Education: Method and Content.** Study of scope of field, principles underlying the development of a program, curricular suggestions on elementary and secondary level, methods and materials for teaching, steps in unit planning, and evaluation of the instructional program. (No prerequisite)

Slocum—3 credits—\$33—16 lessons

**PE 84B. The Physical Education Program in the Elementary School.** Designed to help the elementary classroom teacher assume responsibility in teaching physical education. Emphasis is on planning, methods, selection of appropriate activities and organization. (Prerequisite: minimum of 5 credits in skills and methods courses in physical education; open to elementary classroom teachers only)

Plack—3 credits—\$33—16 lessons

## PHYSICS (Phys)

Fritjof E. Christensen, Professor of Physics, St. Olaf College

Allen B. Johnson, Instructor in Physical Science

**1. Introduction to Physical Science I.** A study of the basic physical laws and principles relative to mechanics and molecular physics. Topics: force, friction, work, rectilinear and curvilinear forces. A liberal amount of problem solving is required. (Prerequisite: high school elementary algebra and plane geometry)

Christensen—3 credits—\$33—16 lessons

**2. Introduction to Physical Science II.** A sequential course to Phys 1. Topics: heat, wave motion, sound, electricity, and magnetism. (Prerequisite: Phys 1)

Christensen—3 credits—\$33—16 lessons

3. **Introduction to Physical Science III.** A sequential course to Phys 1 and 2. Topics: light, Bohr atom, the methods of quantum mechanics, solids, radioactivity, the nucleus, and modern physics. (Prerequisite: Phys 1)  
Christensen—3 credits—\$33—16 lessons
- 4(c). **Modern Physics.** The important discoveries, theories, phenomena, and experiments that have taken place during the last century: discovery of electron, atomic structure, mass spectroscopy, radioactivity, atomic accelerators, cosmic rays, photoelectricity, and semi-conductors. (Prerequisite: Phys 1)  
Christensen—3 credits—\$33—16 lessons
- 16(c). **Elements of Mechanics.** The principles of mechanics such as Newton's laws of motion, friction, conservation of energy and momentum, and rotational motion. The solution of numerous problems will be required. Prepares the student to continue with other courses in physics or engineering. (Prerequisite: trigonometry and higher algebra, preferably college algebra)  
Christensen—3 credits—\$33—16 lessons
29. **Introduction to Meteorology.** Fundamental physical principles and first elements underlying meteorological study, weather map analysis and construction; also local meteorological observation. (Prerequisite: algebra and high school physics)  
Johnson—3 credits—\$33—16 lessons

## POLICE ADMINISTRATION

Wayne Bennett, Instructor in Police Administration (Correspondence Study)

- 15(c). **Methods in Police Supervision.** The basic principles of supervision and leadership. A survey of the problems of supervision with emphasis on human relations. Various types of supervisory positions are considered. The delegation problems of the supervisor are emphasized. The course is designed to assist those who are already supervisors in the police department and those who desire to become supervisors.  
Bennett—3 Extension credits only—\$33—16 lessons
- 16(c). **Methods of Criminal Procedure.** An analysis of the criminal code and criminal court procedure, adaptable to other state codes and statutes. Emphasis is on the understanding of the elements of offenses. Arrest, search, and evidence procedures are discussed. Especially useful for those persons engaged in law enforcement at state, county, and local levels.  
Bennett—3 Extension credits only—\$33—16 lessons
- 17(c). **Methods of Police Planning, Management and Organization.** Major emphasis is on the major factors of the planning, management and organization functions of police departments. Each division of the police department is examined in detail. Students of police operations will find the information especially helpful. The information is as useful for the patrolman in understanding the total department operation as it is for those in command functions in understanding their responsibilities.  
Bennett—3 Extension credits only—\$33—16 lessons
- 18(c). **Methods of Criminal Investigation.** An investigation of the techniques of criminal offense commission and the best methods of solving the various crimes. Report writing, search procedures, interrogation procedures, court processes, identification techniques, scientific aids to investigation and investigative operational procedures are emphasized.  
Bennett—3 Extension credits only—\$33—16 lessons



## POLISH (Plsh)

Kristina Trendota, Associate Professor of Languages and Literature, Bemidji State College

A 12-inch, 33 $\frac{1}{3}$ -rpm Polish pronunciation record is available from the Correspondence Study Department for \$5.50. A tape recording is available for \$3 (3.75 ips).

1. **Beginning Polish I.** An introduction to the Polish language. Students will acquire a working knowledge of the structure of the language and facility in reading selected works of Polish prose. (No prerequisite)

Trendota—5 credits—\$55—27 lessons

2. **Beginning Polish II.** Continuation of Plsh 1. Stress is on vocabulary building and comprehension. The reading material consists mainly of easy short stories. A contemporary play is studied to promote conversational abilities. Review and continuation of grammar. (Prerequisite: Plsh 1 or equivalent and consent of instructor)

Trendota—5 credits—\$55—27 lessons

## POLITICAL SCIENCE (Pol)

See also Public Administration, page 61

Dorothy Dodge, Professor of Political Science, Macalester College

William C. Rogers, Professor and Director, World Affairs Center

John E. Turner, Professor of Political Science

Thomas Scott, Assistant Professor of Political Science

Theodore W. Meckstroth, Hubert Humphrey Fellow in Political Science

1. **American Government and Politics I.** Designed to provide an intelligent understanding of certain fundamental features of our national government: the nature of the constitution, the protection of individual rights and liberties, political parties, public opinion, nominations, and elections. (No prerequisite)

Scott—3 credits—\$33—16 lessons

2. **American Government and Politics II.** The formal legal structure and operation of the legislative, executive, and judicial departments of the government and the informal and extra-legal practices that determine its vital character. Problems related to all branches of the government will be considered. (No prerequisite)

Scott—3 credits—\$33—16 lessons

- 4(c). **The United Nations.** For students, community leaders, teachers, and others interested in learning more about the functions and activities of the United Nations. The 16 lessons give a comprehensive survey of the economic, political, and social programs of the UN—their successes and failures. The course is useful also for discussion or study groups. (No prerequisite)

Dodge—3 credits—\$33—16 lessons

25. **World Politics.** An introduction to world affairs. The development of the state system. The facts of power in international relations. The causes of war and the forces which make for peace. Introduction to the foreign policies of the United States, our Western allies, and of the Soviet Union and China. (No prerequisite)

Rogers—3 credits—\$33—16 lessons

- 26. American Foreign Policy.** Goals and values in American foreign policy; traditional and post-World War II policies. The formulation and administration of foreign policy and the role of public opinion. (No prerequisite)  
Rogers—3 credits—\$33—16 lessons
- 54. Chinese Government and Politics.** A survey of political development in China from imperial times to the present day. Major attention is given to recent and contemporary systems of government. Aspects treated include political ideas, parties, personalities, and social, economic, and foreign policies. (No prerequisite)  
Meckstroth—3 credits—\$33—16 lessons
- 55. Government of the Soviet Union.** An analysis of the government and politics of Soviet Russia that seeks to explain the rise of Bolshevism; the sources and nature of its ideology; the history of the communist regime and its institutional character; the organization of power; the role of the party; foreign, economic, and cultural policies; significance for Western civilization. (No prerequisite)  
Turner—3 credits—\$33—16 lessons
- 89. Japanese Government and Politics.** A survey of political development in Japan, with emphasis upon the postwar period. Topics included are the emperor, cabinet and civil service, the parliament, the courts, political parties and elections, and local government. Deals with the transition from feudalism to constitutional government, the struggle between democratic elements and militarism, the reforms of the postwar occupation, and recent changes. (No prerequisite)  
Meckstroth—3 credits—\$33—16 lessons
- 94. The Far East in International Relations.** World War II expanded our conception of the "Far East," adding to China, Japan, and Korea, Thailand and the new states which were regarded formerly as parts of colonial Southeast Asia. This course, therefore, includes the postwar position and foreign policies of Japan, the two "Chinas," Korea, the Philippines, Vietnam, Malaya, Burma, Thailand, and Indonesia. (No prerequisite)  
Meckstroth—3 credits—\$33—16 lessons
- 148. African Government and Politics.** A survey of the governments and politics of the newly emerging African states; patterns of political organization, one-party and multi-party states, internal and international problems. Emphasis is on Africa south of the Sahara. (No prerequisite)  
Dodge—3 credits—\$33—16 lessons

## PSYCHOLOGY (Psy)

Harold Gilberstadt, Associate Professor of Psychology (Correspondence Study)

Dorothy M. Bird, Instructor in Psychology (Correspondence Study)

- 1. General Psychology I.** An introduction to the study of human behavior with emphasis on its development. Includes motivation, emotion, learning, memory, and the neural basis of behavior. (No prerequisite)  
Bird—3 credits—\$33—16 lessons
- 2. General Psychology II.** Continuative study of human behavior. Factors which determine individual differences in personality. Measurement of personality traits. Consideration of behavior disorders and determinants of social adjustment. (Prerequisite: Psy 1)  
Bird—3 credits—\$33—16 lessons

**119. Psychology of Personality.** Personality growth, dynamics, and variations viewed from an eclectic approach to developmental theories of intra-individual and interpersonal factors influencing character and personality from conception to maturity. (Prerequisite: Psy 2)

Gilberstadt—3 credits—\$33—16 lessons

**144. Abnormal Psychology I.** A comparison of normal and abnormal behavior. The nature of personality maladjustments with emphasis on the dynamics and social determinants of behavioral disorders. Study of the functional psychoses. (Prerequisite: 9 credits in psychology, or 6 credits in psychology with consent of instructor)

Gilberstadt—3 credits—\$33—16 lessons

**145. Abnormal Psychology II.** Continuation of Psy 144. Emphasis on the psychoneuroses, organic psychoses, and associated personality disorders. Consideration of therapeutic methods. (Prerequisite: Psy 144 or consent of instructor)

Gilberstadt—3 credits—\$33—16 lessons

**Child Psychology.** See page 30

**Psychology of Adolescence.** See page 30

**Social Psychology.** See page 65

## PUBLIC HEALTH

See page 44

## PUBLIC ADMINISTRATION (PA)

George A. Warp, Professor and Director, Public Administration Center

John A. Dettmann, Chairman, Department of Business Administration, Duluth Campus

**Governmental Accounting.** (Old Pol 58) Principles and procedures of governmental accounting, including fund accounting, budgetary accounting as it relates to preparation and control of appropriation and program budgets, and control of periodic allotments; revenues, expenditures, assets, and liabilities; account classifications; organizational and administrative aspects; financial reporting. (Prerequisite: elementary accounting or equivalent)

Dettmann—3 credits—\$33—16 lessons

**Introduction to Public Administration.** (Old Pol 60) Study of administrative organization and management, emphasizing formal and informal organization structure, intergovernmental administrative relations, current reorganization theory, and administrative powers and responsibilities. (No prerequisite)

Warp—3 credits—\$33—16 lessons

**Public Personnel Administration.** (Old Pol 62) Survey of personnel administration on all levels of government. Organization, position classification, pay standardization, recruitment, training, employee relations, employee conduct, working conditions, efficiency ratings, separation, and retirement. (No prerequisite)

Warp—3 credits—\$33—16 lessons

## READING

Louise Klohn, Instructor in English (Correspondence Study)

- 1(c). **Guided Reading.** Offers a systematic plan of reading to help the average reader become better informed on subjects of current interest, such as science, art, history, biography. Instructions are provided on how to get the most from reading and how to discuss with others what one has read. Books may be borrowed from the University Library.

Klohn—No credit—\$22 or \$2 per lesson—12 lessons

- 2(c). **Selecting Books for Children.** An introductory course for parents, teachers, and others interested in guiding children's reading. It surveys the field of children's literature from preschool age through the teens.

Klohn—2 Extension credits only—\$22—12 lessons

- 4(c). **Using Books and Libraries.** For anyone interested in books and libraries, this course increases efficiency in finding information, broadens knowledge of library resources, and suggests methods for personal enrichment through books and library materials.

Klohn—No credit—\$22—12 lessons

## RECREATION (Rec)

See also Physical Education, page 57

Frederick Chapman, Associate Professor of Recreation Leadership

H. Robert Giles, Associate Professor of Recreation Leadership

Gordon L. Starr, Assistant Professor of Recreation Leadership

John M. Schultz, Instructor in Recreation Leadership

11. **Survey of Recreational Activities.** Serves the student as an introduction to the many areas and kinds of recreational activities that surround him every day, and will enable him to better understand the world of leisure and recreation. The beginning student in recreation will find the course a good orientation for his professional choice, and other students should be encouraged by it to seek additional information and training. (No prerequisite)

Starr—3 credits—\$33—16 lessons

23. **Introduction to Recreation Leadership.** An introduction to leadership in recreation services. It will touch on principles, techniques, and problems. Of value to practitioners in the field of recreation. It will give recreation students and laymen a better understanding of leadership. (No prerequisite)

Starr—3 credits—\$33—16 lessons

31. **Industrial Recreation.** Serves as an introduction to one of the specialized phases of recreation. Designed to acquaint the full- or part-time recreational leader with the broad aspects of recreation, as well as to point out specific problems related to recreation in industry. Challenges the student to think of the responsibilities of business and industry to both the employee and the community. (No prerequisite)

Starr—3 credits—\$33—16 lessons

- 48(c). **Methods in Supervision of Recreation.** Covers the various in-service training devices and supervisory techniques common to recreation programs in com-

munities, youth agencies, and hospitals. Necessary qualities of the supervisor are reviewed along with the purposes and advantages of good supervision. Of value to those who find it necessary to deal effectively with personnel in formal or informal working relationships. (No prerequisite)

Chapman—3 credits—\$33—16 lessons

49. **Social Aspects of Leisure.** Designed to acquaint the student with leisure and recreation as basic forces in the social and economic structure of our society. Stresses the nature of leisure and recreation with particular reference to their relationship to each other. Attention is focused upon leisure and recreation as parts of daily living, and as products of our social progress. (No prerequisite)

Schultz—3 credits—\$33—16 lessons

56. **Nature and Function of Play and Recreation.** A fundamental background course for either recreation or physical education. Proceeds from an understanding of the biological play drive, theories and philosophies of play, to the place of play in the modern world and its function in building an integrated personality. (No prerequisite)

Giles—3 credits—\$33—16 lessons

107. **Camp Administration.** Covers all major aspects of administration for group camps; for example, objectives, camp settings, organization and structure, facilities and equipment, the director, staff selection and supervision, programs, health and safety, and public relations. (Prerequisite: organized camp experience desirable)

Chapman—3 credits—\$33—16 lessons

141. **Orientation to Recreation for the Ill and Disabled.** Introductory principles of therapeutic recreation are examined. A general description of types of hospitals and their patients' activities programs are studied. The philosophy and purposes of hospital recreation, as well as the program content are highlighted. Featured are beginning methods in the leadership and supervision of recreation programs for the ill and disabled. (No prerequisite)

Chapman—3 credits—\$33—16 lessons

## ROMANCE LANGUAGES

French. See page 40

Spanish. See page 66

## RUSSIAN (Russ)

Adele K. Donchenko, Instructor in Slavic Languages

An 11-minute, 33½-rpm Vinylite record, "The Sounds of Russian," has been prepared. Sounds are articulated by a native Russian. The record is accompanied by three pages of text, with English meanings supplied. As it is almost impossible to teach Russian pronunciation by correspondence, the student is strongly urged to purchase this record and to hear it repeatedly, imitating the sounds as accurately as possible. May be purchased for \$2.50 from the EMC Recordings Corp, 180 East 6th Street, St. Paul, Minnesota 55106. Also available on phono-tape (3.75 ips), for \$3.

1. **Beginning Russian I.** Prepares for reading and writing knowledge of the Russian language. Acquaints the student with Russian script, pronunciation, essentials of grammar, translations from Russian and into Russian. (No prerequisite)  
Donchenko—5 credits—\$55—27 lessons
2. **Beginning Russian II.** Continuation of Russ I. (Prerequisite: Russ I)  
Donchenko—5 credits—\$55—27 lessons
- 24(c). **Scientific Russian I.** An introduction to the basic grammar and structure of the Russian language, using a vocabulary common to various sciences. Prepares for the development of ability to read Russian scientific texts. (No prerequisite)  
Donchenko—5 credits—\$55—27 lessons
- 25(c). **Scientific Russian II.** Directed reading and translation of Russian scientific texts in a field of the student's choice. (Prerequisite: Russ 24[c])  
Donchenko—2 credits—\$22—12 lessons
- 26(c). **Scientific Russian III.** Continuation of Russ 25c. (Prerequisite: Russ 25c)  
Donchenko—No credit—\$22—12 lessons

## SCANDINAVIAN LANGUAGES

Finnish. See page 40

Norwegian. See page 55

Swedish. See page 67

## SLAVIC (Slav)

Marilyn J. Sjöberg, Instructor in Slavic Languages

A pronunciation record (33 $\frac{1}{3}$  rpm) covering basic Serbo-Croatian is available by special order for \$10.50. Each side will run for about 13 minutes. A tape of the same material (3.75 ips) for \$3 is also available from the Correspondence Study Department. The recording is not required but is strongly recommended.

1. **Beginning Serbo-Croatian.** An introduction to the Serbo-Croatian language. Objectives of the course will be the mastery of the essentials of grammar, facility in reading easy texts in both the Cyrillic and the Latin alphabet, and the ability to write simple themes in Serbo-Croatian. (No prerequisite)  
Sjöberg—5 credits—\$55—27 lessons

## SOCIOLOGY (Soc)

Arnold M. Rose, Professor of Sociology

John K. Donohue, Instructor in Sociology (Correspondence Study)

Eleanor S. Otterness, Instructor in Sociology (Correspondence Study)

1. **Man in Modern Society.** (Introduction to Sociology) A study of the characteristics of human group life. An analysis of the factors associated with the development of human group life and man's social environment; the structure of the

social environment and its influence upon the individual's behavior; the processes involved in social change and the social problems that accompany social change. A survey of the fundamental social institutions such as the family and the church; the development and decline of social institutions; change in the institutional functions and social disorganization. Intended to introduce the student to the fundamental concepts of sociology and to give him a better understanding of the contemporary social order. (No prerequisite)

Rose—3 credits—\$33—16 lessons

- 3. Social Problems.** The structure of modern society and the on-going changes in it that create problems. The approach is two-fold: (a) a study of the sociological and social psychological theories that explain social problems; and (b) an attempt to find practical solutions to modern social problems within a carefully defined framework of values. (No prerequisite)

Rose—3 credits—\$33—16 lessons

- 52. Juvenile Delinquency and Juvenile Courts.** An interpretation of the broad social and cultural aspects of delinquency as they relate to the developmental process of individual juvenile delinquent behavior. The role of the juvenile court in meeting the problems of delinquency prevention and treatment will be studied. (Prerequisite: Soc 1 and Soc 53 or consent of instructor)

Donohue—3 credits—\$33—16 lessons

- 53. Elements of Criminology.** A general survey of the field of criminology that analyzes the factors associated with the development of criminal behavior and reviews the methods of treating the adult offender. Affiliated problems of crime control and prevention are also considered. (Prerequisite: Soc 1 or consent of instructor)

Donohue—3 credits—\$33—16 lessons

- 90. American Social Welfare.** Survey of social service with consideration of areas of social needs, social agencies, their purpose and function, and methodology and philosophy of social work practice. (Prerequisite: Soc 3 or consent of instructor)

Otterness—3 credits—\$33—16 lessons

- 120. Social Psychology.** Consideration of the leading social psychology theories with special attention to the development of the self, the process of socialization, social roles, reference groups, and the processes of social interaction. Attention will be paid to prejudice, public opinion, propaganda, leadership, fads, fashion, and other forms of collective behavior. (Prerequisite: Soc 1 or consent of instructor)

Rose—3 credits—\$33—16 lessons

- 123. Minority Group Relations.** Interaction of social and cultural groups in America with particular reference to the Negro. Processes leading to group contact, characteristics and contributions of ethnic groups in the United States, mechanisms and problems of group adjustment, democratic theory and practice, sources of prejudice, contemporary status of principal minority groups, international implications, trends, and proposed solutions. (Prerequisite: Soc 1 or consent of instructor)

Rose—3 credits—\$33—16 lessons

- 141. The Family.** Origin of family life, variability and change of family institutions and mating customs, contemporary parent-child relationships, adolescence, mate finding, marital adjustments, divorce and other family problems, prediction of

marital success, theories of family reform. (Prerequisite: Soc 1 or consent of instructor)

Rose—3 credits—\$33—16 lessons

## SPANISH (Span)

Herbert Willging, Professor of Foreign Language, St. Thomas College

Santiago A. Cuneo, Associate Professor of Romance Languages

Robert Estelle, Instructor in Romance Languages

**1A(c). Spanish in Slow Motion.** Oral and written drills based on 16 tape programs (each 15 minutes in length) give the equivalent of a classroom course conducted in Spanish. The sounds of Spanish are presented through a series of words, phrases, and sentences, each pronounced slowly, twice, by authoritative voices. The grammar is presented in the form of simple drills, with a conversational approach. True-false tests give the student regular opportunities for self-testing of aural comprehension. Tapes, costing \$20.85 and including "Sounds and Sentence" booklet, are available from Bookstore, College of St. Thomas, St. Paul, Minnesota 55101. (No prerequisite)

Willging—3 credits—\$33

**1. Beginning Spanish I.** The student should learn the fundamentals of Spanish grammar, develop good ear training by means of records or tapes, learn to read and write simple Spanish. The question and answer method is used in connection with the reader. The emphasis is on a cultural approach and a practical knowledge of Spanish. (No prerequisite)

Cuneo—5 credits—\$55—27 lessons

A 10-inch, 33 $\frac{1}{3}$ -rpm basic pronunciation record is available, with script, for \$2.50. Order from the Correspondence Study Department. Tape (3.75 ips) is also available for \$3. (For use with Span 1).

**2. Beginning Spanish II.** Continues the conversational and cultural training begun in Span 1 and starts the review of the grammar principles in a more detailed manner. (Prerequisite: Span 1 or equivalent)

Cuneo—5 credits—\$55—27 lessons

**3. Beginning Spanish III.** Continues with the review of the grammar. More emphasis on composition. Reading of short plays. Study of the Spanish-speaking nations. (Prerequisite: Span 2 or equivalent)

Cuneo—5 credits—\$55—27 lessons

**17A. Spanish for Graduate Students.** Prepares student primarily for reading and especially for reading of general and technical nonliterary prose. Prepares for graduate reading examinations in Spanish. (No prerequisite)

Estelle—No credit—\$33—16 lessons

**25. Intermediate Spanish.** Study of the Spanish grammar in Spanish. Starts the student thinking of Spanish. Wide cultural vocabulary or educated-man vocabulary: geography, history, customs, art, literature, music, etc. Questions and answers in Spanish. (Prerequisite: Span 3 or equivalent)

Cuneo—5 credits—\$55—27 lessons

**50. Spanish Commercial Correspondence.** Specialized material in Spanish commercial correspondence. Main parts of a Spanish letter; various kinds of commercial letters; commercial documents; Spanish abbreviations used in



Spanish correspondence; business vocabulary. Spanish composition. (Prerequisite: Span 20 or equivalent)

Cuneo—5 credits—\$55—27 lessons

54. **Elementary Spanish Composition.** Connected prose composition. Reading and grammar. The aim is the ability to write Spanish. (Prerequisite: Span 20 or equivalent)

Cuneo—3 credits—\$33—16 lessons

57. **Advanced Spanish Composition.** Continuation of Span 54. (Prerequisite: Span 54)

Cuneo—3 credits—\$33—16 lessons

63. **Latin-American Culture (in English).** 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 20 countries of Latin America. Readings in English; knowledge of Spanish not necessary. (No prerequisite)

Cuneo—3 credits—\$33—16 lessons

## SPEECH AND THEATRE ARTS

Herbert L. Carson, Assistant Professor of Humanities, Ferris Institute

Louise Klohn, Instructor in English (Correspondence Study)

- 1(c). **Vocabulary Building.** A practical course for those who want to increase their speaking and reading vocabulary. The lessons and exercises stimulate interest and afford practice in the proper use of words, provoke word collecting, and suggest substitutes for overworked words.

Klohn—3 Extension credits only—\$33—16 lessons

- Th 115. **Playwriting.** Reading assignments as an introduction to dramatic form and content. Practice in writing dramatic plots, characters, themes, and dialogue. The writing exercises will include scenario, rough draft, and final revision of a one-act play (approximately 15 typed pages or 30 minutes in playing time). (Prerequisite: typed manuscript and Spch 31 or consent of instructor)

Carson—3 credits—\$33—16 lessons

- Th 180(c). **Independent Playwriting.** Specifically designed for advanced students. The student is given complete freedom. Plays in any stage of development will receive detailed criticism. (Prerequisite: typed manuscript and Spch 115 and consent of instructor)

Carson—3 Extension credits only—\$33—16 lessons (2 full-length plays or approximately the same amount of writing made up of shorter dramatic forms)

## SWEDISH

Arik Gustafson, Professor and Chairman, Department of Scandinavian

- Scan 7. **Beginning Swedish I.** Grammar and composition; selected readings in easy prose and verse. (No prerequisite)

Gustafson—5 credits—\$55—27 lessons

Scan 8. **Beginning Swedish II.** Continuation of Scan 7. (Prerequisite: Scan 7)  
Gustafson—5 credits—\$55—27 lessons

## TRAVEL

Vernie Wolfsberg, Instructor in Travel (*Correspondence Study*)

**Your Trip to Europe.** Offers information on sightseeing, shopping, and travel techniques in addition to a broad coverage of the cultural aspects, economy, government, and life today in the various countries. Relations of these countries with the United States is also covered. The students of the course—would-be travelers—will acquire not only practical information but also such knowledge as will add to their enjoyment, understanding, and appreciation of their travel in Europe. Only by completing and sending in all lessons is it possible to be sure that you are informed on all current requirements of countries to be visited. Countries change such requirements from time to time. Events also vary from season to season.

Wolfsberg—No credit—\$33—16 lessons

## SPECIAL COURSES

### CITIZENSHIP

John M. Huebner, Instructor in Citizenship (Correspondence Study)

**Citizenship.** Given by the Extension Division of the University of Minnesota in co-operation with the public schools and the Immigration and Naturalization Service. Course is intended to assist the foreign-born applicant for citizenship in acquiring a better understanding of the American Constitution and government, and is primarily designed for the rural alien to whom a class in such citizenship instruction is not available. Enrollment is limited to applicants for naturalization.

Huebner—No credit—\$4—21 lessons

### TECHNICAL STUDY SERIES

The rapid expansion of modern science and technology has created the need for individuals to acquire new technical information or to renew unused techniques in a relatively short period of time. The correspondence medium provides a promising means of directing an individual's personal study. The Minnesota Technical Study Series will provide guided and supplemented reading in established technical literature. Each offering will be developed and reviewed by technically competent staff. Assignments will be returned by the student for correction and comment. No credit is associated with this series.

**Quantum Theory of Solids I.** Develops the concepts and techniques of quantum theory applied to problems dealing with properties of materials. A minimum background for profitable study is the equivalent of a Bachelor's degree in engineering or science. Must have knowledge of mathematics through differential equations, and a familiarity with topics in modern physics.

No credit — \$22 — 12 lessons — Available Fall 1966

**Quantum Theory of Solids II.** Continuation of I. (Prerequisite: I)

No credit — \$22 — 12 lessons — Available Winter 1967

# HIGH SCHOOL COURSES

See also page 6

These courses are more completely described in a special high school bulletin. Write for a copy. Each  $\frac{1}{2}$  unit has 20 lessons and is equivalent to 1 semester of resident high school work.

## BIOLOGY

### 1. Biology, Part A

Coulter— $\frac{1}{2}$  unit—\$25—20 lessons

### 2. Biology, Part B

Coulter— $\frac{1}{2}$  unit—\$25—20 lessons

## BOOKKEEPING

### 1. Bookkeeping, Part A

Harrigan— $\frac{1}{2}$  unit—\$25—20 lessons

### 2. Bookkeeping, Part B

Harrigan— $\frac{1}{2}$  unit—\$25—20 lessons

## BUSINESS

### 1. General Business, Part A

Clark— $\frac{1}{2}$  unit—\$25—20 lessons

### 2. General Business, Part B

Clark— $\frac{1}{2}$  unit—\$25—20 lessons

## ENGLISH

### 1. Ninth Grade English, Part A

Bogard— $\frac{1}{2}$  unit—\$25—20 lessons

### 2. Ninth Grade English, Part B

Bogard— $\frac{1}{2}$  unit—\$25—20 lessons

### 3. Tenth Grade English, Part A

Bogard— $\frac{1}{2}$  unit—\$25—20 lessons

### 4. Tenth Grade English, Part B

Bogard— $\frac{1}{2}$  unit—\$25—20 lessons

5. **Eleventh Grade English, Part A**  
Caddy— $\frac{1}{2}$  unit—\$25—20 lessons
6. **Eleventh Grade English, Part B**  
Caddy— $\frac{1}{2}$  unit—\$25—20 lessons
7. **Twelfth Grade English, Part A**  
Rondestvedt— $\frac{1}{2}$  unit—\$25—20 lessons
8. **Twelfth Grade English, Part B**  
Bacig— $\frac{1}{2}$  unit—\$25—20 lessons
9. **Remedial Writing.** (Prerequisite: consent of counselor and Correspondence Study Department)  
Klohn—No credit—\$22—12 lessons
10. **Vocabulary Building.** (Prerequisite: consent of instructor)  
Klohn— $\frac{1}{2}$  unit—\$33—16 lessons

## MATHEMATICS

1. **Elementary Algebra, Part A**  
LaFrenz— $\frac{1}{2}$  unit—\$25—20 lessons
  2. **Elementary Algebra, Part B** (Prerequisite: course 1)  
LaFrenz— $\frac{1}{2}$  unit—\$25—20 lessons
  3. **Plane Geometry, Part A.** (Prerequisite: courses 1 and 2)  
Hatfield— $\frac{1}{2}$  unit—\$25—20 lessons
  4. **Plane Geometry, Part B.** (Prerequisite: course 3)  
Hatfield— $\frac{1}{2}$  unit—\$25—20 lessons
  5. **Trigonometry.** (Prerequisite: courses 2 and 4)  
Walther— $\frac{1}{2}$  unit—\$25—20 lessons
  8. **Solid Geometry.** (Prerequisite: 1 year of plane geometry or equivalent)  
Fischer— $\frac{1}{2}$  unit—\$25—20 lessons
  - 9A. **Higher Algebra.** (Prerequisite: elementary algebra)  
Johnson— $\frac{1}{2}$  entrance unit—\$25—20 lessons
  - 9B. **Higher Algebra.** (Prerequisite: course 9A)  
Johnson— $\frac{1}{2}$  entrance unit—\$25—20 lessons
- (Courses 9A and 9B available August 1, 1966)

## PHYSICS

1. **Physical Science.** (No prerequisite)  
Coulter— $\frac{1}{2}$  unit—\$25—20 lessons

## LANGUAGES\*

### French

#### Beginning French I and II

Fadell—1 unit each—\$55 per unit—27 lessons each

### German

#### Beginning German I, II, and III

Ramras—1 unit each—\$55 per unit—27 lessons each

### Latin

#### 1a. Elementary Latin 1, Part A. (No prerequisite)

ReVeal—½ unit—\$25—20 lessons

#### 1b. Elementary Latin 1, Part B. (Prerequisite: course 1A or 1 semester of HS Latin)

ReVeal—½ unit—\$25—20 lessons

#### 2a. Elementary Latin 2, Part A. (Prerequisite: course 1B or 1 year HS Latin)

ReVeal—½ unit—\$25—20 lessons

#### 2b. Elementary Latin 2, Part B. (Prerequisite: course 2A)

ReVeal—½ unit—\$25—20 lessons

For additional courses, see page 51

### Norwegian

#### Beginning Norwegian I and II

Nelson—1 unit each—\$55 per unit—27 lessons each

### Russian

#### Beginning Russian I and II

Donchenko—1 unit each—\$55 per unit—27 lessons each

### Spanish

#### Elementary Spanish A and B

Cuneo—½ unit each—\$25 per half unit—20 lessons each

---

\* See College section of this bulletin for other courses and for pronunciation records and tapes that are available.

## Swedish

### Beginning Swedish I and II

Gustafson—1 unit each—\$55 per unit—27 lessons each

## SHORTHAND

1. **Shorthand, Part A.** (No prerequisite)  
½ entrance unit—\$25—20 lessons
2. **Shorthand, Part B.** (Prerequisite: Part A)  
½ entrance unit—\$25—20 lessons

## SOCIAL STUDIES

1. **Problems of American Democracy, Part A**  
F. Johnson—½ entrance unit—\$25—20 lessons
2. **Problems of American Democracy, Part B**  
F. Johnson—½ entrance unit—\$25—20 lessons
3. **World History, Part A**  
F. Johnson—½ entrance unit—\$25—20 lessons
4. **World History, Part B**  
F. Johnson—½ entrance unit—\$25—20 lessons
5. **American History, Part A**  
Beery—½ entrance unit—\$25—20 lessons
6. **American History, Part B**  
Beery—½ entrance unit—\$25—20 lessons

## TYPING

1. **Typing I.** (No prerequisite)  
Gudahl—½ entrance unit—\$25—20 lessons
2. **Typing II.** (Prerequisite: course 1)  
Gudahl—½ entrance unit—\$25—20 lessons

## FEES

Fees must be paid at the time of registration. Make money orders, drafts, or checks payable to the University of Minnesota. Send both sections of "Application for Registration" (see reverse of this page for second section) to Correspondence Study Department, University of Minnesota, Minneapolis, Minnesota 55455. Make check for *exact amount* of course fee. Remember, there is a \$3 per course fee for all registrations originating outside Minnesota, except for military personnel.

Cut along this line

(Please complete both parts of this blank. See reverse side).

**UNIVERSITY OF MINNESOTA**  
**GENERAL EXTENSION DIVISION**  
**CORRESPONDENCE STUDY DEPARTMENT**  
 Minneapolis, Minnesota 55455

Male  
 Female

### Application for Registration

Date \_\_\_\_\_ Social Security Number \_\_\_\_\_

Please print \_\_\_\_\_  
First Name Middle or Maiden Name Last Name

Mailing Address \_\_\_\_\_  
Street Address

\_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Permanent Address \_\_\_\_\_  
 (To which mail may be sent at any time with certainty of delivery)

Date of Birth \_\_\_\_\_ Place of Birth \_\_\_\_\_

Department	Course No.	Descriptive Title of Course	Credits

Have you attended any division of the University of Minnesota before? Yes  No   
 If you have previously attended the University of Minnesota indicate all divisions and date of last attendance in each:

Correspondence, year \_\_\_\_\_;  Evening Classes, year \_\_\_\_\_;  
 Day Classes, College \_\_\_\_\_, year \_\_\_\_\_



(To be filled out with pen and ink by the student. Do not print.)

Signature \_\_\_\_\_ Occupation \_\_\_\_\_

Mailing Address \_\_\_\_\_  
Street Address City State Zip Code

Title of courses for which you are registering (no more than two at one time)  
\_\_\_\_\_  
\_\_\_\_\_

CHECK YOUR OBJECTIVE: Credit for  Degree;  Teacher's Certificate;  High School;  Extension Certificate;  Prerequisite for College Entrance;  Non-Credit (self-interest)

Your Educational Experience	Name of Institution	Dates Attended	Date Graduated
High School			
College			

List the courses you have previously taken which are related to the courses for which you are now registering:  
\_\_\_\_\_  
\_\_\_\_\_

MONEY ENCLOSED: Tuition fee \$\_\_\_\_\_; Out-of-State fee \$\_\_\_\_\_ (at \$3.00 per course); Total money enclosed \$\_\_\_\_\_ (Make checks or money orders payable to the "University of Minnesota")

**NOTICE**—Twenty per cent of the cost of each course and \$2.00 for each lesson serviced are nonrefundable. No fees refunded after 6 months from date of registration. No money will be returned after one-half of the course is completed regardless of date of registration.

-----  
Cut along this line

Cut along this line

(Please complete both parts of this blank. See reverse side).

UNIVERSITY OF MINNESOTA  
GENERAL EXTENSION DIVISION  
CORRESPONDENCE STUDY DEPARTMENT  
Minneapolis, Minnesota 55455

Male  
 Female

Application for Registration

Date \_\_\_\_\_ Social Security Number \_\_\_\_\_

Please print \_\_\_\_\_  
First Name Middle or Maiden Name Last Name

Mailing Address \_\_\_\_\_  
Street Address

City State Zip Code

Permanent Address \_\_\_\_\_  
(To which mail may be sent at any time with certainty of delivery)

Date of Birth \_\_\_\_\_ Place of Birth \_\_\_\_\_

Department	Course No.	Descriptive Title of Course	Credits

Have you attended any division of the University of Minnesota before? Yes  No   
If you have previously attended the University of Minnesota indicate all divisions and date of last attendance in each:

Correspondence, year \_\_\_\_\_;  Evening Classes, year \_\_\_\_\_;  
 Day Classes, College \_\_\_\_\_, year \_\_\_\_\_

(To be filled out with pen and ink by the student. Do not print.)

Signature \_\_\_\_\_ Occupation \_\_\_\_\_

Mailing Address \_\_\_\_\_  
Street Address City State Zip Code

Title of courses for which you are registering (no more than two at one time)  
\_\_\_\_\_  
\_\_\_\_\_

**CHECK YOUR OBJECTIVE:** Credit for  Degree;  Teacher's Certificate;  High School;  Extension Certificate;  Prerequisite for College Entrance;  Non-Credit (self-interest)

Your Educational Experience	Name of Institution	Dates Attended	Date Graduated
High School			
College			

List the courses you have previously taken which are related to the courses for which you are now registering:  
\_\_\_\_\_  
\_\_\_\_\_

**MONEY ENCLOSED:** Tuition fee \$ \_\_\_\_\_; Out-of-State fee \$ \_\_\_\_\_ (at \$3.00 per course); Total money enclosed \$ \_\_\_\_\_ (Make checks or money orders payable to the "University of Minnesota")

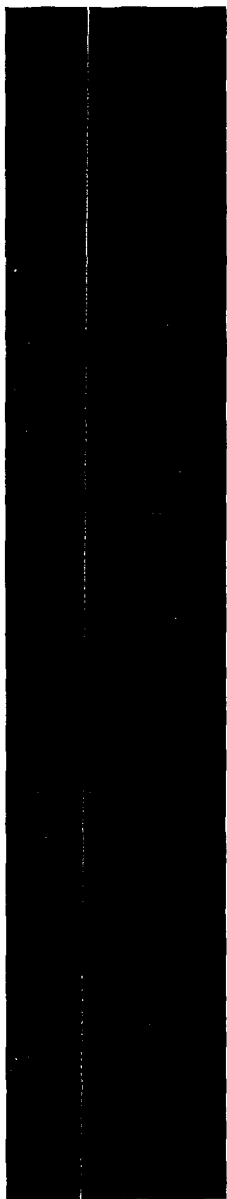
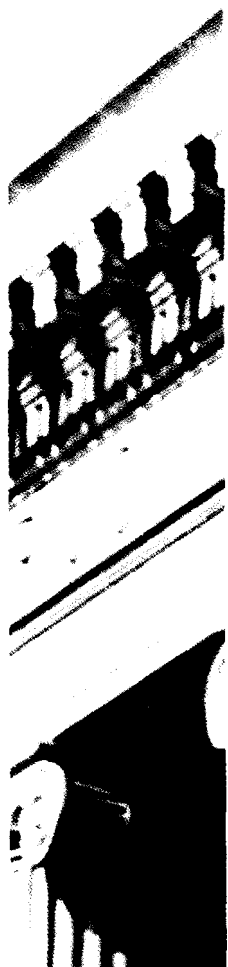
**NOTICE—**Twenty per cent of the cost of each course and \$2.00 for each lesson serviced are nonrefundable. No fees refunded after 6 months from date of registration. No money will be returned after one-half of the course is completed regardless of date of registration.

-----  
Cut along this line

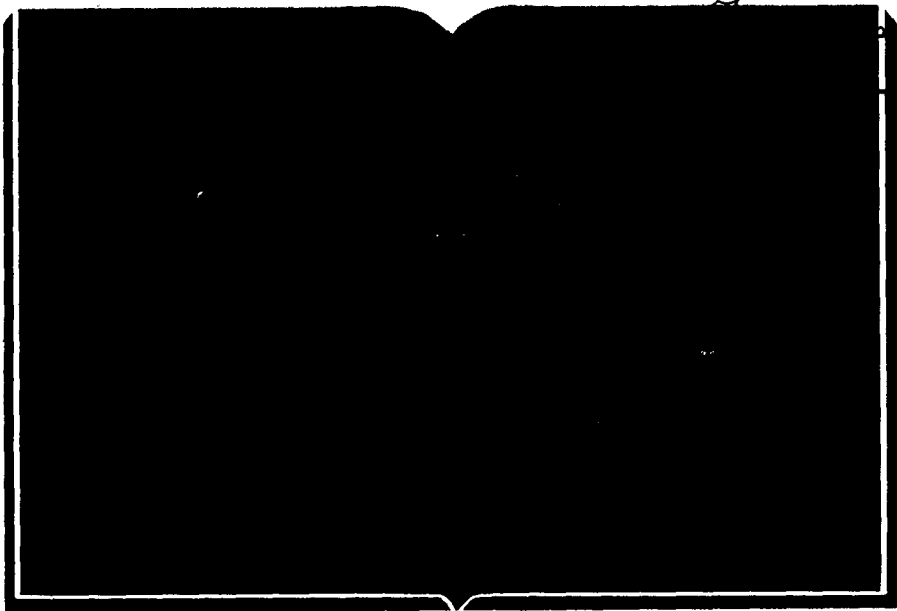
## INDEX

Accounting (Bookkeeping) .....	18, 26, 70	Foreign Policy .....	60
Admissions .....	3, 4, 5	Forestry .....	40
Advertising, Typography .....	50	French .....	40
Advising .....	5	Gardening .....	48
Africa .....	60	General College .....	12, 41
Agriculture .....	12, 23	Geography .....	41
Airmail .....	7	Geology .....	41
Anthropology, Archaeology .....	23, 24	German .....	42
Art and Art Education .....	24	Government .....	59, 61
Astronomy .....	25	Grades .....	6
Beekeeping .....	23	Graduate School .....	13
Biology .....	70	Grammar (Preparatory English) .....	38, 39
Book Selection .....	62	Graphics .....	35
Books .....	3	Greek .....	44
Business Administration .....	10, 16, 26	Guided Reading .....	62
Business Finance .....	27	Handcrafts .....	24
Business, High School .....	70	Health .....	44, 57
Business Law .....	27	High School Subjects .....	70
Cancellation .....	6	History .....	44
Certificates .....	13	Home Economics .....	48
Change of Registration .....	7	Horticulture .....	48
Child Psychology .....	30	Humanities .....	49
Chinese and Chinese Civilization .....	30, 60	Income Tax Accounting .....	27
Citizenship .....	69	Industrial Relations .....	20, 28, 32
Civil Engineering .....	33	Institute of Technology .....	10
Classics .....	31	Insurance .....	28
Composition .....	38	Interior Design .....	25
Conservation of Natural Resources .....	40	International Relations .....	60
Creative Writing .....	39, 50, 67	Investments .....	27
Credit, University .....	4, 5	Japanese .....	49
Criminology .....	58, 65	Journalism .....	50
Data Processing .....	31	Juvenile Delinquency .....	65
Degrees .....	8	Landscape Planning .....	48
Design .....	24	Latin .....	51
Drawing, Engineering (Graphics) .....	35	Latin America .....	48, 67
Dynamics .....	36	Law .....	13
Economics .....	31	Lettering .....	25
Education .....	11, 32, 57	Liberal Arts .....	8, 14
Electrical Technology .....	34	Library Science .....	52
Electronics .....	34	Literature .....	37
Engineering .....	10, 14, 21, 33	Management of Administrative Services .....	14
Engineering Graphics .....	35	Mathematics .....	52
English .....	36	Mechanical Engineering .....	35
Examinations .....	5	Mechanics and Materials .....	36
Extension Credits .....	5	Medical Science .....	12
Family Studies .....	40	Military Personnel .....	6
Farm Accounting .....	23	Music .....	54
Fees .....	3		
Finnish .....	40		

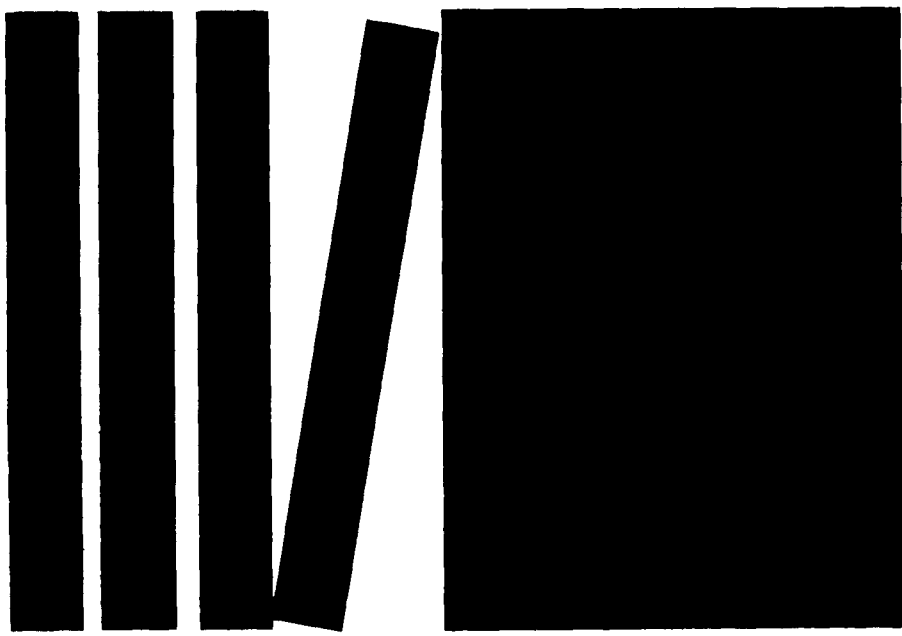
Norwegian .....	55	Religion, Science and .....	56
Nursing .....	13	Russian .....	63
Office Management .....	29	Salesmanship (Marketing) .....	29
Parliamentary Procedure .....	55	Secretarial Certificate .....	19
Personal Orientation .....	55	Serbo-Croatian .....	64
Personality, Culture .....	24, 61	Social Welfare, American .....	65
Pharmacy .....	12	Sociology .....	64
Philosophy .....	56	Spanish .....	66
Physical Education .....	57, 62	Speech .....	67
Physics .....	57	Statics .....	36
Playwriting .....	67	Statistics .....	29, 32
Police Administration .....	58	Study, How to .....	55
Polish .....	59	Supervision .....	28
Political Science .....	59	Swedish .....	67
Postage .....	7	Technical Study Series .....	69
Production Management .....	29	Technical Writing .....	38
Psychology .....	60	Textiles .....	25, 48
Public Administration .....	21, 61	Time and Motion Study .....	36
Public Health .....	44	Transfers .....	5, 7
Quantitative Analysis .....	29	Travel .....	68
Quantum Theory of Solids .....	69	Tuition .....	3
Radio and Television Writing .....	50	Tuition Assistance .....	8
Reading .....	37, 62	United Nations .....	59
Real Estate .....	27	USAFI .....	6
Recordings .....	7	Vocabulary Building .....	67
Recreation .....	62	World Affairs Certificate .....	15
Refunds .....	6	World Politics .....	59
Registration .....	4	Writing .....	38, 50, 67, 71
Reinstatement .....	4		



GENERAL EXTENSION DIVISION  
DESK COPY



TWIN CITIES 1966-1967 / EVENING CLASSES



# UNIVERSITY OF MINNESOTA

## Board of Regents

The Honorable Charles W. Mayo, M.D., Rochester, First Vice President and Chairman; The Honorable Marjorie J. Howard (Mrs. C. Edward), Excelsior, Second Vice President; The Honorable Daniel C. Gainey, Owatonna; The Honorable Bjarne E. Grottum, Jackson; The Honorable Albert V. Hartl, Fergus Falls; The Honorable Robert E. Hess, White Bear Lake; The Honorable Fred J. Hughes, St. Cloud; The Honorable Lester A. Malkerson, Minneapolis; The Honorable William K. Montague, Duluth; The Honorable George W. Rauenhorst, Olivia; The Honorable Otto A. Silha, Minneapolis; The Honorable Herman F. Skyberg, Fisher.

## Administrative Officers

O. Meredith Wilson, Ph.D., President  
William G. Shepherd, Ph.D., Vice President, Academic Administration  
Laurence R. Lunden, B.A., Vice President, Business Administration  
Stanley J. Wenberg, M.A., Vice President for Educational Relationships and Development

## GENERAL EXTENSION DIVISION

### Administration for Evening Classes

Willard L. Thompson, Ph.D., Dean of General Extension and Summer Session  
Donald Z. Woods, Ph.D., Associate Dean of General Extension  
Albert M. Fulton, Ph.M., Director; Chairman of Committee on Student Scholastic Standing  
Duane C. Hill, M.S., Assistant Director

### Extension Departments and Directors

Audio-Visual Extension Service, Willard D. Philipson, 2037 University Avenue S.E.  
Continuing Education in Art, Huldah Curl, 310 Nolte Center for Continuing Education  
Continuing Education in Business, Peter Rosko, 817 Business Administration Building, West Bank  
Continuing Education in Science and Technology, James Holte, 214 Nolte Center for Continuing Education  
Continuing Legal Education, Austin Anderson, 205 Nolte Center for Continuing Education  
Correspondence Study, Harold Alford, 251 Nicholson Hall  
Counseling and Advising, Vera Schletzer, 154 Nicholson Hall  
Divisional Relations, Beverly Sinniger, 318 Nolte Center for Continuing Education  
Drama Advisory Service, Sherwood Snyder III, 320 Westbrook Hall  
Evening Classes, Albert M. Fulton, 54 Nicholson Hall  
Labor Education, Jack Flagler, 423 Business Administration Building, West Bank  
Municipal Reference Bureau, Orville Peterson, 314 Social Science Building, West Bank  
Nolte Center for Continuing Education, Fred E. Berger, 131 Nolte Center for Continuing Education  
Off-Campus Classes, Harold Alford, 315 Nolte Center for Continuing Education  
Radio and Television Broadcasting, Burton Paulu, 1 Eddy Hall  
State Organization Service, William C. Rogers, 167a Social Science Building, West Bank  
World Affairs Center, William C. Rogers, 167a Social Science Building, West Bank



# Contents

(Also see Index, pages 247-251)

	Page
Calendar .....	2
Office Hours .....	6
I. Information	
General Information .....	10
Registration Procedures .....	17
Special Information for Veterans and Members of the Armed Forces .....	23
Special Services for Students .....	25
II. Extension Certificate Programs .....	30
III. University Degree Programs .....	53
IV. Course Offerings	
Agriculture .....	60
Arts and Sciences .....	62
Business Administration .....	155
Education .....	182
Engineering, Physical and Technical Sciences .....	189
Physical Education .....	219
Other Educational Services of the General Extension Division .....	224
Classes Listed by Quarters .....	229
MacPhail Extension Center Classes .....	233
Northwest Suburban Extension Center Classes .....	235
St. Paul General Extension Center Classes .....	237
Maps .....	239
Index .....	247
Building Abbreviations .....	inside back cover

---

Volume LXIX

Number 10

May 15, 1966

## UNIVERSITY OF MINNESOTA BULLETIN

Published semimonthly January 1 to December 15 inclusive. Second-class postage paid at Minneapolis, Minnesota. Send change of address notices and other communications to Office of Admissions and Records, University of Minnesota, Minneapolis, Minnesota 55455.

The contents of this bulletin and of other University Bulletins, publications, or announcements are subject to change.

# Calendar of Evening Classes

## ACADEMIC YEAR, 1966-67

Registration must be made during the official registration periods. Although classes vary in length of term, all credits are *quarter* credits.

*Offices will be closed and classes will not meet on holidays listed in this calendar.*

### Fall Semester

1966-1967

September	7-9		Limited class reservations available. See page 9.
September	12	Monday	<i>Fall Semester registration begins.</i> Special registration hours listed on page 7.
September	21	Wednesday	<i>Last day for registration and payment of tuition.</i> Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 18).
September	22-24		All offices closed.
September	26	Monday	<i>Fall Semester classes begin.</i> All offices resume regular office hours listed on page 6.
October	12	Wednesday	Columbus Day, holiday.
November	11	Friday	Veterans Day, holiday.
November	24	Thursday	Thanksgiving Day, holiday.
November	25	Friday	<i>Last day for official cancellation of classes, without grade.</i>
December	17	Saturday	Christmas recess begins.
December	26	Monday	(Sunday, December 25, Christmas Day), holiday.
January	2	Monday	(Sunday, January 1, New Year's Day), holiday.
January	3	Tuesday	Classes resume.
January	23-27		Final examination period.
January	28	Saturday	<i>Fall Semester closes.</i>

### Spring Semester

January	26-27		Limited class reservations available. See page 9.
January	30	Monday	<i>Spring Semester registration begins.</i> Special registration hours listed on page 7.
February	8	Wednesday	<i>Last day for registration and payment of tuition.</i> Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 18).

February	9-11		All offices closed.
February	13	Monday	<i>Spring Semester classes begin.</i> All offices resume regular office hours listed on page 6.
February	22	Wednesday	Washington's Birthday, holiday.
March	18	Saturday	Easter recess begins.
March	24	Friday	Good Friday, holiday.
March	27	Monday	Classes resume.
April	21	Friday	<i>Last day for official cancellation of classes, without grade.</i>
May	30	Tuesday	Memorial Day, holiday.
June	5-9		Final examination period.
June	10	Saturday	<i>Spring Semester closes.</i>

### Special Terms

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

### Fall Quarter

September	7-9		<b>Limited class reservations available. See page 9.</b>
September	12	Monday	<i>Fall Quarter registration begins.</i> Special registration hours listed on page 7.
September	21	Wednesday	<i>Last day for registration and payment of tuition.</i> Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 18).
September	22-24		All offices closed.
September	26	Monday	<i>Fall Quarter classes begin.</i> All offices resume regular office hours listed on page 6.
October	12	Wednesday	Columbus Day, holiday.
November	4	Friday	<i>Last day for official cancellation of classes, without grade.</i>
November	11	Friday	Veterans Day, holiday.
November	24	Thursday	Thanksgiving Day, holiday.
December	12-16		Final examination period.
December	17	Saturday	<i>Fall Quarter closes.</i>

### Winter Quarter

December	19	Monday	<i>Winter Quarter registration begins.</i> Regular office hours all offices as listed on page 6. <b>Limited class reservations available. See page 9.</b>
----------	----	--------	---

December	26	Monday	(Sunday, December 25, Christmas Day), holiday.
December	28	Wednesday	<i>Last day for registration and payment of tuition.</i> Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 18).
December	29-31		All offices closed.
January	2	Monday	(Sunday, January 1, New Year's Day), holiday.
January	3	Tuesday	<i>Winter Quarter classes begin.</i>
February	10	Friday	<i>Last day for official cancellation of classes, without grade.</i>
February	22	Wednesday	Washington's Birthday, holiday.
March	13-17		Final examination period.
March	18	Saturday	<i>Winter Quarter closes.</i>

### Spring Quarter

March	13	Monday	<i>Spring Quarter registration begins.</i> Regular office hours all offices as listed on page 6. <b>Limited class reservations available.</b> See page 9.
March	22	Wednesday	<i>Last day for registration and payment of tuition.</i> Late fee goes into effect at midnight. Mail registrations postmarked after midnight must include late fee (see Mail Registrations, page 18).
March	23-25		All offices closed.
March	27	Monday	<i>Spring Quarter classes begin.</i>
May	5	Friday	<i>Last day for official cancellation of classes, without grade.</i>
May	30	Tuesday	Memorial Day, holiday.
June	5-9		Final examination period.
June	10	Saturday	<i>Spring Quarter closes.</i>

### Special Classes

Special class term dates usually coincide with dates of semesters or quarters. Where this occurs, *registration should be made during the regular registration periods for the semesters or quarters.* Where the terms do not coincide, registration should be made in the 2-week period before the opening of the class.

*Registration in all children's physical education classes is explained on page 219.*

## Department of Evening Classes Offices

*Campus Office* (Minneapolis Campus): 57 Nicholson Hall (southeast entrance), University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-3195.

*Minneapolis Office* (Downtown Minneapolis)

Our downtown Minneapolis office has been moved from 690 Northwestern Bank Building to 1128 LaSalle Avenue (12th and LaSalle), Minneapolis, Minnesota 55403, and is to be known as the *University of Minnesota MacPhail Center*; telephone 332-0624.

*St. Paul Office* (Downtown St. Paul): Ninth and Exchange, St. Paul, Minnesota 55102; telephone 222-7355.

*Northwest Suburban Extension Center Office* (Robbinsdale Senior High School): Central Office, Independent School District 281, 5214 37th Avenue North (lower level, south end), Minneapolis, Minnesota 55422; telephone 373-3195. (Courses offered in Robbinsdale listed in separate bulletin.)

*Duluth Office*: 110 New Carrick Building, 128 West First Street, Duluth, Minnesota 55802; telephone 722-1745. (Courses offered in Duluth listed in separate bulletin.)

*Morris Office*: University of Minnesota, Morris, Morris, Minnesota 56268; telephone 589-2211. (Courses offered in Morris listed in separate bulletin.)

## Regular Office Hours

### *Campus Office:*

Monday through Thursday .....	8 a.m. to 12 noon 1 p.m. to 8 p.m.
Friday .....	8 a.m. to 12 noon 1 p.m. to 5 p.m.
Monday through Friday (summer) .....	7:45 a.m. to 12 noon 12:45 p.m. to 4:30 p.m.
Saturday (including summer) .....	CLOSED
(May be closed Fridays during summer from 11 a.m. to 12 noon without notice. No telephone service during lunch hour, except during official registration periods.)	

### *Minneapolis Office:*

Monday through Friday (including summer) .....	8 a.m. to 1 p.m. 1:45 p.m. to 4:45 p.m.
Saturday (including summer) .....	CLOSED
(May be closed without notice for short periods of time.)	

### *St. Paul Office:*

Monday through Friday .....	8 a.m. to 12 noon 1 p.m. to 8 p.m.
Monday through Friday (summer) .....	8 a.m. to 12 noon 1 p.m. to 5 p.m.
Saturday (including summer) .....	CLOSED
(May be closed without notice for short periods of time during summer.)	

During Christmas recess, December 17, 1966 through January 2, 1967, the Campus and St. Paul offices will close Monday through Friday at 5 p.m. except December 19 and 20, when all offices will be open until 8 p.m., and December 26, 29, and 30, when all offices will be closed.

## Registration Office Hours\*

*Note:* At the Campus office during Fall Quarter and Fall Semester, registration will be held in Room 211 (second floor) Nicholson Hall; during Winter and Spring Quarters and Spring Semester, registration will be held in the hallway outside Room 150 (first floor) Nicholson Hall.

### Fall Quarter and Semester (September 12-21, 1966)

#### *Campus Office* (211 Nicholson Hall):

Monday through Friday ..... 12 noon to 4 p.m.  
5 p.m. to 8 p.m.  
Saturday (September 17, 1966) ..... 9 a.m. to 1 p.m.

#### *Minneapolis Office:*

Monday through Friday ..... 12 noon to 8 p.m.  
Saturday (September 17, 1966) ..... 9 a.m. to 1 p.m.

#### *St. Paul Office:*

Monday through Friday ..... 12 noon to 8 p.m.  
Saturday (September 17, 1966) ..... 9 a.m. to 1 p.m.

#### *Robbinsdale Office:*

Monday through Friday ..... 8 a.m. to 4 p.m.  
Saturday (September 17, 1966) ..... 9 a.m. to 12 noon

All Offices Closed September 22, 23, and 24.

### Winter Quarter (December 19-28, 1966)

Regular office hours for Campus Office, Minneapolis Office, and St. Paul Office as listed on page 6.

#### *Robbinsdale Office:*

Monday through Friday ..... 8 a.m. to 4 p.m.

### Spring Semester (January 30-February 8, 1967)

Same as Fall Quarter and Semester registration hours for Campus Office, Minneapolis Office, and St. Paul Office.

Saturday (February 4, 1967) ..... 9 a.m. to 1 p.m.

*On the campus, registration is in the hallway outside Room 150 (first floor), Nicholson Hall from 12 noon to 4 p.m. and 5 p.m. to 8 p.m. on weekdays, and 9 a.m. to 1 p.m. on Saturday.*

\* The above hours apply only during the official registration periods and should not be confused with regular office hours which are listed on page 6. Also see instructions for reserving places in limited classes, page 9.

All Offices Closed February 9, 10, and 11.

**Spring Quarter (March 13-22, 1967)**

Regular office hours for Campus Office, Minneapolis Office, and St. Paul Office as listed on page 6.

*Robbinsdale Office:*

Monday through Friday .....8 a.m. to 4 p.m.



## Hours for Picking Up Limited Class Reservation Cards

Enrollment space is limited in each course marked with an asterisk (\*).

Students may obtain limited class reservation cards according to the schedule listed below, at registration offices in advance or at registration periods. Reservation cards will be issued on a first-come, first-served basis.

Students may also obtain limited class reservation cards by mail, if available, by writing the campus office in 57 Nicholson Hall after 8:00 a.m. on Thursday, September 8 (Fall Quarter and Semester); Friday, December 16 (Winter Quarter); Thursday, January 27, 1967 (Spring Semester); and Friday, March 10, 1967 (Spring Quarter).

Places for students holding reservation cards will be held through the first week of each registration period. If limited class reservation cards have not been turned in and the tuition and fees paid by that time, the student's place will be released.

### *Fall Quarter and Semester*

Wednesday, September 7		5:00 p.m.-8:00 p.m.
Thursday, September 8	7:45 a.m.-12 noon	12:45 p.m.-8:00 p.m.
Friday, September 9	7:45 a.m.-12 noon	12:45 p.m.-4:30 p.m.

### *Winter Quarter*

Thursday, December 15		5:00 p.m.-8:00 p.m.
Friday, December 16	8:00 a.m.-12 noon	1:00 p.m.-5:00 p.m.

### *Spring Semester*

Thursday, January 26		5:00 p.m.-8:00 p.m.
Friday, January 28	8:00 a.m.-12 noon	1:00 p.m.-5:00 p.m.

### *Spring Quarter*

Thursday, March 9		5:00 p.m.-8:00 p.m.
Friday, March 10	8:00 a.m.-12 noon	1:00 p.m.-5:00 p.m.

*During the advance reservation period, it will not be possible to consult with an adviser to discuss a program, or to register.*

*Only limited class reservation cards for those classes held at Robbinsdale Senior High School will be available at the Northwest Suburban Extension Center (Robbinsdale).*

# Department of Evening Classes

## Twin Cities Area

(An index will be found on pages 247-251)

The purpose of the Department of Evening Classes is to supplement the full-time programs of instruction offered students in day residence on University of Minnesota campuses. The department's programs and courses reflect the programs and general educational objectives of the University.

## I. INFORMATION

### GENERAL INFORMATION

#### Admission Requirements

There are no entrance requirements for admission into the General Extension Division.

Registration in specific programs or classes may require prerequisite courses or experience. (See Prerequisites, page 15.)

Students wishing to register for graduate credit should refer to page 14.

#### Auditors

A student who does not expect to do all the required work of a class may register as an *auditor* by writing "Aud." in the credit column of the registration form and above his name on the class card, or by asking his instructor to record him as an auditor not later than the sixth week of a quarter class or the ninth week of a semester class, provided he is doing passing work at the time of the request. Permission to audit after the sixth week or ninth week respectively requires special permission from the director of the Department of Evening Classes, 54 Nicholson Hall. Auditor's status carries no credit. One may not later take for credit a course which has been audited; exceptions to this ruling may be allowed upon consultation with an adviser in the college or school concerned. Auditors pay the same fee as other students.

No student whose tuition and fees are paid in whole or in part by military, Veterans Administration, company, or scholarship funds may register as an auditor.

#### Class Attendance

Evening class students are responsible for attending classes in which they are registered. A student who cannot attend a class session should arrange

with his instructor—in advance, if possible—to make up the work. A student who wishes to earn credit for a course without attending should read the information under Examination for Credit, page 12.

### Committee on Student Scholastic Standing

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

### Correspondence Study Courses

A large selection of correspondence study courses is available. Much of the work required for Extension certificates and for some University degrees may be earned through correspondence study. Bulletins are available from any Extension office or from Director, Correspondence Study Department, 254 Nicholson Hall, University of Minnesota, Minneapolis, Minnesota 55455.

### Course Numbering

Courses carrying degree credit are numbered as follows: Lower Division courses, numbered 1 through 49, are intended primarily for freshmen and sophomores; Upper Division courses, numbered 50 through 99, are intended primarily for juniors and seniors; courses numbered 100 through 199 are considered Upper Division and graduate level; courses numbered 200 and above are graduate level only.

If you wish to take a course numbered 100 or above for graduate credit, be sure to ask at time of registration that the appropriate class card be stamped *graduate credit requested*.

In the case of a joint registration, Graduate School registration forms must be presented at the time Evening Class registration forms are completed. This will be the case if a student has been admitted to the Graduate School. See How To Earn Graduate Credit on page 14.

*Note—Graduate students in (150 series) part I of MBA program should read page 155.*

### Credits

All credits listed in the class descriptions are *quarter* credits even though the majority of evening classes are of semester length. All credits are clearly labeled as to use:

1. "Degree credit"—means that a course carrying such a designation may be used on a degree program at the University of Minnesota, provided certain other conditions are met.

## Evening Classes

---

2. "Certificate credit"—means that the course so marked may be used in appropriate Extension certificate programs (certificate credits usually are not usable in teacher certification).
3. "Entrance credit"—designates a course which may be used to meet University admission requirements.
4. "No credit"—means that no credit is given for the course, although grades may be assigned.
5. "Special class"—means that the class carries no credit and no grades will be assigned.

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

**Residence**—Credits earned in undergraduate evening classes are "residence" credits. They may be used to satisfy the residence requirements of the University of Minnesota. They do not, however, meet the residence requirements of individual colleges of the University, until a student who is working on a degree program is formally admitted to the college from which he expects to get a degree. See University Degree Programs, page 53.

## Day School Students

Students who are regularly registered in day school classes in any unit of the University who wish to register for evening classes are urged to clear such registration with their day school adviser or college office.

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

The Department of Evening Classes assumes no responsibility as to the appropriateness of such registrations made by students in either of the above categories; nor is the college involved committed to accept so-earned credits for the degree program involved.

## Degree Programs

(See page 53.)

## Examination for Credit

A student who, by independent study or by experience, has gained knowledge which is equivalent to that covered by a particular evening course may establish credit for such course by passing a special examination on the subject matter covered by the course, provided he is a University evening

student at the time he takes the examination. A student may establish credit for work done at a nonaccredited institution in the same way.

## Extension Certificate Programs

(See page 30.)

## Faculty

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

## Fees

The tuition for each class is designated in the listing of the class in this bulletin. Special fees may be laboratory, materials, or audio-visual equipment fees, and may or may not be for the student's personal use. Fees do not cover books.

## Grades

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

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

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

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

There is a registration symbol W, indicating official cancellation without grade. This shall be assigned by the Department of Evening Classes in all

## Evening Classes

---

cases of official cancellation through the ninth week of any semester, or the sixth week of any quarter or special term irrespective of the student's standing. After the ninth week of any semester, or the sixth week of any quarter or special term, the symbol W is assigned by the instructor concerned, and only if the student is doing passing work at the time of official cancellation. If he is doing failing work, the instructor will assign the grade of F (failure). It is advisable, therefore, that any student considering cancellation of a class after the ninth week of any semester, or the sixth week of any quarter or special term, discuss the matter with his instructor.

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

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

## Grade Reports

(See Transcripts and Grade Reports, page 16.)

## How to Earn Graduate Credit in Evening Classes

1. Any student seeking graduate credit for course work taken in the General Extension Division which is to be used in a program of study leading to a Master's or Doctor's degree at the University of Minnesota must first be duly and regularly admitted to the Graduate School of the University of Minnesota. For admission procedures and requirements, the student is directed to pages 4 and 5 of the *Graduate School Bulletin*. This bulletin may be obtained by writing the Graduate School, 316 Johnston Hall, University of Minnesota, Minneapolis, Minnesota 55455, or secured in person at any General Extension Division office.

When requesting a *Graduate School Bulletin*, students should also request full information about the mechanics of joint registration between the Graduate School and the General Extension Division.

2. Students in the Adult Special category who subsequently make application for admission to the Graduate School may petition to transfer credits earned in Extension classes to their graduate record. The transfer may be restricted to the first term's work.

3. Students who contemplate the use of graduate credits earned in Extension classes toward a graduate degree in an institution other than the University of Minnesota are not required to make application for admission to the Graduate School of the University of Minnesota.

4. All students no matter in which of the above categories they may fall *must at the time of registration request the tally clerk to stamp the appropriate class card(s) "graduate credit requested."* In addition, students making a joint registration with the Graduate School must have appropriate Graduate School

registration forms at the time of Extension registration. The Department of Evening Classes will forward the course computer card to the Graduate School recorder.

5. The new regulations applying to graduate credit in Extension are not retroactive.

### Nonresidents

Students who are not residents of the state of Minnesota pay the same fees in evening classes as do residents of the state.

### Prerequisites

The purpose of a prerequisite is to establish who is eligible to register for the course. You will find the prerequisite of any course listed at the end of the course description. Usually there is no prerequisite for beginning courses. However, if these courses have two or more parts, these parts must be taken in sequence unless otherwise indicated. Most advanced courses do have prerequisites and cannot be carried satisfactorily unless the student has had the stated previous course or its equivalent. In some instances, mature students who have had a reasonable equivalent of study, training, or experience related to the course desired may be exempted from the prerequisite by the instructor. In such instances the symbol # will appear in the prerequisite listing. If you are in doubt as to your qualifications for a course, but believe you are qualified, register for the course and consult the instructor at the first class session. If the instructor decides that you are not qualified, or that the course does not meet your needs, your class card properly endorsed to this effect on the back, by the instructor, will permit you to transfer to another course without penalty or to cancel with a full refund, provided this action is taken before the end of the second week of classes (see Refunds, page 22). A prerequisite course may not usually be taken for credit after the advanced course has been satisfactorily completed.

### Symbols

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

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order, unless otherwise indicated.
- o Enrollment space limited. Students may obtain reservation cards at registration offices in advance of the opening of registration periods, and during the registration periods, on a first-come, first-served basis. See instructions on page 9.
- † All courses listed before dagger must be completed before credit may be received.
- § No credit is given if credit has been received for equivalent course listed after section mark.
- ¶ Means "concurrent registration in" (i.e., course must be taken simultaneously).
- # Prerequisite may be equivalent experience, with consent of instructor.
- △ Consent of department or school offering course is required.

## Evening Classes

---

### Probation

Students taking classes for credit, who consistently fail to maintain a C average, may be placed upon probation. This means that their registrations and work loads come under the surveillance of the Committee on Student Scholastic Standing.

### Television Courses

A selection of credit and noncredit courses is offered by the General Extension Division, using the facilities of KTCA-TV, Channel 2. For further information, see page 224 of this bulletin, or telephone the University "Television College" at 373-5030.

### Transcripts and Grade Reports

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

Extension students can secure transcripts showing all credits earned in evening classes by calling or writing the Office of Admissions and Records, Window 18, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-2149.

### Transferring Credits Earned in Extension

A student wishing to have degree credits earned in Extension put on a day school record should ask the record clerk (in Morrill Hall) of the college in which he is registered to transfer the credits. Requests for such transfer are ruled on individually by the college concerned.

A student wishing to have credits earned in Extension transferred to another institution should forward a transcript to that institution and request an evaluation of credits.

### Transfers from Other Institutions

A student who has had university or college work other than at the University of Minnesota and who intends to work on a degree or certificate program should submit a transcript of his record to the secretary of the Committee on Student Scholastic Standing, 153 Nicholson Hall, Minneapolis Campus; telephone 373-3905. This should be done immediately following the close of any registration period. A student who wants help in planning a program is urged to bring his transcript with him when he comes to see an Extension adviser. He may leave it with the adviser for evaluation. (See Program Advising, page 25.) Obtain transcripts from the registrar of an institution previously attended.



## Transfers Within The University

A student who wishes to transfer from day school classes to evening classes may do so during Department of Evening Class registration periods without going through formal transfer procedures. However, if the student plans to complete a degree program through the Department of Evening Classes, he should consult an Extension adviser in 153 Nicholson Hall; telephone 373-3905. Please read the section on Day School Students, page 12, and Degree Programs, page 53.

## Upper Division Eligibility

Generally speaking, a student should have completed approximately 90 credits to take an Upper Division course. However, in individual situations, competent and mature students may be qualified to carry such courses with less than 90 credits.

# REGISTRATION PROCEDURES

## Registration Periods

The dates for all registration periods are designated in the calendar, beginning on page 2. The registration hours for all terms at all offices are stated on page 7.

All registrations should be made and fees paid during the official registration period for the term involved. Any registration, initial or added, made after the official registration period will be considered a late registration and subject to a late fee.

## How to Use This Bulletin for Registering

Each class listing in this bulletin should, in most cases, give all the information needed for completing the registration forms. Most classes appear under the appropriate department or subject heading; where several classifications are possible, cross references will usually be given. There is an index at the back of the bulletin for your convenience in locating courses and other information.

The first line or two of the listing gives the abbreviated departmental prefix, the course number, if any, the title of the course, the number of credits and the kind of credit, and the tuition per term (semester, quarter, or special term), plus special fees, if any. With a very few exceptions, all arabic-numbered listings are degree credit classes and are the same as those of corresponding day classes or have been approved for evening class use by the department concerned. Other classes are indicated as for certificate credit; any of these classes may be applicable toward an appropriate Extension certificate (see Credits, page 11).

The description of the course content follows. Such regulations as prerequisites, class size limitations, number of meetings, etc., will be found in

## Evening Classes

---

the parenthetical statement following the course descriptions. (See Prerequisites, page 15.)

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

### Registration Forms

Registration forms may be obtained in person at any of the Evening Class offices listed on page 7. Forms may be obtained 2 weeks prior to the official opening of the registration period, except for limited classes (see page 9). Forms may also be obtained by completing and mailing the post card on page 253, or by writing the Department of Evening Classes, 57 Nicholson Hall, University of Minnesota, Minneapolis, Minnesota 55455.

Please read the following material carefully before making your request for registration materials.

**Semester length classes:** If you register for classes taught on the semester basis, use the white form marked "semester." Fill in all information requested. You may register for as many as four semester classes on this form. Fill out one class card (blue in color) for each class, and one addressograph and tally card (pink in fall—yellow in winter and spring). Have all forms tallied. Pay the cashier.

**Quarter length classes:** If you register for classes taught on the quarter basis, use the green form marked "quarter." You may register for as many as four quarter classes on one form. Fill out one class card (blue in color) for each class, and one addressograph and tally card (pink in fall—yellow in winter and spring). Have all forms tallied. Pay the cashier.

**Special term length classes:** If you register for classes taught on a special term basis, use the salmon form marked "special." You may register for as many as four of these classes on one form. Fill out one class card (blue in color) for each class, and one addressograph and tally card (pink in fall—yellow in winter and spring). Have all forms tallied. Pay the cashier.

**Special class:** If you register for a class that is taught as a special class, use the blue form marked "special class." You can register for only one "special class" on each special class form. (*All recreation classes are special classes.*) Fill out a class card (blue in color), and one addressograph and tally card (pink in fall—yellow in winter and spring). Have all forms tallied. Pay the cashier.

All forms are multiple forms. *Please use a ball point pen and press hard.*

### Mail Registrations

Registrations by mail will be accepted subject to the following conditions:

1. Registrations must be made on appropriate official registration forms (semester, quarter, special term, special classes), with attached check or

money order covering full amount of tuition and fees, payable to the University of Minnesota. Registration forms may be obtained by completing and mailing the post card on page 253.

2. Checks or money orders for late registrations (postmarked after midnight of the last day of registration) must include the late fee specified on page 20.

3. No military personnel or any person registering under an authorization from a federal, state, foreign agency, institution, company, scholarship, or loan fund can register by mail without special permission from the Special Registration Office, Department of Evening Classes, 56 Nicholson Hall, Minneapolis Campus; telephone 373-4871. Normally, such registrations must be made in person.

4. Registration for limited classes will not be accepted by mail unless accompanied by the required limited class reservation card. See page 9.

5. Students are especially warned that all registration forms are *multiple speed forms*. It is important, therefore, that a ball point pen on a hard surface be used in filling out these forms. If all copies are not clearly legible, they will be returned to the sender.

*Any registration or request to register received by mail which does not meet the conditions prescribed above will be refused and returned to the sender.*

### Payment of Fees

The full amount of the tuition and other fees is payable at the time of registration. No arrangements for partial payment can be made. Checks or money orders must be drawn for the exact amount due and made payable to the University of Minnesota. Students in need of special financial assistance see Extension Student Loan Fund, page 28.

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

### Registering with Financial Assistance

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

Military personnel should read the Special Information for Veterans and Members of the Armed Forces section starting on page 23.

Students registering under the authority of the "Cold War Veterans Bill of 1966" (Chapter 34, Title 38, U.S. Code), should refer to page 24.

Business firms may register their employees in evening classes by special arrangement with the General Extension Division. When requesting registration material, specify whether for semester, quarter, or special term classes; call the principal clerk, telephone 373-3930.

## Evening Classes

---

### Registering for Graduate Credit

Students interested in registering for graduate credit should refer to "How to Earn Graduate Credit in Evening Classes," page 14.

### Work Load

The average person employed on a full-time basis usually carries one or two classes. However, any person in good standing may carry 12 credits on the semester basis or 9 credits on the quarter basis. To carry more than this number of credits all persons, including students who have been dropped or placed on probation by any college of the University of Minnesota or any other institution of higher learning, must have their work load approved by a member of the Committee on Student Scholastic Standing. Such requests must be accompanied by a transcript of previous college work, whether taken at the University of Minnesota or elsewhere. Transcripts for work taken at the University of Minnesota may be secured by calling or writing the Office of Admissions and Records, Window 18, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-2149. There is *no assurance* that any credits earned by students in a dropped or probation status will be accepted by the college from which they wish to take a degree.

### Late Registrations and Additions

All registrations, whether initial or added, received either in person or by mail after the close of the registration period as designated in the calendar, pages 2, 3, and 4, will be considered late registrations and will be subject to the late fee and conditions listed below.

During the first week .....	\$3
During the second week .....	\$5 (if accepted)
During or after the third week .....	\$10 (if accepted)

The following conditions must be met for a student to register *during the second week* of classes:

*Quarter and Semester Classes*—No registration will be accepted unless the student has attended the first class meeting or registers in time so that he can attend the second class meeting. If the class meets twice a week, the registration must be made at a date that will permit him to attend both class sessions during the second week.

*Special Term and Special Class*—The rule for quarter and semester classes will apply. The decision will be made on the basis of the length of the special term or special class.

The following conditions must be met for a student to register *during or after the third week*:

No registrations during and after the third week of classes—quarter, semester, special term, or special class—will be approved unless the student has been in class attendance at least during the second week of classes.

Approval for registration must come from the director of the Department of Evening Classes, 54 Nicholson Hall. If the registration is not acceptable to the instructor, a full refund will be made to the student.

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

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

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

### Transferring Classes

Students who wish to transfer after an initial registration will be subject to the transfer fees and conditions listed below.

During the first week .....	\$3
During the second week .....	\$5 (if accepted)
During or after the third week .....	\$10 (if accepted)

Transfers made after the first week of classes are not encouraged and will not be permitted unless the student has met the following conditions:

*Transfer During the Second Week* (Quarter, Semester, Special Term, Special Class)—No transfer will be accepted unless the transfer will permit the student to attend class(es) the second week.

*Transfer During the Third Week or After* (Quarter, Semester, Special Term, Special Class)—No transfer will be approved unless the student has attended the second week of classes of the class into which he wishes to transfer. Such transfers must be approved by the director of the Department of Evening Classes, 54 Nicholson Hall. If the transfer is not acceptable to the instructor, a full refund will be made to the student.

*There will be no transfer fee if: (1) University requests transfer be made; (2) transfer is required by failure in placement test or prerequisite course; or (3) transfer is required because of cancellation of course in which previously registered, provided such transfer is made within 1 week from date of cancellation of class.*

There will be no transferring between mathematics class sections without special permission.

The student must present his fee statement at the time the transfer is made.

### Cancellations

Any student who drops out or wishes to drop out of classes is urged to make an official cancellation, either in person or by writing to, Department of

## Evening Classes

---

Evening Classes, 57 Nicholson Hall, University of Minnesota, Minneapolis, Minnesota 55455. (Cancellation letters mailed to other offices may not be processed.) By so doing, he will receive a refund *if eligible* (see Refunds below) and will likewise insure the appropriate grade on his grade report. If a student officially cancels from a class *before* or *during* the ninth week of any semester, or the sixth week of any quarter or special term, he will be automatically given a "W" on his grade report. This symbol means "official cancellation without grade." If the official cancellation is made *after* the above-stated period, the instructor will give him a "W" if the student is doing passing work. If he is doing failing work, the instructor will give a grade of "F" (failure). It is advisable that the student inform his instructor of the reason for his action.

No student is permitted to cancel the last 2 weeks of any quarter, semester, or special term (this includes final examination week). Official cancellation of registration must be made in person or by writing to the Department of Evening Classes office on the campus—TELEPHONE CANCELLATION CALLS ARE NOT ACCEPTABLE.

*No instructor is authorized to accept cancellation of any registration. The effective date of cancellation will be the day on which the cancellation is received in any Extension office, regardless of the date of last attendance. It is urgent, therefore, that students officially cancel by filling out the appropriate forms at any Extension office whenever they stop attending a class.*

## Refunds

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

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

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

It is solely the student's responsibility to obtain and present his class card as designated in a and b above.

2. Full refund of all tuition and special fees will also be made to any student who has been recalled, who has enlisted, or has been drafted into military service upon presentation of military orders, provided the student would not be entitled to an appropriate grade at such time.

3. A \$3 registration fee will be charged for cancellation of classes on or before the first class meeting in any semester, quarter, or special term. The balance of the tuition and special fees will be refunded.

4. Late fees and/or transfer fees are not refundable.

5. Refunds for cancellation of classes *after* the opening date of each semester, quarter, or special term (except as indicated in item 3 above), will be made as follows:

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

For the student's convenience, this information is also printed on his copy of the registration (pink).

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

*Refunds cannot be made in cash; they must be paid by check.* Normally, it requires 4 weeks to process a request for a refund. Refund checks will be mailed to the student.

### Departmental Cancellation of, or Change in, Scheduled Classes

Classes listed in this bulletin may be canceled because of insufficient enrollment. The Department of Evening Classes reserves the right to cancel, postpone, split, or combine classes, to change instructors and/or locations of classes.

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

### Military Personnel

All military personnel are urged to familiarize themselves with the General Information and Registration Procedures sections of this bulletin. University regulations and procedures apply to all students unless stated to the contrary.

All branches of the Armed Services now provide Off-Duty Academic Instruction or Tuition Assistance Programs for military personnel on active duty. There are no application forms necessary for admission to the Evening Classes division. Under these programs, eligible military personnel may

## **Evening Classes**

---

be entitled to payment of \$8.25 per quarter credit hour for approved classes. (All classes in this bulletin are quarter credit whether designated quarter or semester length.) The remaining tuition and all fees must be paid by military personnel. Interested members of the Armed Services are urged to contact the educational officer or commanding officer of their command for proper authorization to participate in these programs. Written authorization designating classes and amount of tuition to be paid by Army, Navy, Air Force, or Marine Corps should be presented at time of registration, at which time payment of remainder of tuition and fees must be made. Military personnel who do not have the necessary authorization at the time of registration will be required to pay in full for their registration. When the government authorization is received, a refund for the authorized amount will be made. Registration must be made in person at 56 Nicholson Hall, Minneapolis Campus; telephone 373-4871.

## **World War II Veterans**

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

## **Korean War Veterans**

Educational benefits under P.L. 550 terminated January 31, 1965.

## **Cold War Veterans (Chapter 34, Title 38, U.S. Code)**

A new GI Bill providing educational benefits for eligible veterans was effective June 1, 1966. Eligibility will be based on active military service after January 31, 1955, with veterans receiving 1 month of eligibility for each month of active service after that date. Maximum period of training is 36 months, but this period will be reduced by training taken under other Veterans Administration programs.

Educational and training allowances will be provided for veterans registered for full-time, three quarter-time or half-time programs. Tuition and fees will be paid for less than half-time programs. No allowance for cost of books will be paid.

At the time this bulletin went to press, details of implementation of the new GI Bill were not known. However, such details will be known by the time this bulletin reaches you.

It is strongly recommended that any veteran interested in registering for part-time training in the Department of Evening Classes, General Extension Division, contact the veterans adviser in 52 Nicholson Hall, telephone 373-5777, for help in securing appropriate Certificates of Eligibility at time of registration. At that time, other Veterans Administration and Department of Evening Classes registration forms necessary for entrance into training can also be completed.

In order that Veterans Administration and University procedures be followed, all Twin Cities veterans must register in 52 Nicholson Hall, *Minneapolis Campus*. No veteran registrations can be accepted in our St. Paul, Minne-



apolis, or Northwest Suburban Extension Center (Robbinsdale Senior High School) offices.

Call our Veterans Office, 52 Nicholson Hall, telephone 373-5777, for information about registering for Extension classes. All required Veterans Administration forms will be available in this office.

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

Under some circumstances World War II and Korean Veterans whose educational benefits under Public Law 346 and 550 have been used and exhausted (not interrupted) may be eligible for tuition assistance from State of Minnesota Department of Veterans Affairs. Such veterans, if they believe themselves eligible, should contact State of Minnesota Department of Veterans Affairs, Veterans Service Building, St. Paul, Minnesota 55101 (telephone 221-2562).

## **SPECIAL SERVICES FOR STUDENTS**

### **Advising and Counseling**

The Counseling Office of the General Extension Division offers both counseling and program advising services, without fee, to evening class students. Persons who anticipate registering for evening classes are also invited to use these services. The office is located in 153 (first floor) Nicholson; telephone 373-3905.

**Counseling**—Professional counseling and testing services are available to those evening class students who want to learn more about their own abilities, interests, and personalities, or who wish help in making vocational plans or in choosing a major field of study. Educational, vocational, and personal problems may be brought to the counselor. A fee of \$10 is charged for those persons wishing to take a battery of tests. Appointments must be made in advance.

**Advising**—Program advising is available to help students select programs of study, determine prerequisites and standing, evaluate transcripts of previous college work, choose the kinds and number of courses to take and decide in what order they should be taken, arrange for examinations for credit or advanced standing, and to handle other academic matters.

During the special registration periods before the fall and spring semesters, advisers will be available in the campus office from 1 to 4 p.m. and 5 to 8 p.m., Monday through Friday, and from 9 a.m. to 1 p.m. on Saturday; no appointment is needed. In the downtown offices, advisers are available by appointment from 5 to 8 p.m., Monday through Friday; Minneapolis, 332-0624; St. Paul, 222-7355.

Special evening meetings are arranged at the beginning of each semester registration for students who may be candidates for degrees in the College of Liberal Arts. Meetings will be held on September 12 and 14 and on January 30, from 7:30 to 10 p.m., in 113 and 114 Johnston Hall. All students who have

## Evening Classes

---

questions about degree programs in CLA are urged to attend one of the meetings.

Program advisers from the College of Education, the School of Business Administration, and the Institute of Technology will be available in their offices on the campus during specific evening and Saturday morning hours during the Fall and Spring Semester registration periods. A student wishing to see such an adviser should telephone the Counseling Office, 373-3905, and make an appointment.

## Athletic Facilities

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

## Athletic Tickets

Any student enrolled for at least 3 credits (not including audit, television, or correspondence registration) in evening classes which carry credit may purchase one student athletic season ticket at \$15. Married students may purchase a second season ticket, for use by *spouse only*, at \$15. All tickets are nontransferable. If classes are canceled, athletic tickets must be returned to athletic office. Tickets may be bought at the special student athletic ticket sale headquarters on campus the week before classes begin. *Paid fee statement is required to purchase ticket.* The ticket sale schedule will be as follows:

Wednesday, September 21, 9 a.m.-4 p.m.

Thursday, September 22, 9 a.m.-9 p.m.

Friday, September 23, 9 a.m.-4 p.m.

Saturday, September 24, 9 a.m.-2 p.m.

Monday, September 26, 9 a.m.-9 p.m.

Tuesday, September 27, 9 a.m.-4 p.m.

All ticket sales will be held in Williams Arena Lobby. Reserved seat season tickets will be issued in Williams Arena Lobby on Thursday and Friday, September 29 and September 30, from 9 a.m. to 4 p.m., and Saturday, October 1, from 9 a.m. to 2 p.m.

Students who want to attend the first home game on Saturday, September 24, must make application on or before this date. Seating will be "first-come, first-served" in the student area for this game only.

Regulations governing purchase, transfer, and cancellation of these tickets are available on request to the Athletic Ticket Office. Extension student ticket holders will be assigned seats in the bowl, at the end of the regular student location. Any regular student wishing to sit with an Extension student will be assigned in the Extension location.

Football tickets must be exchanged for Winter-Spring tickets at the beginning of January as outlined on the back of the football ticket. The exchange will be made with the fall semester fee statement for Extension students. Tickets are void after fall semester unless ticket holder is registered for spring semester. Spring semester fee statements must be presented at the beginning of the spring semester to validate the student ticket.

## Bookstores

For the convenience of General Extension Division students in securing text books and supplies, the following evening schedule has been established for University Bookstores.

### *Nicholson Bookstore*

5 p.m. to 8:30 p.m., Monday through Thursday, for the first 2 weeks of Fall Quarter and Fall and Spring Semesters.

5 p.m. to 8:30 p.m., Monday through Thursday, for the first week of Winter and Spring Quarters.

### *Main Engineering Bookstore*

6 p.m. to 8:30 p.m., Monday through Thursday, for the first 2 weeks of Fall and Winter Quarters and Fall and Spring Semesters.

6 p.m. to 8:30 p.m., Monday through Thursday, for the first week of Spring Quarter.

### *West Bank Bookstore*

5 p.m. to 8:30 p.m., Monday through Thursday, throughout the school year.

### *St. Paul Extension Center Bookstore*

5:30 to 8 p.m., Monday through Friday, for the first week of Fall, Winter and Spring Quarters and Fall Semester.

5:30 to 8 p.m., Monday through Thursday, for the first week of Spring Semester.

### *Northwest Suburban Extension Center Bookstore (Robbinsdale)*

6 p.m. to 8 p.m., Monday through Thursday, for the first week of Fall, Winter, and Spring Quarter.

## Coffman Memorial Union

The facilities of Coffman Memorial Union are open to all students and their guests. Information on building hours and facilities available may be obtained from the Union Information Desk, first floor, or by calling 373-2403.

## **Evening Classes**

---

### **Convocations**

University convocations are open to the public. Announcements of convocations, which are held in Northrop Memorial Auditorium, will be made prior to each convocation.

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

The Department of Evening Classes is now offering a special English class for foreign students (see page 88 for further information). Beginning, intermediate, and advanced classes in everyday English, oral and written, are also available at the International Institute, 183 W. Kellogg at Exchange, St. Paul, and at the Minneapolis Vocational Evening School, Third Avenue South and Eleventh Street, Minneapolis. Persons seeking further information on these classes should call:

Mr. M. B. Keck, International Institute, St. Paul, 222-1754  
Minneapolis Vocational Evening School, Minneapolis, 332-0381.

### **Extension Student Loan Fund**

Extension students who need financial assistance to pay tuition costs may be eligible for a loan not to exceed \$50 in any semester, quarter, or special term. Such loans if granted are payable within 2 months from date of receipt. The interest charge is approximately 50 cents. Applications should be made during any official registration period at any Extension office. Because only limited funds are available, students who need assistance should inquire as soon as possible during the registration periods.

### **Financial Aid for Handicapped Students**

"Rehabilitation funds" for the education of disabled persons are available through the State Department of Education. Applications for aid from these funds should be sent to the Division of Vocational Rehabilitation, State Department of Education, Centennial Office Building, St. Paul, Minnesota 55101.

### **Military Deferments**

Military deferments are granted by the student's local draft board and not by the Department of Evening Classes. Therefore, students wishing information as to deferment requirements should contact their local board. Students wishing to have their Evening Class registration certified to their local board may do so by coming to 57 Nicholson Hall. Requests for certification must be accompanied by a transcript of previous college work, whether taken at the University of Minnesota or elsewhere. Transcripts for work taken at the University of Minnesota may be secured by calling or writing the Office of Admissions and Records, Window 18, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-2149.

### **Minneapolis Symphony Orchestra**

Special rates for season tickets to the regular concert season are available to students registered for at least 5 credits in evening classes. For further information, call the Symphony Ticket Office at 373-2331.

### **University Library**

Evening students attending classes in Minneapolis or St. Paul are entitled to draw books from the University Library to be used in connection with their classes but are subject to all library regulations including those in regard to return upon demand and to fines on overdue books. These regulations and hours are set forth in the *Library Handbook*, copies of which are available at library circulation desks.

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

Events of an educational and cultural nature are constantly being offered on the University campuses. Many of them are open to the student body and to the public without charge; for others there are admission charges. For information, telephone the University Theatre office (373-2337), Artists Course office (373-2345), or Department of Concerts and Lectures (373-2345).

## II. EXTENSION CERTIFICATE PROGRAMS

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

Nineteen intensive certificate programs are conducted by the General Extension Division. The curriculums are described in detail in the following pages.

Certificate programs are organized at the collegiate level; students entering them should have adequate educational preparation or other experience to work effectively with college materials. Certificate programs consist of degree credit classes or a combination of degree and certificate credit classes. Certificate credit classes are college level in quality and represent an accelerated and specialized approach in subject matter in the areas represented. They are not, however, transferable to a degree program.

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

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

Certificate requirements may be modified from time to time. Although there is no time limit on the use of credits, no certificate will be granted that represents a certificate program more than 7 years out of date.

A student interested in pursuing a certificate program is urged to secure a copy of *Procedures for Obtaining a General Extension Division Certificate* and to complete an *Application for Admission to Certificate Programs* at the earliest possible time so proper counseling can be given. Both forms are available at any Extension office. Advice and information about the various programs, including transfer of credits, may be secured from the Extension Counseling Office, 153 Nicholson Hall.

A student nearing completion of the required work and expecting to receive a certificate must file a Certificate Completion form at the beginning of the term in which the certificate is to be awarded.

Upon completion of a specified program with at least a C average the student is awarded a certificate. All certificates are dated and awarded as of commencement exercises three times during the academic year. Students receiving senior certificates may participate in the June Commencement exercises.

## Liberal Arts Certificate

(45 credits)

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

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

### *English Requirement* (12 credits):

Comp 1-2-3; or Comm 1-2-3; or equivalent

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

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

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

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

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

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

## Evening Classes

---

### Interior Design Certificate

(46 credits)

The Interior Design Certificate is awarded upon successful completion of a program of courses in interior design and related fields. A student holding the certificate should have a background indicating proficiency in the field of home furnishings and decorating. Adviser to this program is Professor Leah Lewis, telephone 373-3918.

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

#### Core requirement (28 credits):

Art 83A—Interior Design II  
Art 84A—Interior Design III  
Art 103A—Seminar: Interior Design I  
Art 104A—Seminar: Interior Design II  
Layout for Interior Design I  
(or) Home Design and Planning

Art I—Introduction to Art  
Psy IA—Application of Psychology to  
Living  
Comp 1—Freshman English; or equivalent  
Business Correspondence

#### Spread Requirement (18 credits) spread over at least three of the following groups:

1. History of Art
2. Use of Color, Layout for Interior Design II, Drawing and Painting
3. Ceramics, Sculpture, Printmaking
4. French, Humanities, Psychology



## Police Administration Certificate

(45 credits)

The Police Administration Certificate program was planned by departments of the General Extension Division in co-operation with the Public Administration Center and police administrators and other municipal officials. Increasing numbers of police officers are being selected from applicants with college experience. The certificate provides an organized program of study, most of which can be transferred to a degree curriculum.

*Some of the courses required in this certificate are available only through the Correspondence Study Department of the University of Minnesota. The courses are marked with a double asterisk \*\*. Although credits may be transferred to this program from other institutions accredited by the University of Minnesota, the courses so marked (\* \*) must be taken at the University of Minnesota.*

### English Requirement (12 credits):

Comp 1-2-3; (or) Comm 1-2-3; (or) Comp 1 and 8 additional credits selected from Comp 2, Engl 4c,\* Hum 1, Hum 2, Hum 3, Hum 4, Basic Technical Writing I

### Core Requirement (15 credits):

Soc 53—Elements of Criminology  
PoAd 15(c)\*\*—Methods in Police Supervision  
PoAd 16(c)\*\*—Methods of Criminal Procedure

PoAd 17(c)\*\*—Methods of Police Planning, Management, and Organization  
PoAd 18(c)\*\*—Methods of Criminal Investigation

### Spread Requirement (18 credits):

Pol 1—American Government and Politics:  
Part I  
Psy 1-2—General Psychology  
Soc 1—Man in Modern Society  
6 additional credits selected from:  
Pol 2—American Government and Politics: Part II

Pol 25—World Politics  
Soc 3—Social Problems  
Soc 52—Juvenile Delinquency and Juvenile Courts  
Hist 20, 21, 22—American History

## **Public Administration Certificate**

(45 credits)

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

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

### **Core Requirement (15 credits from the following):**

Legal and Political Environment of Public Administration;	Public Personnel Administration (old Pol 62);
(or) Pol 1-2—American Government and Politics	(or) Federal Personnel Practices
Organization and Management (old Pol 60);	Public Financial Administration (old Pol 63)
(or) Organization Theory and Administrative Behavior	Problems of Public Administration (old Pol 66)
Municipal Law and Administration (old Pol 61)	Administrative Responsibility (old Pol 78)
	Departmental Management

### **Spread Requirement (15 credits from the following):**

Governmental Accounting (old Pol 58)	Government Purchasing
Administrative Analysis (old Pol 67)	Human Relations in Administration
Administrative Communication (old Pol 68)	Intergovernmental Relations
City and County Planning (old Pol 73)	Performance Evaluation
Government and Welfare (old Pol 74)	Private Law for Public Administrators
Business and Government (old Pol 76)	Public Speaking and Conference Leadership
Computer Based Management Systems	Jour 78—Public Relations Methods
Employer-Employee Relations in Government	QA 5—Elements of Statistics; (or) equivalent

**Concentration Requirement:** At least 15 credits in one of the following fields or in any approved combination thereof to make a minimum of 45 credits total for the certificate.

Accounting	Nursing
Business Finance	Political Science
Child Psychology	Psychology
Economics	Recreation Leadership
Engineering	Social Work
Industrial Relations	Sociology
Insurance	Transportation

## Accounting Certificates

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

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

### Junior Accounting Certificate

(50 credits)

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

#### Requirements:

Comp 1-2-3; or Comm 1-2-3; or equivalent  
Econ 1-2—Principles of Economics  
Math 10—College Algebra and Analytic  
Geometry (or equivalent)

BFin 56—Finance Fundamentals;  
(or) BFin 57—Financial Management  
Acct 24-25-26—Principles of Accounting  
Acct 105A-B-C—Intermediate Accounting  
Acct 115A-B—Cost Accounting

### Senior Accounting Certificate

(91 credits)

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

#### Requirements:

Comp 1-2-3; or Comm 1-2-3; or equivalent  
Comp 27—Advanced Writing  
Math T, 10, and 40 (or equivalent)  
Acct 24-25-26—Principles of Accounting  
Acct 105A-B-C—Intermediate Accounting  
Acct 115A-B—Cost Accounting  
Three additional accounting courses numbered 100 or above  
BFin 56—Finance Fundamentals;  
(or) BFin 57—Financial Management  
Econ 1-2—Principles of Economics  
QA 5—Elements of Statistics  
QA 51—Business Statistics  
BLaw 58—Business Law: Contracts  
BLaw 78, 88—Business Law (or approved substitutions in management or industrial engineering)

Two courses from the following:  
Prod 50—Production Management  
IR 52—Systems of Industrial Relations:  
Labor Marketing  
Ins 53—Risk Management and Insurance  
Tran 54—Fundamentals of Transportation  
Mktg 57—Principles of Marketing  
Econ 65—Intermediate Economic Analysis I: The Firm and Industry  
Econ 66—Intermediate Economic Analysis II: Income and Employment  
Econ 67—Money and Banking  
Econ 68—Elements of Public Finance  
Econ 69—Government Regulation of Business

## Evening Classes

### **Assessment and Appraisal Administration Certificate**

(45 credits)

The Assessment and Appraisal Administration Certificate program was planned by departments of the General Extension Division, the School of Business Administration, and persons professionally employed in assessment and appraisal.

The program, which can be completed in a 3-year period but may take longer, requires that the student spend a 2-week, on-campus session during the early fall of each of 2 succeeding years, for which he receives 15 credits. The 1968 sessions are scheduled for September 6 to 16. In the intervening months, the student would be expected to complete at least Econ 1 and Acct 24. The remaining 24 credits must be completed within the next 5 years and may be taken in day or evening classes, by television, or by correspondence study. Credits may also be transferred from other accredited institutions.

**Core Requirement** (15 credits earned in residence at the Nolte Center for Continuing Education):

Basics of Public Finance  
Fundamentals of Appraisal  
Principles of Taxation

Basics of Valuation  
Advanced Appraisal

**Spread Requirement** (21 credits):

Econ 1-2—Principles of Economics  
Acct 24-25—Principles of Accounting  
BLaw 58, 98—Business Law

QA 5—Elements of Statistics;  
(or) Econ 67—Money and Banking

**Electives:** Additional courses selected from the following to make a minimum of 45 credits total for the certificate.

Comm 1-2-3—Communication  
Governmental Accounting  
Organization and Management  
Math 20—Mathematics of Investment

Psy 1A—Application of Psychology to Living  
Psy 1-2—General Psychology

## Business Administration Certificates

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

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

### Junior Business Administration Certificate

(47 credits)

This certificate, requiring the satisfactory completion of 47 credits of course work, is the equivalent of 1 academic year of full-time study. It offers a firm grounding in most of the basic fields of business administration. All of the credits received in completing the Junior Certificate are automatically credited toward a Senior Certificate and represent half of its required work load.

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

### Prebusiness Requirement (32 credits):

Comp 1-2-3; or Comm 1-2-3; or equivalent  
Econ 1-2—Principles of Economics  
Acct 24-25-26—Principles of Accounting

Math 10—College Algebra and Analytic  
Geometry (or equivalent)

### Core Requirement (15 credits): Five courses selected from the following:

Prod 50—Production Management  
QA 5—Elements of Statistics and QA 51—  
Business Statistics  
IR 52—Systems of Industrial Relations:  
Labor Marketing  
Ins 53—Risk Management and Insurance  
Tran 54—Fundamentals of Transportation  
BFin 56—Finance Fundamentals  
Mktg 57—Principles of Marketing  
BLaw 58—Business Law: Contracts

Mgmt 60—Business Policy and Manage-  
ment Control  
Econ 65—Intermediate Economic Analysis  
I: The Firm and Industry  
Econ 66—Intermediate Economic Analysis  
II: Income and Employment  
Econ 67—Money and Banking  
Econ 69—Government Regulation of Busi-  
ness

## Evening Classes

---

### Senior Business Administration Certificate

(90 credits)

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

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

#### Prebusiness Requirement (32 credits):

Comp 1-2-3; or Comm 1-2-3; or equivalent  
Econ 1-2—Principles of Economics  
Acct 24-25-26—Principles of Accounting

Math 10—College Algebra and Analytic  
Geometry (or equivalent)

#### Core Requirement (21 credits): Seven courses selected from the following:

Prod 50—Production Management  
QA 5—Elements of Statistics and QA 51—  
Business Statistics  
IR 52—Systems of Industrial Relations:  
Labor Marketing  
Ins 53—Risk Management and Insurance  
Tran 54—Fundamentals of Transportation  
BFin 56—Finance Fundamentals  
Mktg 57—Principles of Marketing  
BLaw 58—Business Law: Contracts

Mgmt 60—Business Policy and Manage-  
ment Control  
Econ 65—Intermediate Economic Analysis  
I: The Firm and Industry  
Econ 66—Intermediate Economic Analysis  
II: Income and Employment  
Econ 67—Money and Banking  
Econ 68—Elements of Public Finance  
Econ 69—Government Regulation of Busi-  
ness

*Electives in the School of Business Administration:* At least 12 additional credits in courses in business administration. These may be selected from the core group above or from other courses.

#### Other Electives:

- A. Satisfactory completion of the prebusiness degree requirements in either social sciences, natural sciences, or humanistic courses (see items 4, 5, and 6 on page 57).
- B. Additional courses approved by the Committee on Student Scholastic Standing to make a minimum of 90 credits for the certificate. Students contemplating continuing toward a degree from the School of Business Administration should select electives which could become part of the degree program. These students are therefore urged to complete the prebusiness requirements (see page 57).

## Industrial Relations Certificate

(48 credits)

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

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

### Core Requirement (42 credits):

Econ 1-2—Principles of Economics  
 IR 52—Systems of Industrial Relations:  
 Labor Marketing  
 IR 72—Systems of Industrial Relations:  
 Manpower Management  
 IR 182A—Intermediate Labor Marketing  
 IR 182B—Intermediate Manpower Management  
 Psy 1-2—General Psychology  
 Psy 122-123—Vocational Development and  
 Personnel Psychology  
 One of:  
 Psy 70—Principles of Psychological Mea-  
 surement  
 QA 5—Elements of Statistics

One of:  
 Econ 152—Economic History of Labor  
 IR 182—Union Government and Policies  
 One of:  
 Econ 192—Economics of Collective Bar-  
 gaining  
 IR 142—Conflict and Collective Bargain-  
 ing  
 One of:  
 Econ 172—Labor Market Behavior and  
 Regulation  
 Econ 182—Economic Security

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

Econ 102—Contemporary Labor Issues  
 Econ 152—Economic History of Labor  
 Econ 172—Labor Market Behavior and  
 Regulation  
 Econ 182—Economics Security  
 Econ 192—Economics of Collective Bar-  
 gaining  
 IR 62—Human Relations in Industry  
 IR 82—Modern Labor Relations  
 IR 142—Conflict and Collective Bargaining  
 IR 162—Union Government and Policies  
 IR 175—The Employment Interview  
 IR 212A—Labor Education  
 IR 212B—Employee Development and  
 Training  
 Mgmt 109—Management of Administrative  
 Services

Prod 50—Production Management  
 Administrative Communication  
 Psy 125-126—Psychology of Individual  
 Differences  
 Psy 144-145—Abnormal Psychology  
 Soc 120—Social Psychology  
 Soc 146—Industrial and Occupational  
 Sociology  
 Supervision I, II, III  
 Industrial Engineering and Management  
 Motion and Time Study  
 Inventory and Production Control  
 Introduction to Operations Research  
 Corporate Standard Data I, II  
 Statistical Quality Control

## ***Evening Classes***

---

***Special Requirement:*** To qualify for the certificate award, upon completion of the core and elective requirements, a student must pass an Industrial Relations Classification and Placement Test administered by the Department of Industrial Relations.



## Management of Administrative Services Certificates

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

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

In addition to the certificates granted by the General Extension Division on completion of the prescribed programs, the student may be entitled to certificates of the Administrative Management Society. Persons interested in the latter certificates may telephone or write to Mr. Victor Sandvig, Northwestern National Bank, Minneapolis, Minnesota 55402; telephone 330-8202.

### Associate in Management of Administrative Services Certificate

(45 credits)

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

**Core Requirement (38-39 credits):**

Review of Business English; or Business Correspondence; or Comp 1; or Comm 1; or equivalent	BLaw 58—Business Law: Contracts
Econ 1-2—Principles of Economics	Mgmt 109—Management of Administrative Services
QA 5—Elements of Statistics	Math 10—College Algebra and Analytic Geometry (or equivalent)
Acct 24-25-26—Principles of Accounting	Psy 1-2—General Psychology

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

### Fellow in Management of Administrative Services Certificate

(90 credits)

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

**Core Requirement (47-53 credits):**

Review of Business English and Business Correspondence; or Comp 1-2-3; or Comm 1-2-3; or equivalent	IR 52—Systems of Industrial Relations: Labor Marketing
Econ 1-2—Principles of Economics	BLaw 58—Business Law: Contracts
QA 5—Elements of Statistics	Mgmt 109—Management of Administrative Offices
Acct 24-25-26—Principles of Accounting	

## Evening Classes

---

Math 10—College Algebra and Analytic  
Geometry (or equivalent)  
Psy 1-2—General Psychology

Comp 58—Business Reports and Letters  
(or) Communication in Management

### Group Requirements (27 credits):

Group I—At least three courses from the following (9 credits):

Ins 53—Risk Management and Insurance  
Tran 54—Fundamentals of Transportation

BFin 56—Finance Fundamentals  
Mktg 57—Principles of Marketing

Group II—At least six courses from the following (18 credits):

Acct 55C—Managerial Costs;  
(or) Acct 115A—Cost Accounting  
Acct 55D—Analysis of Financial Statements  
IR 62—Human Relations in Industry  
IR 72—Systems of Industrial Relations:  
Manpower Management  
Mgmt 70—Fundamentals of Management  
BFin 57—Financial Management

Mgmt 80—Administrative Practices  
BLaw 88—Business Law: Sales and Nego-  
tiable Instruments  
Prod 110—Systems and Procedures Analy-  
sis: Work Measurement (or equivalent)  
Psy 122-123—Vocational and Personnel  
Psychology

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

Mktg 87—Credits and Collections  
OMgt 89B—Tabulating Equipment Applied  
to Business: Laboratory  
Supervision I, II, III  
Administrative Communication  
Psy 156—Psychology of Advertising  
Accounting  
Business Finance  
Economics  
Production, Management, and Industrial Re-  
lations

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

## Secretarial Certificate

(45 credits)

The Secretarial Certificate is awarded to those who, in addition to the necessary skills and experience in typewriting and shorthand, have completed a selection of courses appropriate to a background in business administration, such as needed for qualifying for Certified Professional Secretary examinations.

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

### Core Requirement (36 to 39 credits):

Review of Business English and Business Correspondence; or Comp 58, Business Reports and Letters	BLaw 58, 88—Business Law
Econ 1-2—Principles of Economics	OMgt 79A—Administrative Secretarial Studies
Acct 24-25—Principles of Accounting	Mgmt 109—Management of Administrative Services
OMgt 36—Office Procedures	Psy 1-2—General Psychology

**Electives:** Additional courses selected from the following or other approved courses to make a minimum of 45 credits total for the certificate.

QA 5—Elements of Statistics	BLaw 78, 98—Business Law
Acct 26—Principles of Accounting	OMgt 79B—Administrative Secretarial Studies
Ins 53—Risk Management and Insurance	Common Legal Problems
Econ 67—Money and Banking	

### Engineering Science and Engineering Technician Certificates

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

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

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

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

It is recognized that many capable students would like to complete an engineering degree. Such students should plan to complete the Senior Engineering Science Certificate and apply for admission to the Institute of Technology. Third-year Upper Division degree-credit classes in civil engineering, electrical engineering, mechanical engineering, and mathematics are available for evening students. It is unlikely, however, that it will be possible to complete any degree program entirely in the evening for some time to come.

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

Entrance into the Senior Engineering Science program or any of the Senior Engineering Technician programs is made upon completion of the Basic Engineering Science Certificate. An Application for Admission to Basic Engineering Certificate program blank should be completed by the student when he begins the program so that advisers can give effective counseling. This blank is available at any General Extension Division office.

**Basic Engineering Science Certificate**

(50 credits)

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

*Students transferring credits from other institutions to this certificate program must take a minimum of 13 credits at the University of Minnesota.*

*Prerequisites:* High school graduate or equivalent; 2 years of algebra and 2 years of geometry and trigonometry.

**Core Requirement (41 credits):**

Math 21—Calculus I: Calculus and Analytic Geometry  
Math 22—Calculus II: Calculus and Analytic Geometry  
Math 23—Calculus III: Calculus and Analytic Geometry

EG 25 (or EG 4-5)—Engineering Graphics  
Phys 21-21A-22-22A—General Physics and Laboratory  
Comp 1-2-3—Freshman English (or equivalent)

*Electives:* Courses from nontechnical or biological science electives, †† to make a minimum of 50 credits.

†† Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, astronomy, botany, classics, economics, geography, geology, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology.

## Evening Classes

---

### Senior Engineering Science Certificate

(99 credits—includes 50 credits from Basic Engineering Science Certificate)

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

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

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

*Students transferring credits from other institutions to this certificate program must take a minimum of 25 credits at the University of Minnesota, including those taken for the Basic Certificate.*

*Prerequisite:* Completion of Basic Engineering Science Certificate.

#### Core Requirement (30 credits):

Math 31—Calculus IV: Calculus and Analytic Geometry

Math 32—Calculus V: Calculus, Linear Algebra, Differential Equations

Phys 23-23A—General Physics and Laboratory

Phys 50-50A—General Physics and Laboratory

GeCh 4-5—General Principles of Chemistry

#### Spread Requirement: A minimum of 6 credits from the following courses:

Math 33—Calculus VI: Vector Calculus and Differential Equations

MM 35—Statics

MM 36—Dynamics

MM 37—Deformable Body Mechanics

Phys 51—Intermediate General Physics

EE 30-31—Circuit Analysis

EE 30A-31A—Electrical Engineering Laboratory

Hydr 101—Fluid Mechanics

Hydr 104—Fluid Mechanics Laboratory

ME 99—Introduction to Engineering Analysis

*Electives:* Courses from nontechnical or biological science electives††, or mathematics, or chemistry, or physics, or Engl 85-86(IT), or additional courses from the spread requirement to make a minimum of 99 credits, including those from the Basic Certificate.

---

†† Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, astronomy, botany, classics, economics, geography, geology, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology.

## Evening Classes

---

### Senior Civil Engineering Technician Certificate

(100 credits—includes 50 credits from Basic Engineering Science Certificate)

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

This program is not a short cut to a professional degree in civil engineering. It is designed as a practical program for those students who desire to increase their skill and education in a specific field of civil engineering. Degree credit classes may be transferred to a degree program.

*Students transferring credits from other institutions to this certificate program must take a minimum of 25 credits at the University of Minnesota, including those taken for the Basic Certificate.*

**Prerequisite:** Completion of Basic Engineering Science Certificate.

**Core Requirement (29 credits):** These credits should be selected from the courses required in the second year of the civil engineering curriculum as listed below. The courses selected should be the prerequisites for the courses desired in the concentration area. Up to 9 credits of nontechnical courses can be included in this requirement.

Math 31—Calculus IV: Calculus and Analytic Geometry  
Math 32—Calculus V: Calculus, Linear Algebra, Differential Equations  
GeCh 4-5—General Principles of Chemistry  
MM 35—Statics  
MM 36—Dynamics  
MM 37—Deformable Body Mechanics

EE 30-30A—Circuit Analysis; Laboratory  
Phys 23-23A—General Physics and Laboratory  
Phys 50-50A—Intermediate General Physics and Laboratory  
Hydr 101—Fluid Mechanics  
Hydr 104—Fluid Mechanics Laboratory  
Nontechnical ††

---

†† Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, astronomy, botany, classics, economics, geography, geology, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology.



*Concentration Requirement (21 credits):* Select courses from the list below in the fields you desire. All 21 credits can be in one area.

- |   |  |
|---|--|
| CE 51—Highways and Pavements I              | CE 81—Elementary Structural Analysis       |
| CE 52—Highways and Pavements II             | CE 82—Intermediate Structural Analysis     |
| CE 53—Soil Mechanics                        | CE 83—Elementary Structural Design         |
| CE 61—Surveying Instrumentation             | CE 141—Reinforced and Prestressed Concrete |
| CE 62—Mapping                               | CE 142A—Advanced Structural Design         |
| CE 63—Land Survey Systems                   | CE 143A—Shell Structures                   |
| CE 64—Engineering Surveys                   | Hydr 101—Fluid Mechanics                   |
| CE 111—Land Surveying                       | CE 160A—Applied Hydraulics                 |
| CE 112—Aerial Surveying and Photogrammetry  | CE 161—Hydrology                           |
| CE 113—Land Planning and Subdivision Design |  |

## Evening Classes

---

### Senior Electrical Engineering Technician Certificate

(100 credits—includes 50 credits from Basic Engineering Science Certificate)

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

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

*Students transferring credits from other institutions to this certificate program must take a minimum of 25 credits at the University of Minnesota, including those taken for the Basic Certificate.*

**Prerequisite:** Completion of Basic Engineering Science Certificate.

**Core Requirement (47 credits):**

Math 31—Calculus IV: Calculus and Analytic Geometry	Elements of Electric Circuits
Math 32—Calculus V: Calculus, Linear Algebra, Differential Equations	Elements of Electronics I-II-III
Math 33—Calculus VI: Calculus, Linear Algebra, Differential Equations	Engl 85—Advanced Technical Communication
MM 36—Dynamics	Phys 23-23A—General Physics and Laboratory

**Electives:** Courses from nontechnical or biological science electives†† to make a minimum of 100 credits, including those from the Basic Certificate.

---

†† Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, astronomy, botany, classics, economics, geography, geology, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology.

**Senior Industrial Engineering Technician Certificate**

(99 credits—includes 50 credits from Basic Engineering Science Certificate)

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

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

The requirements for the Senior Industrial Engineering Technician Certificate program are listed below. No substitutions are permitted in this program.

*Students transferring credits from other institutions to this certificate program must take a minimum of 25 credits at the University of Minnesota, including those taken for the Basic Certificate.*

**Prerequisite:** Completion of Basic Engineering Science Certificate.

**Core Requirement (29 credits):**

Math 31—Calculus IV: Calculus and Analytic Geometry  
Math 32—Calculus V: Calculus, Linear Algebra, Differential Equations  
MM 35—Statics  
MM 37—Deformable Body Mechanics  
Engl 85—Advanced Technical Communication

Industrial Engineering and Management  
ME 99—Introduction to Engineering Analysis;  
(or) Math 90—Elementary Engineering Statistics

**Concentration Requirement (20 credits):** Select at least four courses from the following industrial engineering courses:

Motion and Time Study  
Introduction to Reliability  
Inventory and Production Control  
Plastics Technology  
Corporate Standard Data I, II

Introduction to Operations Research  
Plant Layout and Materials Handling  
Statistical Quality Control  
Advanced Statistical Quality Control

## Evening Classes

---

### Senior Mechanical Engineering Technician Certificate

(99 credits—includes 50 credits from Basic Engineering Science Certificate)

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

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

*Students transferring credits from other institutions to this certificate program must take a minimum of 25 credits at the University of Minnesota, including those taken for the Basic Certificate.*

**Prerequisite:** Completion of Basic Engineering Science Certificate.

#### Core Requirement (42 credits):

Math 31—Calculus IV: Calculus and Analytic Geometry	MM 35—Statics
Math 32—Calculus V: Calculus, Linear Algebra, Differential Equations	MM 37—Deformable Body Mechanics
ME 21A—Mechanisms: Kinematic Analysis	Engl 85—Advanced Technical Communication
ME 22A—Mechanisms: Dynamic Analysis	Phys 23-23A—General Physics and Laboratory
ME 30A-31A—Thermodynamics	

**Electives:** Additional courses may be selected from the following suggested areas or courses to make a minimum of 99 credits, including those from the Basic Certificate.

Industrial Engineering	Supervision I, II, III
Mechanical Engineering	Econ 1-2—Principles of Economics
Electrical Engineering	Met 56—Physical Metallurgy
Mathematics	MM 36—Dynamics
Psy 1-2	

### III. UNIVERSITY DEGREE PROGRAMS

It is possible through evening classes (sometimes in combination with correspondence study) to meet all of the requirements for the following regular University degrees: the associate in liberal arts (A.L.A.), the bachelor of arts (B.A.) in certain major fields, and the bachelor of science in business (B.S.B.).

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

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

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

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

Bulletins of the various colleges of the University can be obtained by telephoning 373-2153, and asking for the Service Bureau.

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

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

Requirements for the A.L.A. degree are based on the Course Requirements for Admission to the Upper Division of the Arts College (see page 55). From that list, these distribution requirements must be met: English (A), and at least three of the other four: Foreign Language (B), Social Science (C), Natural Science (D), and Humanities (E). The student must complete 90 credits, at least 45 of which must be earned following admission to the College of Liberal Arts. This constitutes the college residence requirement. Any or all of the first 45 credits may also be taken through correspondence courses.

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

## Bachelor of Arts (B.A.)

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

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

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

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

- A. Freshman English:** Engl A-B-C; or Comp 1-2-3; or Comm 1-2-3; or equivalent  
**B. Foreign Language:** From 0-15 credits according to the following schedule:

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

## Evening Classes

---

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

1. Anthropology
2. Economics (except 40)
3. Business administration (only Mgmt 1 and QA 5 accepted)
4. Geography
5. History
6. Political science
7. Psychology
8. Sociology
9. Social science (interdisciplinary programs)

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

1. Biological sciences: botany, psychology, zoology, general biology
2. Physical sciences: astronomy, chemistry, earth sciences (geology), physics, Physical World
3. Mathematics (except 1, 2, 20, 21)
4. Orientation in the natural sciences (a student presenting credits in only NSci 1-2 must take his additional work in other than group D2)

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

1. Art
2. English literature
3. Classics
4. Foreign literature
5. History
6. Humanities
7. Mathematics (except 1, 5, T, 20, 21)
8. Music
9. Philosophy
10. Speech and theatre arts (except 6, 6A, 9, 39)

**F. Course in Health:** PubH 2 or 3 or 50 or equivalent.

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

Students should read the *Bulletin of the College of Liberal Arts* for additional notes on these requirements. The requirements are being significantly changed beginning in 1967 or 1968. The new requirements are outlined in the college bulletin. A student may graduate under the requirements in effect at the time he is admitted to the College of Liberal Arts.

---

†† Introductory natural science courses which count toward the laboratory requirement are Biol 1-2; GeCh 4-5, 24-25; Geo 1-2; NSci 4-5-6; Phys 1-2-3 with 1A-2A-3A, 4-5-6, 7-8-9, 13-13A, 21-21A, 22-22A; Psy 1-2 with 4-5. Nonlaboratory courses include Ast 11; Biol 1A-2A; Bot 10, 12, 14; Math T, 10, 40; NSci 1-2-3; Phys 1-2-3; Psy 1-2.



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

The bachelor of science in business degree from the School of Business Administration may be earned through evening classes. A limited portion may also be met through correspondence courses, if desired. A student wishing to complete the B.S.B. degree through Extension should talk with a member of the Extension Committee on Student Scholastic Standing as soon as he has made this decision.

The bachelor of science in economics (B.S.E.) degree has been discontinued. Students officially admitted to the B.S.E. program prior to the fall quarter, 1966, will be permitted to complete the requirements for the degree.

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

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

### *Prebusiness Course Requirements in the Arts College for the B.S.B. Degree*

1. **Business and Economics Courses** (15 credits††): Acct 24-25-26, Principles of Accounting (9); and Econ 1-2, Principles of Economics (6).
2. **Freshman English** (9-15 credits, satisfaction of Arts College Freshman English requirement): Engl A-B-C, Freshman Composition and Literature (15); or Comp 1-2-3, Freshman Composition (12); or Comm 1-2-3, Communication (12); or exemption from the requirement.
3. **Mathematics** (10 or more credits††††): Math 10 (or Math 15), College Algebra (5); and Math 40, Calculus (5)††. (Math Z, Preparatory Mathematics, may be prerequisite for Math 10 or 15.)
4. **Social Sciences** (15 credits††): Psychology 1-2 (6)††; and Sociology 1 (3)††; and 6 additional credits from any of the following: anthropology, geography, history§§, political science, psychology, and sociology (except Soc 45, Social Statistics, which is not acceptable in fulfillment of this requirement).

†† Prebusiness requirements for students admitted *prior* to fall quarter, 1967, vary from those stated above as follows (numbers refer to sections of the requirements):

1. QA 5, Elements of Statistics (4), is required in addition to Acct 24-25-26 and Econ 1-2.
3. Math 40 (or 42) is not required.
4. Psy 1-2 and Soc 1 are not required, but students must present 15 credits in two or more of the departments listed (at least 5¶¶ credits must be taken in each department used to satisfy the requirement).

†† This is a "proficiency level" requirement, rather than a specific credit requirement. The student must reach the level of Math 40 or equivalent.

§§ History may be used to satisfy the requirement in only one area.

## Evening Classes

---

5. **Natural Sciences** (8-10 credits): In a single natural science to be selected from botany, chemistry, geology, physics, zoology, or NSci 4-5. All courses must include laboratory. This requirement can be met currently in the Arts College only with the following courses: Biol 1-2, General Biology (10); GeCh 4-5, General Principles of Chemistry (10), or higher numbered courses in chemistry; Geo 1-2, General Geology (8); Phys 1 with 1A and either 2 with 2A or 3 with 3A, Physical Science (8); NSci 4-5, Physical World (8).
6. **Humanistic Courses** (10 credits): From at least two of the following categories (at least 5 credits<sup>¶¶</sup> must be taken in each category used to satisfy this requirement): art, English literature (which may include 6 credits of literature from Engl A-B-C), foreign language or foreign literature, history<sup>§§</sup>, humanities, music, philosophy, speech and theater arts. This entire requirement may be met with 10 credits of foreign language.
7. Electives to complete the approximately 90 credits required for admission.
8. Students planning to enter the B.S.B. accounting program are required to complete Comp 27, Advanced Writing (3) in addition to the above.

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

1. **Business and Economics Courses:** Acct 24-25-26, Principles of Accounting; Econ 1-2, Principles of Economics. (All courses are 3 credits each in Extension.)
2. **Freshman English:** Engl A-B-C; or Comp 1-2-3; or Comm 1-2-3; or equivalent.
3. **Mathematics:** Math 21, 22, 23, 31, 32, 33.
4. **Social Sciences:** Psy 1 and 2, Soc 1.
5. **Other specific requirements:**  
EG 25, Engineering Graphics (or equivalent)  
Phys 21-21A, 22-22A, 23-23A, 50-50A, General Physics  
GeCh 14-15 (4-5), OrCh 16 or GeCh 6 or Phys 51, Chemistry/Physics  
MM 35, Statics

### *Degree Requirements*

Other prebusiness programs are found in the *Bulletin of the School of Business Administration*, a copy of which is essential for the B.S.B. degree candidate.

A copy of *Procedures for Obtaining the Bachelor of Science in Business Degree Through Extension* should be obtained from the Extension office.

Specific degree requirements are listed in the *Bulletin of the School of Business Administration*.

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

---

§§ History may be used to satisfy the requirement in only one area.

¶¶ 4½ transfer credits will satisfy the 5-credit requirement.

¶¶ Prebusiness requirements for students admitted prior to fall quarter, 1967, vary from those stated above as follows (numbers refer to sections of the requirements):

1. QA 5, Elements of Statistics (4), is required in addition to Acct 24-25-26 and Econ 1-2.
2. Psy 1-2 and Soc 1 are not required.

## **Master's Degree**

An evening program leading to the master of business administration degree is offered under the auspices of the Graduate School of Business Administration and the Graduate School of the University. Inquiries concerning this program should be directed to the Associate Dean, Programs and Administration, School of Business Administration, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-3701. (See page 155.)

Requests for information about evening graduate work in electrical engineering should be addressed to Department of Electrical Engineering, Institute of Technology, University of Minnesota, Minneapolis, Minnesota 55455.

See Graduate Credit, page 14.

## IV. COURSE OFFERINGS

### AGRICULTURE, HOME ECONOMICS, AND VETERINARY MEDICINE

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

#### HORTICULTURAL SCIENCE

*Robert A. Phillips, Assistant Professor of Horticultural Science*

**Hort 10. Home Floriculture and Gardening.** 3 degree credits. \$33 plus \$1 materials fee.

A practical course in the science of house plant growing, propagation and care of plants; and special emphasis on autumn gardening activities; growing bulbs in the garden and in pots for the home in winter. Student projects in growing plants from cuttings; and growing and forcing bulbs for winter house plants. Although this course is specially designed for beginning gardeners, it is comprehensive enough to interest the advanced amateurs as well as professional gardeners. An opportunity for gardeners to participate actively in plant culture throughout the year. (No prerequisite)

##### **Fall Quarter**

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

**Hort 51. Garden Flowers and Home Gardening.** 3 degree credits. \$33 plus \$1 materials fee.

A complete practical course in home gardening for the experienced gardener as well as the beginner. All the practical horticultural aspects of plant growing and garden and home grounds care are covered in lecture, demonstrations, and illustrations; student projects in propagating plants in greenhouses, hot beds, and home facilities. Special emphasis on pruning, fertilizing; weed, insect, and disease control. Also a survey of all the plants recommended for Minnesota gardens and yards. (No prerequisite)

##### **Special Term—February 14 to May 2**

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

---

Symbols explained on page 15.

## Course Offerings—Agriculture, Home Economics, Veterinary Medicine

---

**Hort 60. Home Landscaping Planning.** 3 degree credits. \$33 plus \$1 materials fee.

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

### *Fall Quarter*

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

**Hort 61. Home Landscape Planting.** 3 degree credits. \$33 plus \$1 materials fee.

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

### *Special Term—February 16 to April 27*

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

## HOME ECONOMICS

*Lura M. Morse, Professor of Home Economics*

**HE 172. Current Developments in Nutrition.** 3 degree credits. \$33.

Fundamental facts and techniques for solving current nutrition problems. (Prerequisite: HE 31, 40, BioC 1A, Phsl 51 or §)

### *Spring Semester*

W 6:20-8:00, McNeal 201, St. Paul Cam-  
pus, Morse

## VETERINARY MEDICINE

**VMC 1. Care, Management, Showing, and Diseases of Horses.** 3 degree credits.  
\$33.

This course will consist of lectures and demonstrations by faculty members of the College of Veterinary Medicine and qualified well-known authorities on horses and horsemanship from the Metropolitan area. (No prerequisite)

### *Special Term—January 5 to April 27*

Th 7:30-9:30, Veterinary Clinic Building  
125, St. Paul Campus, Mather (co-  
ordinator)

---

Symbols explained on page 15.

# ARTS AND SCIENCES

## ANTHROPOLOGY

*Evelyn P. Hatcher, Lecturer in Anthropology*

*Shirley Holt, Lecturer in Anthropology*

*Jennette Jones, Lecturer in Anthropology*

**Anth 1A. Introduction to Anthropology: Prehistoric Man and Culture.** 3 degree credits. \$33.

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

*Fall Semester*

Th 6:20-8:00, Ford 155, Hatcher

*Spring Semester*

W 6:20-8:00, Ford 155, Holt

**Anth 2A. Introduction to Anthropology: Cultural Anthropology.** 3 degree credits. \$33.

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

*Fall Semester*

W 6:20-8:00, Ford 155, Holt

*Spring Semester*

T 8:15-9:55, Ford 155, Jones

**Anth 42. Introduction to World Ethnography.** 3 degree credits. \$33.

Survey of the major tribal and folk cultures of the world. (No prerequisite)

*Spring Semester*

Th 6:20-8:00, Ford 285, Hatcher

**Anth 80. The American Indian.** 3 degree credits. \$33.

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

*Fall Semester*

W 8:15-9:55, Ford 285

**Anth 90. Archaeology of North America.** 3 degree credits. \$33.

A survey of the prehistoric archaeology of North America north of Mexico. Emphasis will be placed on analysis of the techniques, methods, and goals of prehistoric archaeology. (No prerequisite)

*Spring Semester*

W 8:15-9:55, Ford 285

---

Symbols explained on page 15.

**Anth 100. Principles of Cultural Anthropology.** 3 degree credits, §2A. \$33.

Intensive introduction to the elements of cultural anthropology. Analysis of primitive societies with respect to range and variability of human behavior. Principles of culture dynamics. (No prerequisite. May not be taken for graduate credit)

*Fall Semester*

T 8:15-9:55, Ford 285, Jones

**Anth 150. The Contact of Cultures.** 3 degree credits. \$33.

The processes of acculturation. Impact of civilization on native cultures. (Prerequisite: 2A or 100. May not be taken for graduate credit)

*Spring Semester*

Th 8:15-9:55, Ford 285, Hatcher

**Anth 161. Primitive Religion.** 3 degree credits. \$33.

Beliefs and practices in primitive religious systems, the roles of sacred, the supernatural, and beliefs in continuance of life after death, and the role of the dead in the life-ways of primitive peoples. (No prerequisite. May not be taken for graduate credit)

*Spring Semester*

T 6:20-8:00, Ford 285, Jones

**Anth 165. Culture and Personality.** 3 degree credits. \$33.

Role of culture in the formation of personality. Problems of individual adjustments to the demands of culture. Psychological approach to culture. (Prerequisite: 2A or 100 or  $\Delta$  [waived for majors in public health, nursing, psychology, sociology, and social work]. May not be taken for graduate credit)

*Fall Semester*

T 6:20-8:00, Ford 285, Jones

**Anth 166. Primitive Art.** 3 degree credits. \$33.

Technique, style, and symbolism in the arts of primitive peoples. Art and the artist in relation to primitive culture and society. (No prerequisite. May not be taken for graduate credit)

*Fall Semester*

Th 8:15-9:55, Ford 285, Hatcher

## ART

### Art Education

(See page 182)

### General Arts

(See page 93)

---

Symbols explained on page 15.

## Evening Classes

---

### History of Art

*Norman W. Canedy, Assistant Professor of Art*

*Sheila McNally, Assistant Professor of Art*

*Robert Poor, Assistant Professor of Art*

*Herbert Scherer, Lecturer in Art*

*Hylton Thomas, Professor of Art*

*Donald R. Torbert, Professor of Art*

*Melvin Waldfoegel, Associate Professor of Art*

#### **Art 1. Introduction to Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

A comprehensive survey of the main problems of meaning, form, and style in the visual arts (architecture, sculpture, painting, the graphic arts, and photography) of the various cultures and periods. The course attempts to enable students to interpret works of art critically by relating them to their geographic, historical, and social origins, and by placing them within the proper phases in the evolution of art. The course touches on the main periods of art history and is designed to familiarize students with the critical and technical vocabulary used in the literature of art. (No prerequisite. Repeated winter and spring quarters. For Upper Division credit, register in Art 50)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
M	6:20-8:50, MacPhail Center 404, Scherer	T 6:20-8:50, Architecture 25, Torbert	M 6:20-8:50, MacPhail Center 404, Scherer
T	6:20-8:50, Architecture 25, Torbert		T 6:20-8:50, Architecture 25, Torbert

#### **Art 2. Survey of the History of Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

A study of the expression of Western civilization in architecture, sculpture, and painting; including Egypt, Mesopotamia, Crete, Iran, Greece, Rome; and the Middle Ages, to the mid-12th century. (No prerequisite. For Upper Division credit, register in Art 56)

##### **Fall Quarter**

M 6:20-8:50, Jones 207B, McNally

#### **Art 3. Survey of the History of Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

A study of the expression in architecture, sculpture, and painting from the 12th to the 17th century, including the Gothic period, the Northern Renaissance, the Italian Renaissance, the High Renaissance, and the Mannerist Period. (No prerequisite. For Upper Division credit, register in Art 57)

##### **Winter Quarter**

T 6:20-8:50, Jones 207B, McNally

#### **Art 4. Survey of the History of Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

A study of the expression in architecture, sculpture, and painting from the 17th century to the present, including the baroque and rococo periods, neoclassicism, the 19th cen-

---

Symbols explained on page 15.



## Course Offerings—Arts and Sciences

ture, and the movements of Modern Art. (No prerequisite. For Upper Division credit, register in Art 58)

### Winter Quarter

M 6:20-8:50, Jones 207B, Thomas

**Art 5. Survey of the History of Modern Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

Modern architecture, sculpture and painting, 19th and 20th centuries. (No prerequisite. For Upper Division credit, register in Art 60)

### Spring Quarter

M 6:20-8:50, Jones 207B, Waldfogel

**Art 47. Introduction to Far Eastern Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

An examination of selected major themes within the broad context of Indian and Far Eastern Art. The course provides an introduction to the arts of the Eastern world but it is not an inclusive historical survey. (No prerequisite. Repeated spring quarter)

### Fall Quarter

W 6:20-8:50, Jones 207B, Poor

### Spring Quarter

W 6:20-8:50, Jones 207B, Poor

**Art 50. Introduction to Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

See course description as listed under Art 1. (Prerequisite: Limited to those students eligible for Upper Division credit)

### Fall Quarter

M 6:00-8:30, MacPhail  
Center 404

### Winter Quarter

T 6:20-8:50, Architecture  
25, Torbert

### Spring Quarter

M 6:00-8:30, MacPhail  
Center 404

T 6:20-8:50, Architecture  
25, Torbert

T 6:20-8:50, Architecture  
25, Torbert

**Art 56. Survey of the History of Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

See course description as listed under Art 2. (Prerequisite: Limited to those students eligible for Upper Division credit)

### Fall Quarter

M 6:20-8:50, Jones 207B, McNally

**Art 57. Survey of the History of Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

See course description as listed under Art 3. (Prerequisite: Limited to those students eligible for Upper Division credit)

### Winter Quarter

T 6:20-8:50, Jones 207B, McNally

Symbols explained on page 15.

## Evening Classes

---

**Art 58. Survey of the History of Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

See course description as listed under Art 4. (Prerequisite: Limited to those students eligible for Upper Division credit)

**Winter Quarter**

M 6:20-8:50, Jones 207B, Thomas

**Art 60. Survey of the History of Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

See course description as listed under Art 5. (Prerequisite: Limited to those students eligible for Upper Division credit)

**Spring Quarter**

M 6:20-8:50, Jones 207B, Waldfogel

**Art 102. Roman Art.** 3 degree credits. \$33 plus \$2 laboratory fee.

Etruscan and Greco-Roman beginnings, Roman Republican and Imperial developments in architecture, sculpture, and painting. (No prerequisite. Qualified students may register for graduate credit)

**Spring Quarter**

W 6:20-8:50, Jones 207A, McNally

**Art 106. Italian Art of the Fourteenth Century.** 3 degree credits. \$33 plus \$2 laboratory fee.

Proto-Renaissance sculpture and painting and alternative trends. Painting after the Black Death. The International Style in painting and sculpture. (No prerequisite. Qualified students may register for graduate credit)

**Fall Quarter**

T 6:20-8:50, Jones 207A, Canedy

**Art 107. Early Fifteenth-Century Art in Italy and Northern Europe.** 3 degree credits. \$33 plus \$2 laboratory fee.

Early Italian Renaissance architecture, sculpture, and painting; and Early Netherlandish painting. (No prerequisite. Qualified students may register for graduate credit)

**Winter Quarter**

T 6:20-8:50, Jones 207A, Canedy

**Art 108. Late Fifteenth-Century Art in Italy and Northern Europe.** 3 degree credits. \$33 plus \$2 laboratory fee.

Painting, sculpture, and architecture in central and northern Italy; and northern European painting. (No prerequisite. Qualified students may register for graduate credit)

**Spring Quarter**

T 6:20-8:50, Jones 207A, Canedy

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

---

### Art 111. Art of China. 3 degree credits. \$33 plus \$2 laboratory fee.

Development of painting, sculpture, and the minor arts in China from earliest times to the present. (No prerequisite. Qualified students may register for graduate credit)

#### Winter Quarter

W 6:20-8:50, Jones 207B, Poor

### Art 126. Eighteenth-Century Art in Italy. 3 degree credits. \$33 plus \$2 laboratory fee.

Late baroque and classicizing trends in architecture. Neoclassic architecture. Roman, Neopolitan, and North Italian sculpture. Canova. Painting in Rome, Naples, Bologna, Genoa, and Venice. Prints. (No prerequisite. Qualified students may register for graduate credit)

#### Fall Quarter

M 6:20-8:50, Jones 207A, Thomas

### Art 128. Eighteenth-Century Art in England and Germany. 3 degree credits. \$33 plus \$2 laboratory fee.

The Palladian Revival in architecture. Robert Adam. The English portrait: Reynolds, Gainsborough. Hogarth. English landscape painting. German and Austrian late baroque and rococo architecture, sculpture, and painting. (No prerequisite. Qualified students may register for graduate credit)

#### Spring Quarter

M 6:20-8:50, Jones 207A, Thomas

### Art 157. Nineteenth-Century French Painting, 1860-1900. 3 degree credits. \$33 plus \$2 laboratory fee.

The realism of Manet and Degas, the impressionist idea and its evolution, the multiple styles of the postimpressionists, and aestheticism, symbolism, and mysticism of the 1890's. (No prerequisite. Qualified students may register for graduate credit)

#### Winter Quarter

M 6:20-8:50, Jones 207A, Waldvogel

### Art 59. Summer Travel Course in European Art. (Summer 1967). 5 degree credits. Fee (to be announced) includes travel.

Course conducted by Department of Art under auspices of Summer Session. Covers main phases of ancient, medieval, Renaissance, baroque, and modern art. Lectures, guided visits, and discussions at important cultural centers, museums, and cathedrals. Among important places usually visited are Athens, the Greek Islands, Delphi, Corinth, Mycenae, Rome, Assisi, Siena, Florence, Ravenna, Venice, Salzburg, Innsbruck, Munich, Amsterdam, London, Cambridge, Paris, Chartres, Versailles. (Itinerary is established the autumn prior to course and is subject to change. Approximate dates, June 26 to August 11, 1967, encompass 6 weeks. Registration should be made early and is done through Summer Session. Qualified students may register for graduate credit with \$. For information, write Donald R. Torbert, Department of Art, University of Minnesota, Minneapolis, Minnesota 55455.)

Symbols explained on page 15.

## Evening Classes

---

### Studio Art

Robert Burg, *Instructor in Art*  
Peter Busa, *Associate Professor of Art*  
F. H. Chaffey, *Visiting Lecturer in Art*  
Benjamin A. Gingold, Jr., *Lecturer in Art*  
Michael J. Hopkins, *Color Consultant*  
John House, *Visiting Professor of Art*  
Milton Howard, *Instructor in Art*  
Robert Johnson, *Instructor in Art*  
Leah M. Lewis, *Professor of Interior Design*  
Jerome Liebling, *Professor of Art*  
Malcolm Myers, *Professor of Art*  
Inga Platou, *Lecturer-Medical Illustrator*  
Zigmund Friede, *Instructor in Art*  
Richard Randell, *Instructor in Art*  
Herman Rowan, *Associate Professor of Art*  
Ann Vadnais, *Instructor in Art*  
Mario Volpe, *Instructor in Art*  
Robert Wilcox, *Instructor in Art*

All studio drawing and painting classes will meet for a 2½-hour period. Those who wish to receive degree credit in these courses will be expected to do some work outside of class—consult instructor. Unless otherwise indicated, students may register for any unit number of these sequences in any semester, provided units are satisfactorily completed in the order listed or instructor's consent is obtained for registration in an advanced unit on the basis of background and ability. Advanced standing credit will be granted in special cases for work done elsewhere—consult chairman of Art Department.

**\*Art 10. Basic Photography I.** 3 degree credits. \$33 plus \$10 laboratory fee.

A course for beginners with little or no experience in photography. The course will include lectures and demonstrations dealing with basic photographic equipment and materials, general camera and darkroom techniques, history, and criticism. There will be some laboratory work in the use of the camera, in contact printing, and enlarging. This class is of interest to people who need a working knowledge of photography in professions other than photography and to those who want to know how to use a camera efficiently. (No prerequisite. Limited to 20 students. Students must furnish own cameras. Repeated spring semester)

*Fall Semester*

M 6:20-8:50, West Bank Art Building  
T 6:20-8:50, West Bank Art Building,  
Wilcox

*Spring Semester*

M 6:20-8:50, West Bank Art Building

**\*Art 11. Basic Photography II.** 3 degree credits. \$33 plus \$10 laboratory fee.

A course for amateurs with some experience and familiarity with special photographic equipment and techniques. Work will include some assigned projects, lectures, and demonstrations, but special attention will be given to individual interests and requirements.

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

(Prerequisite: Art 10 or equivalent with §. Limited to 20 students. Students must furnish own cameras)

### Spring Semester

T 6:20-8:50, West Bank Art Building,  
Wilcox

Phot. Color Photography I. (See page 125).

Phot. Color Photography II. (See page 125).

\*Art 20. Basic Drawing. 2 degree credits. \$33 plus \$3 laboratory fee.

An introduction to studio work; exploration of contemporary and traditional methods. Work from nature, various drawing and painting mediums. (No prerequisite. Limited to 25 students. Repeated spring semester)

### Fall Semester

M 6:20-8:50, West Bank Art Building,  
Volpe  
T 6:20-8:50, West Bank Art Building,  
Howard  
W 6:20-8:50, West Bank Art Building,  
Burg  
Th 6:20-8:50, West Bank Art Building,  
Johnson

### Spring Semester

M 6:20-8:50, West Bank Art Building,  
Volpe  
T 6:20-8:50, West Bank Art Building,  
Howard  
W 6:20-8:50, West Bank Art Building,  
Burg  
Th 6:20-8:50, West Bank Art Building,  
Johnson

\*Art 23. Drawing and Painting. 2 degree credits. \$33 plus \$3 laboratory fee.

Work from life and nature, introduction to color and pictorial structure. (Prerequisite: 20. Limited to 25 students. Repeated spring semester)

### Fall Semester

T 7:00-9:30, West Bank Art Building,  
Priede  
Th 6:20-8:50, West Bank Art Building,  
Chaffey

### Spring Semester

T 7:00-9:30, West Bank Art Building,  
Priede  
Th 6:20-8:50, West Bank Art Building,  
Chaffey

Art 25. Drawing and Color. 2 degree credits. \$33 plus \$5 laboratory fee.

Introduction to color and pictorial organization. This will permit students to have more adequate training (Art 20, 23, 25) in basic techniques preparatory to Upper Division painting and printmaking. (Prerequisite: 23. Limited to 25 students. Repeated spring semester)

### Fall Semester

W 6:20-8:50, West Bank Art Building

### Spring Semester

W 6:20-8:50, West Bank Art Building

\*Art 32. Elements of Printmaking. 3 degree credits. \$33 plus \$3 laboratory fee.

Foundation course designed to familiarize the student with the mediums of printmaking in general. Problems in engraving, etching, and other techniques employed in working on metal plate, as well as lithography, woodcuts, and combined processes. (Pre-

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

requisite: 23 or §. Meets concurrently with 33 and 90. Limited to 25 students. Repeated spring semester)

*Fall Semester*

T 6:20-8:50, West Bank Art Building,  
Myers

*Spring Semester*

T 6:20-8:50, West Bank Art Building,  
Myers

\*Art 33. **Printmaking.** 3 degree credits. \$33 plus \$3 laboratory fee.

A continuation of Art 32 with more emphasis on the technical and aesthetic problems involved in the execution of prints. Lectures and demonstrations given. (Prerequisite: 32. Meets concurrently with 32 and 90. Limited to 25 students. Repeated spring semester)

*Fall Semester*

T 6:20-8:50, West Bank Art Building,  
Myers

*Spring Semester*

T 6:20-8:50, West Bank Art Building,  
Myers

\*Art 40. **Basic Sculpture I.** 2 degree credits. \$33 plus \$7 laboratory fee.

Study of structure in nature. Direct construction, casting and carving in various mediums. (No prerequisite. Meets concurrently with 41 in spring semester. Limited to 25 students. Repeated spring semester)

*Fall Semester*

W 6:20-8:50, Holman 154, House

*Spring Semester*

W 6:20-8:50, Holman 154, House

\*Art 41. **Basic Sculpture II.** 2 degree credits. \$33 plus \$7 laboratory fee.

Integrates basic principles examined in Art 40. Natural form is studied for sculptural possibilities. A more imaginative approach to the study of nature is encouraged. In addition to clay, direct plaster construction is the principal medium. Drawing from life precedes each problem. (Prerequisite: 40 or §. Meets concurrently with 40. Limited to 25 students)

*Spring Semester*

W 6:20-8:50, Holman 154, House

\*Art 45. **Ceramic Processes.** 2 degree credits. \$33 plus \$5 laboratory fee.

Introduction to building pottery by hand and forming on the potter's wheel. Experiments with decorative techniques on wet clay and on bisque fired pottery. Primarily concerned with pottery as a creative expression but includes technical considerations of clays, glazes, and kilns. (No prerequisite. Thursday section meets concurrently with 94. Limited to 22 students. Repeated spring semester)

*Fall Semester*

T 6:20-8:50, Holman 134  
Th 6:20-8:50, Holman 134

*Spring Semester*

T 6:20-8:50, Holman 134  
Th 6:20-8:50, Holman 134

\*Art 51-54-55. **Life Drawing.** 2 degree credits, \$33 plus \$6 laboratory fee.

Portraiture and life drawing from the model, still life, and nature. Principles of anatomy. (Prerequisite: 23 or § for 51; 51 or § for 54; 54 or § for 55. Limited to 25 students. Repeated spring semester)

*Fall Semester*

W 6:20-8:50, West Bank Art Building,  
Busa

*Spring Semester*

T 6:20-8:50, West Bank Art Building  
W 6:20-8:50, West Bank Art Building,  
Busa

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

### \*Art 60B-61B-62B. Water Color. 2 degree credits. \$33 plus \$3 laboratory fee.

Introduction to transparent water color, gouache, casein, and tempera. General course introducing the student to a variety of drawing and painting mediums. Figure, still life, landscape, and abstract design. (Prerequisite: 20 or 23 or # for 60B; 60B or # for 61B; 61B or # for 62B. Limited to 25 students. Repeated spring semester)

#### *Fall Semester*

M 6:20-8:50, West Bank Art Building,  
Myers

#### *Spring Semester*

M 6:20-8:50, West Bank Art Building,  
Myers

### Art 65. Commercial Design. 3 degree credits. \$33 plus \$2 laboratory fee.

Commercial art, offered as part of minor in art. Commercial art problems in design and drawing emphasizing the application of design principles. (No prerequisite. Meets concurrently with Art 73. Repeated spring semester)

#### *Fall Semester*

Th 6:20-8:50, West Bank Art Building

#### *Spring Semester*

Th 6:20-8:50, West Bank Art Building

### \*Art 70-71-72. Oil Painting. 3 degree credits. \$33 plus \$5 laboratory fee.

Introduction to medium of oil; individual projects and instruction. (Prerequisite: 54 or # for 70; 70 or # for 71; 71 or # for 72. Meets concurrently with 70B. Limited to 25 students. Repeated spring semester)

#### *Fall Semester*

M 6:20-8:50, West Bank Art Building,  
Busa

#### *Spring Semester*

M 6:20-8:50, West Bank Art Building,  
Busa

### \*Art 70B-71B-72B. Oil Painting. 3 degree credits. \$33 plus \$5 laboratory fee.

Oil painting for general students. (Prerequisite: 20 or 23 for 70B; 70B for 71B; 71B for 72B. Meets concurrently with 70. Limited to 25 students. Repeated spring semester)

#### *Fall Semester*

M 6:20-8:50, West Bank Art Building,  
Busa

#### *Spring Semester*

M 6:20-8:50, West Bank Art Building,  
Busa

### Art 73. Presentation Techniques. 3 degree credits. \$33 plus \$2 laboratory fee.

The visual means of communicating ideas in the fields of exhibition techniques, illustration, and advertising. Investigation of the characteristics and the creative use of various mediums. (No prerequisite. Meets concurrently with Art 65. Repeated spring semester)

#### *Fall Semester*

Th 6:20-8:50, West Bank Art Building

#### *Spring Semester*

Th 6:20-8:50, West Bank Art Building

*Your attention is called to the Interior Design Certificate Program, see page 32.*

### \*Art 83A. Interior Design I. 3 degree credits. \$33 plus \$1 laboratory fee.

Trends in resources for both residential and commercial use are studied. Basic design principles are applied to projects done by students. Traditional styles of furniture are studied, along with contemporary. The subject matter includes floors and floor coverings, walls and

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

wall coverings, cabinet woods and their finishes, furniture selection and arrangement, and the creation of a focal point in a room lacking a logical architectural reason. In six of the meetings part of the class time is used to evaluate and assist students in the preliminary presentation of their projects. Displays of actual materials are arranged for the subject matter under consideration. Slides are used to advantage. There are demonstrations on how to build a color scheme, enabling the student to see the importance of texture as well as color harmony. (No prerequisite. Each section limited to 50 students, accepted in order of registration. Repeated spring semester)

### Fall Semester

M 6:20-8:00, Johnston 113, Lewis  
T 6:20-8:00, Johnston 113  
Th 6:20-8:00, Johnston 113

### Spring Semester

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

### Art 84A. Interior Design II. 3 degree credits. \$33 plus \$1 laboratory fee.

The emphasis is on the study of decorative fabrics. Texture, design, and fiber content as well as historical background are considered. This study must be kept updated. Displays of current fabrics and new wall coverings supplement the subject matter. Students continue to learn more of the leading resources, also to recognize the work of designers. Major accessories including the use of fine arts are considered. The best selection of lamps and hardware, and how to display collections and add touches without which the interior lacks personality. Window treatment and how to estimate yardage are practical aspects of the course. More about color schemes develops as a natural part of the above studies. In a time of rapid expansion in the population size it is necessary to all working in interior design and supporting fields to meet a challenging responsibility. One field trip and talks from practicing interior designers and add interest. (Prerequisite: 83A)

### Spring Semester

M 6:20-8:00, Johnston 113, Lewis  
T 6:20-8:00, Johnston 113

### \*Art 90-91-92. Advanced Printmaking. 3 degree credits. \$33 plus \$3 laboratory fee.

A print class for students who have had experience in drawing, composition. All techniques of fine printing will be taught and color printing will be demonstrated in the area of etching, lithography, and woodcuts. (Prerequisite: 32 or 33. Meets concurrently with 32 and 33. Limited to 25 students. Repeated spring semester)

### Fall Semester

T 6:20-8:50, West Bank Art Building,  
Myers

### Spring Semester

T 6:20-8:50, West Bank Art Building,  
Myers

### \*Art 93-94-95. Ceramic Design. 2 degree credits. \$33 plus \$10 laboratory fee.

Continuation of Art 45. Greater emphasis on wheel throwing. Advanced design problems and introduction to glaze and clay experimentation. Emphasis on the development of personal expression in ceramic medium. (Prerequisite: 45 or 46. Meets concurrently with 45. Limited to 22 students. Repeated spring semester)

### Fall Semester

Th 6:20-8:50, Holman 134

### Spring Semester

Th 6:20-8:50, Holman 134

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.



## Course Offerings—Arts and Sciences

\***Art 103A-104A. Seminar in Interior Design.** 3 degree credits each semester. \$33 each semester.

A further expansion of subjects studied in Art 83A-84A. Students will work on individual projects under supervision. (Prerequisite: 84A for 103A; 103A for 104A; must be taken in sequence. Limited to 25 students. No auditors. Qualified students may register for graduate credit)

*Fall Semester*

103A W 8:15-9:55, Johnston 106, Lewis

*Spring Semester*

104A W 8:15-9:55, Johnston 106, Lewis

**Art. Layout for Interior Design I.** 3 certificate credits. \$33.

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

*Fall Semester*

T 6:20-8:00, Wulling 210, Hopkins

*Spring Semester*

T 8:15-9:55, Wulling 210, Hopkins

\***Art. Use of Color.** 3 certificate credits. \$33.

Lectures and laboratory work demonstrating how color should and should not be used in public buildings and private residences. This course is designed to be of service to both the amateur home decorator and to the professional artist, architect, advertiser, or decorator. The course will deal with basic theory of color as well as problems in the use of color in architecture and interior design. (No prerequisite. Limited to 25 students. Repeated spring semester)

*Fall Semester*

T 8:15-9:55, Wulling 210, Hopkins

*Spring Semester*

T 6:20-8:00, Wulling 210, Hopkins

**Art. Home Design and Planning.** 3 certificate credits. \$33 plus \$1 laboratory fee.

Basic principles and elements of residential environment design and planning. Design criteria, values, and methods. Techniques of programming, plan drawing, architectural criticism. Review of historical style and significant modern work. Discussion of site planning, interior design, concepts of family living, building materials and methods, climate control, building restrictions, financing, and the relationship of these factors to planning technique. Relationship of the professions of architecture, building contracting, and real estate to the functional, aesthetic, and technological components of residential environment. (No prerequisite)

*Fall Quarter*

Th 6:20-8:50, Architecture 25, Gingold,  
Pink, Krank

**Art. Scientific and Medical Drawing.** 3 certificate credits. \$33 plus \$5 laboratory fee.

A course in drawing designed especially to meet the needs for visual presentation of an idea. Instruction will be individual and in the various media. (Prerequisite: Pro-

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

Professional scientists, medical researchers, or ♯. Repeated winter and spring quarters. Students may profitably repeat the course)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
T	6:20-8:50, West Bank Art Building, Platou	T	6:20-8:50, West Bank Art Building, Platou	T	6:20-8:50, West Bank Art Building, Platou

## ASTRONOMY

(See page 191)

## BIOLOGY

*Walter J. Breckenridge, Professor of Zoology*  
*Dwain W. Warner, Associate Professor of Zoology*

**Biol 1-2.† General Biology.** 5 degree credits each semester. \$55 plus \$10 laboratory fee each semester.

Introduction to living things, both plant and animal, and to the major biological concepts. Structure, function, classification, and evolution of organisms. (No prerequisite for 1; 1 for 2. Must be taken in sequence. Lectures will be conducted over closed circuit TV)

<i>Fall Semester</i>		<i>Spring Semester</i>	
1	MW 6:20-9:20, Owre 111	2	MW 6:20-9:20, Owre 111

\*NatH 1. **Birds of Minnesota.** No credit. \$40.

A laboratory and field class in identifying and enjoying the birds of this region. Early meetings will make use of collections of the Museum of Natural History, but, as soon as weather permits, the class will meet in field locations on Sunday mornings at 7:30. (No prerequisite. Limited to 25 students)

**Special Class**  
(February 15 to June 7)  
W 6:20-8:00, Museum of Natural History  
309, Breckenridge and Warner

## CHEMISTRY

(See page 191)

## CHILD PSYCHOLOGY

(See page 184)

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## CLASSICS

*Theofanis G. Stavrou, Associate Professor of History*  
*Hermann Weber, Instructor in Classics*

### Clas 45. Greek and Roman Mythology. 3 degree credits. \$33.

Classical myths dealing with gods, demi-gods, and heroes. Attention to the myths as stories and as a basic component of the European cultural heritage, including artistic, religious, psychological, and anthropological interpretations. Distinctions between myth and legend, mythology and mythography. Special attention to the use of myths in modern literature. (No prerequisite. Repeated spring semester. For graduate credit, register in Clas 145)

**Fall Semester**

T 6:20-8:00, Folwell 202

**Spring Semester**

T 6:20-8:00, Folwell 202

### Clas 48. Technical Terms of Science, Medicine, and the Humanities. 3 degree credits. \$33.

Presentation in English contexts of Greek and Latin prefixes, suffixes, and roots basic in modern technical vocabularies. (No prerequisite)

**Fall Quarter**

T 5:30-8:00, Folwell 204

### Clas 68. Technical Terms of Science, Medicine, and the Humanities. 3 degree credits, \$48. \$33.

Meets with Clas 48, but students will do additional work for Upper Division credit. (Prerequisite: Limited to those students eligible for Upper Division credit)

**Fall Quarter**

T 5:30-8:00, Folwell 204

### Clas 91, 92, 93. Classical Literary Traditions. 3 degree credits each quarter. \$33 each quarter.

Readings from Greek and Roman literature in translation, with emphasis on literary themes and forms in European literature. Topics include: (Fall) epic, didactic, pastoral, lyric, and satire. (Winter) drama and myth, the origins and development of the literary prose tradition. (Spring) literary criticism, history, the novel and short story. (Prerequisite: 9 credits in English literature beyond Freshman English, or in a foreign language. Students may enter in any quarter. No knowledge of Greek or Latin is required)

**Fall Quarter**

91 W 5:30-8:00, Folwell 102, Weber

**Winter Quarter**

92 W 5:30-8:00, Folwell 102, Weber

**Spring Quarter**

93 W 5:30-8:00, Folwell 102, Weber

### Clas 145. Greek and Roman Mythology. 3 degree credits. \$33.

See course description as listed under Clas 45. Same class work as Clas 45, but with special independent reading and research assignments. Qualified students may register for graduate credit.

**Fall Semester**

T 6:20-8:00, Folwell 202

**Spring Semester**

T 6:20-8:00, Folwell 202

Symbols explained on page 15.

## Evening Classes

---

**Clas 191, 192, 193. Classical Literary Traditions.** 3 degree credits each quarter. \$33 each quarter.

See class description as listed under Clas 91, 92, 93. Same class work as Clas 91, 92, 93, but with special independent reading and research assignments. Qualified students may register for graduate credit.

**Fall Quarter**

191 W 5:30-8:00, Folwell 102, Weber

**Winter Quarter**

192 W 5:30-8:00, Folwell 102, Weber

**Spring Quarter**

193 W 5:30-8:00, Folwell 102, Weber

**Lat 3X, 4X. Intermediate Latin.** 5 degree credits each semester. \$55 each semester.

Both a refresher course and a continuation of previous training. Selections from Caesar, Cicero, Virgil. (Prerequisite: 2 years high school Latin, or equivalent, or §)

**Fall Semester**

3X M 6:20-9:20, Folwell 303

**Spring Semester**

4X M 6:20-9:20, Folwell 303

**Grk 1-2.† Beginning Modern Greek.** 5 degree credits each quarter. \$55 each quarter.

A course in modern conversational Greek. Course is for anyone interested in learning to speak Greek. (No prerequisite. Must be taken in sequence)

**Fall Quarter**

1 S 9:00 a.m.-1:00 p.m.,  
West Bank Social  
Science 435, Stavrou

**Winter Quarter**

2 S 9:00 a.m.-1:00 p.m.,  
West Bank Social  
Science 435, Stavrou

**Grk 3-4. Intermediate Modern Greek.** 3 degree credits each quarter. \$33 each quarter.

A course in modern conversational and reading Greek. Students will be exposed to selected works of modern Greek writers and poets such as Palamas, and Kazantzakis. (Prerequisite: Grk 1-2)

**Fall Quarter**

3 S 2:00-4:30, West  
Bank Social Science  
435, Stavrou

**Winter Quarter**

4 S 2:00-4:30, West  
Bank Social Science  
435, Stavrou

## EAST AND SOUTH ASIAN LANGUAGES

*Amy Matsumoto, Instructor in East and South Asian Languages*

*Catherine Wang, Instructor in East and South Asian Languages*

The laboratory fee for beginning East and South Asian courses entitles students to use of the Language Laboratory.

---

Symbols explained on page 15.

## Chinese

**Chin 1-2. Beginning Modern Chinese (Mandarin).** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

An introductory course in modern written and spoken Chinese intended to provide a basis for developing a modest reading and conversational ability. (No prerequisite for 1; 1 or 2 for 2)

*Fall Semester*

1 T 6:20-8:00, Folwell 305½, Wang

*Spring Semester*

2 M 6:20-8:00, Nicholson 201, Wang

## Japanese

**Jpn 5-6. Beginning Spoken Japanese.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

An introduction to modern spoken Japanese intended to provide the basic sentence patterns and vocabulary in Romanization, necessary for development of conversational ability. (No prerequisite for 5; 5 or 6 for 6)

*Fall Semester*

5 M 6:20-8:00, Folwell 302, Matsu-  
moto

*Spring Semester*

6 M 6:20-8:00, Folwell 302, Matsu-  
moto

## ECONOMICS

*Charles E. Meyerding, Lecturer in Economics*

*Marcel K. Richter, Associate Professor of Economics*

*Norman J. Simler, Professor of Economics*

*Harlan M. Smith, Associate Professor of Economics*

*John G. Turnbull, Professor of Economics*

*Note—Beginning with the fall semester, 1966, the order of material in the two halves of the Principles of Economics course is the reverse of what it has been hitherto in evening classes. This brings the course into line with present daytime classes. If you have taken either Econ 1 or Econ 2 but not both, it is necessary in completing the 2 semesters of Principles of Economics to ascertain whether you have taken the micro half or the macro half and then sign up for the half you lack, whether or not that requires registering for the same number twice. (Where the number is thus used twice, credit will be given by petition showing dates each time and whether day or evening classes.)*

**Econ 1, 2.† Principles of Economics.** 3 degree credits each term, §1T-2T or §1H-2H or §C or §50A-B. \$33 each term.

Principles underlying economic activity and the way these principles work out through our economic institutions. Econ 1, 2 or equivalent are prerequisite for most other courses in economics and business administration. 1: Macro: national income, money and

---

Symbols explained on page 15.

## Evening Classes

banking, business cycles, and international trade. 2: Micro: demand and supply, competition and monopoly, and distribution of income. (No prerequisite)

### Fall Semester

1	M	6:20-8:00, West Bank CB 130
	M	8:15-9:55, West Bank CB 130
	T	6:20-8:00, West Bank CB 130
	T	8:15-9:55, West Bank CB 130
	W	6:00-7:40, StP Ext Center
	W	6:20-8:00, West Bank CB 130
	W	7:50-9:30, StP Ext Center
	W	8:15-9:55, West Bank CB 130
	Th	6:20-8:00, West Bank CB 130
	Th	8:15-9:55, West Bank CB 130
2	M	7:50-9:30, StP Ext Center
	Th	6:20-8:00, West Bank CB 145
	Th	8:15-9:55, West Bank CB 145

### Spring Semester

1	M	7:50-9:30, StP Ext Center
	T	6:20-8:00, West Bank CB 130
	T	8:15-9:55, West Bank CB 130
	Th	6:20-8:00, West Bank CB 130
	Th	8:15-9:55, West Bank CB 130
2	M	6:20-8:00, West Bank CB 130
	M	8:15-9:55, West Bank CB 130
	T	6:20-8:00, West Bank CB 120
	W	6:00-7:40, StP Ext Center
	W	6:20-8:00, West Bank CB 130
	W	7:50-9:30, StP Ext Center
	W	8:15-9:55, West Bank CB 130

### Fall Quarter

1	T	6:30-9:00, Robbinsdale HS 217
---	---	-------------------------------

### Winter Quarter

2	T	6:30-9:00, Robbinsdale HS 217
---	---	-------------------------------

*Note—Students majoring in economics are encouraged to follow Principles of Economics with Econ 65 and 66 (which may, however, be taken in either order) before taking their other economics courses. It is likely to be advantageous to any students whose programs of study include Econ 65 and 66 to do likewise. Other students should note, however, that a number of courses are available without formal prerequisite of both and in some cases without prerequisite other than Econ 1, 2.*

### Econ 62. Labor Economics. 3 degree credits, §IR 52. \$33.

An introductory course dealing with the role of labor in the economy: labor as a factor of production; population and the labor force; economics of labor markets; labor market institutions; theories of wages and employment; unions and collective bargaining; current wage and employment practices; public policy. (Prerequisite: 6 credits in Principles of Economics or #)

#### Fall Semester

T	6:20-8:00, West Bank CB 140, Simler
---	-------------------------------------

### Econ 65. Intermediate Economic Analysis I: The Firm and Industry. 3 degree credits, §65T or §165. \$33.

Behavior of firms and industries under competitive and monopolistic conditions; factors influencing production, price, and advertising conditions. (Prerequisite: 6 credits in Principles of Economics or #. Repeated spring semester)

#### Fall Semester

M	6:20-8:00, West Bank CB 240
W	8:15-9:55, West Bank CB 240

#### Spring Semester

W	8:15-9:55, West Bank CB 120
---	-----------------------------

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

### Econ 66. Intermediate Economic Analysis II: Income and Employment. 3 degree credits, §66T or §166. \$33.

Determinants of national income, employment, and price level; attention given to aggregate consumption and investment. (Prerequisite: 6 credits in Principles of Economics or §. Repeated spring semester and spring quarter)

#### *Fall Semester*

W 8:15-9:55, West Bank CB 230

#### *Spring Semester*

W 8:15-9:55, West Bank CB 240

#### *Spring Quarter*

T 6:30-9:00, Robbinsdale HS 233

### Econ 67. Money and Banking. 3 degree credits. \$33.

Historical development, present pattern, and economic role of financial institutions, with special emphasis upon commercial banks, the money supply, and the Federal Reserve System. (Prerequisite: 66 or §)

#### *Spring Semester*

Th 6:20-8:00, West Bank CB 240, Smith

### Econ 68. Elements of Public Finance. 3 degree credits, §178A. \$33.

Survey of government expenditures, budgeting, fiscal policy, debts, and taxes in terms of fiscal institutions, impact on business and the economy, and policy issues. (Prerequisite: 66 or §)

#### *Fall Semester*

Th 6:20-8:00, West Bank CB 250

### Econ 69. Government Regulation of Business. 3 degree credits. \$33.

Economic aspects of public policy affecting the market process. Relations between market structure and economic efficiency and welfare; economic origins of monopoly and other business limitations on free competition; and purposes and effect of anti-trust laws and laws relating to "unfair business practices." (Prerequisite: 65 for business or economics majors, suitable background in law or political science for others, or §)

#### *Spring Semester*

W 6:20-8:00, West Bank CB 240

### \*Econ 75. Intermediate Economic Analysis III. 3 degree credits. \$33.

Introduction to household and welfare theory. Applications of evaluative techniques to various market phenomena and government policies. (Prerequisite: Econ 65 or equivalent. This course is a required course for economics majors. This is the first time it has been available in evening classes. Limited to 35 students)

#### *Spring Semester*

Th 6:30-8:10, Agricultural Engineering  
101, St Paul Campus, Richter

### Econ 80. Survey of Economic Ideas. (To be offered 1967-68)

Symbols explained on page 15.

\*Enrollment space limited; instructions on page 9.

## Evening Classes

---

### Econ 102. Contemporary Labor Issues. 3 degree credits. \$33.

Analysis of important labor problem areas. Current issues will be examined in light of their broader economic, legal, political, and social implications. (Prerequisite: Econ 62 or equivalent or #)

#### Spring Semester

T 6:20-8:00, West Bank CB 140,  
Turnbull

### Econ 103. Economic Development. 3 degree credits. \$33.

Conditions necessary for increasing income; capital formation, measurement of economic growth, and problems of "underdeveloped" areas. (Prerequisite: 6 credits in Principles of Economics or #. May not be taken for graduate credit)

#### Fall Semester

W 6:20-8:00, West Bank CB 225

### Econ 104. International Economics. (Formerly Econ 176) 3 degree credits. \$33.

Principal issues involved in international economic relationships. Significance of foreign trade and investment, international payments and foreign exchange, the gold standard, the International Monetary Fund and Bank, and the arguments over tariffs and foreign aid policies. (Prerequisite: 2)

#### Spring Semester

Th 8:15-9:55, West Bank CB 140, Smith

### Econ 150A, B. Current Economic Issues. 3 degree credits each semester. \$33 each semester.

Current controversies over economic policy, and problems that underlie controversies. Selected topics each time offered. This year the course is designed for and open only to schoolteachers who wish to improve their background in economics. (Prerequisite: #. Registrants may apply for scholarship to Professor Roman Warmke, Minnesota Council on Economic Education, 1169 Business Administration Building, University of Minnesota, Minneapolis. The 2-semester course, on Mondays, is open to secondary schoolteachers only, and the 1-semester course, on Thursdays, is open to elementary schoolteachers only)

#### Fall Semester

150A M 6:20-8:00 (secondary school-  
teachers only), West Bank CB 450,  
Coen

150A Th 6:20-8:00 (elementary school-  
teachers only), West Bank CB 205,  
Smith

#### Spring Semester

150B M 6:20-8:00 (secondary school-  
teachers only), West Bank CB 450,  
Coen

### Econ 157. Business Cycles. 3 degree credits. \$33.

Ups and downs of business: explanations of causes, statistical data on such fluctuations. Relationship of cycles to economic growth. Methods of forecasting. Examination of proposals for economic stabilization. (Prerequisite: 66 and 67 or #)

#### Fall Semester

Th 8:15-9:55, West Bank CB 240, Smith

### Econ 160. Comparative Economic Systems. (To be offered 1967-68)

---

Symbols explained on page 15.



**Econ 172. Labor Market Behavior and Regulation.** 3 degree credits. \$33.

Public and private rules and policies directed at regulation of employer-employee-union relations and labor market behavior. Settlement of disputes. Control of employer and union self-help techniques. Emphasis on economics of control, rather than upon the legal or administrative aspects of policy. (Prerequisite: Econ 62 or equivalent or #)

*Fall Semester*

T 8:15-9:55, West Bank CB 140, Simler

**Econ 182. Economic Security.** 3 degree credits. \$33.

Public and private approaches to problems of economic insecurity. Details of and economic and social implications of private and public programs. Emphasis on economics of income and employment maintenance and stabilization rather than upon legal or administrative aspects of policy. (Prerequisite: Econ 62 or equivalent or #)

*Spring Semester*

T 8:15-9:55, West Bank CB 150, Turnbull

**Econ 192. Economics of Collective Bargaining.** (To be offered 1967-68)

## ENGLISH

### Literature

*Eberhard Alsen, Assistant Professor of English*

*George Bowen, Lecturer in English*

*Carole Brown, Lecturer in English*

*Richard Foster, Professor of English*

*Archibald I. Leyasmeyer, Assistant Professor of English*

*Raymond McClure, Assistant Professor of English*

*Gordon W. O'Brien, Professor of English*

*Jack Patnode, Lecturer in English*

*Robert C. Rathburn, Associate Professor of Literature and Writing*

*Robert Regnier, Lecturer in English*

*James L. Scoggins, Associate Professor of English*

*Martin A. Steinmann, Jr., Professor of English*

*Margery W. Stricker, Assistant Professor of English*

**Engl 1B-2B-3B. Freshman English.** (See page 87, Comp 1-2-3, Freshman Composition)

**Engl 21, 23. Introduction to Literature.** 5 degree credits each semester. \$55 each semester.

A chronological study of English literature with historical background. An introduction to types of literature and literary ideas. 21: Chaucer to Milton. Marlowe, Spenser, Bacon, Browne, and Bunyan. 23: The Romantic Movement and the Victorians. Wordsworth,

---

Symbols explained on page 15.

## Evening Classes

---

Byron, Shelley, Keats, Carlyle, Tennyson, Browning, and Arnold. (Prerequisite: completion of Freshman English. Need not be taken in sequence)

### Fall Semester

21 M 6:20-9:20, Vincent 306, Scoggins  
W 6:30-9:30, Robbinsdale HS 217,  
Brown

### Spring Semester

23 M 6:20-9:20, Vincent 306, Scoggins  
W 6:30-9:30, Robbinsdale HS 217,  
Brown

Engl 37, 38, 39. Modern Literature. 3 degree credits each quarter. \$33 each quarter.

Intended for students in all departments and colleges, not particularly for English majors. Readings in 20th-century British and American fiction, drama, and poetry. Selected, arranged, and discussed—not to give a full historical survey, but to enhance the student's pleasure in, and understanding of, imaginative literature generally. Short critical papers are required and count in determining grades. 37: Short fiction. 38: Poetry and drama. 39: The novel since Thomas Hardy. (No prerequisite. Need not be taken in sequence)

### Fall Quarter

37 M 6:20-8:50,  
Vincent 1, Bowen  
T 6:30-9:00,  
Robbinsdale HS 212

### Winter Quarter

38 M 6:20-8:50,  
Vincent 1, Bowen  
T 6:30-9:00,  
Robbinsdale HS 212

### Spring Quarter

39 M 6:20-8:50,  
Vincent 1, Bowen  
T 6:30-9:00,  
Robbinsdale HS 212

Engl 52, 53, 54. The English Novel. 3 degree credits each quarter. \$33 each quarter.

52: Reading of novels by such writers as Defoe, Fielding, Sterne, Smollett, and Richardson. 53: Reading of novels by such writers as Jane Austen, Scott, the Bronnës, Thackeray, and Dickens. 54: Reading of novels by such writers as Trollope, George Eliot, Meredith, Hardy, Conrad, and Butler. (Prerequisite: 5 credits in literature, exclusive of freshman English. Need not be taken in sequence)

### Fall Quarter

52 M 6:20-8:50,  
Nicholson 216,  
Rathburn

### Winter Quarter

53 M 6:20-8:50,  
Nicholson 216,  
Rathburn

### Spring Quarter

54 M 6:20-8:50,  
Nicholson 216,  
Rathburn

Engl 55, 56. Shakespeare. 3 degree credits each quarter. \$33 each quarter.

55: The reading of plays from Shakespeare's early and middle periods—*Richard II*, *A Midsummer Night's Dream*, *The Merchant of Venice*, *Much Ado About Nothing*, and two or three other plays selected by the instructor. 56: The reading of plays from Shakespeare's middle and later periods—*Twelfth Night*, *Hamlet*, *Macbeth*, *The Tempest*, and two other plays selected by the instructor. (Prerequisite: 5 credits in literature, exclusive of freshman English. Need not be taken in sequence but students are strongly urged to take 55 before 56)

### Fall Quarter

55 T 6:20-8:50,  
Vincent 306, O'Brien  
W 6:30-9:00,  
Robbinsdale HS 212,  
Regnier

### Winter Quarter

56 T 6:20-8:50,  
Vincent 306, O'Brien  
W 6:30-9:00,  
Robbinsdale HS 212,  
Regnier

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

### Engl 66. The Literature of the Bible. 3 degree credits. \$33.

Readings in the Old and New Testaments from the literary point of view. Selections from the historical narratives, the prophets, psalms, tales, wisdom literature, apocalypse. (Prerequisite: 5 credits in literature, exclusive of freshman composition)

#### Fall Quarter

W 6:20-8:50, Vincent 205, O'Brien

### Engl 72-73-74. American Literature. 3 degree credits each quarter. \$33 each quarter.

72: The beginnings through Melville. 73: Whitman through Stephen Crane. 74: Dreiser to the present. (Prerequisite: 5 credits in literature, exclusive of freshman English for 72; 72 or # for 73; 73 or # for 74)

#### Fall Quarter

72 W 6:20-8:50,  
Vincent 309, Patnode  
M 6:30-9:00,  
Robbinsdale HS 219,  
Patnode

#### Winter Quarter

73 W 6:20-8:50,  
Vincent 309, Patnode  
M 6:30-9:00,  
Robbinsdale HS 219,  
Patnode

#### Spring Quarter

74 W 6:20-8:50,  
Vincent 309, Patnode  
M 6:30-9:00,  
Robbinsdale HS 219,  
Patnode

### Engl 75. Chaucer. 3 degree credits. \$33.

Reading of selections from *The Canterbury Tales* with introduction dealing with grammar and literary forms of 14th-century English. (Prerequisite: completion of freshman English requirement. Repeated spring semester)

#### Fall Semester

M 6:20-8:00, Vincent 113, McClure

#### Spring Semester

M 6:20-8:00, Vincent 113, McClure

### Engl 104. Emerson and Thoreau. 3 degree credits. \$33.

Emerson and Thoreau: A study of the classic statements of American transcendentalism. (Prerequisite: 5 credits in literature, English or American, exclusive of freshman English. Qualified students may register for graduate credit)

#### Winter Quarter

T 6:20-8:50, Vincent 125, Alsen

### Engl 105. Hawthorne and Melville. 3 degree credits. \$33.

Hawthorne and Melville: A study of the classic works of American romance, symbolism, and ambiguity. (Prerequisite: 5 credits in literature, English or American, exclusive of freshman English. Qualified students may register for graduate credit)

#### Spring Quarter

T 6:20-8:50, Vincent 307

### Engl 108, 109, 110. Romantic Poetry and Prose. 3 degree credits each quarter. \$33 each quarter.

108: Blake, Wordsworth, Coleridge, and others. 109: Scott, Byron, Lamb, DeQuincey, and others. 110: Shelley, Keats, Hazlitt, and others. (Prerequisite: 5 credits in

Symbols explained on page 15.

## Evening Classes

---

literature, exclusive of freshman English. Need not be taken in sequence. Qualified students may register for graduate credit)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
108	Th 6:20-8:50, Vincent 301, Stricker	109 Th 6:20-8:50, Vincent 301, Stricker	110 Th 6:20-8:50, Vincent 301, Stricker

### Engl 127. Drama. 3 degree credits. \$33.

The beginnings of modern realism. (Prerequisite: 5 credits in literature, exclusive of freshman English. Qualified students may register for graduate credit)

#### *Fall Semester*

Th 6:20-8:00, Vincent 303, Leyasmeyer

### Engl 129. Modern Drama. 3 degree credits. \$33.

Survey of chief dramatists, English, American, and Continental, from 1900. (Prerequisite: 55 and 56 or 126 and 127. Qualified students may register for graduate credit)

#### *Spring Semester*

Th 6:20-8:00, Vincent 303, Leyasmeyer

### Engl 136. Advanced Shakespeare. 4 degree credits. \$44.

The work of the poet's maturity. Special attention to *Othello*, *King Lear*, *Antony and Cleopatra*, *Cymbeline*, *The Winter's Tale*. (Prerequisite: 55 and 56. Qualified students may register for graduate credit)

#### *Spring Quarter*

T 6:20-9:40, Vincent 205, O'Brien

### Engl 162. Milton. 3 degree credits. \$33.

The minor poems, *Areopagitica*, *Paradise Lost*, and *Samson Agonistes*. (Prerequisite: 21 and 22 or 55 and 56. Qualified students may register for graduate credit. Repeated each quarter)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
W	6:20-8:50, Vincent 306, Steinmann	W 6:20-8:50, Vincent 306, Steinmann	W 6:20-8:50, Vincent 306, Steinmann

### Engl 165. The Structure of Modern English. 3 degree credits. \$33.

An introductory study of English phonemics, morphemics, and syntax. (Prerequisite: 5 credits in literature, exclusive of freshman English. Qualified students may register for graduate credit)

#### *Fall Semester*

M 6:20-8:00, Vincent 303

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

### Engl 166. History of the English Language. 3 degree credits. \$33.

Historical influences upon, and changes within, the language as both a popular and literary medium of communication. (Prerequisite: 5 credits in literature, exclusive of freshman English. Qualified students may register for graduate credit)

#### Spring Semester

M 8:15-9:55, Vincent 303

### Engl 190, 191, 192. Twentieth-Century Writers. 3 degree credits each quarter. \$33 each quarter.

190: Faulkner, Fitzgerald, Mailer. 191: Lawrence, Joyce. 192: Yeats, Hardy, Frost, Stevens. (Prerequisite: 5 credits in literature, English or American, exclusive of freshman English. Need not be taken in sequence. Qualified students may register for graduate credit)

#### Fall Quarter

190 Th 6:20-8:50,  
Vincent 307, Foster

#### Winter Quarter

191 Th 6:20-8:50,  
Vincent 307, Foster

#### Spring Quarter

192 Th 6:20-8:50,  
Vincent 307, Foster

### Engl 197-198. Seventeenth-Century Literature. 3 degree credits each quarter. \$33 each quarter.

Prose and nondramatic poetry of the century down to 1660. (Prerequisite: completion of freshman English and 5 additional English credits. Qualified students may register for graduate credit)

#### Winter Quarter

197 W 6:20-8:50,  
Vincent 307, O'Brien

#### Spring Quarter

198 W 6:20-8:50,  
Vincent 307, O'Brien

## Composition and Communication

*Harold J. Alford, Associate Professor of English*

*David H. Anderson, Lecturer in English*

*Artis E. Bernard, Lecturer in English*

*Angus Clarke, Lecturer in English*

*James T. Farrell, Lecturer in English*

*Roland Flint, Instructor in English*

*J. Vernon Jensen, Assistant Professor of Communication*

*Alex Kurak, Assistant Professor of Literature and Writing*

*Charlotte Kwiat, Instructor in English*

*Robert Lippert, Lecturer in English*

*Agnes Macdonald, Lecturer in English*

*Philip Moe, Lecturer in English*

*Thomas A. Nelson, Jr., Instructor in English*

*Charles Norman, Lecturer in English*

*Justin O'Connell, Lecturer in English*

*John A. Sweetser III, Lecturer in English*

Symbols explained on page 15.

**Placement Tests for Composition and Communication**

Admission to Comp 1 or Comm 1 is based on satisfactory score in the placement test or satisfactory completion of Comp X, Preparatory Composition.

Your first step is to register for Comp 1 or Comm 1 before the date of the final placement test for the quarter, as listed below. At the time of registration you will fill out an "English Registration Permit Form" and the registration clerk will tell you whether or not you must take the placement test. The general regulations are: (a) If you took the placement test in a Minnesota high school within the last 2 years, we will be able to check your record and you need not take the test again. (b) If you have passed a freshman English course at another accredited college or university in the United States, but have a total of less than 9 quarter credits or 6 semester credits in freshman English from that school, you should take Comp 1 but you need not take the placement test. (c) If you have passed Comp X in the last 3 years at the University of Minnesota, you need not take the placement test. (d) If you do not meet any of the three criteria listed above, you must take the placement test at one of the following times and places.

**Fall Quarter**

- 7:00 p.m. Thursday, September 15, Nicholson 213
- 7:00 p.m. Tuesday, September 20, Nicholson 213
- 7:00 p.m. Tuesday, September 20, StP Ext Center 202
- 7:00 p.m. Wednesday, September 21, Robbinsdale HS 231 and 233

**Winter Quarter**

- 7:00 p.m. Wednesday, December 21, Nicholson 211
- 7:00 p.m. Wednesday, December 28, Nicholson 211

**Spring Quarter**

- 7:00 p.m. Wednesday, March 22, Nicholson 211

You will be notified by mail prior to the first meeting of your class of your eligibility to remain in Comp 1 or Comm 1. If you have not received a satisfactory score on the placement test, you will be advised to transfer immediately to Comp X which will meet on the same night as Comp 1 or Comm 1) or to cancel your registration and receive a full refund. This transfer or cancellation must be made on official transfer or cancellation forms before the end of the first week of classes; if not, the regular transfer or refund policy will apply.

*Please Note:* No registrations for Comp 1 or Comm 1 will be accepted after the date of the final placement test each quarter except from students who are exempt from the placement test as outlined in a, b, or c, above.

**Comp X. Preparatory Composition. No credit. \$33 plus \$1 materials fee.**

Intensive drill on grammatical forms, structure, and theme writing. Recommended for those whose primary need is organization and development of themes. Any passing grade admits students to Comp 1 or Comm 1. (No prerequisite. Repeated winter and spring quarters)

	<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>
M	6:30-9:00, Robbinsdale HS 221	M	6:30-9:00, Robbinsdale HS 221	M	6:30-9:00, Robbinsdale HS 221
T	6:20-8:50, Vincent 303	T	6:20-8:50, Vincent 303	W	6:20-8:50, Vincent 303
W	6:20-8:50, Vincent 303	W	6:20-8:50, Vincent 303	Th	6:00-8:30, MacPhail Center 218
Th	6:00-8:30, MacPhail Center 218	Th	6:00-8:30, MacPhail Center 218		
F	6:00-8:30, StP Ext Center	F	6:00-8:30, StP Ext Center		

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

**Comp 1-2-3. Freshman Composition.** 4 degree credits each quarter. \$44 each quarter.

A course in composition. It concentrates upon developing the student's skill in writing exposition, with some reading in expository literature chiefly as a means of providing subject matter for the writing. It satisfies the Group A requirements for graduation. (Prerequisite: Comp X or satisfactory score in placement test, explained above, for 1; 1 or Engl 1B for 2; 2 or Engl 2B for 3. Must be taken in sequence. Any student offering transfer credits from communication or from any freshman English course other than Comp 1-2-3 [or 1B-2B-3B or 1A-2A-3A or A-B-C] must begin his work with Comp 1, and take as many quarters of Comp 1-2-3 as are necessary to complete his Freshman English requirement. *Registration must be made in person.* Repeated winter and spring quarters)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
1 M 6:30-10:00, Robbinsdale HS 217	1 T 6:20-9:50, Vincent 2	1 M 6:30-10:00, Robbinsdale HS 213
T 6:20-9:50, Vincent 2	W 6:20-9:50, Vincent 2	W 6:20-9:50, Ford 50
W 6:20-9:50, Vincent 2	Th 6:00-9:30, MacPhail Center 323	Th 6:00-9:30, MacPhail Center 323
Th 6:00-9:30, MacPhail Center 323	F 6:00-9:30, StP Ext Center	2 M 6:30-10:00, Robbinsdale HS 223
Th 6:20-9:50, Vincent 6	2 M 6:30-10:00, Robbinsdale HS 217	T 6:20-9:50, Ford 30
F 6:00-9:30, StP Ext Center	T 6:20-9:50, Vincent 6	W 6:20-9:50, Ford 40
2 T 6:20-9:50, Vincent 6	W 6:20-9:50, Vincent 6	Th 6:00-9:30, MacPhail Center 219
3 W 6:20-9:50, Vincent 6	Th 6:00-9:30, MacPhail Center 219	F 6:00-9:30, StP Ext Center
	Th 6:20-9:50, Vincent 6	3 M 6:30-10:00, Robbinsdale HS 217
	F 6:00-9:30, StP Ext Center	T 6:20-9:50, Vincent 6
	3 T 6:20-9:50, Vincent 1	W 6:20-9:50, Vincent 6
		Th 6:00-9:30, MacPhail Center 321
		Th 6:20-9:50, Vincent 6
		F 6:00-9:30, StP Ext Center

**Comm 1-2-3. Communication.** 4 degree credits each quarter. \$44 each quarter.

A practical course intended to prepare the student to meet more effectively the various vocational and social demands, to write and talk to others, and to receive communication from them. Constant practice in writing and speaking is uniquely based upon some understanding of how language functions to convey meaning. 1: The fundamental patterns of meaning in English, word meaning, social meaning, good usage. 2: The use of language to influence human behavior. 3: Mass communication of press, film, and radio, and how to receive it with critical discrimination. (Prerequisite: Comp X or satisfactory score on placement test, explained on page 86, for 1; 1 for 2; 2 for 3. Must be taken in sequence. Meets all requirements which are satisfied by Comp 1-2-3, Freshman Composition, *except* in the Institute of Technology. *Registration must be made in person*)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
1 W 6:20-9:50, Johnston 114, Jensen	2 W 6:20-9:50, Johnston 114, Jensen	3 W 6:20-9:50, Johnston 114, Jensen

Symbols explained on page 15.

## Evening Classes

---

### Comp. Grammar Review. 3 certificate credits. \$33 plus \$1 materials fee.

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

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
M	6:00-8:30, MacPhail Center 218, Alford	M 6:00-8:30, MacPhail Center 218, Alford	M 6:00-8:30, MacPhail Center 218, Alford
W	6:20-8:50, Vincent 207, O'Connell	W 6:20-8:50, Vincent 207, O'Connell	W 6:20-8:50, Vincent 207, O'Connell

### Comp. Advanced Grammar. 3 certificate credits. \$33.

Designed for the student who wishes to make a greater academic inquiry into grammar than that which he may have made in Grammar Review. The course includes a thorough study of complex grammatical forms, including those common to modern American English, an examination of faulty syntactical forms, and a study of effective sentence construction. Limited readings from selected old and modern grammar texts; one short paper required. (Prerequisite: Grammar Review. Repeated winter and spring quarters)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
T	6:20-8:50, Vincent 207, O'Connell	T 6:20-8:50, Vincent 207, O'Connell	T 6:20-8:50, Vincent 207, O'Connell

### Comp. Writing Projects. 3 certificate credits. \$33.

A course for those who are interested in writing fiction or book length nonfiction. Open to both beginners and advanced students who have projects which they wish to develop with the aid of individual and group criticism. Students may submit projects already begun or may develop new projects during the semester. Class discussion will center on student projects in the novel and short story, with reference to other forms as appropriate. (No prerequisite. Repeated spring semester)

	<b>Fall Semester</b>	<b>Spring Semester</b>
F	7:00-10:00, StP Ext Center, Alford	F 7:00-10:00, StP Ext Center, Alford

### Comp 27, 28. Advanced Writing. 3 degree credits each semester. \$33 each semester.

Offers training in the fundamentals of creative writing, through lectures and the criticism of manuscripts. 27: Deals with expository writing: articles, essays, criticism, etc. 28: Deals with description and narration. (Prerequisite: Completion of freshman English requirement or # for 27 or 28. Need not be taken in sequence)

	<b>Fall Semester</b>	<b>Spring Semester</b>
27 T	6:20-8:00, Vincent 113, Macdonald	28 T 6:20-8:00, Vincent 113, Macdonald
W	6:20-8:00, Vincent 113, Macdonald	W 6:20-8:00, Vincent 113, Macdonald

### Engl. English for Foreign Students. No credit. \$44 each term.

The students have the opportunity to speak, read, and write American English. Emphasis is on conversational English and the errors most frequently made in English by foreign students. Students are encouraged to think in English rather than in their

---

Symbols explained on page 15.



## Course Offerings—Arts and Sciences

---

native languages. Students are taught to distinguish informal and colloquial speech from literary and formal English. (Prerequisite: open to those who have a working knowledge of English grammar. Repeated spring term)

### **Special Class**

(September 29 to January 26)

Th 6:20-8:40, Vincent 207, Kwiat

### **Special Class**

(February 16 to June 8)

Th 6:20-8:40, Vincent 207, Kwiat

**Business English.** (See page 159)

**Engineering English.** (See page 199)

## FAMILY STUDIES

*Allen Blume, Instructor in Family Studies*

*Richard Hey, Associate Professor of Family Studies*

*Nathan Mandel, Assistant Professor of Family Studies*

*Elizabeth Peterson, Assistant Professor of Family Studies*

*David Torbett, Instructor in Family Studies*

**FamS 1. Dynamics of Dating, Courtship, and Marriage.** 3 degree credits. \$33 plus \$1 materials fee.

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

### *Spring Semester*

M 6:20-8:00, Johnston 114, Mandel

**FamS 1A. Dynamics of Marriage and Parenthood.** 3 degree credits, \$1. \$33 plus \$1 materials fee.

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

### *Fall Semester*

M 6:20-8:00, Johnston 114, Torbett

### *Spring Semester*

Th 6:20-8:00, Johnston 105, Blume

---

Symbols explained on page 15.

## Evening Classes

---

### **\*FamS 25A. Parenthood.** 2 degree credits. \$22.

Examination of differing concepts of family roles—father, mother, son, daughter, brother, sister; their implications for parent-child and sibling interaction. Effects of parenthood on husband-wife relations. (No prerequisite. Limited to 40 students. Repeated winter and spring terms)

#### **Special Term—September 26 to December 5**

M 7:30-9:10, Nicholson  
107, Hey  
M 7:00-8:45, Sibley Senior  
High School, West St  
Paul, Peterson

#### **Special Term—January 9 to March 13**

M 7:30-9:10, Nicholson  
107, Peterson

#### **Special Term—March 27 to June 5**

M 7:00-8:45, White Bear  
Lake High School 109,  
Peterson

## FRENCH

*John E. Fadell, Instructor in French*

*Claude Francis, Associate Professor of French*

*Barry T. Hughes, Instructor in French*

*Peter Lock, Associate Professor of French*

*Joseph P. Waldauer, Associate Professor of French*

1-2-3, *Beginning French*, 1A-1B-2A-2B-3A-3B, *Beginning French*, and 25, *Intermediate French*, are courses stressing pronunciation, aural comprehension, basic grammatical forms, patterns of French and the ability to recombine them in new situations. The reading and writing skills will be developed as a complement to the acquisition of the spoken objectives. Each meeting will consist of language laboratory work as well as class recitation. Grades will be assigned solely on the basis of class recitation and weekly quizzes.

The two *Beginning French* sequences differ only in rate of progress and may be correlated as follows:

Fren 1A plus 1B will be considered the equivalent of Fren 1

Fren 2A plus 2B will be considered the equivalent of Fren 2

Fren 3A plus 3B will be considered the equivalent of Fren 3

The laboratory fee for beginning French courses entitles students to use of the Language Laboratory.

### **Fren 1. Beginning French.** 5 degree credits. \$55 plus \$3 laboratory fee.

See note above. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

MTh 6:20-8:00, Folwell 104

#### *Spring Semester*

MTh 6:20-8:00, Folwell 104

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

### **Fren 2. Beginning French.** 5 degree credits. \$55 plus \$3 laboratory fee.

See note on page 90. (Prerequisite: 1 or 1B or 1 year high school French. Repeated spring semester)

*Fall Semester*  
MTh 6:20-8:00, Folwell 110

*Spring Semester*  
MTh 6:20-8:00, Folwell 110

### **Fren 3. Beginning French.** 5 degree credits. \$55 plus \$3 laboratory fee.

See note on page 90. (Prerequisite: 2 or 2B or 2 years high school French. Repeated spring semester)

*Fall Semester*  
MTh 6:20-8:00, Folwell 107

*Spring Semester*  
MTh 6:20-8:00, Folwell 107

### **Fren 1A-1B. Beginning French.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

See note on page 90. (No prerequisite for 1A; 1A for 1B. Repeated spring semester)

*Fall Semester*  
1A W 6:20-8:00, Folwell 109  
1B W 6:20-8:00, Folwell 108

*Spring Semester*  
1A W 6:20-8:00, Folwell 109  
1B W 6:20-8:00, Folwell 108

### **Fren 2A-2B. Beginning French.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

See note on page 90. (Prerequisite: 1 or 1B or 1 year high school French for 2A; 2A for 2B)

*Fall Semester*  
2A M 6:20-8:00, Folwell 303½

*Spring Semester*  
2B M 6:20-8:00, Folwell 303½

### **Fren 3A-3B. Beginning French.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

See note on page 90. (Prerequisite: 2 or 2B or 2 years high school French for 3A; 3A for 3B)

*Fall Semester*  
3A T 6:20-8:00, Folwell 303½

*Spring Semester*  
3B T 6:20-8:00, Folwell 303½

### **Fren 25. Intermediate French.** 5 degree credits. \$55 plus \$3 laboratory fee.

See note on page 90. (Prerequisite: 3 or 3B or 3 years high school French. Repeated spring semester)

*Fall Semester*  
MTh 6:20-8:00, Folwell 203

*Spring Semester*  
MTh 6:20-8:00, Folwell 203

### **Fren 30. Introduction to French Literary Texts.** 3 degree credits. \$33.

A variety of literary works representing the principal genres are examined through stylistic analyses and literary explications. Students learn critical terminology and discuss

Symbols explained on page 15.

## Evening Classes

---

literary problems and techniques. (Prerequisite: 25 or 4 years high school French. Repeated spring semester)

*Fall Semester*

Th 6:20-8:00, Folwell 201

*Spring Semester*

Th 6:20-8:00, Folwell 201

### **Fren 54. French Composition.** 3 degree credits. \$33.

Emphasis is on original composition. Reviews advanced grammar, stressing the living language. (Prerequisite: 25 or 4 years high school French)

*Fall Semester*

Th 6:20-8:00, Folwell 108

### **Fren 55. French Conversation.** 3 degree credits. \$33 plus \$10 laboratory fee.

In addition to regular conversation course, some time each week is devoted to practical phonetics and pronunciation drill. (Prerequisite: 25 or 4 years high school French. Repeated spring semester. May be repeated for credit)

*Fall Semester*

T 6:20-8:30, Folwell 201

*Spring Semester*

T 6:20-8:30, Folwell 201

### **Fren 65. Survey of French Literature: Rabelais to La Bruyère.** 3 degree credits. \$33.

Examines the principal works in the Renaissance, the baroque period, and the age of classicism, including those of Ronsard, d'Aubigné, Montaigne, Malherbe, Corneille, Molière, Racine, Mme. de LaFayette, and LaFontaine. (Prerequisite: 30 or ¶30)

*Fall Semester*

T 6:20-8:00, Folwell 205

### **Fren 66. Survey of French Literature: The Age of Enlightenment.** 3 degree credits. \$33.

Includes a study of the principal works of Marivaux, Montesquieu, Voltaire, Diderot, Rousseau, Beaumarchais, and others. (Prerequisite: 30 or ¶30)

*Spring Semester*

T 6:20-8:00, Folwell 205

### **Fren 143. Diderot.** 3 degree credits. \$33.

Diderot as a philosopher, a novelist, and an art critic. (Prerequisite: one literature course in French or ‡. Qualified students may register for graduate credit)

*Fall Semester*

Th 6:20-8:00, Folwell 303½, Waldauer

---

Symbols explained on page 15.

**Fren 165. Poetry in the Twentieth Century: Apollinaire, Valéry, Eluard.** 3 degree credits. \$33.

A study of the trends and principal themes in the poetry of the 20th century after the symbolist movement. (Prerequisite: one literature course in French or #. Qualified students may register for graduate credit)

*Fall Semester*

T 6:20-8:00, Folwell 302, Francis

**Fren 172. The Novel of l'Entre Deux Guerres.** 3 degree credits. \$33.

A critical reading of the main writers from Gide and Proust to Mauriac and Bernanos. (Prerequisite: one literature course in French or #. Qualified students may register for graduate credit)

*Spring Semester*

W 6:20-8:00, Folwell 302, Lock

**French for Graduate Students**

The French language requirements for a graduate degree can be satisfied by successfully passing an examination given at the end of a 1-quarter course, 17A, specifically designed for students who desire only a reading knowledge of the language.

**Fren 17A. French for Graduate Students.** No credit. \$33 each quarter.

This course is designed solely to impart a basic reading knowledge of the French language; full time is devoted to intensive reading and translation of a variety of texts. Since this approach deals with only one aspect of the language, reading, with no time-consuming sessions for oral-aural drills and composition, great skill can be acquired in a short time. At the end of 1 quarter the student is given the equivalent of the French Graduate Reading Examination. Successfully passing this examination fulfills the Graduate School requirement of a reading knowledge of a foreign language. (No prerequisite. Repeated winter and spring quarters)

*Fall Quarter*

M 6:20-8:50, Folwell 202

*Winter Quarter*

M 6:20-8:50, Folwell 202

*Spring Quarter*

M 6:20-8:50, Folwell 202

**GENERAL ARTS**

*Jerome E. Gates, Assistant Professor of General Arts*

**GC 21. General Arts.** 3 degree credits. \$33 plus \$2 materials fee.

The student is given the opportunity to evaluate his attitudes and ideas relating to the arts. This is done through an examination of the basic similarities which underlie all art forms and through an investigation of the development of these art forms in terms of human needs. The arts concentrated on are painting, sculpture, music, architecture, and literature. (No prerequisite. Repeated winter and spring quarters)

*Fall Quarter*

Th 6:30-9:00, Robbinsdale  
HS 233, Gates

*Winter Quarter*

Th 6:30-9:00, Robbinsdale  
HS 233, Gates

*Spring Quarter*

Th 6:30-9:00, Robbinsdale  
HS 233, Gates

Symbols explained on page 15.

## Evening Classes

---

### GEOGRAPHY

*Russell Adams, Assistant Professor of Geography*

*William Loy, Instructor in Geography*

*James Newman, Instructor in Geography*

*John Webb, Associate Professor of Geography*

#### **Geog 1. Physical Geography.** 5 degree credits. \$55.

Major features of distribution patterns of climate, relief, vegetation, and soils; regional differences in the problems of physical development. (No prerequisite. Repeated spring semester)

*Fall Semester*

T 6:20-9:20, West Bank CB 435,  
Newman

*Spring Semester*

T 6:20-9:20, West Bank CB 435, Loy

#### **Geog 4. Human Geography.** 5 degree credits. \$55.

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

*Fall Semester*

Th 6:20-9:20, West Bank CB 235, Webb

*Spring Semester*

Th 6:20-9:20, West Bank CB 235,  
Newman

#### **Geog 41. Economic Geography.** 5 degree credits. \$55.

Introductory survey and analysis of world patterns of economic activity. Emphasis is placed on raw material occurrence and resource potential, centers of industrial fabrication and circulation of trade and services. (No prerequisite)

*Spring Semester*

W 6:20-9:20, West Bank CB 425, Adams

#### **\*Geog 81. Introduction to Cartography.** 3 degree credits, \$70. \$33.

Principles of map design, compilation, specification, and drafting. Map symbols. History of cartography. Projections—analysis of construction, properties, and uses. (Prerequisite: 5 credits in geography or \*. Limited to 20 students)

*Fall Semester*

W 6:20-8:50, West Bank CB 455, Loy

#### **Geog 115. Mediterranean Region.** 3 degree credits, \$105. \$33.

Physical and human geography of lands adjacent to the Mediterranean Sea: Greece, Italy, Spain, Portugal, and southern France. (Prerequisite: 5 credits in geography or \*. May not be taken for graduate credit)

*Spring Quarter*

W 6:20-8:50, West Bank CB 435, Loy

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

**Geog 118. Africa.** 3 degree credits. \$33.

Regional differentiation of human groups and environments in Africa with special emphasis on culture contact and problems of underdeveloped countries south of the Sahara. (Prerequisite: 5 credits in geography or 4. May not be taken for graduate credit)

**Winter Quarter**

W 6:20-8:50, West Bank CB 435, Newman

**Geog 134. Eastern United States.** 3 degree credits, §113. \$33.

Regional analysis of the physical and human resources east of the Great Plains. (No prerequisite. Qualified students may register for graduate credit)

**Fall Quarter**

W 6:20-8:50, West Bank CB 435, Adams

## GEOLOGY

(See page 201)

## GERMAN

*Erhard Friedrichsmeyer, Assistant Professor of German*

*Edwin F. Menze, Professor of German*

*Herman Ramras, Professor of German*

*Gerhard H. Weiss, Associate Professor of German*

*Cecil Wood, Professor of German*

Two sequences of Beginning German are offered for credit: Ger 1A-2A-3A and Ger 1B-2B-3B. Either will satisfy the College of Liberal Arts language requirement. Ger 17A and 17B are noncredit courses designed for graduate students only. The German language requirement for an advanced degree can be satisfied by passing the examination given at the end of 17B with a grade of "B" or better.

The prospective student should choose the course that is best suited for his needs.

*1A-2A-3A. Beginning German: "Oral" Approach.* 5 credits per unit. Provides basic experience in speaking, reading, and understanding the German language and its structure through the acquisition of basic patterns of speech and later through the reading and analysis of texts. The course will be reinforced with programmed materials which will be available to students in the language laboratory. The continuation course is Ger 4-5, which is a prerequisite for Upper Division German courses.

*1B-2B-3B. Beginning German: Language and Culture.* 5 credits per unit. Provides a foundation for a reading knowledge adequate for cultural

---

Symbols explained on page 15.

## Evening Classes

---

and professional purposes; a core of minimum essential vocabulary and familiarity with German structure necessary to develop a speaking knowledge; an introduction to representative German figures such as Goethe, Heine, Thomas Mann, through a variety of graded texts. Tapes for practicing pronunciation, listening comprehension, and basic structural patterns will be available to students in the language laboratory. The continuation course is Ger 4-5, which is the prerequisite for Upper Division German courses.

The laboratory fee for beginning German courses entitles students to use of the Language Laboratory.

**Ger 1A-2A. Beginning German: "Oral" Approach.** 5 degree credits each semester. \$55 plus \$3 laboratory fee each semester.

Structure, pronunciation, reading, and oral comprehension by learning the patterns of basic German. See note on page 95. (No prerequisite for 1A; 1A or 1 year preparatory German for 2A)

*Fall Semester*

1A M 6:20-9:20, Folwell 209½, Weiss  
1A Th 6:20-9:20, Folwell 209½

*Spring Semester*

2A M 6:20-9:20, Folwell 209½, Weiss  
2A Th 6:20-9:20, Folwell 209½

**Ger 3A. Beginning German: "Oral" Approach.** 5 degree credits. \$55.

A continuation of the 5-credit sequence in Beginning German. (Prerequisite: 2A)

*Fall Semester*

M 6:20-9:20, Folwell 109

**Ger 1B-2B. Beginning German: Language and Culture.** 5 degree credits each semester. \$55 plus \$3 laboratory fee each semester.

Reading and oral comprehension, core of minimum structure and vocabulary. See note on page 95. (No prerequisite for 1B; 1B or 1 year preparatory German for 2B)

*Fall Semester*

1B M 6:20-9:20, Folwell 209, Ramras

*Spring Semester*

2B M 6:20-9:20, Folwell 209, Ramras

**Ger 3B. Beginning German.** 5 degree credits. \$55.

A continuation of the 5-credit sequence in Beginning German. (Prerequisite: 2B)

*Fall Semester*

M 6:20-9:20, Folwell 108

**Ger 4-5. Intermediate German.** 5 degree credits. \$55.

The combination of Ger 4 and 5 corresponds to the regular departmental course offerings at the intermediate German level in the College of Liberal Arts: Ger 4, Intermediate German, Selected Readings from Literature, 3 degree credits; Ger 5, Intermediate German, Elementary Composition, 2 degree credits. A student must register concurrently for both courses in the Extension Division. (Prerequisite: 3A or 3B or 3 years of high school German)

*Spring Semester*

M 6:20-9:20, Folwell 305½

---

Symbols explained on page 15.



## Course Offerings—Arts and Sciences

**Ger 61E-62E. Conversation.** 3 degree credits each semester, §61-62-63. \$33 each semester.

Systematic development of vocabulary in areas relating to everyday life and practice in the use of spoken German. (Prerequisite: 4-5 or equivalent or § for 61E; 61E for 62E)

*Fall Semester*

61E Th 6:20-8:00, Folwell 302

*Spring Semester*

62E Th 6:20-8:00, Folwell 302

**Ger 68. Contemporary Germany.** 3 degree credits. \$33.

An introduction to the culture and civilization of present-day Germany. (Prerequisite: Ger 56 or Ger 4 and Δ)

*Fall Semester*

T 6:20-8:00, Folwell 207, Friedrichsmeyer

### German for Graduate Students

The German language requirement for an advanced degree can be satisfied with a program of study based on Ger 17A and Ger 17B. Ger 17A or equivalent (2 quarters of beginning German or 2 years of high school German) is a prerequisite for Ger 17B. A final examination is administered at the conclusion of Ger 17B. If the student achieves a grade of "B" or better in this examination, the German Department will certify him as having satisfied the German language requirement for an advanced degree.

**Ger 17A. German for Graduate Students.** No credit. \$33.

This course is designed to help the graduate student acquire a reading knowledge of basic German as rapidly as possible. (The course itself is not intended to prepare a student for the Graduate German Reading Examination; it is merely the first step toward such an objective.) Ger 17A assumes no knowledge of German on the part of the student. Grammar is reduced to an essential minimum. The course progresses from intensive reading of simple, graded material to selections of moderate difficulty. Vocabulary building and analysis of compound words are emphasized. (No prerequisite. Repeated spring semester)

*Fall Semester*

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

*Spring Semester*

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

**Ger 17B. German for Graduate Students.** No credit. \$44.

This course is designed to give the graduate student the experience in intensive reading of German literary texts necessary to enable him to satisfy the German language requirement for an advanced degree by achieving a grade of "B" or better in the final examination which is part of the course. (Prerequisite: 17A or 2 quarters of beginning German or 2 years of high school German. Repeated spring semester)

*Fall Semester*

M 6:20-8:35, Folwell 105, C Wood

*Spring Semester*

M 6:20-8:35, Folwell 105, C Wood

## GREEK

(See Classics, page 75)

Symbols explained on page 15.

## Evening Classes

### HISTORY

*W. Donald Beatty, Professor of History*  
*Hyman Berman, Associate Professor of History*  
*Kinley J. Brauer, Assistant Professor of History*  
*John R. Howe, Associate Professor of History*  
*Tom B. Jones, Professor of History*  
*Rodney C. Loehr, Professor of History*  
*Jeanne T. Lupton, Associate Professor of History*  
*Byron K. Marshall, Assistant Professor of History*  
*John K. Munholland, Assistant Professor of History*  
*Sidney B. Nelson, Instructor in History*  
*David W. Noble, Professor of History*  
*Marvin A. Powell, Instructor in History*  
*Darrett B. Rutman, Associate Professor of History*  
*Richard Schuele, Instructor in History*  
*Timothy L. Smith, Professor of History*  
*Theofanis G. Stavrou, Associate Professor of History*  
*William E. Wright, Associate Professor of History*

*Note—In the fall of 1964 all history courses numbered 100 and above were renumbered. The old numbers are in parentheses following the new course numbers. Be sure you do not register for a course you may have already taken under another number.*

**Hist 1, 2, 3. Civilization of the Modern World.** 3 degree credits each quarter. \$33 each quarter.

1: The rise of the European state system as framework within which Western civilization developed, and the economic, cultural, political, and religious implications of the emerging system. 2: The struggle for control over the Western states system, and the emergence of liberal democracy in the modern world. 3: The impact of industrialism upon Western and world civilization in the 20th century. (No prerequisite. Need not be taken in sequence. For Upper Division credit, register in Hist 53, 54, 55)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
1	M 6:30-9:00 Robbinsdale HS 231 (Limited to 72 students*) W 5:30-8:00, West Bank CB 10, Wright Th 6:00-8:30, StP Ext Center, Olson	2	M 6:30-9:00, Robbinsdale HS 231 (Limited to 72 students*) W 5:30-8:00, West Bank CB 10, Wright Th 6:00-8:30, StP Ext Center, Olson	3	M 6:30-9:00, Robbinsdale HS 231 (Limited to 72 students*) W 5:30-8:00, West Bank CB 10, Wright Th 6:00-8:30, StP Ext Center, Olson

**Hist 11, 12, 13. Medieval and Renaissance History.** 3 degree credits each quarter. \$33 each quarter.

11: The early Middle Ages, decline of Rome, the barbarian kingdoms, Carolingian empire. 12: The high Middle Ages, feudal Europe, medieval culture. 13: The later Middle

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

Ages and early Renaissance, rise of national monarchies, art, learning, and literature. (No prerequisite. Need not be taken in sequence)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
11 M 6:00-8:30, MacPhail Center Annex 2, Schuele	12 M 6:00-8:30, MacPhail Center Annex 2, Schuele	13 M 6:00-8:30, MacPhail Center Annex 2, Schuele

**Hist 14, 15, 16. Ancient Civilization.** 3 degree credits each quarter. \$33 each quarter.

14: A survey of the rise of civilization in the Ancient Near East from the earliest times to 500 B.C. Emphasis is placed upon the origin of culture and its development in complexity from the primitive to the civilized stage. Special attention is given to the civilizations of Babylonia, Egypt, Indus Valley, Syria, Palestine, and Crete. 15: The history of the rise and flowering of the Greek civilization from the earliest times to the death of Alexander the Great in 323 B.C. Special emphasis is placed on Greek civilization in the literary, artistic, and philosophic achievement of that period. 16: The climax of ancient civilization during the Hellenistic Age 323-133 B.C. and the Roman Imperial Period followed by the decline of Rome and of ancient civilization (to about A.D. 300). The three main topics to be considered are (a) the civilization of the ancient world at its peak, (b) the rise and flowering of Roman culture, and (c) the reasons for the decline of ancient civilization. Special attention will be paid to political institutions, art, literature, economics and society, philosophy, and ancient science. (No prerequisite. Need not be taken in sequence, but recommended that 16 be preceded by 15, and 15 by 14 in order that the student may acquire a background for following course. For Upper Division credit, register in Hist 50, 51, 52)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
14 T 5:30-8:00, West Bank CB 10, Powell	15 T 5:30-8:00, West Bank CB 10, Powell	16 T 5:30-8:00, West Bank CB 10, Powell
W 6:00-8:30, Mac- Phail Center Annex 1, Nelson	W 6:00-8:30, Mac- Phail Center Annex 1, Nelson	W 6:00-8:30, Mac- Phail Center Annex 1, Nelson
Th 5:30-8:00, West Bank CB 10, Jones	Th 5:30-8:00, West Bank CB 10, Jones	Th 5:30-8:00, West Bank CB 10, Jones

**Hist 17, 18, 19. History of Asia.** 3 degree credits each quarter. \$33 each quarter.

A survey of the history of China, Japan, India, and southeast Asia from ancient times to the present. 17: Ancient history and culture of China, Japan, and India to A.D. 1200. 18: Asia (A.D. 1200-1800): Chinese empire period; India: Muslim domination; Japanese feudalism; the beginning of Western influence. 19: Modern Asia: The impact of Europe, nationalism, post-World War II Asia. (No prerequisite. Need not be taken in sequence. For Upper Division credit, register in Hist 59, 60, 61)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
17 M 5:30-8:00, West Bank CB 135, Marshall	18 M 5:30-8:00, West Bank CB 135, Marshall	19 M 5:30-8:00, West Bank CB 135, Marshall

Symbols explained on page 15.

## Evening Classes

---

\*Hist 20, 21, 22. American History. 3 degree credits each quarter. \$33 each quarter.

A survey of the political, economic, and social history of the United States, with emphasis on the forces that resulted in the emergence of modern America. 20: Colonial and early national period. 21: Sectionalism and political development. 22: Modern America. (No prerequisite. Need not be taken in sequence. Limited to 72 students each quarter)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
20	W 6:30-9:00, Robbinsdale HS 235, Lupton ( <i>Limited to 72 students*</i> )	21 W 6:30-9:00, Robbinsdale HS 233, Lupton ( <i>Limited to 72 students*</i> )	22 W 6:30-9:00, Robbinsdale HS 233, Lupton ( <i>Limited to 72 students*</i> )

Hist 23, 24 (old 20, 21, 22). American History. 4 degree credits each semester. \$44 each semester.

Survey of political, economic, and social history of the United States with emphasis on forces that resulted in the emergence of Modern America. 23: Colonial, early national period through the sectional crisis. 24: Modern America. (No prerequisite. Need not be taken in sequence)

	<b>Fall Semester</b>	<b>Spring Semester</b>
23	M 7:00-9:15, StP Ext Center Th 5:45-8:00, West Bank CB 150, Berman	24 M 7:00-9:15, StP Ext Center Th 5:45-8:00, West Bank CB 150, Berman

*Note—Either Hist 20, 21, and 22, or Hist 23 and 24, will satisfy the Lower Division requirement for students who plan to major in history. Students who take Hist 20, 21, and 22 cannot take Hist 23 or 24 for credit. Students who take Hist 23 and 24 can not take Hist 20, 21, or 22 for credit. Students unable to complete either sequence may substitute Upper Division courses after consultation with a member of the Department of History.*

Hist 50, 51, 52. Ancient Civilization. 3 degree credits each quarter. \$33 each quarter.

See course description as listed under Hist 14, 15, 16. (Prerequisite: Limited to those students eligible for Upper Division Credit)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
50	Th 5:30-8:00, West Bank CB 10, Jones	51 Th 5:30-8:00, West Bank CB 10, Jones	52 Th 5:30-8:00, West Bank CB 10, Jones

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

**Hist 53, 54, 55. Civilization of the Modern World.** 3 degree credits each quarter. \$33 each quarter.

See course description as listed under Hist 1, 2, 3. (Prerequisite: Limited to those students eligible for Upper Division credit)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
53 M	6:30-9:00, Rob- binsdale HS 231, (Limited to 72 students*)	54 M 6:30-9:00, Rob- binsdale HS 231 (Limited to 72 students*)	55 M 6:30-9:00, Rob- binsdale HS 231 (Limited to 72 students*)
W	5:30-8:00, West Bank CB 10, Wright	W 5:30-8:00, West Bank CB 10, Wright	W 5:30-8:00, West Bank CB 10, Wright
Th	6:00-8:30, StP Ext Center, Olson	Th 6:00-8:30, StP Ext Center, Olson	Th 6:00-8:30, StP Ext Center, Olson

**Hist 59, 60, 61. History of Asia.** 3 degree credits each quarter. \$33 each quarter.

See course description as listed under Hist 17, 18, 19. (Prerequisite: Limited to those students eligible for Upper Division credit)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
59 M	5:30-8:00, West Bank CB 135, Marshall	60 M 5:30-8:00, West Bank CB 135, Marshall	61 M 5:30-8:00, West Bank CB 135, Marshall

**Hist 79, 80. The United States in the Twentieth Century.** 3 degree credits each semester. \$33 each semester.

Courses are first two parts of the sequence 79, 80, 81. A concentrated study of the social, political, economic, and cultural development of the United States since 1900 and of the rise of the United States as a world power. 79: Spanish-American War and America's overseas empire; the rise of big business; problems of the city; and Progressive Era of Reform; America in World War I. 80: Social and intellectual crises of the 1920's; prosperity and depression; the New Deal; the rise of organized labor; from isolation to intervention; the postwar scene. (No prerequisite. Need not be taken in sequence)

	<b>Fall Semester</b>		<b>Spring Semester</b>
79 Th	6:20-8:00, West Bank CB 120, Noble	80 Th	6:20-8:00, West Bank CB 120, Noble

**Hist 86, 87, 88. American Colonies.** 3 degree credits each quarter. \$33 each quarter.

86: The European and English background, foundation of colonies, establishment of colonial institutions, 1607-1689. 87: The expansion of the colonies territorially, economically, and culturally, 1689-1750. 88: The colonies in the empire, imperial struggle and its aftermath in revolution and independence, 1750-1776. (No prerequisite. Need not be taken in sequence)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
86 T	5:30-8:00, West Bank CB 155, Rutman	87 T 5:30-8:00, West Bank CB 155, Rutman	88 T 5:30-8:00, West Bank CB 155, Rutman

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

**Hist 87A-88A. The Era of the American Revolution.** 3 degree credits each quarter. \$33 each quarter.

The causes and course of the American Revolution, accenting the economic, social, political, and psychological impact of the Revolution upon American life. 87A: The causes and course of the Revolution. 88A: The Revolution and an American nation. (No prerequisite for 87A; 87A or † for 88A)

<b>Fall Quarter</b>		<b>Winter Quarter</b>	
87A	M 5:30-8:00, West Bank CB 205, Howe	88A	M 5:30-8:00, West Bank CB 205, Howe

**Hist 93, 94, 95. History of American Foreign Policy.** 3 degree credits each quarter. \$33 each quarter.

93: Revolution, territorial expansion, to post-Civil War settlements, 1775-1871. 94: Period of commercial expansion and war, 1871-1920. 95: American foreign policy since Versailles. (No prerequisite. Need not be taken in sequence)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
93	M 5:30-8:00, West Bank CB 425, Brauer	94	M 5:30-8:00, West Bank CB 425, Brauer	95	M 5:30-8:00, West Bank CB 425, Brauer

**Hist 95. American Diplomatic History.** 3 degree credits. \$33.

Course is last part of the former sequence 93, 94, 95. 95: United States as a world power. (No prerequisite. Need not be taken in sequence)

<b>Fall Quarter</b>	
M	8:15-9:55, West Bank CB 205, Lupton

**Hist 103B, 104B, 105B (old 100A, 101A, 102A). Greek History.** 3 degree credits each quarter. \$33 each quarter.

An advanced course in Greek history from the earliest times to the end of the Hellenistic Age. 103B: Minoan and Mycenaean civilization, the Dark Ages, the rise of the Greek civilization, 750-500 B.C. 104B: Persian Wars, Periclean Athens, Peloponnesian War, classical Greek civilization (art, literature, philosophy, etc.). 105B: The fourth century, rise of Macedon, Alexander the Great, Hellenistic history and civilization, 323-133 B.C. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
103B	T 5:30-8:00, West Bank CB 255, Jones	104B	T 5:30-8:00, West Bank CB 255, Jones	105B	T 5:30-8:00, West Bank CB 255, Jones

**Hist 115D, 116D, 117D (old 109, 110, 111). Europe in the Twentieth Century.** 3 degree credits each quarter. \$33 each quarter.

115D: The preeminence of the European order and origins of 20th-century crises: imperialism, social democracy and the first World War, 1890-1918. 116D: The search for a new order and the development of totalitarianism in Europe, 1918-1939. 117D:

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

---

The second World War and the emergence of a new Europe, 1939-1960's. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
115D Th 5:30-8:00, West Bank CB 155, Munholland	116D Th 5:30-8:00, West Bank CB 155, Munholland	117D Th 5:30-8:00, West Bank CB 155, Munholland

**Hist 119D, 120D (old 126A, 127A).** Central Europe: Poland, Hungary, Czechoslovakia. 3 degree credits each semester. \$33 each semester.

Courses are last two parts of the sequence 118D, 119D, 120D. 119D: 18th century to 1867. 120D: From 1867 to the present. (No prerequisite. Qualified students may register for graduate credit)

<b>Fall Semester</b>	<b>Spring Semester</b>
119D W 8:15-9:55, West Bank CB 205, Wright	120D W 8:15-9:55, West Bank CB 205, Wright

**Hist 118F, 119F, 120F (old 125B, 126B, 127B).** Modern Russia. 3 degree credits each quarter. \$33 each quarter.

118F: The 18th-century background. 119F: The 19th century. 120F: The fall of the Russian monarchy; the revolutions and the Soviet Regime. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
118F M 5:30-8:00, West Bank CB 235, Stavrou	119F M 5:30-8:00, West Bank CB 235, Stavrou	120F M 5:30-8:00, West Bank CB 235, Stavrou

**Hist 134E, 135E (old 138A, 139A).** American History, 1850-1900. 3 degree credits each quarter. \$33 each quarter.

Courses are last two parts of the sequence 133E, 134E, 135E. 134E: From 1865 to 1880. 135E: From 1880 to 1900. (No prerequisite. Qualified students may register for graduate credit)

<b>Fall Quarter</b>	<b>Winter Quarter</b>
134E M 5:30-8:00, West Bank CB 155, Loehr	135E M 5:30-8:00, West Bank CB 155, Loehr

**Hist 137A, 138A (old 147A, 148A).** History of the South. 3 degree credits each semester. \$33 each semester.

Courses are the last two parts of the sequence 136A, 137A, 138A. 137A: Covers the period 1840-1890. 138A: Covers the period 1890 to the present. (No prerequisite. Qualified students may register for graduate credit)

<b>Fall Semester</b>	<b>Spring Semester</b>
137A Th 8:15-9:55, West Bank CB 10, Noble	138A Th 8:15-9:55, West Bank CB 10, Noble

---

Symbols explained on page 15.

## Evening Classes

---

**Hist 139D, 141D (old 143A, 145A). The Social History of American Religion.** 3 degree credits each quarter. \$33 each quarter.

The courses are the first and last parts of the sequence 139D, 140D, 141D. A survey and analysis of the role of religion and American society, both as a sanction to developments determined by other forces, and as itself a factor in social change. 139: the 17th and 18th centuries. 141D: The 20th century. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

**Fall Quarter**

139D Th 5:30-8:00, West Bank CB 225,  
Smith

**Spring Quarter**

141D Th 5:30-8:00, West Bank CB 205,  
Smith

**Hist 142A (old 146). American Economic History.** 3 degree credits. \$33.

142A is the first part of the sequence 142A, 143A, 144A. Colonial economic life from the beginning of settlement to the American Revolution. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

**Spring Quarter**

M 5:30-8:00, West Bank CB 205, Loehr

**Hist 144C, 142C (old 145B, 143B). History of American Labor.** 3 degree credits each semester. \$33 each semester.

Courses are the last and first parts of the sequence 142C, 143C, 144C. A history and analysis of the role of labor in the development of the United States. Life of the workers, conditions of work, and organization of labor institutions will be described. The political and ideological strivings of labor will be examined broadly. 144C: From 1917 to present. 142C: From 1607 to 1873. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

**Fall Semester**

144C Th 8:15-9:55, West Bank CB 115,  
Berman

**Spring Semester**

142C Th 8:15-9:55, West Bank CB 115,  
Berman

**Hist 145A, 146A, 147A (old 157, 158, 159). Survey of Latin-American History.** 3 degree credits each quarter. \$33 each quarter.

145A: Colonial period. 146A: Latin-American republics. 147A: Recent Latin-American history. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

**Fall Quarter**

145A Th 5:30-8:00, West  
Bank CB 255,  
Beatty

**Winter Quarter**

146A Th 5:30-8:00, West  
Bank CB 255,  
Beatty

**Spring Quarter**

147A Th 5:30-8:00, West  
Bank CB 255,  
Beatty

**Hist 148F, 149F. History of Japan.** 3 degree credits each semester. \$33 each semester.

148F: To 1700. 149F: Since 1700. (No prerequisite. Need not be taken in sequence. Qualified students may register for graduate credit)

**Fall Semester**

148F M 8:15-9:55, West Bank CB 440,  
Marshall

**Spring Semester**

149F M 8:15-9:55, West Bank CB 440,  
Marshall

---

Symbols explained on page 15.



## HUMANITIES

William Agee, *Instructor in Humanities*  
 Eugene Atkin, *Instructor in Humanities*  
 David Brown, *Lecturer in Humanities*  
 Fred Hallberg, *Instructor in Humanities*  
 Stephen Hult, *Instructor in Humanities*  
 George Kliger, *Instructor in Humanities*  
 Don Lambert, *Instructor in Humanities*  
 Ray Livingston, *Lecturer in Humanities*  
 Lynn Louden, *Instructor in Humanities*  
 Margaret MacInnes, *Assistant Professor, General College*  
 Albert Milgrom, *Instructor in Humanities*  
 Mischa Penn, *Instructor in Humanities*  
 Robert Scott, *Professor of Speech and Theatre Arts*  
 Eric Stokes, *Assistant Professor, General College*  
 Wolfgang Taraba, *Associate Professor of German and the Humanities*  
 Gaylord Todd, *Instructor in Humanities and Romance Languages*  
 Hermann Weber, *Instructor in Humanities and Classics*

### Hum 1. Humanities in the Modern World I. 3 degree credits, \$51. \$33.

An introduction to the study of the humanities in the modern world, including the old regime, the revolution, neoclassicism and romanticism, from about 1740 to 1820. Materials used are history, prose, criticism, literature, poetry, and art. Authors: Pope, Voltaire, Rousseau, Burke, Goethe, Tolstoy. (No prerequisite. Repeated each term)

<i>Fall Semester</i>		<i>Spring Semester</i>	
M	8:15-9:55, Ford 285, Abishaker	M	6:20-8:00, Ford 285
<b>Fall Quarter</b>		<b>Winter Quarter</b>	<b>Spring Quarter</b>
T	5:15-7:45, StP Ext Center, Thomas	W	5:30-8:00, Ford 115, Stokes
T	5:30-8:00, MacPhail Center Annex 1, Hallberg	Th	5:30-8:00, Ford 115, Hult
T	7:00-9:30, Ford 155, Ouren	T	5:30-8:00, Ford 115, Stokes
W	5:30-8:00, Ford 285, Brown	W	5:30-8:00, Ford 115, White
W	6:30-9:00, Robbinsdale HS 231, Lambert (Limited to 72 students*)		
W	7:00-9:30, Ford 130, Todd		
Th	5:30-8:00, Ford 55, Saplala		

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

### Hum 2. Humanities in the Modern World II. 3 degree credits, §52. \$33.

The industrial revolution, liberalism and socialism, the psychology of individualism. Period covered is from 1776 to 1890. Authors: Carlyle, Mill, Marx, Smith, Malthus, Ibsen, Dostoevski. (No prerequisite. Repeated spring semester)

#### Spring Semester

M 8:15-9:55, Ford 285, Abishaker

#### Winter Quarter

T 5:15-7:45, StP Ext Center,  
Milgrom  
T 5:30-8:00, MacPhail Center  
Annex 1, Thomas  
W 5:30-8:00, Ford 285, Ouren  
W 7:00-9:30, Ford 130, Todd  
W 6:30-9:00, Robbinsdale HS 231,  
Brown (Limited to 72 students\*)  
Th 5:30-8:00, Nicholson 213,  
MacInnes

### Hum 3. Humanities in the Modern World III. 3 degree credits, §53. \$33.

The impact of science and evolution; religion and morals in a changing world, from about 1840 to 1914. Authors: the evolutionists, Kierkegaard, Nietzsche, Chekhov, Thomas Mann. (No prerequisite. Repeated spring quarter)

#### Fall Semester

Th 6:20-8:00, Ford 285, Lambert

#### Spring Quarter

T 5:15-7:45, StP Ext Center  
T 5:30-8:00, MacPhail Center Annex 1,  
Brown  
W 5:30-8:00, Nicholson 213, MacInnes  
W 6:30-9:00, Robbinsdale HS 231,  
Lambert (Limited to 72 students\*)  
Th 5:30-8:00, Ford 115, Hult

### Hum 4. Humanities in the Modern World IV. 3 degree credits, §54. \$33.

Civilization between two wars: the impact of psychoanalysis, communism, 20th-century liberalism, new problems of human value and authority. Authors: Freud, Lenin, T. S. Eliot, Kafka, and others. (No prerequisite. Repeated spring semester)

#### Fall Semester

M 6:20-8:00, Ford 130, Atkin

#### Spring Semester

Th 6:20-8:00, Ford 130, Atkin

### Hum 11. The Greek Heritage. 3 degree credits, §61. \$33.

Greece through the Peloponnesian War. Emphasizes Golden Age of Athens; tragic visions of the dramatists, classical art and architecture, Athenian democracy, concepts of reason and justice, Homer, Hesiod, the dramatists, Plato, Aristotle, Greek art and architecture. (No prerequisite)

#### Fall Quarter

T 5:30-8:00, Ford 130, Weber

### Hum 12. Roman and Medieval Heritage. 3 degree credits, §62. \$33.

Roman state. Hellenistic and Roman civilization. Epicureanism and Stoicism, Neoplatonism, Hebrew background and setting for Christianity. Christian doctrine, medieval

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

society, faith, theocracy, Lucretius, Marcus Aurelius, Epictetus, New Testament, Augustine, church documents, Thomas Aquinas, Dante. Early Christian, Romanesque, and Gothic art. (No prerequisite)

**Winter Quarter**

T 5:30-8:00, Ford 130, Klinger

**Hum 13. The Renaissance and Reformation. 3 degree credits, §63. \$33.**

The 14th to 17th centuries. Rise of Italian communes, commercial life, banking; age of Lorenzo the Magnificent in Florence; ideal of beauty in art, politics, and morals; universal man. High Renaissance and the power of Rome. Pietism and Reformation in Germany. Counter Reformation in Spain and France. Golden Age of Spain and beginnings of Age of Reason. Readings from Pico della Mirandola, Machiavelli, Castiglione, Luther, Calvin, Loyola, Montaigne, Pascal, Cervantes. Renaissance and baroque art and architecture. (No prerequisite)

**Spring Quarter**

T 5:30-8:00, Ford 130, Weber

**Hum 21. American Life. 3 degree credits. \$33.**

The concept of individualism and the place of the individual in American society as recorded in literature, social thought, and the arts. Readings of varying length from a variety of authors including Franklin, Tocqueville, Thoreau, Whitman, Lewis, and Farrell. Industrial and union folk songs. (No prerequisite)

**Fall Quarter**

W 6:00-8:30, StP Ext Center, Agee

Th 6:20-8:50, Vincent 1, Agee

**Hum 22. American Life. 3 degree credits. \$33.**

Religion in American thought and experience from Puritanism to the present. Readings of varying length from a variety of authors including Edwards, Hawthorne, Paine, Jefferson, Emerson, Ingersoll, William James, Eliot, and Hemingway. Studies of American religious utopias. The "Honest to God" and "God Is Dead" controversies. (No prerequisite)

**Winter Quarter**

W 6:00-8:30, StP Ext Center,  
Agee

Th 6:20-8:50, Vincent 1, Agee

**Hum 23. American Life. 3 degree credits. \$33.**

Two major topics are investigated: (a) The land, the city, and the machine as factors in American life. Readings of varying length from Jefferson, Crevecoeur, Mark Twain, and Dreiser. The natural and the urban-technological landscapes in painting. The rise of the skyscraper. The architecture of Frank Lloyd Wright. (b) The image of himself and of his society held by the modern American Negro. Readings of varying length from Washington, DuBois, Ellison, King, and Baldwin. Jazz and the story of "Jelly-Roll" Morton. Negro folk songs and humor. (No prerequisite)

**Spring Quarter**

W 6:00-8:30, StP Ext Center, Agee

Th 6:20-8:50, Vincent 1, Agee

Symbols explained on page 15.

## Evening Classes

---

### **Hum 51. Humanities in the Modern World. 3 degree credits, §1. \$33.**

Similar to Hum 1. More extensive readings, papers. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### **Fall Quarter**

Th 5:30-8:00, Ford 160, Scott

### **Hum 52. Humanities in the Modern World. 3 degree credits, §2. \$33.**

Similar to Hum 2. More extensive readings, papers. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### **Winter Quarter**

Th 5:30-8:00, Ford 160, Scott

### **Hum 53. Humanities in the Modern World. 3 degree credits, §3. \$33.**

Similar to Hum 3. More extensive readings, papers. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### **Spring Quarter**

Th 5:30-8:00, Ford 160, Taraba

### **Hum 54. Humanities in the Modern World. 3 degree credits, §4. \$33.**

Similar to Hum 4. More extensive readings, papers. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### **Spring Semester**

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

### **Hum 55. Humanities in the Modern World. 3 degree credits. \$33.**

The intellectual climate of the western world since World War II. The worlds of existentialism and "the absurd"; alienation, irrationalism; the new theology and the influence of Zen. Readings in Buber, Camus, Hesse, Ionesco, Genet, Bultmann, Tillich, and others. (Prerequisite: 4 or 54)

#### **Fall Semester**

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

### **Hum 61. The European Heritage. 3 degree credits, §11. \$33.**

Similar to Hum 11. More extensive readings, papers. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### **Fall Quarter**

W 5:30-8:00, Ford 170, Louden

### **Hum 62. The European Heritage. 3 degree credits, §12. \$33.**

Similar to 12. More extensive readings, papers. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### **Winter Quarter**

W 5:30-8:00, Ford 170, Louden

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

### **Hum 63. The European Heritage.** 3 degree credits, \$13. \$33.

Similar to Hum 13. More extensive readings, papers. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### **Spring Quarter**

W 5:30-8:00, Ford 170, Louden

### **\*Hum 99. Science and the Humanities.** 3 degree credits. \$33.

Examines the warfare between the "two cultures"; the scientific and the humanistic, through a consideration of decisive documents from Ficino and Vives to the recent work of Polanyi, Koestler, Bronowski, Popper, Cassier, and A. Huxley. Selected topics include (a) humanistic scholarship and the methodological character of the sciences, (b) creativity in the arts and sciences, and (c) the problem of the scientist's moral responsibility. (Prerequisite: Limited to those students eligible for Upper Division credit. Limited to 25 students)

#### **Spring Semester**

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

### **Hum 131. Proseminar: The Myth of the Hero.** 3 degree credits. \$33.

The universal motif of the hero's journey through trials to fulfillment as sustaining and exemplary to men in all ages. Works and authors to be studied include Sophocles, Arthurian Legends, Dante, Shakespeare, Bunyan, Dostoevski, Conrad, *The Odyssey*, *The King and The Corpse*, *The Hero with a Thousand Faces*. (Prerequisite: 9 credits in humanities program courses or §. May not be taken for graduate credit)

#### **Fall Quarter**

Th 6:20-8:50, Ford 60, Livingston

### **Hum 132. Proseminar: The Way of Woman.** 3 degree credits. \$33.

A tentative exploration of the mystery of the feminine nature as delineated in works of art and literature, including Amor and Psyche, Tristan and Isolde, Madame Bovary, Anna Karenina, and others that depict the variety, richness, and power of woman. (Prerequisite: 9 credits in humanities program courses or §. May not be taken for graduate credit)

#### **Winter Quarter**

Th 6:20-8:50, Ford 60, Livingston

### **Hum 133. Proseminar: The Nostalgia for Paradise.** 3 degree credits. \$33.

The longing for the fullness of life, variously conceived as existing in Eden, the Golden Age, Heaven, Utopia, the Workers' Paradise, America A.D. 2000, or the Eternal Now, as a compelling motif in the life of man. Myths, legends, scriptures, Utopian visions, and futuristic projections will be studied. (Prerequisite: 9 credits in humanities program courses or §. May not be taken for graduate credit)

#### **Spring Quarter**

Th 6:20-8:50, Ford 60, Livingston

General Arts. (See page 93)

## INTERDISCIPLINARY PROGRAMS

### **Communication**

(See page 87)

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

### Family Studies

(See page 89)

### Humanities

(See page 105)

### Personal Orientation

How to Study (See page 153)

### Social Science

(See page 141)

## ITALIAN

*Livia Pellegrini-Seim, Lecturer in Italian*

**1A-1B, 2A-2B, 3A-3B.** *Beginning Conversational Italian*, carrying 3 degree credits each semester, is the same sequence of courses formerly listed in evening classes as 1A-2A, Beginning Conversational Italian, and 3A-4A, Conversational Italian.

The laboratory fee for beginning Italian courses entitles students to use of the Language Laboratory.

**Ital 1A-1B. Beginning Conversational Italian.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

An audio-lingual approach to provide a speaking knowledge of Italian. (No prerequisite for 1A; 1A or old 1A or § for 1B)

*Fall Semester*  
1A T 6:20-8:00, Folwell 305

*Spring Semester*  
1B T 6:20-8:00, Folwell 305

**Ital 2A-2B. Beginning Conversational Italian.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

An audio-lingual approach to provide a speaking knowledge of Italian. (Prerequisite: 1A or 1B or old 2A or § for 2A; 2A or old 3A or § for 2B)

*Fall Semester*  
2A W 6:20-8:00, Folwell 305,  
Pellegrini-Seim

*Spring Semester*  
2B W 6:20-8:00, Folwell 305,  
Pellegrini-Seim

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

**Ital 3A-3B. Beginning Conversational Italian.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

A conversational approach to provide a speaking knowledge of Italian. (Prerequisite: 2A or old 4A or § for 3A; 3A or § for 3B)

*Fall Semester*

3A Th 6:20-8:00, Folwell 305

*Spring Semester*

3B Th 6:20-8:00, Folwell 305

**Ital 50. Intensive Italian.** 5 degree credits. \$55.

This *intensive oral* approach to a course with reading objectives is open to any student who has studied Latin or a Romance language. Satisfactory completion of Ital 50 fulfills the "reading knowledge" required of the Graduate School. Students who wish to continue may take 2B, or 65 or 66 with permission. (No other prerequisite)

*Fall Semester*

M 6:20-9:20, Folwell 305

**Ital 65. Survey of Italian Literature: Dante to Lorenzo de Medici.** 3 degree credits. \$33.

(Prerequisite: 2A or §)

*Fall Semester*

W 6:20-8:00, Folwell 306

**Ital 66. Survey of Italian Literature: The Renaissance.** 3 degree credits. \$33.

(Prerequisite: 2A or 65 or §)

*Spring Semester*

W 6:20-8:00, Folwell 306

## JOURNALISM AND MASS COMMUNICATION

*Donald M. Gillmor, Associate Professor of Journalism*

*F. Gerald Kline, Instructor in Journalism*

*Robert Lindsay, Associate Professor of Journalism*

*R. Smith Schuneman, Instructor in Journalism*

*Herman J. Sittard, Lecturer in Journalism*

*Harold W. Wilson, Professor of Journalism*

*Gerald C. Wollan, Lecturer in Journalism*

**Jour 1 (old 13). Introduction to Mass Communications.** 3 degree credits. \$33.

The nature, functions, and responsibilities of newspapers, magazines, radio and television, examined from the point of view of the professional journalist. News, opinion, entertainment, and persuasion functions. Basic instruction in fact-gathering and journalistic writing. (Prerequisite: completion of Freshman English requirement or §; minimum typing skill of 30 words per minute. Repeated spring semester)

*Fall Semester*

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

*Spring Semester*

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

Symbols explained on page 15.

## Evening Classes

---

### **Jour 3. Communication in the Modern World—Mass Media. 3 degree credits, §Spch 3. \$33.**

The mass media and their social and cultural effects. Interaction between the audience and the media. Related areas of communication; advertising, public relations, propaganda. The future of mass media and "mass culture." (No prerequisite)

#### *Fall Semester*

W 8:15-9:55, Murphy 308, Kline

### **Jour 18. Principles of Advertising. 3 degree credits. \$33.**

The role and function of advertising in modern society. A survey of techniques and practices in creating advertising, emphasizing copy, research, and media fields. Problems and cases in advertising. (Prerequisite: 1 or §)

#### *Fall Semester*

W 6:20-8:00, Murphy 311

### **Jour 41. Publications Editing. 3 degree credits. \$33.**

Lectures and exercises in basic problems of copy editing, headline writing, page layout, integration of illustrative material for various types of publications. Basic aspects of libel. (Prerequisite: 1 or §; not recommended for journalism majors)

#### *Fall Semester*

Th 6:20-8:00, Murphy 207

### **\*Jour 53. Picture Editing. 3 degree credits. \$33.**

Criteria for picture selection. Combining word and picture in layouts for company or institutional magazines, newspapers, and general publications. Introduction to TV news film editing. (Prerequisite: 1 or 18 or professional journalistic experience and §. Limited to 16 students)

#### *Spring Semester*

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

### **\*Jour 57. Design and Typography: Advertising and Publications. 3 degree credits. \$33 plus \$5 laboratory fee.**

Principles of design and layout. Use of photo-typography, cold-type pasteup techniques. Appropriate use of typefaces. Color in layout and make-up. Hand composition. Individual projects. (Prerequisite: 18 or §. Limited to 20 students)

#### *Spring Semester*

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

### **\*Jour 60. Graphic Processes: Advertising and Publications. 3 degree credits. \$33 plus \$5 laboratory fee.**

Survey of letterpress, offset, gravure, and silk screen by lecture, demonstration, field trip, and movie. Study of engraving art, and illustration techniques. Practical exercises in processing and planning illustrations for reproduction. (Prerequisite: §. Limited to 20 students)

#### *Fall Semester*

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

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.



## Course Offerings—Arts and Sciences

---

**\*Jour 71. Business and Industrial Journalism. 3 degree credits. \$33.**

Study of the business and industrial press as specialized communications media; analysis and evaluation of content, staffs, and production methods. Gathering material for and writing of feature articles and other types of content in the industrial field. (Prerequisite: completion of freshman English requirement or §. Limited to 20 students)

*Fall Semester*

W 6:20-8:00, Murphy 302, Schuneman

**\*Jour 73. Magazine Writing. 3 degree credits. \$33.**

Planning and writing feature articles for general, class, and trade publications; marketing articles; problems of magazine editing. Aid for the free-lance writer. (Prerequisite: completion of freshman English requirement and §. Limited to 20 students)

*Fall Semester*

T 8:15-9:55, Murphy 207, Sittard

**Jour 78. Public Relations Methods. 3 degree credits. \$33.**

Publicity, external and internal communication, use of media; techniques and application of institutional promotion and communication, including use of company publications, institutional advertising, and trade journals. Projects and campaigns. (Prerequisite: 1 or §)

*Fall Semester*

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

**\*Jour 79. Advertising Copy Writing. 3 degree credits. \$33.**

Techniques of writing retail and national advertising copy. Application of psychological principles relating to approach, appeals, and response. Use of pretesting, and creative research findings. (Prerequisite: 18 or §. Limited to 18 students)

*Spring Semester*

W 6:20-8:00, Murphy 311

**Jour 90. Mass Communications and the News. 3 degree credits. \$33.**

How the news gets to and affects the public, in print, on the air, by film. Evaluation of news gathering and presentation methods. Contemporary influences on communications media. Not open to journalism majors. (Prerequisite: 15 credits in social sciences or §)

*Fall Semester*

T 6:20-8:00, Murphy 308, Gillmor

**Jour 118. Advanced Projects in Journalism. 3 degree credits. \$33.**

Advanced projects in magazine and periodical writing. Detailed individual critiques and manuscript appraisal. Study of audiences and markets. Help with topics and techniques for the free-lance writer. (Prerequisite: 71 or 73 or §. May not be taken for graduate credit)

*Spring Semester*

T 8:15-9:55, Murphy 207, Sittard

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

### Jour 124. International Communications and Foreign Affairs. 3 degree credits. \$33.

Channels of international communication and news gathering agencies. Factors affecting flow of news throughout the world. Role of foreign correspondent. Relation of communications to foreign affairs and international understanding. (Prerequisite: 15 credits in social sciences, with inclusion of Upper Division course in history or political science or §. Qualified students may register for graduate credit)

#### *Fall Semester*

M 6:20-8:00, Murphy 311, Lindsay

### Jour 150. Institutional Public Relations. 3 degree credits. \$33.

Principles and practices of public relations in public health, social work, education, and other community institutional service fields. Use of the mass media and journalistic implications of the public relations process. (Prerequisite: college degree in any area or §. Qualified students may register for graduate credit)

#### *Spring Semester*

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

## LIBRARY SCIENCE

*James H. Bacon, Lecturer in Library Science*

*David K. Berninghausen, Professor of Library Science*

*Nancy J. Freeman, Instructor in Library Science*

*Edith V. Kromer, Instructor in Library Science*

*Ruta Praulins, Lecturer in Library Science*

*Marie P. Samanisky, Lecturer in Library Science*

*Raymond H. Shove, Associate Professor of Library Science*

*Wesley Simonton, Professor of Library Science*

*Frederick Wezeman, Associate Professor of Library Science*

### Lib 53. School Library Management. 3 degree credits. \$33.

A practical introduction to the management of the small school library. Understanding and organization of simple routines, methods, and records necessary for the operation of such a library. For undergraduates in the College of Education and postgraduates admitted to the Minimum Certification Program for School Librarians. (No prerequisite)

#### *Fall Quarter*

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

### Lib 74. Library Materials in the Classroom. 3 degree credits. \$33.

Correlating the library, as a materials center, with the school program. Sources of information and evaluation of materials for teaching and resource units. For College of Education students or postgraduates working for certification as school librarians. (No prerequisite)

#### *Winter Quarter*

T 6:30-9:00, Library 4A, Praulins

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

---

### **Lib 101. Library Administration.** 3 degree credits. \$33.

Introduction to principles of library administration, organization, management, and the types of libraries. For graduate students and students admitted to the Minimum Certification Program for School Librarians. (No prerequisite. Qualified students may register for graduate credit)

#### **Fall Quarter**

MW 4:00-5:30, Library 4A, Berninghausen

### **Lib 102. Reference I.** 3 degree credits. \$33.

General reference tools and other sources of information. Theory and practice of reference work. Required of students admitted to the graduate program and the Minimum Certification Program for School Librarians. Useful for all college students intending to pursue graduate study in any field. (No prerequisite. Qualified students may register for graduate credit)

#### **Fall Quarter**

TTh 4:00-5:30, Library 4A

### **Lib 103. Cataloguing and Classification.** 3 degree credits. \$33.

Basic principles of descriptive cataloguing, including rules of entry, subject headings, and classification in libraries, for all types of libraries. Required of graduate students and students admitted to the Minimum Certification Program for School Librarians. (No prerequisite. Qualified students may register for graduate credit)

#### **Winter Quarter**

TTh 4:00-5:30, Library 4A, Samanisky

### **Lib 104. Selection of Library Materials.** 3 degree credits. \$33.

Techniques and standards for selection of books, magazines, pamphlets, phonograph records, films, etc. Required of graduate students and students admitted to the Minimum Certification Program for School Librarians. (No prerequisite. Qualified students may register for graduate credit)

#### **Spring Quarter**

TTh 4:00-5:30, Library 4A, Freeman

### **Lib 172. Reading Guidance for Adolescents.** 3 degree credits. \$33.

Reading interests of adolescents and the various kinds of materials that meet these interests. Knowledge of the sources, selection, evaluation, and methods of introducing books to adolescents. For school and children's librarians. Required for Minimum Certification as School Librarians. (Prerequisite: 104. Qualified students may register for graduate credit)

#### **Spring Quarter**

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

### **Lib 173. Reading Guidance for Adults.** 3 degree credits. \$33.

Light fiction, psychology, religion, travel, history, biographies, essays, poetry, drama, science. The promotion of adult reading and the evaluation of book collections. Catalogues and lists of adult books. (Prerequisite: 104. Qualified students may register for graduate credit)

#### **Fall Quarter**

MW 4:00-5:30, Library 4B, Wezeman

---

Symbols explained on page 15.

## Evening Classes

---

### Lib 241. Library Mechanization. 3 degree credits. \$33.

Application of systems analysis to library operations; principles, problems, and examples of library mechanization. (Prerequisite: 101 and 103 or §, and admission to the Graduate School or a fifth-year library degree. Qualified students may register for graduate credit)

#### Winter Quarter

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

### Lib 242. Introduction to Information Retrieval. 3 degree credits. \$33.

Theory of various methods of subject analysis; methods of data representation, including coding, search strategies. (Prerequisite: 103 or §, and admission to the Graduate School or a fifth-year library degree. Qualified students may register for graduate credit)

#### Spring Quarter

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

## MATHEMATICS

(See page 204)

## MIDDLE EASTERN LANGUAGES

*Anwar Chejne, Professor of Middle Eastern Languages*

*Jonathan Paradise, Assistant Professor of Middle Eastern Languages*

The laboratory fee for beginning Middle Eastern courses entitles students to use of the Language Laboratory.

### Arabic

#### Arab 1-2. Introduction to Arabic Grammar and Reading. 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Vocabulary, forms and syntax; intensive graded reading and speaking facility. (No prerequisite for 1; 1 or § for 2)

##### Fall Semester

1 M 6:20-8:00, Nicholson 209A, Chejne

##### Spring Semester

2 M 6:20-8:00, Folwell 205, Chejne

### Hebrew

#### Heb 1-2. Introduction to Spoken Hebrew. 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Fundamentals of reading, speaking, and writing of Israeli Hebrew. Active use of the language will be stressed. (No prerequisite for 1; 1 or § for 2)

##### Fall Semester

1 M 6:20-8:00, Nicholson 201, Paradise

##### Spring Semester

2 M 6:20-8:00, Folwell 109, Paradise

---

Symbols explained on page 15.

## MUSIC

Frank P. A. Bencriscutto, Associate Professor of Music  
 Paul Fetler, Professor of Music  
 Paul W. Freed, Assistant Professor of Music  
 Paul Knowles, Assistant Professor of Music  
 Johannes Riedel, Professor of Music  
 Charles F. Schwartz, Jr., Assistant Professor of Music  
 Richard E. Sieber, Assistant Professor of Music Education

### Applied Music

Individual instruction in music offered by the Department of Music is open to students not able to attend day classes by registration through the General Extension Division. Private lessons are given in piano, organ, voice, violin, trumpet, and all other orchestral instruments.

All applicants for applied music instruction must first, prior to the beginning of a quarter, obtain an "Approval for Registration Form" and fulfill any necessary audition requirements through the Department of Music, 107 Scott Hall. Time and place of lessons are also arranged through the Department of Music office, and final examinations will be taken during daytime hours. The "Approval for Registration Form" must be presented by the student to an Extension Division office at the time of registration during the appropriate quarter registration period.

The courses offered, and their fees, will be found in the program of classes for the College of Liberal Arts, in the *Class Schedule*. In addition to the regular tuition and fees, a \$4 registration fee will be charged for each quarter course. The usual fee for late registration will also be charged. For further information, consult any office of the General Extension Division or the office of the Department of Music.

*Note—Individual instruction will also be offered on the same basis at the St. Paul General Extension Center. Full information is available at the Center.*

\*Mus. Piano Playing for Pleasure I-II. 2 certificate credits each semester. \$33 each semester.

Designed primarily for the person with no piano background. Keyboard fundamentals such as sight-reading, transposition, harmonization, improvisation. Some individual practice outside the class period necessary for successful completion of the course. (No prerequisite for I; I or § for II. Each section limited to 10 students)

<i>Fall Semester</i>		<i>Spring Semester</i>	
I	T 6:30-7:45, Music Education 103, Freed	I	Th 6:30-7:45, Music Education 103, Freed
I	Th 6:30-7:45, Music Education 103, Freed	II	T 6:30-7:45, Music Education 103, Freed

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

### Group Performance

*Note—Students must audition for all of the group performance music classes. Auditioning may be arranged with the instructor in advance of the class opening or may be handled at the first session.*

#### Mus 39. Women's Glee Club. 1 degree credit. \$11.

Rehearsals and performances cover standard women's glee club material as well as special arrangements. (Prerequisite: ♯. Students may receive credit for 6 quarters of work. Repeated winter and spring quarters)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
TTh	12:30-1:20, Northrop Aud 5, Schwartz	TTh	12:30-1:20, Northrop Aud 5, Schwartz	TTh	12:30-1:20, Northrop Aud 5, Schwartz

#### Mus 40, 41, 42. University Symphony Orchestra. 1 degree credit each quarter. \$11 each quarter.

Standard orchestral literature performed. Open to players of orchestral instruments from Twin Cities area. Those enrolled with consent of chairman of Music Department are given the opportunity of rehearsing with the University Symphony and participating in three annual concerts given in Northrop Auditorium. (Prerequisite: ♯. Need not be taken in sequence. Students may receive credit for 6 quarters of work. Extension students may choose whether or not to attend the MWF daytime section, but must attend the evening section)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
40	MWF 3:30-4:20, Wulling 320, Sieber	41	MWF 3:30-4:20, Wulling 320, Sieber	42	MWF 3:30-4:20, Wulling 320, Sieber
T	7:00-9:30, Northrop Aud, Sieber	T	7:00-9:30, Northrop Aud, Sieber	T	7:00-9:30, Northrop Aud, Sieber

#### Mus 43. University Chorus. 1 degree credit. \$11.

Performances of major symphonic-choral works with the Minneapolis Symphony Orchestra, University Symphony Orchestra, and University Concert Band. (Prerequisite: ♯. Students may receive credit for 6 quarters of work. Extension students may choose whether or not to attend one of the MWF daytime sections, but must attend the evening section. Repeated winter and spring quarters)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
MWF	11:30-12:20, Northrop Aud 4, Schwartz	MWF	11:30-12:20, Northrop Aud 4, Schwartz	MWF	11:30-12:20, Northrop Aud 4, Schwartz
MWF	1:30-2:20, Northrop Aud 5, Schwartz	MWF	1:30-2:20, Northrop Aud 5, Schwartz	MWF	1:30-2:20, Northrop Aud 5, Schwartz
T	7:30-9:30, Science Building 325, Schwartz	T	7:30-9:30, Science Building 325, Schwartz	T	7:30-9:30, Science Building 325, Schwartz
T	7:30-9:30, MacPhail Center 404	T	7:30-9:30, MacPhail Center 404	T	7:30-9:30, MacPhail Center 404

---

Symbols explained on page 15.

Course Offerings—Arts and Sciences

---

**Mus 43S, 44S, 45S. St. Paul Campus Chorus.** 1 degree credit each quarter. \$11 each quarter.

Prepares for at least one public appearance each quarter as well as for special events connected with the St. Paul Campus. (Prerequisite: ‡. Need not be taken in sequence. Students may receive credit for 6 quarters of work)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
43S TTh 4:30-6:00, Coffey 225	44S TTh 4:30-6:00, Coffey 225	45S TTh 4:30-6:00, Coffey 225

**Mus 46, 47, 48. Concert Band.** 1 degree credit each quarter. \$11 each quarter.

Rehearsals and appearances cover standard band literature; several appearances each quarter. (Prerequisite: ‡. Need not be taken in sequence. Class meets 2, 3, or 4 days a week, by arrangement. Students are advised to arrange auditions and class meeting days with Professor Bencriscutto, telephone 373-3431, prior to registration. Students may receive credit for 6 quarters of work)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
46 Days arranged, 3:30- 5:20, Northrop Aud 4, Bencriscutto	47 Days arranged, 3:30- 5:20, Northrop Aud 4, Bencriscutto	48 Days arranged, 3:30- 5:20, Northrop Aud 4, Bencriscutto

**Mus 49. Men's Glee Club.** 1 degree credit. \$11.

Rehearsals and performances cover standard men's glee club material as well as special arrangements. Group appears for on- and off-campus functions. (Prerequisite: ‡. Students may receive credit for 6 quarters of work. Repeated winter and spring quarters)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
MWF 12:30-1:20, North- rop Aud 5	MWF 12:30-1:20, North- rop Aud 5	MWF 12:30-1:20, North- rop Aud 5

**Mus 57-58-59 (old 66-67-68). Chamber Singers.** 2 degree credits each quarter. \$22 each quarter.

A small mixed vocal ensemble of select voices. Sacred and secular music from 16th century to contemporary composers prepared for concert presentation. (Prerequisite: ‡. Need not be taken in sequence. Students may receive credit for 6 quarters of work)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
57 MWF 2:30-3:20, Northrop Aud 5, Schwartz	58 MWF 2:30-3:20, Northrop Aud 5, Schwartz	59 MWF 2:30-3:20, Northrop Aud 4, Schwartz

**Mus 147, 148, 149. Opera Production.** 2 degree credits each quarter. \$22 plus \$3 laboratory fee each quarter.

Student is given opportunity to prepare and perform operatic roles both standard and contemporary. A union of musical and dramatic interpretation is emphasized. In addition to ensemble work scheduled private instruction is given. All projects and roles will be sung in English. Coaching session may be arranged with instructor. (Prerequisite: ‡. Students are advised to arrange auditions with Professor Knowles, telephone 373-4061, prior to registration. Need not be taken in sequence)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
147 M 6:20-8:00, Wulling 7, Knowles	148 M 6:20-8:00, Wulling 7, Knowles	149 M 6:20-8:00, Wulling 7, Knowles

---

Symbols explained on page 15.

## Evening Classes

---

### Music Theory, History, and Literature

#### Mus. Enjoying Music. No credit. \$22.

Enjoying and understanding music heard in today's concert halls, theaters, and homes. Various types, forms, and styles of instrumental and vocal music, including symphony, opera, chamber music, and solo works. Fall: Baroque and classical periods. Winter: Romantic and modern periods. (No prerequisite. Students may enter any quarter)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
M	6:20-8:00, Scott 3,	M 6:20-8:00, Scott 3	W 6:20-8:00, MacPhail
W	6:20-8:00, MacPhail Center 218		Center 218

#### Mus 1A. Introduction to Music. 3 degree credits. \$33.

Basic elements of music, such as notation and characteristics of musical tone, fundamental musical concepts of rhythm, melody, harmony, polyphony, form; demonstrated by recordings and performance of music of all types in Western civilization. Outside music listening required. (No prerequisite. Repeated spring semester)

	<b>Fall Semester</b>	<b>Spring Semester</b>
T	6:30-8:30, Scott 3	T 6:00-7:50, StP Ext Center

#### Mus 1T-2T-3T. Music Theory. 3 degree credits each quarter. \$33 each quarter.

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

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
1T M	6:20-8:50, Scott 103, Fetler	2T M 6:20-8:50, Scott 103, Fetler	3T M 6:20-8:50, Scott 103, Fetler
W	6:20-8:50, Mac- Phail Center 321	W 6:20-8:50, Mac- Phail Center 321	W 6:20-8:50, Mac- Phail Center 321

#### Mus 4T-5T-6T. Music Theory. 3 degree credits each quarter. \$33 each quarter.

Continuation of 1T-2T-3T with greater emphasis on harmonic analysis, part-writing, and clef reading. (Prerequisite: 3T for 4T; 4T for 5T; 5T for 6T. Must be taken in sequence)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
4T Th	6:20-8:50, Scott 103, Fetler	5T Th 6:20-8:50, Scott 103, Fetler	6T Th 6:20-8:50, Scott 103, Fetler

#### Mus 4. Fundamentals of Music. 2 degree credits. \$33.

Knowledge of the piano keyboard, major and minor scales, triads, elementary ear training, rhythmic dictation. Required of students in elementary, primary, kindergarten, and nursery school education; not open to music majors. (No prerequisite. Repeated each term)

	<b>Fall Semester</b>	<b>Spring Semester</b>
W	6:00-8:00, Music Education 103	W 6:00-8:00, Music Education 103

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
M	6:00-9:00, MacPhail Center 321	M 6:00-9:00, MacPhail Center 321	M 6:00-9:00, Macphail Center 321

---

Symbols explained on page 15.



## Course Offerings—Arts and Sciences

**Mus 50, 51, 52. American Music.** 2 degree credits each quarter. \$22 each quarter.

50: Music in colonial America, music of the Puritans and Pietists, instrumental music in Pennsylvania, ballad opera in America, folk music in the United States and in Minnesota. 51: Music of the American Indian, Latin-American music, the history of public music education, the rise of the symphony orchestra, concert music, the spirituals. 52: Music in contemporary America. Jazz, the styles of writing by Charles Ives, Aaron Copland, G. C. Menotti, Elliott Carter, Leonard Bernstein, and others. Listening to numerous studio and field recordings. (No prerequisite. Need not be taken in sequence. For nonmusic majors)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
50	T 6:20-8:00, Scott 104, Riedel	51	T 6:20-8:00, Scott 104, Riedel	52	T 6:20-8:00, Scott 104, Riedel

**Mus. Folk Music.** 3 certificate credits. \$33.

A survey of folk music. American balladry and folk song. Latin American folk music. European folk music. Historical development, ethnic background, musical values. Different material covered each term. (No prerequisite. Students may enter any semester and may receive certificate credit for 4 semesters of work)

<b>Fall Semester</b>		<b>Spring Semester</b>	
T	8:15-9:50, Scott 104, Riedel	T	8:15-9:50, Scott 104, Riedel

**Mus 85-86-87 (old 73-74-75). Introduction to Opera.** 2 degree credits each quarter. \$22 plus \$1 materials fee each quarter.

Designed to give an understanding of classical and romantic opera; centered on the weekly broadcasts of the Metropolitan Opera Company, and important presentations in the Twin Cities including Minneapolis Symphony Orchestra performances, St. Paul Civic Opera productions, and the spring season of the Metropolitan in Northrop Auditorium. Opera theater space is available; there will be work during the class period with costumes, props, and so forth. (No prerequisite for 85; 85 for 86; 86 for 87. Must be taken in sequence. For nonmusic majors)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>	
85	W 6:20-8:00, Wull- ing 7, Knowles	86	W 6:20-8:00, Wull- ing 7, Knowles	87	W 6:20-8:00, Wull- ing 7, Knowles

## MUSIC EDUCATION

(See page 187)

## NATURAL HISTORY

**NatH 1. Birds of Minnesota.** (See page 74)

Symbols explained on page 15.

## **NURSING**

*Marilyne Backlund, Assistant Professor of Nursing*  
*Margaret Grainger, Assistant Professor, School of Nursing*  
*Helen Hansen, Assistant Professor, School of Nursing*  
*Marian Town, Instructor, School of Nursing*

Evening courses offered by the School of Nursing do not carry degree credit. The nursing courses described in this bulletin are being offered to assist the registered nurse to gain further understanding of her responsibilities in nursing. They are not the equivalent of nursing courses offered in the curriculum of degree programs of the school.

General education is of value to all nurses and many evening courses listed in the Arts and Sciences section of this bulletin may be taken for credit. Final decision as to the applicability of these credits toward a degree offered by the School of Nursing is the responsibility of the school's Admissions Committee.

Registered nurses who wish to continue their studies in the direction of a degree program in one of the nursing fields are urged to contact the School of Nursing, 125 Owre Hall (telephone 373-3462), and ask for the assistance of an adviser in planning an organized course of study.

### **Nurs. Nursing Concerns Today. No credit. \$33.**

Ideas involved in current theory and practice of nursing. Issues important to nursing, nursing education, and provision of nursing service; exploration of their development, current status, and possible directions. (Open to registered nurses)

#### **Special Class**

(September 27 to December 13)

T 6:00-8:30, Millard 118, Backlund

### **Nurs. Clinical Nursing. No credit. \$33.**

Study of nurse-patient interactions designed to help the nurse practitioner become more aware of the significance of patient behavior and to increase the nurse's skill in assisting the patient with his concerns in relation to his situation. (Open to registered nurses)

#### **Special Class**

(January 3 to March 14)

T 6:00-8:30, Millard 118, Hansen and Town

### **Nurs. Nursing Unit Administration. No credit. \$33.**

Responsibilities of the head nurse and team leader in the hospital setting; application of basic principles of administration to the nurse-patient relationship; principles of supervision of nursing personnel. (Open to registered nurses)

#### **Special Class**

(March 28 to June 6)

T 6:00-8:30, Millard 118, Grainger

---

Symbols explained on page 15.

## PHILOSOPHY

*William H. Hanson, Assistant Professor of Philosophy*  
*Douglas Lewis, Assistant Professor of Philosophy*  
*Homer E. Mason, Associate Professor of Philosophy*  
*Grover Maxwell, Professor of Philosophy*  
*Jeffrie G. Murphy, Assistant Professor of Philosophy*  
*Waddah Nasr, Instructor in Philosophy*  
*Mischa Penn, Instructor in Humanities*  
*Francis V. Raab, Professor of Philosophy*  
*D. Burnham Terrell, Professor of Philosophy*  
*Candido Zanoni, Instructor in Philosophy*

Philosophy courses with "A" following the course number are somewhat abridged counterparts of corresponding day school courses carrying more credits. They carry regular academic credit, but they will fulfill requirements for a major in philosophy only by special arrangement with the Department of Philosophy.

### Phil 1A. Problems of Philosophy. 3 degree credits. \$33.

Introduction to the subject; the main fields of investigation; permanent problems; principal methods and schools of philosophy; historical and contemporary use. (No prerequisite. Repeated winter and spring quarters)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
M	5:30-8:00, Ford 150, Mason	M 6:20-8:50, Ford 155, Murphy	M 6:20-8:50, Ford 130, Murphy
Th	6:20-8:50, Ford 130, Murphy		Th 5:15-7:45, StP Ext Center, Zanoni

### Phil 2A. Logic. 3 degree credits. \$33.

A study of the difference between logical and fallacious reasoning; the functions and uses of language; rules of good definitions and sound argument. (No prerequisite. Repeated winter quarter and spring semester)

	<b>Fall Semester</b>	<b>Spring Semester</b>
W	6:20-8:00, Ford 349, Lewis	M 6:20-8:00, Ford 285, Terrell
Th	6:20-8:00, Ford 349, Nasr	W 6:20-8:00, Ford 349, Lewis
		<b>Winter Quarter</b>
		Th 5:15-7:45, StP Ext Center, Zanoni

### Phil 3A. Ethics. 3 degree credits. \$33.

An examination of the problems which arise when human beings attempt to think systematically about conduct and values (are there absolute standards?); the problem of free will; and a survey of historical views about the right and the good. (No prerequisite. Repeated each term)

	<b>Spring Semester</b>		
	T 6:20-8:00, Ford 55, Raab		
	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
W	6:20-8:50, Ford 55, Murphy	W 6:20-8:50, Ford 55, Murphy	Th 6:20-8:50, Ford 55, Nasr
Th	5:15-7:45, StP Ext Center, Zanoni		

Symbols explained on page 15.

## Evening Classes

---

### Phil 10. Science and Religion. 2 degree credits. \$22.

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

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
W	6:20-8:00, Ford 115, Penn	6:20-8:00, Ford 150, Penn	6:20-8:00, Ford 115, Penn

### Phil 53A. General History of Philosophy. 3 degree credits. \$33.

Later modern philosophy from Kant through the 19th century. (No prerequisite)

	<b>Spring Quarter</b>
W	6:20-8:50, Ford 130, Murphy

### Phil 107. Philosophy in Modern Literature. 3 degree credits. \$33.

Survey of basic philosophical ideas in modern civilization as they are expressed in major works of literature. (Prerequisite: major or minor in philosophy or literature, or  $\Phi$ . Qualified students may register for graduate credit)

	<b>Fall Semester</b>
M	8:15-9:55, Ford 160, Terrell

### Phil 108. Political and Social Ethics. 3 degree credits. \$33.

Ethical principles, theoretical and practical, at the basis of the social order. (Prerequisite: 3 or  $\Phi$ . Qualified students may register for graduate credit)

	<b>Winter Quarter</b>
M	5:30-8:00, Ford 150, Mason

### Phil 140. Contemporary Philosophy. 3 degree credits. \$33.

Current systematic and critical philosophies, especially idealism, naturalism, realism, pragmatism, positivism, as represented by their principal exponents. (Prerequisite: 9 credits in history of philosophy or  $\Phi$ . Qualified students may register for graduate credit)

	<b>Spring Quarter</b>
Th	5:30-8:00, Ford 30, Mason

### Phil 154. Elements of Symbolic Logic. 4 degree credits. \$44.

Systematic introduction to modern logic. Topics include dimensions of language; calculus propositions, classes, and relations; applications to foundations of mathematics. (Prerequisite: 2 or 2A or  $\Phi$ . Qualified students may register for graduate credit)

	<b>Spring Semester</b>
Th	5:40-8:00, Ford 150, Hanson

---

Symbols explained on page 15.

## PHOTOGRAPHY

Harry C. Webb, Lecturer in Photography

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

**Phot. Color Photography I.** 3 certificate credits. \$33 plus \$10 laboratory fee.

A foundation course in the growing field of color photography, designed to provide the student with practical knowledge and experience in basic color work. Course includes: (a) lecture demonstrations of equipment, color processes, and techniques; and (b) supervised camera assignments in the studio and on outdoor field trips. (No prerequisite. Repeated spring semester)

*Fall Semester*

T 6:20-8:00, Wesbrook 202, Webb

*Spring Semester*

T 6:20-8:00, Wesbrook 202, Webb

**Phot. Color Photography II.** 3 certificate credits. \$33 plus \$10 laboratory fee.

A workshop course in which the student participates in supervised photographic projects. Course includes lecture demonstrations, field trips, and attention to such subjects as color portraiture, color experiments, color printing, and special problems. (Prerequisite: Color Photography I or 4)

*Spring Semester*

T 6:20-8:00, Wesbrook 202, Webb

**Art 10. Basic Photography I.** (See page 68)

**Art 11. Basic Photography II.** (See page 68)

## PHYSICS

(See page 216)

## POLITICAL SCIENCE

Charles H. Backstrom, Associate Professor of Political Science  
Richard N. Blue, Assistant Professor of Political Science  
Dorothy Dodge, Lecturer in Political Science  
William H. Flanigan, Assistant Professor of Political Science  
James E. Jernberg, Assistant Professor of Political Science  
G. Theodore Mitau, Lecturer in Political Science  
J. John Penikis, Instructor in Political Science  
Robert E. Riggs, Associate Professor of Political Science  
William C. Rogers, Professor of Political Science  
John E. Schwarz, Assistant Professor of Political Science  
Thomas M. Scott, Assistant Professor of Political Science  
John E. Turner, Professor of Political Science

*Note—Graduate students majoring in political science can use only 200-level seminars to satisfy major requirements; they should take lower-level*

Symbols explained on page 15.

## Evening Classes

---

political science courses only to supply deficiencies in background when directed to do so by advisers. Political science courses numbered 50 through 199 are available for Upper Division credit. Nonmajors may receive graduate credit for 100-level courses.

**Pol 1, 2.† American Government and Politics: Parts I and II.** 3 degree credits each semester. \$33 each semester.

1: The impact of international events upon the American system of government and the tremendous part that government plays in our lives. This course is designed to provide an intelligent understanding of certain fundamental features of our governmental system: the nature of our Constitution, the protection of individual rights and liberties, political parties, public opinion, nominations and elections. Special attention will be given throughout to current developments. 2: Recognizing that the American citizen must have an understanding of our system of government if he is to play an active and intelligent part in helping it meet the problems of the future, this course is designed to provide a description, analysis, and evaluation of the legislative, executive, and judicial branches of our government (national, state, and local) with special attention to current development. (No prerequisite for 1 or 2. Need not be taken in sequence; however, both 1 and 2 must be completed to receive credit)

### Fall Semester

1 M 6:20-8:00, West Bank CB 410,  
Scott  
W 7:00-8:40, StP Ext Center, Mitau

### Spring Semester

2 M 6:20-8:00, West Bank CB 125,  
Scott  
W 7:00-8:40, StP Ext Center, Mitau

**Pol A, B. The State in the Modern World.** 3 degree credits each quarter. \$33 each quarter.

An examination of principles, structure, and operation of the modern state. Emphasis on nation state; historical development; democratic government (United States, Great Britain); totalitarian government (Nazi Germany, Soviet Russia); conflict between states. (No prerequisite for A or B. Need not be taken in sequence)

### Fall Quarter

A Th 6:30-9:00, Robbinsdale HS 231  
(Limited to 75 students\*)

### Winter Quarter

A M 6:00-8:30, MacPhail Center  
Annex 3  
B Th 6:30-9:00, Robbinsdale HS 231  
(Limited to 75 students\*)

### Spring Quarter

B M 6:00-8:30, MacPhail Center  
Annex 3

**Pol 25. World Politics.** 3 degree credits. \$33.

An introduction to world affairs. The development of the state system. The facts of power in international relations. The causes of war and the forces which make for peace. Introduction to the foreign policies of the United States, our Western allies, and of the Soviet Union and China. (No prerequisite. Repeated spring semester and spring quarter)

### Fall Semester

W 6:20-8:00, West Bank CB 135, Blue

### Spring Semester

Th 6:20-8:00, MacPhail Center 216,  
Rogers

### Spring Quarter

M 6:30-9:00, Robbinsdale HS 233, Riggs  
(Limited to 72 students\*)

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

---

### **Pol 26. American Foreign Policy. 3 degree credits. \$33.**

Goals and values in American foreign policy; traditional and post-World War II policies. The formulation and administration of foreign policy and the role of public opinion. (No prerequisite)

#### *Fall Semester*

Th 6:20-8:00, West Bank CB 135, Rogers

### **Pol 30. American Public Policy. 3 degree credits, \$10. \$33.**

Analysis of policy to meet major foreign and domestic issues facing the American political system; emphasis on the forces molding government policy on civil rights, labor and business, military and diplomatic strategy, foreign aid. (No prerequisite)

#### *Fall Semester*

T 8:15-9:55, West Bank CB 150, Flanigan

### **Pol 57. African Government and Politics. 3 degree credits. \$33.**

An introductory survey of the political traditions, constitutional development, and international relations of the emerging African states. (No prerequisite)

#### *Fall Semester*

T 6:20-8:00, West Bank CB 115, Dodge

### **Pol 107. The American Chief Executive. 3 degree credits, \$79. \$33.**

Constitutional powers and political roles of the President and governors; the chief executive and administration; executive relations with legislatures; party and popular leadership; presidential roles in crisis. (No prerequisite)

#### *Fall Semester*

T 6:20-8:00, West Bank CB 105, Jernberg

### **Pol 108. Legislative Organization and Procedure. 3 degree credits, \$56. \$33.**

Congress and the state legislature at work. (No prerequisite)

#### *Spring Semester*

M 8:15-9:55, West Bank CB 135, Backstrom

### **Pol 138. American Political Campaigns and Elections. 3 degree credits, \$53. \$33.**

Examination of national, state, and local campaigns and elections, including field work in local political parties and election campaigns. (No prerequisite)

#### *Fall Semester*

M 8:15-9:55, West Bank CB 135, Backstrom

---

Symbols explained on page 15.

## Evening Classes

---

### **Pol 141. European Government and Politics. 3 degree credits, §82. \$33.**

Britain. Political institutions in their social setting; problems of power and responsibility, governmental stability; political decision-making, government and the economic order. (No prerequisite)

#### *Fall Semester*

T 6:20-8:00, West Bank CB 440, Schwarz

### **Pol 142. European Government and Politics. 3 degree credits, \$33.**

France and Germany. Political institutions in their social setting; problems of power and responsibility, governmental stability; political decision-making, government and the economic order. (No prerequisite)

#### *Spring Semester*

T 6:20-8:00, West Bank CB 440,  
Schwarz

### **Pol 143. Government of the Soviet Union. 3 degree credits, §55. \$33.**

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

#### *Fall Semester*

M 6:20-8:00, West Bank CB 140, Turner

### **Pol 154. Chinese Government. 3 degree credits, §54. \$33.**

An analysis that seeks to explain the rise and development of communism in China; sources and nature of ideology; organization of communist power; role of the Chinese Communist party; foreign, economic, and cultural policies of the Chinese communists. (No prerequisite)

#### *Spring Semester*

M 6:20-8:00, West Bank CB 120, Turner

### **Pol 160. American Political Thought. 3 degree credits, §90. \$33.**

From colonial times to present; Puritanism; Constitution; utopianism; Calhoun; history of anarchist, socialist, populist, and syndicalist thought; social Darwinism; conservatism; political thought in law and literature. (No prerequisite)

#### *Fall Semester*

Th 8:15-9:55, West Bank CB 105

### **Pol 162. Recent Political Thought. 3 degree credits, §92. \$33.**

Main currents from Marx to present; Marx, Marxism, and their critics; non-Marxist socialism; syndicalism; anarchism; Catholic and Protestant theories; conservatism; pacifism; political thought in law and literature. (No prerequisite)

#### *Spring Semester*

Th 8:15-9:55, West Bank CB 105

---

Symbols explained on page 15.



## Course Offerings—Arts and Sciences

### **Pol 176. United States Foreign Affairs Administration.** 3 degree credits, \$96. \$33.

Control of foreign relations; treaties and executive agreements; structure and function of foreign affairs agencies—Department of State, U.S. Information Agency, Central Intelligence Agency; Department of Defense, National Security Council; co-ordination of agencies; the Foreign Service and other overseas agencies. (No prerequisite)

#### *Fall Semester*

M 8:15-9:55, West Bank CB 105, Penikis

### **Pol 177. United States Foreign Policy.** 3 degree credits. \$33.

Analysis of factors conditioning United States foreign policy: geographic and economic position, defense needs and dispositions, social structure, ideologies, psycho-cultural characteristics, technological revolution, public opinion, political participation; role of parties, interest groups, bureaucracy; leadership; decision-making processes. (No prerequisite)

#### *Spring Semester*

M 8:15-9:55, West Bank CB 105, Penikis

### **Pol 187. International Organization.** 3 degree credits, \$87. \$33.

The organization of interaction among nation-states; decision-making in international organizations; comparison of national and international political institutions; world organization for collective security and peaceful settlement of disputes. (No prerequisite)

#### *Fall Semester*

W 6:20-8:00, West Bank CB 450, Riggs

## **PORTUGUESE**

*Russell G. Hamilton, Jr., Assistant Professor of Portuguese*

The laboratory fee for beginning Portuguese entitles students to use of the Language Laboratory.

### **Port 1A-1B. Beginning Portuguese.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Grammar, pronunciation, reading, and practice in speaking. (No prerequisite for 1A; 1A or § for 1B)

#### *Fall Semester*

1A W 6:20-8:00, Folwell 203, Hamilton

#### *Spring Semester*

1B W 6:20-8:00, Folwell 203, Hamilton

### **Port 50-51. Intensive Portuguese.** 5 degree credits each semester. \$55 each semester.

This *intensive oral* approach to a course with reading objectives is open to any student who has a good knowledge of a Romance language. Satisfactory completion of Port 50 fulfills the "reading knowledge" requirement of the Graduate School. (No other prerequisite for 50; 50 or § for 51)

#### *Fall Semester*

50 MT 6:20-8:00, Folwell 208, Hamilton

#### *Spring Semester*

51 MT 6:20-8:00, Folwell 208, Hamilton

Symbols explained on page 15.

## Evening Classes

# PSYCHOLOGY

Rene Davis, Professor of Industrial Relations  
Nancy Fox, Lecturer in Psychology  
Harold Gilberstadt, Associate Professor of Psychology  
Thomas S. Hyde, Instructor in Psychology  
Leslie A. King, Associate Professor of Psychological Studies  
G. Gordon Kingsley, Professor of Psychological Studies  
Jesse K. Lair, Assistant Professor of Psychology  
Howard P. Longstaff, Professor of Psychology  
James Mack, Instructor in Psychology  
Clifford E. Macker, Instructor in Psychology  
Michael J. Maley, Instructor in Psychology  
Lloyd K. Sines, Assistant Professor of Psychology  
Gerald Stearns, Instructor in Psychology  
Donald Stieper, Lecturer in Psychology  
Norris Vestre, Assistant Professor of Psychology

### Psy 1A. Application of Psychology to Living. 3 degree credits. \$33.

This course is devoted to psychology in personal relationships and in the achievement of mental health. It centers, for the most part, around our fundamental needs—the source of all our actions and satisfactions—and it presents principles highly applicable in the life of every person. (No prerequisite. May be taken with the same satisfaction before or after Psy 1-2. Elective credit in Arts College. Not to be confused with Elementary Psychology A. Repeated spring semester)

#### Fall Semester

M 6:20-8:00, Nicholson 211, Kingsley  
T 6:20-8:00, MacPhail Center Annex 2  
Th 8:15-9:55, Nicholson 213, King

#### Spring Semester

M 6:20-8:00, Nicholson 213, Kingsley  
T 6:20-8:00, MacPhail Center Annex 2  
Th 8:15-9:55, Nicholson 207, King

### Psy 1-2.† General Psychology. 3 degree credits each term. \$33 plus \$1 materials fee each term.

This course is designed to orient the student to the whole field of psychology. Its emphasis is upon methods of investigation. Required for most other courses in psychology. (No prerequisite for 1; 1 for 2. Must be taken in sequence)

#### Fall Semester

1 W 6:20-8:00, Nicholson Aud, Vestre  
Th 7:50-9:30, StP Ext Center, Macker  
2 T 6:20-8:00, Nicholson 211, Sines  
Th 6:00-7:40, StP Ext Center, Macker

#### Spring Semester

2 W 6:20-8:00, Nicholson Aud, Vestre  
Th 7:50-9:30, StP Ext Center, Macker  
1 T 6:20-8:00, Nicholson 211, Sines  
Th 6:00-7:40, StP Ext Center, Macker

#### Fall Quarter

1 T 6:30-9:00, Rob-  
binsdale HS 231,  
Vestre

#### Winter Quarter

2 T 6:30-9:00, Rob-  
binsdale HS 231,  
Vestre

### \*Psy 4-5.† Introductory Laboratory Psychology. 2 degree credits each semester. \$33 plus \$1.50 laboratory fee each semester.

Experiments illustrating the subject matter of contemporary psychology. Included are human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. Supplies the laboratory science requirement

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

in the Lower Division. (Prerequisite: 1 for 4; 2 and 4 for 5 or ¶1-2. Must be taken in sequence. Sections limited to 36 students)

### Fall Semester

4 W 8:15-9:55, Wesbrook 101, Mack  
Th 8:15-9:55, Wesbrook 101, Fox

### Spring Semester

5 W 8:15-9:55, Wesbrook 101, Mack  
Th 8:15-9:55, Wesbrook 101, Fox

### Psy 70. Principles of Psychological Measurement. 3 degree credits, §Soc 45, §QA 5. \$33.

Designed to present statistical methods necessary to the practical application of psychological concepts. Especially useful to persons who work with psychological tests or with any sort of objective evaluation technique. Special emphasis is given to psycho-physical methods and to techniques of attitude scaling, directed toward the needs of persons engaged in analysis of public opinion or in market research. Topics discussed include presentation and arrangement of data, measures of central tendency and dispersion, attitude scaling techniques (including the Likert, Thurstone, and Guttman methods), psycho-physical methods, sampling methods and problems of forecasting, tests of significance of differences, and correlation analysis. (Prerequisite: 2 or ‡. Repeated spring semester. For graduate credit, register in Psy 270)

### Fall Semester

Th 8:15-9:55, Johnston 114, Dawis

### Spring Semester

Th 8:15-9:55, Johnston 114, Dawis

### Psy 75. Introduction to the Psychology of Learning. 3 degree credits. \$33.

Survey of the basic methods in the study of learning. Development of fundamental concepts and principles governing the learning process. (Prerequisite: 2. Repeated spring semester)

### Fall Semester

T 6:20-8:00, Wesbrook 101, Hyde

### Spring Semester

T 6:20-8:00, Wesbrook 101, Hyde

### Psy 119. Psychology of Personality. 3 degree credits. \$33 plus \$1 laboratory fee.

Personality growth, dynamics and variations viewed from an eclectic approach to developmental theories of intra-individual and interpersonal factors influencing character and personality from conception to maturity. (Prerequisite: 2. Repeated spring semester. Qualified students may register for graduate credit)

### Fall Semester

W 6:20-8:00, Wesbrook 101, Gilbertstadt

### Spring Semester

W 6:20-8:00, Wesbrook 101, Gilbertstadt

### Psy 122-123.† Vocational Development and Personnel Psychology. 3 degree credits each semester, §Psy 160. \$33 plus \$2.50 laboratory fee each semester.

Deals with selecting, counseling, training, and maintaining an efficient labor force in industry. Theory and practice of giving, interpreting, and evaluating psychological tests and interviewing; constructing and using rating scales; training, maintaining, and promoting employees. There will also be actual practice in the use of psychological tests. (Prerequisite: 2 for 122; 122 for 123. Must be taken in sequence. Qualified students may register for graduate credit)

### Fall Semester

122 M 6:20-8:00, Wesbrook 101, Long-staff

### Spring Semester

123 M 6:20-8:00, Wesbrook 101, Long-staff

Symbols explained on page 15.

## Evening Classes

---

**Psy 125-126. Psychology of Individual Differences.** 3 degree credits each semester. \$33 each semester.

Quantitative studies of such factors as age, sex, race and nationality, physical traits, family heredity, and environment in the causation of individual differences in abilities and temperament. (Prerequisite: 5 or 70 or ‡ for 125; 125 for 126. Must be taken in sequence. Qualified students may register for graduate credit)

*Fall Semester*

125 Th 6:20-8:00, Johnston 114, Dawis

*Spring Semester*

126 Th 6:20-8:00, Johnston 114, Dawis

**Psy 138. Psychology of Motivation and Conflict.** 3 degree credits. \$33.

The drives and motives which underlie normal behavior and the forms of adjustment which arise when motives conflict or encounter external frustration. Parallel observations in the field of animal behavior will be considered. (Prerequisite: 2. Repeated spring semester. May not be taken for graduate credit)

*Fall Semester*

Th 8:15-9:55, Wesbrook 202, Maley

*Spring Semester*

Th 8:15-9:55, Wesbrook 202, Maley

**Psy 144-145.† Abnormal Psychology.** 3 degree credits each semester. \$33 each semester.

Normal and abnormal behavior contrasted. Dynamics, and particularly the social determinants, of personality and maladjustments. (Prerequisite: 9 credits in psychology, or 6 credits in psychology with either Zool 1-2-3 or 12 credits in social science for 144; 144 for 145. Must be taken in sequence. Qualified students may register for graduate credit)

*Fall Semester*

144 Th 6:20-8:00, Architecture 40,  
Stieper

*Spring Semester*

145 Th 6:20-8:00, Architecture 40,  
Stieper

**Psy 156. Psychology of Advertising.** 3 degree credits. \$33.

Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. (Prerequisite: 2. Repeated spring semester. Qualified students may register for graduate credit)

*Fall Semester*

Th 6:20-8:00, Burton 125, Lair

*Spring Semester*

Th 6:20-8:00, Burton 125, Lair

**Psy 270. Advanced Psychological Measurement.** 3 degree credits. \$33.

See course description as listed under Psy 70. Same work as Psy 70, but in addition students will write reports on advanced psychometric topics. Qualified students may register for graduate credit.

*Fall Semester*

Th 8:15-9:55, Johnston 114, Dawis

*Spring Semester*

Th 8:15-9:55, Johnston 114, Dawis

**Child Psychology.** (See page 184)

---

Symbols explained on page 15.

Educational Psychology. (See page 187)

How to Study. (See page 153)

## PUBLIC ADMINISTRATION

*Reynold A. Boezi, Lecturer in Public Administration*  
*Stanley R. Cowle, Lecturer in Public Administration*  
*John H. Farley, Lecturer in Public Administration*  
*David E. Forester, Lecturer in Public Administration*  
*Leigh E. Grosenick, Lecturer in Public Administration*  
*John W. Jackson, Lecturer in Public Administration*  
*James E. Jernberg, Assistant Professor of Public Administration*  
*Carroll C. Jorgenson, Lecturer in Public Administration*  
*David J. Kennedy, Lecturer in Public Administration*  
*Henry Lederer, Lecturer in Public Administration*  
*Daniel Magraw, Lecturer in Public Administration and Accounting*  
*Howard Mold, Lecturer in Public Administration*  
*Albert H. Rosenthal, Professor of Public Administration*  
*George L. Shapiro, Associate Professor of Speech and Theatre Arts*  
*Cyrus F. Smythe, Associate Professor of Industrial Relations*  
*George A. Warp, Professor of Public Administration*  
*Robert I. Wessel, Lecturer in Public Administration*  
*Quentin F. Wessman, Lecturer in Public Administration*

In view of the demand by federal, state, and local government employees for professional classes in public administration, *all course offerings have been revamped and in the future will carry certificate credit only.* At the present time, these courses are not applicable toward degree programs.

The old political science numbers, which were used to designate some of the courses, have been dropped. The evening courses in public administration are not numbered, but they are taught as junior-senior-graduate courses in the 100-series.

Your attention is called to the Certificate Program in Public Administration which is described on page 34. Credits earned in all of the public administration courses are applicable towards the Public Administration Certificate.

Your attention also is called to the Public Administration Center's graduate course offerings in the late afternoon and Saturday morning hours. These courses lead to the degree of master of arts in public administration (M.A. P.A.). The graduate program is open to students who can profit from professional public administration courses and who have the academic qualifications for admission to the Graduate School.

Courses offered from 4 to 6:30 p.m. in Federal Government buildings in the Fort Snelling area are intended primarily for federal employees.

Symbols explained on page 15.

## Evening Classes

---

### PA. Legal and Political Environment of Public Administration. 3 certificate credits. \$33.

Study of the basic constitutional framework and concepts conditioning public administration. Examination of the origins and methods of bureaucratic power and of the forms that set limits upon it. (No prerequisite)

#### **Fall Quarter**

Th 6:20-8:50, West Bank CB 415, Warp

### PA. Organization and Management (old Pol 60). 3 certificate credits. \$33.

Study of administrative organization and management, emphasizing formal and informal organization structure, current reorganization theory, policy formulation, planning, decision-making, direction, and responsibility. (No prerequisite)

#### **Spring Quarter**

M 6:20-8:50, West Bank CB 415, Warp

### PA. Organization Theory. 3 certificate credits. \$33.

Study of the theories of organizational structure from the origins of formal theory to the recent contributions of the behavioral sciences and of the applications of theory to federal administrative organization. (No prerequisite. Intended primarily for federal employees)

#### **Fall Quarter**

T 4:00-6:30, VA Hosp Training Room

### PA. Administrative Behavior. 3 certificate credits. \$33.

Study of leadership, authority, and decision-making, with examples drawn from federal administrative organizations to illustrate concepts and models of administrative behavior. (No prerequisite. Intended primarily for federal employees)

#### **Winter Quarter**

M 4:00-6:30, VA Hosp Training Room

### PA. Municipal Law and Administration (old Pol 61, 121). 3 certificate credits. \$33.

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

#### **Fall Quarter**

Th 6:20-8:50, West Bank CB 425, Kennedy

### PA. Public Personnel Administration (old Pol 62). 3 certificate credits. \$33.

Development and significance of the public service; organization for personnel management; classification of positions; pay standardization and administration; recruitment, examination, and placement; in-service training, evaluation of performance, conditions of employment; separation; human relations and morale; employee organizations; obligations and responsibilities of public employees; retirement systems. (No prerequisite)

#### **Fall Quarter**

T 6:20-8:50, West Bank CB 415, Jackson

---

Symbols explained on page 15.

Course Offerings—Arts and Sciences

**PA. Federal Personnel Practices.** 3 certificate credits. \$33.

Study of Federal Government personnel practices. History and background; legal foundation and organization; position classification and compensation; recruitment and selection; training; employment policies and morale; employee relations and organization; retirement systems. (No prerequisite. Intended primarily for federal employees)

**Winter Quarter**

Th 4:00-6:30, Bureau of Mines Conference Room, Rosenthal

**PA. Public Financial Administration (old Pol 63).** 3 certificate credits. \$33.

Systems, techniques, and problems of financial organization and management, including revenue administration, budgeting, and control of public expenditures. (No prerequisite. Spring quarter class intended primarily for federal employees)

**Winter Quarter**

T 6:20-8:50, West Bank  
CB 415, Wessel

**Spring Quarter**

Th 4:00-6:30, Bureau of  
Mines Conference  
Room, Jernberg

**PA. Problems of Public Administration (old Pol 66).** 3 certificate credits. \$33.

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

**Spring Quarter**

T 4:00-6:30, VA Hosp Training Room

**PA. Administrative Responsibility (old Pol 78).** 3 certificate credits. \$33.

Analysis of the multiple and sometimes conflicting responsibilities of federal officers and employees to their concept of the public interest, their superiors, the legislature, and the public. Special emphasis will be placed on a critical analysis of the powers and practices exercised by superiors, the legislature, and the courts in their efforts to promote and procure administrative responsibility. (No prerequisite. Intended primarily for federal employees)

**Winter Quarter**

T 4:00-6:30, VA Hosp Training Room, Warp

**PA. Departmental Management.** 3 certificate credits. \$33.

This is a special executive development course intended for department heads of municipalities in the Twin Cities area. It will concern the various aspects of departmental management. (Prerequisite: Nomination by municipality)

**Spring Quarter**

Th 1:00-4:00, location to be arranged,  
Grosenick

**PA. Governmental Accounting (old Pol 58).** 3 certificate credits. \$33.

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

**Fall Quarter**

M 6:20-8:50, West Bank CB 415, Magraw

Symbols explained on page 15.

## Evening Classes

---

**PA. Administrative Analysis (old Pol 67).** [Those interested in degree credit register for Acct 145C, page 159.] 3 certificate credits. \$33.

A study of the techniques of analyzing and designing the organization and methods of administrative agencies. Topics include approaches to systems analysis, the organization as a total system, flow charting, work measurement, forms design and control, procedure writing and manualization, quantitative techniques in administration, information and decision systems, control systems, automated data processing, systems integration and communication, making systems effective. (No prerequisite)

**Winter Quarter**

W 6:20-8:50, West Bank CB 415, Magraw

**PA. Government and Welfare (old Pol 74 and 124).** [Those interested in degree credit register for SW 124, page 143.] 3 certificate credits. \$33.

Philosophy, policy development, and administration of federal, state, and local programs in fields of social insurance, public assistance, welfare services, and housing. (No prerequisite)

**Fall Quarter**

W 6:20-8:50, West Bank CB 415, Rosenthal

**PA. Computer Based Management Systems.** 3 certificate credits. \$33.

Study of management of complex projects utilizing computers as direct management tools. Includes management control systems from Gantt charts through PERT/cost. Analysis of implications and underlying concepts. Student prepares own PERT network. (No prerequisite. Intended primarily for federal employees)

**Spring Quarter**

W 4:00-6:30, Naval Air Station Bldg 42, Lederer

**PA. Employer-Employee Relations in Government.** 3 certificate credits. \$33.

Analysis of the problems arising out of the employer-employee relationship in the public service from the viewpoints both of the government as an employer and the public employee as a worker. (No prerequisite. Fall quarter class intended primarily for federal employees)

**Fall Quarter**

Th 4:00-6:30, Bureau of Mines Conference Room, Smythe

**Spring Quarter**

Th 6:20-8:50, West Bank CB 415, Smythe

**PA. Government Purchasing.** 3 certificate credits. \$33.

Study of government purchasing, including organization for purchasing, preparation of specifications, procedures for bidding or negotiation of prices, quality control, and other purchasing procedures and policies. (No prerequisite)

**Spring Quarter**

T 6:20-8:50, West Bank CB 415, Cowle

**PA. Human Relations in Administration.** 3 certificate credits. \$33.

Developmental approach to supervision and training. Supervision as a function of management; social aspects of supervision; training for development; the supervisor as a developer. Presentation and discussion of cases. (No prerequisite. Spring quarter class intended primarily for federal employees)

**Winter Quarter**

M 6:20-8:50, West Bank CB 415, Mold

**Spring Quarter**

M 4:00-6:30, VA Hosp Training Room, Farley

---

Symbols explained on page 15.



## Course Offerings—Arts and Sciences

---

### PA. Intergovernmental Relations. 3 certificate credits. \$33.

Analysis of the constitutional, political, and institutional relationships among federal, state, and local governments in the United States. Covers such matters as grants in aid and the expanding area of intergovernmental co-operation in such fields as health, education, welfare, public works, and urban development. (No prerequisite)

#### Spring Quarter

W 6:20-8:50, West Bank CB 415,  
Rosenthal

### PA. Performance Evaluation. 3 certificate credits. \$33.

Philosophy, problems, and techniques of performance evaluation in the Federal Government. (No prerequisite. Intended primarily for federal employees)

#### Winter Quarter

W 4:00-6:30, Naval Air Station Bldg 42, Wessman

### PA. Private Law for Public Administrators. 3 certificate credits. \$33.

Aspects of the law of agency, contracts, property, and torts of special interest to the public administrator. (No prerequisite. Fall quarter class intended primarily for federal employees)

#### Fall Quarter

W 4:00-6:30, Naval Air  
Station Bldg 42,  
Jorgenson

#### Winter Quarter

Th 6:20-8:50, West Bank  
CB 415, Jorgenson

### PA. Public Speaking and Conference Leadership. 3 certificate credits. \$33.

Effective conference leadership and participation in government organizations. Training in how to accomplish change, handle misunderstanding and disagreement, and communicate orally to gain objectives. (No prerequisite. Intended primarily for federal employees)

#### Fall Quarter

M 4:00-6:30, VA Hosp Training Room, Shapiro

### PA. Administration of Planning (old Pol 73). 3 certificate credits. \$33.

Purpose of planning; organization of planning agencies; citizen participation in planning; the master plan; zoning; housing; urban redevelopment; fiscal planning, the capital budget and program; planning for various municipal functions; intergovernmental relationships in planning. (No prerequisite, but The Planning Process course is strongly recommended)

#### Winter Quarter

Th 6:20-8:50, West Bank CB 425, Boezi

### PA. The Planning Process. 3 certificate credits. \$33.

Nature and techniques of the planning process for urban development and redevelopment in regional, metropolitan, city, and neighborhood areas; steps in the planning process; growth alternatives and policy planning. Principles and standards involved in functional plans. Case studies of the planning process in the Twin Cities metropolitan area and in other areas. (No prerequisite)

#### Fall Quarter

W 6:20-8:50, West Bank CB 425, Forester

---

Symbols explained on page 15.

## Evening Classes

---

### PUBLIC HEALTH

*Stewart C. Thomson, Professor of Public Health*

**PubH 50. Personal and Community Health.** 3 degree credits, §2, §3, §3A, §4, §5, §51, §52. \$33.

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

*Fall Semester*

T 8:15-9:55, Owre 15, Thomson

### ROMANCE LANGUAGES

(See listing under each language: French, page 90; Italian, page 110; Portuguese, page 129; Spanish, page 146.)

### SCANDINAVIAN LANGUAGES

*Bjarne E. Landa, Lecturer in Scandinavian*

*Lillemor Saether, Instructor in Scandinavian*

*Allen Simpson, Assistant Professor of Scandinavian*

The laboratory fee for beginning Scandinavian courses entitles students to use of the Language Laboratory.

#### Danish

**Scan 13-14. Beginning Danish.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

This course is intended for students with little or no previous knowledge of the Danish language. It stresses the oral approach and reading selections of cultural value. (No prerequisite for 13; 13 or § for 14)

*Fall Semester*

13 Th 6:20-8:00, Folwell 307, Landa

*Spring Semester*

14 Th 6:20-8:00, Folwell 307, Landa

#### Norwegian

**Scan 1-2. Beginning Norwegian.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

This course, intended for students who have little or no previous knowledge of Norwegian, stresses spoken Norwegian, but provides in addition the essentials of grammar and some practice in simple composition. (No prerequisite for 1; 1 or § for 2)

*Fall Semester*

1 M 6:20-8:00, Folwell 307, Simpson

*Spring Semester*

2 M 6:20-8:00, Folwell 307, Simpson

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

**Scan 3-4. Intermediate Norwegian.** 3 degree credits each semester. \$33 each semester.

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

*Fall Semester*

3 W 6:20-8:00, Folwell 207, Simpson

*Spring Semester*

4 W 6:20-8:00, Folwell 207, Simpson

### Swedish

**Scan 7-8. Beginning Swedish.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

This course, intended for students who have little or no previous knowledge of Swedish, stresses fundamentals of grammar, correct pronunciation, reading, practice in conversation and simple composition. (No prerequisite for 7; 7 or # for 8)

*Fall Semester*

7 M 6:20-8:00, Folwell 102, Saether

*Spring Semester*

8 M 6:20-8:00, Folwell 207, Saether

**Scan 9-10. Intermediate Swedish.** 3 degree credits each semester. \$33 each semester.

This course is designed either for students who have completed Scan 7-8 or for those who have a reasonable practical working knowledge of Swedish. Review of fundamentals of grammar together with conversation and composition and readings in Swedish prose. (Prerequisite: 8 or # for 9; 9 for 10)

*Fall Semester*

9 W 6:20-8:00, Folwell 105, Saether

*Spring Semester*

10 W 6:20-8:00, Folwell 105, Saether

## SLAVIC LANGUAGES

*Adele K. Donchenko, Instructor in Slavic Languages*

*Tatiana Prokopov, Instructor in Slavic Languages*

*Marilyn Sjoberg, Instructor in Slavic Languages*

*Danuta Zamojska, Instructor in Slavic Languages*

The laboratory fee for beginning Slavic courses entitles students to use of the Language Laboratory.

### Czechoslovakian

**Czec 1-2-3. Beginning Czechoslovakian.** 3 degree credits each quarter. \$33 each quarter.

Grammar, pronunciation, reading, and practice in speaking. (No prerequisite. Must be taken in sequence)

*Fall Quarter*

1 S 9:00-11:30, West  
Bank CB 125

*Winter Quarter*

2 S 9:00-11:30, West  
Bank CB 125

*Spring Quarter*

3 S 9:00-11:30, West  
Bank CB 125

Symbols explained on page 15.

## Evening Classes

---

### Polish

**Plsh 1-2. Beginning Polish.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Provides essentials for speaking, understanding, and reading basic Polish. (No prerequisite for 1; 1 or § for 2)

*Fall Semester*

1 Th 6:20-8:00, Folwell 306, Zamojska

*Spring Semester*

2 M 6:20-8:00, Folwell 305, Zamojska

### Russian

**Russ 1-2. Beginning Russian.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Grammar, pronunciation, reading, and practice in speaking. (No prerequisite for 1; 1 or § for 2)

*Fall Semester*

1 M 6:20-8:00, Folwell 305½,  
Donchenko

*Spring Semester*

2 M 6:20-8:00, Folwell 406,  
Donchenko

**Russ 3-4. Intermediate Russian.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Readings from modern authors, review of essential grammar, emphasis on spoken Russian. (Prerequisite: 2 or § for 3; 3 for 4)

*Fall Semester*

3 T 6:20-8:00, Folwell 307,  
Donchenko

*Spring Semester*

4 T 6:20-8:00, Folwell 307,  
Donchenko

**Russ 56-57 (old 20-21). Conversation.** 3 degree credits each semester. \$33 each semester.

Systematic development of vocabulary in areas relating to everyday life and practice in the use of spoken Russian. (Prerequisite: 4 or § for 56; 56 for 57)

*Fall Semester*

56 Th 6:20-8:00, Folwell 305½,  
Prokopov

*Spring Semester*

57 Th 6:20-8:00, Folwell 305½,  
Prokopov

**Russ 71-72 (old 50-51). Introduction to Russian Literary Texts.** 3 degree credits each semester. \$33 each semester.

A variety of literary works representing the principal genres are examined through stylistic analyses and literary explications. (Prerequisite: 4 or § for 71; 71 for 72)

*Fall Semester*

71 T 6:20-8:00, Folwell 306, Prokopov

*Spring Semester*

72 T 6:20-8:00, Folwell 406, Prokopov

---

Symbols explained on page 15.

## Russian for Graduate Students

The Russian language requirement for an advanced degree can be satisfied with a program of study based on Russ 17A and Russ 17B; 17A or permission is a prerequisite for Russ 17B. If the student achieves a grade of "B" or better in the final examination administered at the conclusion of Russ 17B, the Department of Slavic Languages will certify him as having satisfied the Russian language requirement for an advanced degree.

### Russ 17A. Russian for Graduate Students. No credit. \$33.

This course is designed to help the graduate student acquire a reading knowledge of basic Russian as rapidly as possible. Russ 17A assumes no knowledge of Russian on the part of the student. The course includes reading of simple, graded material. (No prerequisite)

#### *Fall Semester*

M 6:20-8:00, Folwell 406, Sjöberg

### Russ 17B. Russian for Graduate Students. No credit. \$33.

As a continuation of Russ 17A, the concentration in this course is on intensive reading of Russian literary and scientific texts. The graduate student is able to satisfy the Russian language requirement for an advanced degree by achieving a grade of "B" or better in the final examination which is part of the course. (Prerequisite: 17A or #)

#### *Spring Semester*

M 6:20-8:00, Folwell 204, Sjöberg

## Serbo-Croatian

### Serb 1-2. Beginning Serbo-Croatian. 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Grammar, pronunciation, reading, and practice in speaking. (No prerequisite for 1; 1 or # for 2)

#### *Fall Semester*

1 T 6:20-8:00, Folwell 203, Sjöberg

#### *Spring Semester*

2 T 6:20-8:00, Folwell 203, Sjöberg

## SOCIAL SCIENCE

*Martin Dolan, Instructor in Social Science*  
*Khosrow Riggi, Instructor in Social Science*  
*Richard Sykes, Instructor in Social Science*  
*Robert Utlaut, Instructor in Social Science*

These courses provide a broad framework within which the student may develop an understanding of man, his institutions, ideas and values. The courses are organized around central themes of human existence. Selections from the various social sciences as well as from the humanities are studied. All of the courses attempt to provide an integrated study of the factors—

Symbols explained on page 15.

## Evening Classes

---

historical, political, economic, social, psychological, and cultural—that influence and are influenced by man's conduct. Each course is organized around a basic theme.

### SSci 1. Introduction to Social Science. 4 degree credits. \$44.

*Personality* is the basic theme for SSci 1. Investigation of factors that influence individual human behavior. Topics studied include personality in nature, culture, society; personality as shaper of culture and history; American character; validation of theories and confirmation of findings about personality, character, identity. (No prerequisite. Repeated spring semester. For Upper Division credit, register in SSci 51)

#### Fall Semester

T 5:45-8:00, West Bank CB 220, Utlaut  
Th 5:45-8:00, West Bank CB 220, Dolan

#### Spring Semester

T 5:45-8:00, West Bank CB 220, Utlaut  
Th 5:45-8:00, West Bank CB 220, Dolan

### SSci 2. Introduction to Social Science. 4 degree credits. \$44.

*Work*. Division of labor and economic organization studied within social framework. Social functions of economic systems. Historical and social perspectives on work ideals. Problems of development. Comparison of economic systems. (Prerequisite: 1. Repeated spring semester. For Upper Division credit, register in SSci 52)

#### Fall Semester

W 5:45-8:00, West Bank CB 440, Riggi

#### Spring Semester

W 5:45-8:00, West Bank CB 440, Riggi

### SSci 3. Introduction to Social Science. 4 degree credits. \$44.

*Community*. Structures and patterns of human relations in traditional and modern societies. Varieties of group behavior: caste and class, kinship, urbanization, modernization, power distribution in different societies. Examination of social theories. (Prerequisite: 1 or 2. For Upper Division credit, register in SSci 53)

#### Fall Semester

M 5:45-8:00, West Bank CB 440, Sykes

#### Spring Semester

M 5:45-8:00, West Bank CB 440, Sykes

### SSci 51. Introduction to Social Science. 4 degree credits. \$44.

See course description as listed under SSci 1. Same work as SSci 1, but with additional assignments. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### Fall Semester

T 5:45-8:00, West Bank CB 220, Utlaut  
Th 5:45-8:00, West Bank CB 220, Dolan

#### Spring Semester

T 5:45-8:00, West Bank CB 220, Utlaut  
Th 5:45-8:00, West Bank CB 220, Dolan

### SSci 52. Introduction to Social Science. 4 degree credits. \$44.

See course description as listed under SSci 2. Same work as SSci 2, but with additional assignments. (Prerequisite: Limited to those students eligible for Upper Division credit)

#### Fall Semester

W 5:45-8:00, West Bank CB 440, Riggi

#### Spring Semester

W 5:45-8:00, West Bank CB 440, Riggi

---

Symbols explained on page 15.

**SSci 53. Introduction to Social Science. 4 degree credits. \$44.**

See course description as listed under SSci 3. Same work as SSci 3, but with additional assignments. (Prerequisite: Limited to those students eligible for Upper Division credit)

*Fall Semester*

*Spring Semester*

M 5:45-8:00, West Bank CB 440, Sykes

M 5:45-8:00, West Bank CB 440, Sykes

## SOCIAL WORK

*Joann Gannon, Instructor in Social Work*

*Frances Guzie, Clinical Assistant Professor of Social Work*

*Dagny Johnson, Assistant Professor of Social Work*

*Albert Rosenthal, Professor of Public Administration*

### Organized Extension Program in Social Work

The Organized Extension Program in Social Work consists of courses offered over a 2-year span. As of Fall 1966, this program offered by the School of Social Work through the General Extension Division will begin again. The 21 credits in the seven courses have been designed to meet the expressed needs of individuals employed in social welfare positions who do not intend to enter the 2-year graduate program in social work. The Organized Extension Program in Social Work is designed to help these individuals in acquiring knowledge and skill in better performing specific current social welfare tasks. The student will be helped to acquire increased understanding of the people for whom the social services exist, of the social institutions in society—particularly social welfare institutions, of ways of helping people solve problems of social functioning, and of attitudes and philosophy that make the helping process effective.

**SW 124. Government and Welfare. 3 degree credits. \$33.**

Philosophy, policy development, and administration of federal, state, and local programs in fields of social insurance, public assistance, welfare services, and housing. (Prerequisite: Pol 2 or 4. Qualified students may register for graduate credit)

*Fall Quarter*

W 6:20-8:50, West Bank CB 415, Rosenthal

**SW 125. Public Policy and the Social Work Profession. (To be offered 1967-68)**

**SW 140. Individual Human Rights and the Social Work Profession. (To be offered 1967-68)**

---

Symbols explained on page 15.

## Evening Classes

---

\*SW 148-149. Normal Social Functioning. 3 degree credits each semester. \$33 each semester.

Develops understanding of basic personality and environmental factors which affect and determine the individual's potential for normal social functioning. (Prerequisite: 165 or 175, or ¶165 or ¶175, or ‡. Limited to 25 students. May not be taken for graduate credit)

*Fall Semester*

148 Th 3:40-5:20, West Bank CB 115,  
Johnson

*Spring Semester*

149 Th 3:40-5:20, West Bank CB 115,  
Johnson

\*SW 165-166. Practical Problems in the Casework Process. 3 degree credits each semester. \$33 each semester.

Knowledge, attitudes, skills needed for supportive techniques; emphasis on how, why, when of referral and use of supervision and consultation. (Prerequisite: 148, or ¶148, or ‡. Limited to 25 students. May not be taken for graduate credit)

*Fall Semester*

165 Th 6:20-8:00, West Bank CB 115,  
Gannon

*Spring Semester*

166 Th 6:20-8:00, West Bank CB 115,  
Gannon

SW 171. The Community and the Social Agency. (To be offered 1967-68)

\*SW 175-176. Practical Problems in Social Group Work. 3 degree credits each semester. \$33 each semester.

Dynamics of individual and group behavior as these influence social group work; role of group worker, basic principles, use and meaning of program content. (Prerequisite: 148 or ¶148, or ‡. Limited to 25 students. May not be taken for graduate credit)

*Fall Semester*

175 Th 1:40-3:20, West Bank CB 115,  
Guzie

*Spring Semester*

176 Th 1:40-3:20, West Bank CB 115,  
Guzie

## SOCIOLOGY

*Judith D. Bennett, Instructor in Sociology*

*John Donohue, Lecturer in Sociology*

*David D. Franks, Instructor in Sociology*

*Robert E. Franz, Instructor in Sociology*

*Arthur L. Johnson, Professor of Sociology*

*Scott G. McNall, Assistant Professor of Sociology*

*William L. Zwerman, Assistant Professor of Sociology*

Soc 1. Man in Modern Society. 3 degree credits. \$33.

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.

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.



## Course Offerings—Arts and Sciences

A survey of the fundamental social institutions, such as the family and the church; the development and decline of social institutions; change in the institutional functions and social disorganization. (No prerequisite. Repeated spring semester)

### Fall Semester

M 6:20-8:00, MacPhail Center Annex 1  
T 6:00-7:40, StP Ext Center, Franz  
Th 6:20-8:00, West Bank CB 5, Bennett

### Spring Semester

M 6:20-8:00, MacPhail Center Annex 1  
T 6:20-8:00, West Bank CB 410, Bennett

### Soc 3. Social Problems. 3 degree credits. \$33.

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

### Fall Semester

T 6:20-8:00, West Bank CB 410, Johnson  
W 6:20-8:00, MacPhail Center Annex 2

### Spring Semester

T 7:00-8:40, StP Ext Center, Franks  
W 6:20-8:00, MacPhail Center Annex 2  
Th 8:15-9:55, West Bank CB 410, Franz

### Soc 52. Juvenile Delinquency and Juvenile Courts. 3 degree credits. \$33.

An interpretation of the broad social and cultural aspects of delinquency as they relate to the developmental process of individual juvenile delinquent behavior. The role of the juvenile court in meeting the problems of delinquency prevention and treatment will be studied. (Prerequisite: 1 and 53 or §. Repeated spring semester)

### Fall Semester

W 8:15-9:55, West Bank CB 215, Donohue

### Spring Semester

T 6:00-7:40, StP Ext Center, Donohue

### Soc 53. Elements of Criminology. 3 degree credits. \$33.

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

### Fall Semester

T 6:00-7:40, StP Ext Center, Donohue  
W 6:20-8:00, West Bank CB 250, Donohue

### Soc 120. Social Psychology. 3 degree credits. \$33.

Research and theory regarding the relation of the individual to social groups. Emphasis on the socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits. (Prerequisite: 1 or §. Qualified students may register for graduate credit)

### Fall Semester

W 8:15-9:55, West Bank CB 250, Bennett

### Soc 140. Social Organization. 3 degree credits. \$33.

Organization and structure of social groups; basic culture patterns of economic, political, and social institutions. Integration and disintegration of social groups and institutions. Essentials of social dynamics. (Prerequisite: 1 or §. Qualified students may register for graduate credit)

### Fall Semester

T 8:15-9:55, West Bank CB 220, Zwerman

Symbols explained on page 15.

## Evening Classes

---

### Soc 141. The Family. 3 degree credits. \$33.

Evolution of the family, development of family unity or disunity, roles of the several members of the family, methods of investigation of the family. (Prerequisite: 1 or 2. Qualified students may register for graduate credit)

*Spring Semester*

T 6:20-8:00, West Bank CB 240,  
Johnson

### Soc 144. Social Stratification and Mobility. 3 degree credits. \$33.

Relationship of social mobility to social stratification and social organization. Analysis of the hierarchical structure of society in relation to class and status. (Prerequisite: 1 or 2. Qualified students may register for graduate credit)

*Spring Semester*

T 8:15-9:55, West Bank CB 240,  
Zwerman

### Soc 172. Backgrounds of Modern Social Thought. 3 degree credits. \$33.

Survey of major trends of social thought from Renaissance to 19th century, with special attention to those factors contributing to origin of sociology. (Prerequisite: 1 or 2. Qualified students may register for graduate credit)

*Fall Semester*

T 8:15-9:55, West Bank CB 225, McNall

## SPANISH

*Larry Collins, Instructor in Spanish*

*Santiago Cúneo, Associate Professor of Spanish*

*Robert F. Estelle, Instructor in Spanish*

*Rodolfo O. Floripe, Associate Professor of Spanish*

*Richard Franklin, Instructor in Spanish*

*Richard Naródez, Assistant Professor of Spanish*

*Constance Sullivan, Assistant Professor of Spanish*

There are two sequences of courses in beginning Spanish from which the prospective student may choose the one best suited to his needs:

*1-2-3, Beginning Spanish*, carrying 5 degree credits per unit, comprises the standard course in first-year Spanish. 1-2-3 is the same sequence of courses formerly listed in evening classes as 1C-2C-3C, Beginning Spanish. The principal aim is to provide a solid foundation for the comprehension of the written and spoken language. Sufficient training in grammar is included to enable the student to acquire elementary skills in conversation and composition. This sequence is recommended for those planning to continue the study of Spanish or wishing to satisfy college language requirements.

*1A-1B-2A-2B-3A-3B, Beginning Spanish*, carrying 3 degree credits per unit. 1A-1B-2A-2B is the same sequence of courses formerly listed in

---

Symbols explained on page 15.

## Course Offerings—Arts and Sciences

evening classes as 1-2-3-4, Beginning Spanish. This sequence is recommended for those who desire a general introduction to the language but who wish to proceed at a slower pace than required for the standard 5-credit units.

The laboratory fee for beginning Spanish courses entitles students to use of the Language Laboratory.

**Span 1-2. Beginning Spanish.** 5 degree credits each semester. \$55 plus \$3 laboratory fee each semester.

Grammar, pronunciation, reading, and practice in speaking. See note on page 146. (No prerequisite for 1; 1 or 1B or old 1C or 1 year high school Spanish for 2)

*Fall Semester*

1 TTh 6:20-8:00, Folwell 109

*Spring Semester*

2 TTh 6:20-8:00, Folwell 109

**Span 3. Beginning Spanish.** 5 degree credits. \$55 plus \$3 laboratory fee.

Grammar, pronunciation, reading, and practice in speaking. See note on page 146. (Prerequisite: 2 or 2B or old 2C or 2 years high school Spanish)

*Fall Semester*

MW 6:20-8:00, Folwell 201

**Span 1A-1B. Beginning Spanish.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Grammar, pronunciation, reading, and practice in speaking. See note on page 146. (No prerequisite for 1A; 1A or old 1 for 1B. Repeated spring semester)

*Fall Semester*

1A W 6:20-8:00, Folwell 110, Cúneo  
1B W 6:20-8:00, Folwell 208

*Spring Semester*

1A W 6:20-8:00, Folwell 110  
1B W 6:20-8:00, Folwell 208, Cúneo

**Span 2A-2B. Beginning Spanish.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Grammar, pronunciation, reading, and practice in speaking. See note on page 146. (Prerequisite: 1 or 1B or old 2 or 1 year high school Spanish for 2A; 2A or old 3 for 2B)

*Fall Semester*

2A M 6:20-8:00, Folwell 207

*Spring Semester*

2B M 6:20-8:00, Folwell 108

**Span 3A-3B. Beginning Spanish.** 3 degree credits each semester. \$33 plus \$3 laboratory fee each semester.

Grammar, pronunciation, reading, and practice in speaking. See note on page 146. (Prerequisite: 2 or 2B or old 4 or 2 years high school Spanish for 3A; 3A for 3B)

*Fall Semester*

3A T 8:15-9:55, Folwell 103

*Spring Semester*

3B T 8:15-9:55, Folwell 103

Symbols explained on page 15.

## Evening Classes

---

### Span 25 (old 53). Intermediate Spanish. 5 degree credits. \$55.

An intensive review of grammar through analysis of a variety of Spanish texts. (Prerequisite: 3 or 3B or old 3C or 3 years high school Spanish. Repeated spring semester)

*Fall Semester*

MW 6:20-8:00, Folwell 204

*Spring Semester*

MW 6:20-8:00, Folwell 103

### Span 30. Introduction to Spanish and Spanish-American Literary Texts. 3 degree credits. \$33.

A variety of literary works representing the principal genres are examined through stylistic analyses and literary explications. Students learn critical terminology and discuss literary problems and techniques. (Prerequisite: 25 or 4 years high school Spanish or §. Repeated spring semester)

*Fall Semester*

Th 6:20-8:00, Folwell 208, Cooke

*Spring Semester*

Th 6:20-8:00, Folwell 208, Cooke

### Span 54. Composition. 3 degree credits. \$33.

This course (conducted in Spanish) is designed for persons desiring to continue the study of the Spanish language and literature. Its goals are to develop the student's capacity and ability to write effectively in the language. Stress will be on the principles of effective written communication, terminology, errors common to native speakers in syntax, morphology, and vocabulary. An analysis of written materials for content will serve as a basis for writing compositions. (Prerequisite: 25 or §. Repeated spring semester)

*Fall Semester*

M 6:20-8:00, Nicholson 209, Dahl

*Spring Semester*

M 6:20-8:00, Folwell 102, Dahl

### Span 55. Conversational Spanish. 3 degree credits. \$33 plus \$8 laboratory fee.

Daily and contemporary affairs are discussed. (Prerequisite: 25 or equivalent)

*Fall Semester*

T 6:20-8:20, Folwell 209, Narváez

### Span 58. Advanced Conversational Spanish. 3 degree credits. \$33.

(Prerequisite: 55 or equivalent)

*Spring Semester*

T 6:20-8:20, Folwell 207, Narváez

### Span 74. Survey of Literature of Spanish America. 3 degree credits. \$33.

Survey of the literature of Spanish America. The colonial period. (Prerequisite: 30 or ¶30 or §)

*Fall Semester*

W 6:20-8:00, Folwell 305½, Floripe

### Span 75. Survey of the Literature of Spanish America. 3 degree credits. \$33.

Romanticism to Modernismo. (Prerequisite: 30 or ¶30 or §)

*Spring Semester*

W 6:20-8:00, Folwell 305½, Floripe

---

Symbols explained on page 15.

**Span 175. Twentieth-Century Spanish Literature: Prose. 3 degree credits. \$33.**

Essays, short stories, and novels. Unamuno, Ortega y Gasset, Baroja, Azorín, Pérez de Ayala, Matute, Cela. (Prerequisite: 65 or 66 or 67 or 74 or 75 or 76 or 7. Qualified students may register for graduate credit)

*Fall Semester*

M 6:20-8:00, Folwell 205, Floriøpe

**Span 176. Twentieth-Century Spanish Literature: Poetry. 3 degree credits. \$33.**

Juan Ramón Jiménez, Unamuno, Antonio Machado, García Lorca, Alberti, Guillén, Salinas. (Prerequisite: 65 or 66 or 67 or 74 or 75 or 76 or 7. Qualified students may register for graduate credit)

*Spring Semester*

M 6:20-8:00, Folwell 201, Floriøpe

**Spanish for Graduate Students**

The Spanish language requirements for a graduate degree can be satisfied by successfully passing an examination given at the end of a 1-quarter course, 17A, specifically designed for students who desire only a reading knowledge of the language.

**Span 17A. Spanish for Graduate Students. No credit. \$33.**

This course is designed solely to impart a basic reading knowledge of the Spanish language; full time is devoted to intensive reading and translation of a variety of texts. Since this approach deals with only one aspect of the language, reading, with no time-consuming sessions for oral-aural drills and composition, great skill can be acquired in a short time. At the end of 1 quarter the student is given the equivalent of the Spanish Graduate Reading Examination. Successfully passing this examination fulfills the Graduate School requirement of a reading knowledge of a foreign language. (No prerequisite. Repeated winter and spring quarters)

	<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>
W	6:20-8:50, Folwell 107, Estelle	W	6:20-8:50, Folwell 107, Estelle	W	6:20-8:50, Folwell 107, Estelle

**Span 17B. Spanish Technical and Business Reading. No credit. \$33.**

This course is designed to give a reading mastery of Spanish beyond the basic knowledge gained in Span 17A. The course is intended to help those whose research, business, or personal interests require a thorough acquaintance with the prose style and terminology of books, journals, periodicals, or newspapers published within their area of study. Extensive reading will be done, mostly on an individual basis, in texts selected by the student with the instructor's help. Problems of translation will be dealt with, when necessary. (Prerequisite: Span 17A or a basic course in the structure of Spanish or 7. Repeated spring quarter)

	<b>Winter Quarter</b>		<b>Spring Quarter</b>
T	6:20-8:50, Folwell 107, Estelle	T	6:20-8:50, Folwell 107, Estelle

Symbols explained on page 15.

## Evening Classes

# SPEECH, COMMUNICATION, AND THEATRE ARTS

*H. Lee Adey, Assistant Professor of Speech, Communication, and Theatre Arts*  
*Arthur H. Ballet, Professor of Speech, Communication, and Theatre Arts*  
*Leonard Bart, Assistant Professor of Speech, Communication, and Theatre Arts*  
*Frank T. Benson, Associate Professor of Speech, Communication, and Theatre Arts*  
*Ernest Bormann, Professor of Speech, Communication, and Theatre Arts*  
*Bernard L. Brock, Assistant Professor of Speech, Communication, and Theatre Arts*  
*Albert M. Fulton, Professor of Speech*  
*Wendell L. Josal, Associate Professor of Speech, Communication, and Theatre Arts*  
*Maxine Klein, Assistant Professor of Speech, Communication, and Theatre Arts*  
*Merle W. Lopnow, Lecturer in Speech, Communication, and Theatre Arts*  
*Robert L. Scott, Professor of Speech, Communication, and Theatre Arts*  
*David W. Thompson, Professor of Speech, Communication, and Theatre Arts*

## Speech

\*Spch. **Beginning Practical Speech Making.** 3 certificate credits. \$33 plus \$5.50 materials and laboratory fee.

This course is designed particularly for the adult student who wants a practical application of the fundamentals of speech to his professional, business, and social needs. The primary purpose of the course is to develop confidence and effectiveness in speaking situations. Individual attention will be given to cases of nervousness, embarrassment, inadequacy, inferiority, and stage fright. Each student speaks before the class each meeting. Voice recordings and an analysis of the speaking voice will be made. (Prerequisite: high school graduate or  $\pm$ . Each section limited to 20 students. Repeated winter and spring quarters)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
T	6:20-8:50, Architecture 30, Fulton	T 6:20-8:50, Architecture 30, Fulton	T 6:20-8:50, Architecture 30, Fulton
Th	6:20-8:50, Architecture 30, Fulton		Th 6:20-8:50, Architecture 30, Fulton

\*Spch. **Advanced Practical Speech Making.** 3 certificate credits. \$33.

Emphasis will be given to analysis of controversial subjects and the logical presentation of a point of view. Impromptu speeches will also be featured. There will be continuous practice in thinking on one's feet. Each student speaks before the class at least once each meeting. (Prerequisite: Beginning Practical Speech Making. Class limited to 15 students)

	<b>Winter Quarter</b>
Th	6:20-8:50, Architecture 30, Fulton

\*Spch **5X-6X. Fundamentals of Speech.** 3 degree credits each semester. \$33 each semester.

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. (No prerequisite for 5X; 5X for 6X. Must be taken in sequence. Credit for 5X without 6X by petition only. Limited to 30 students)

	<b>Fall Semester</b>		<b>Spring Semester</b>
5X	M 6:20-8:00, Folwell 306, Scott	5X	T 6:20-8:00, Folwell 306, Brock
	Th 6:00-7:40, MacPhail Center 321, Bart	6X	M 6:20-8:00, Folwell 306, Scott
			Th 6:00-7:40, MacPhail Center 102, Bart

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Arts and Sciences

---

**Spch 65. Radio and Television Speech.** 3 degree credits. \$33 plus \$10 laboratory fee.

Speech arts and psychology of radio and television. Practice exercises, projects, and reports on problems of appeal and audience response. Laboratory fee to cover use of radio and TV production facilities. Students will have the opportunity of making audio-taped and video-taped programs. (Prerequisite: 5 or 5X-6X or ‡)

### *Spring Semester*

W 6:20-8:00, Aeronautical Engineering  
309, Bart

**Spch 106. Discussion.** 3 degree credits. \$33.

Group techniques in creative problem solving: co-operative thinking, recognition and definition of problems, idea-finding, evaluation of solutions. Practice in planning, preparing for, participating in, and leading various forms of discussion. (Prerequisite: 5 or 5X-6X or ‡. Qualified students may register for graduate credit)

### *Fall Semester*

T 8:15-9:55, Nicholson 107, Benson

\***Spch. Voice and Diction.** 3 certificate credits. \$33.

A practical and beginning course in training of the speaking voice as an expressive instrument. The emphasis is on understanding and practicing the physical skills, emotional attitudes, and vocal habits necessary for good voice production. Individual attention to common deficiencies in breath control, volume, pitch placement and melody, resonance, articulation, pronunciation, speech rhythm, and phrasing. The course is designed to help both students with mild vocal deficiencies and those with adequate voices who wish to increase their range of expressiveness. (No prerequisite. Limited to 20 students. Repeated spring quarter)

### *Fall Quarter*

W 6:20-8:50, Folwell 307, Thompson

### *Spring Quarter*

W 6:20-8:50, Folwell 307, Thompson

English for Foreign Students. (See page 88)

## Theatre Arts

**Th 11. Introduction to the Theatre.** 3 degree credits. \$33.

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

### *Fall Quarter*

W 6:20-8:50, Wulling 230, Ballet

### *Spring Quarter*

W 5:45-8:15, MacPhail Center 416,  
Ballet

**Th 12. Laboratory Section: Introduction to the Theatre.** 1 degree credit. \$11.

A laboratory in the practice of the arts and crafts of the theatre; scenery and particularly construction and painting; stage operation, theatre lighting, costuming, make-up.

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

(Prerequisite: 11 or ¶11. First class meeting of each quarter further sessions will be scheduled. Repeated winter and spring quarters)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
Th	6:20-8:50, Armory 53, Adey	6:20-8:50, Armory 53, Adey	6:20-8:50, Armory 53, Adey

### Th 21. Beginning Acting: Creative Approach. 3 degree credits. \$33.

Creation and presentation of original scenes and exercises. Ability to respond to the imaginative situation with individuality and effectiveness is stressed. (Prerequisite: 12 or ¶12. Repeated winter quarter)

**Fall Semester**  
W 6:20-8:00, Scott 19, Adey

**Winter Quarter**  
W 6:20-8:50, Westbrook 302, Klein

### Th 34. Stagecraft, Construction, and Painting. 3 degree credits. \$33.

Theory and practice in construction, painting, and shifting of scenery. (Prerequisite: 12)

**Spring Quarter**  
W 6:20-8:50, Westbrook 306, Adey

### Th 114. Theatre Management and Promotion. 3 degree credits. \$33.

Theory and practice in box office procedures, house management, publicity, and promotion; special problems in college, community, children's, and professional theatre. (Prerequisite: 12 or ¶12. Qualified students may register for graduate credit)

**Spring Quarter**  
M 6:20-8:50, Wulling 130, Loppnow

### Th. Exploring Today's Theatre. 3 certificate credits. \$33.

This course is designed to acquaint the individual with the many facets of theatre productions, and to enable him to develop his understanding and appreciation of plays in production. It will include trips backstage, attendance at performances in the field of professional, educational, community, and children's theatre. The registration fee does not include theatre tickets. There will be discussions and analyses by available theatre personalities. (No prerequisite)

**Winter Quarter**  
Th 8:15-10:45, Wulling 130, Loppnow, Josal

## STUDY SKILLS

*Richard M. Aalberg, Instructor in Rhetoric*  
*Fred M. Amram, Assistant Professor of Oral Communication*  
*Theodore L. Campbell, Instructor in Literature and Writing*  
*John Geier, Assistant Professor of Rhetoric*  
*Alex Kurak, Assistant Professor of Literature and Writing*  
*William M. Marchand, Assistant Professor of Rhetoric*  
*Starling W. Price, Instructor in Rhetoric*

---

Symbols explained on page 15.



## Course Offerings—Arts and Sciences

*Dorothy L. Sheldon, Assistant Professor of Literature and Writing*  
*Margaret N. Space, Assistant Professor of Psychology*  
*William A. Stockdale, Assistant Professor of Literature and Writing*  
*David M. Wark, Assistant Professor of Psychology*  
*Eugene S. Wright, Professor of Rhetoric*

**\*PO 1. How to Study.** 2 degree credits (credits do not count toward a B.A. degree; however, credits are included in the over-all grade point average. \$33 plus \$2 materials fee.

Practical assistance to the student in developing efficient methods of study and concentration, organizing material, preparing for examinations, and improving reading ability. Attention to the orientation of students in their attitudes and motivation, and the relation of these to satisfactory performance. Each student receives individual testing and practice to develop basic skills in reading, spelling, vocabulary, and elementary composition. (No prerequisite. Limited to 25 students. Students intending to use this course in a degree program should consult an adviser before registering. Repeated spring semester)

### Fall Semester

M 6:20-8:00, Eddy 102, Space  
M 8:15-9:55, Eddy 102, Space  
W 6:00-7:40, StP Ext Center, Wark  
W 7:50-9:30, StP Ext Center, Wark

### Spring Semester

M 6:20-8:00, Eddy 102, Space  
M 8:15-9:55, Eddy 102, Space  
W 6:00-7:40, StP Ext Center, Wark  
W 7:50-9:30, StP Ext Center, Wark

**Rhet 25. Parliamentary Procedure.** 1 degree credit plus 2 certificate credits. \$33.

Parliamentary procedure applied to group organization and management. Duties of officers and disposition of motions emphasized. Individual participation stressed through role-playing and other workshop procedures. (No prerequisite)

### Fall Quarter

T 6:20-8:50, Nicholson 216, Aalberg

**\*Rhet 47. Efficient Reading.** 3 certificate credits (may be used on degree program by petition; 1 credit in Arts or BusAdm; 3 credits in GC, Educ, or Ag). \$33 plus \$2 materials fee.

Designed for students, business, or professional people of average or above-average reading ability who wish to improve their reading speed and comprehension. Emphasis is on reading techniques of particular use in achieving or maintaining superior scholastic or professional status. A suggested follow-up for PO 1, How to Study. (No prerequisite. Limited to 30 students. Repeated spring semester)

### Fall Semester

M 6:20-8:00, Ford 70, Price  
M 8:15-9:55, Ford 70, Price  
T 6:20-8:00, Ford 70, Geier  
T 8:15-9:55, Ford 70, Geier  
W 6:20-8:00, Ford 70, Wright  
W 8:15-9:55, Ford 70, Wright  
Th 6:00-7:40, StP Ext Center, Marchand  
Th 7:50-9:30, StP Ext Center, Marchand

### Spring Semester

M 6:20-8:00, Ford 70, Price  
M 8:15-9:55, Ford 70, Price  
T 6:20-8:00, Ford 70, Geier  
T 8:15-9:55, Ford 70, Geier  
W 6:20-8:00, Ford 70, Wright  
Th 7:00-8:40, StP Ext Center, Marchand

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

### \*SSk. Efficient Reading II. No credit. \$33 plus \$2 materials fee.

A short, intensive course in efficient reading for students, business, and professional people of above-average reading ability, reading at about 500 words-per-minute, normally. A suggested follow-up for Efficient Reading (Rhet 47) or other reading efficiency training, either as an immediate continuation or refresher course. Emphasis on further refinement of reading techniques and skills of particular use in maintaining superior scholastic or professional status. No duplication of material with Efficient Reading I. Maximum use is made of the perceptoscope, a newly developed remote-control projector with multipurpose training functions. (No prerequisite. Limited to 30 students)

#### Special Class

(March 29 to June 7)

W 6:20-8:00, Nicholson 216, Geier

### SSk. Vocabulary Building: How to Expand Your Word Power. 3 certificate credits. \$33 plus 25 cents materials fee.

A class designed to extend the range and increase the quality of one's vocabulary for social and business purposes and for the benefit of one's intellectual development. Students master 150 word elements which furnish a basis for the analysis and formation of thousands of English words, learn to use the dictionary as an instrument for expanding their vocabularies and for enhancing their precision and flexibility in reading, writing, and speaking, and steadily extend their familiarity with additional vocabulary in written and spoken contexts. A programmed-learning sequence and reading sequences and tape recordings especially designed for the systematic expansion and effective use of one's vocabulary are employed as instructional aids. (No prerequisite. This course may, by petition, be used on a degree program in General College. Repeated winter and spring quarters)

	<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>
M	6:30-9:00, Robbinsdale HS 233, Kurak	T	6:20-8:50, Nicholson 207, Sheldon	T	6:20-8:50, Nicholson 207, Kurak
T	6:20-8:50, Nicholson 207, Sheldon	W	6:20-8:50, Nicholson 207, Stockdale	Th	6:20-8:50, Nicholson 216, Campbell
W	6:20-8:50, Nicholson 207, Stockdale	Th	5:15-7:45, StP Ext Center, Campbell		
Th	5:15-7:45, StP Ext Center, Campbell				

### \*GC 34. Creative Problem Solving. 3 degree credits. \$33.

A course organized around a study of creativity and creative problem solving. Emphasis will be directed toward making students aware of the need for creative behavior in business, industry, and community affairs, and in the arts. Students will participate in exercises to help them become more sensitive to problems, better able to analyze problems, and to demonstrate some of the techniques which aid in the discovery of unique solutions. Class discussion about the social and emotional blocks to creative behavior will be designed to help students discover and overcome their own blocks. Students will be encouraged to apply their creative activities to their academic, professional, or artistic interests. (No prerequisite. Limited to 25 students. Repeated winter and spring quarters)

	<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>
W	6:20-8:50, Nicholson 201, Amram	Th	6:20-8:50, Nicholson 201, Amram	W	6:20-8:50, Nicholson 201, Amram

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

# BUSINESS ADMINISTRATION

Your attention is called to the Master of Business Administration program on page 59 and to the certificate programs in secretarial training, industrial relations, business administration, accounting, and management of administrative services; see pages 30 to 52.

Effective fall, 1962, the School of Business Administration changed its prefix designations for degree courses previously having a BA prefix. In most cases, the former course number has been retained and only the prefix has been changed. For example, BA 5 has been changed to QA (Quantitative Analysis) 5, etc.

*Special Notice*—The following courses will be offered in 1966-67, as part of the master of business administration degree program. These courses are open *only* to students who have been admitted to the Graduate School and to the evening master of business administration program. They are *not* open to other graduate students. These courses require joint registration in the Graduate School and the Division of Evening Classes of the General Extension Division. Inquiries should be directed to the Associate Dean—Programs and Administration, School of Business Administration, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-3701.

## Schedule, 1966-67, for "150-Series" Courses in Evening Master of Business Administration Part I of the Program

### Fall Semester

Mktg 157. 3 degree credits. \$33.  
M 6:20-8:00, West Bank CB 120

Acct 155A. 3 degree credits. \$33.  
T 8:15-9:55, West Bank CB 145

### Fall Quarter

Mgmt 150A. 3 degree credits. \$33.  
T 5:30-8:00, West Bank CB 120

QA 151. 3 degree credits. \$33.  
W 6:20-8:50, West Bank CB 220

Ins 153. 3 degree credits. \$33.  
Th 6:20-8:50, West Bank CB 125

### Spring Semester

Acct 155B. 3 degree credits. \$33.  
T 8:15-9:55, West Bank CB 220

### Winter Quarter

Prod 150B. 3 degree credits. \$33.  
W 5:30-8:00, West Bank CB 220

BLaw 158. 3 degree credits. \$33.  
Th 6:20-8:50, West Bank CB 125

### Spring Quarter

IR 152C. 3 degree credits. \$33.  
W 6:20-8:50, West Bank CB 220

BFin 156. 3 degree credits. \$33.  
Th 6:20-8:50, West Bank CB 125

# ACCOUNTING

Your attention is called to the Accounting Certificate programs; see page 35.

*Alvin Arens, Lecturer in Accounting*

*Bruce Budge, Lecturer in Accounting*

## Evening Classes

---

Wallace Johnson, Lecturer in Accounting  
Robert Katz, Lecturer in Accounting  
Jerome Lee, Lecturer in Accounting  
Daniel Magraw, Lecturer in Accounting  
Leonard A. Rapoport, Lecturer in Accounting  
John K. Simmons, Lecturer in Accounting  
Jay M. Smith, Jr., Lecturer in Accounting  
Gilbert W. Urban, Lecturer in Accounting

## First-Year Accounting Courses

Acct 24-25-26, Principles of Accounting, is the first-year introductory course. It is designed to meet the needs of three groups of students: (a) those who plan to use accounting information for business management purposes; (b) those who intend to be practicing accountants (and who expect, therefore, to continue with the second-year and advanced accounting courses); (c) those who wish an introduction to the "language of business" as part of a liberal education. It is not designed to train students to be bookkeepers.

Persons with prior background or training may receive credit in one or more of these courses by passing an advanced standing examination. *These examinations will be given at the following times in 632 Business Administration Building (West Bank):*

Acct 24 Wednesday, September 14, 7:00 p.m.  
Wednesday, September 21, 7:00 p.m.  
Wednesday, December 21, 7:00 p.m.  
Wednesday, February 1, 7:00 p.m.

Acct 25 Thursday, September 15, 7:00 p.m.  
Thursday, September 22, 7:00 p.m.  
Thursday, February 2, 7:00 p.m.

Acct 26 Friday, September 16, 7:00 p.m.  
Friday, September 23, 7:00 p.m.  
Friday, February 3, 7:00 p.m.

The three courses are scheduled on three plans:

1. Regular semester class schedule for 3 credits each of 3 semesters for full first-year course. For students who wish regular class periods in order to take two classes the same evening or who do not wish to spend the time necessary for the more concentrated scheduling.
2. Quarter basis, two 75-minute classes or one 2½-hour class each week, 3 credits each quarter, course completed in 1 year. For students who wish to complete the entire course in 1 year of 3 quarters of 11 weeks each. Students who find this schedule too rapid are in a position to change to the semester basis.
3. Combined course, meeting twice weekly in 2½-hour sessions, spring semester only, 1-year course covered in 1 semester. For those who wish to concentrate on completion of the course in the spring semester in order to begin advanced courses in the following term.

## Course Offerings—Business Administration

**Acct 24-25-26. Principles of Accounting.** 3 degree credits each term, §Acct 55A-55B. \$33 each term.

Methods of recording, reporting, and interpreting business events. Use of accounting as a tool of business management. (No prerequisite for 24; 24 for 25; 25 for 26. Must be taken in sequence)

### Fall Semester

24	T	6:20-8:00, West Bank CB 110
	W	6:20-8:00, West Bank CB 110
	W	8:15-9:55, West Bank CB 110
25	T	8:15-9:55, West Bank CB 110
	W	8:15-9:55, West Bank CB 135
26	Th	6:20-8:00, West Bank CB 110
	Th	8:15-9:55, West Bank CB 110

### Spring Semester

24	T	6:20-8:00, West Bank CB 110
	T	8:15-9:55, West Bank CB 110
	W	6:20-8:00, West Bank CB 110
	W	8:15-9:55, West Bank CB 110
25	W	6:20-8:00, West Bank CB 155
26	W	6:20-8:00, West Bank CB 135
	W	8:15-9:55, West Bank CB 135

### Fall Quarter

24	MW	5:10-6:25, StP
		Ext Center
	MW	6:30-7:45, StP
		Ext Center
	MW	7:50-9:05, StP
		Ext Center
	TTh	5:30-6:45, West Bank CB 230
	TTh	6:50-8:05, West Bank CB 230
	TTh	8:15-9:30, West Bank CB 230
	Th	6:30-9:00, Robbinsdale HS 217

### Winter Quarter

25	MW	5:10-6:25, StP
		Ext Center
	MW	6:30-7:45, StP
		Ext Center
	TTh	5:30-6:45, West Bank CB 230
	TTh	6:50-8:05, West Bank CB 230
	Th	6:30-9:00, Robbinsdale HS 217

### Spring Quarter

24	MW	6:30-7:45, West Bank CB 215
26	MW	6:00-7:15, StP
		Ext Center
	TTh	6:30-7:45, West Bank CB 230
	Th	6:30-9:00, Robbinsdale HS 217

**Acct 24-25-26. Principles of Accounting (Combined).** 9 degree credits, §Acct 55A-55B. \$99.

This course covers Acct 24-25-26 complete in 1 semester. (No prerequisite. Registrations will be accepted for the entire course only. Not recommended for people with no accounting experience)

### Spring Semester

MTh 6:00-8:30, StP Ext Center

**Acct 55A-B. Elementary Accounting.** 4 degree credits each quarter, §24-25-26. \$44 each quarter.

The equivalent of 24-25-26 (Principles of Accounting) for School of Business Administration students and for 4-year combined engineering and business students. (No prerequisite; counts as a Lower Division course when transferred to College of Liberal Arts)

### Winter Quarter

55A	MTh	6:20-8:40,
		West Bank CB
		225

### Spring Quarter

55B	MTh	6:20-8:40,
		West Bank CB
		225

Symbols explained on page 15.

## Evening Classes

### Second-Year and Advanced Accounting Courses

**Acct 89B. Tabulating Equipment Applied to Business (Data Processing Techniques).** 3 certificate credits. \$33.

Covers the general principles and fundamentals of punched card accounting found in business today. Includes current techniques of pre- and post-computer data processing with emphasis on proper management of noncomputer type equipment. For those seeking a better understanding of punched card systems, their application, control and method. (No prerequisite)

*Spring Semester*

M 6:20-8:00, West Bank CB 105,  
Ostlund

**Acct 105A-B-C. Intermediate Accounting.** 3 degree credits each term, \$Acct 55D for 105C. \$33 each term.

Second-year accounting for students intending to specialize in accounting or in business finance. 105A: Historical review of search for accounting principles, present value analysis and price level indices, nature and measurement of income and funds flow. 105B: Accounting for acquisition and subsequent measurement of business assets. 105C: Accounting for equities, including creditors equity and owners' equity for corporations, proprietorships, nonprofit organizations and consolidated entities. Analysis and interpretation of financial statements. (Prerequisite: 26 and 6 credits in economics for 105A [see page 156 for advanced standing examinations]; 105A and Math 10 or equivalent for 105B; 105A for 105C. Students wishing graduate credit should inquire at time of registration)

*Fall Semester*

*Spring Semester*

105A	Th	6:20-8:00, West Bank CB 435	105B	Th	8:15-9:55, West Bank CB 220
	Th	8:15-9:55, West Bank CB 435			
105C	W	8:15-9:55, West Bank CB 255			

*Fall Quarter*

*Winter Quarter*

*Spring Quarter*

105A	M	5:15-7:45, StP Ext Center, Johnson	105B	M	5:15-7:45, StP Ext Center, Johnson	105C	M	5:15-7:45, StP Ext Center, Johnson
	T	6:30-9:00, Rob- binsdale HS 221		T	6:30-9:00, Rob- binsdale HS 221		T	6:30-9:00, Rob- binsdale HS 221

**Acct 115A-B. Cost Accounting.** 3 degree credits each semester, \$Acct 55C. \$33 each semester.

115A: Practices, principles, and procedures of handling production costs for use in inventory valuation and income determination. Job order, process, and standard cost systems. A brief introduction to standard cost as a tool of cost control. 115B: Use of cost information in managerial decision-making. (Prerequisite: 26, 6 credits in Principles of Economics and Math 10 or equivalent for 115A [see page 156 for advanced standing examinations]; 115A for 115B. Students wishing graduate credit should inquire at time of registration)

*Fall Semester*

*Spring Semester*

115A	T	6:20-8:00, West Bank CB 250	115B	T	6:20-8:00, West Bank CB 250
	T	8:15-9:55, West Bank CB 250			

**Acct 125. Auditing Principles and Procedures.** 3 degree credits. \$33.

Verification of financial data, including consideration of auditing procedures and their application. Preparation of working papers and audit reports is emphasized. (Prerequisite: 105C or #105C. May not be taken for graduate credit)

*Fall Semester*

W 6:20-8:00, West Bank CB 230, Lee

Symbols explained on page 15.

## Course Offerings—Business Administration

**Acct 135A-B. Income Tax Accounting.** 3 certificate credits each semester (4 degree credits on completion of both courses consecutively). \$33 each semester.

Principles involved in determining taxable net income and computation of federal and state income taxes for individuals, partnerships, and corporations. (Prerequisite: 105A for 135A; 135A for 135B. May not be taken for graduate credit)

<i>Fall Semester</i>		<i>Spring Semester</i>	
135A	M 8:15-9:55, West Bank CB 230, Rapoport	135B	M 8:15-9:55, West Bank CB 230, Rapoport

**Acct 145B. Internal Auditing.** 3 degree credits. \$33 plus \$10 materials fee.

Comprehensive course in auditing taught jointly with members of the Twin Cities Chapter of the Institute of Internal Auditors. The principles of internal auditing, organization of the internal auditor's functions, and detailed discussion of the performance of particular activities will be covered. (Prerequisite: 6 degree credits of accounting courses numbered above 50. May not be taken for graduate credit)

*Fall Semester*  
T 6:20-8:00, West Bank CB 240, Smith  
T 8:15-9:55, West Bank CB 205, Smith

**Acct 145C. Systems and Procedures.** (See PA, Administrative Analysis, page 136). 3 degree credits. \$33.

A study of the techniques of analyzing and designing the organizations and methods of administrative agencies. Topics include approaches to systems analysis, the organization as a total system, flow charting, work measurement, forms design and control, procedure writing and manualization, quantitative techniques in administration, information and decision systems, control systems, automated data processing, systems integration and communication, making systems effective. (No prerequisite. May not be taken for graduate credit)

*Spring Semester*  
T 6:20-8:00, West Bank CB 145, Magraw

**Acct 185A. Advanced Accounting.** 3 degree credits. \$33.

Consolidated statements, fiduciary and fund accounting, partnership accounting. (Prerequisite: 105C or ¶105C. Students wishing graduate credit should inquire at time of registration)

*Spring Semester*  
T 8:15-9:55, West Bank CB 145, Budge

## BUSINESS ENGLISH

*Clifford I. Haga, Assistant Professor of English*  
*John W. Lippert, Lecturer in English*

**Comp. Review of Business English.** 3 certificate credits. \$33.

For those who have been out of school for a while or had poor preparation for business English while in school. Modern, streamlined sentence structure, paragraphing, punc-

Symbols explained on page 15.

## Evening Classes

---

tuation, and spelling. Brief introduction to letter form and organization. Emphasis on brevity, accuracy, meaning, and vividness. (No prerequisite. Repeated spring semester)

### Fall Semester

T 6:00-7:40, StP Ext Center, Lippert  
W 6:20-8:00, Main Engineering 4,  
Lippert

### Spring Semester

M 6:20-8:00, Main Engineering 4,  
Lippert  
W 6:20-8:00, Main Engineering 4,  
Lippert

### Comp. Business Correspondence. 3 certificate credits. \$33.

A practical class for people recognizing the value of effective expression in business letters. The principal types of letters will be analyzed and the written assignments will emphasize the development of a letter style capable of producing economical, clear, action-getting letters. (No prerequisite. Repeated spring semester)

### Fall Semester

M 6:20-8:00, Main Engineering 4,  
Lippert  
W 8:15-9:55, Main Engineering 215,  
Haga

### Spring Semester

T 6:00-7:40, StP Ext Center, Lippert  
W 6:20-8:00, Main Engineering 215,  
Haga

### Comp 58. Business Reports and Letters. (See Communication in Management)

### Comp. Communication in Management. 3 certificate credits. \$33.

*Note—On approval of petition by instructor and the School of Business Administration, degree credit (not in excess of 3 credits) applicable on a business degree will be recognized for Communication in Management in lieu of Comp 58, provided class work has included appropriate supplementary assignments. Consult instructor at beginning of class term.*

An advanced course for people working at the administrative level. Reviews and analyzes the forms and styles appropriate in the three major classes of management communication: downward (order-giving), upward (administrative reporting), and horizontal (clearance and review). In addition to the class assignments, each student will work out an individual communication project related to his specific job. (No prerequisite. Repeated spring semester)

### Fall Semester

W 6:20-8:00, Main Engineering 215,  
Haga

### Spring Semester

W 8:15-9:55, Main Engineering 215,  
Haga

## BUSINESS FINANCE

*Ken E. Cooper, Instructor in Finance*  
*J. R. Nelson, Associate Professor of Finance*  
*George Power, Jr., Lecturer in Finance*  
*Peter Rosko, Assistant Professor of Finance*  
*Harold W. Stevenson, Professor of Finance*

### BFin 56. Finance Fundamentals. 3 degree credits, \$156. \$33.

Deals with the problems of acquiring, allocating, and managing funds within the firm. The following concepts of internal financial management are considered in depth:

---

Symbols explained on page 15.



## Course Offerings—Business Administration

determining financial goals of the firm; analyzing and controlling fund flows through the firm; measuring the expected return on individual investment projects; selecting optimal "portfolios" of projects; determination of capital costs, and the way these costs vary with financing mix; evaluating the performance of the firm and its components. (Prerequisite: Acct 26. Repeated spring semester)

### Fall Semester

T 6:20-8:00, West Bank CB 135  
T 8:15-9:55, West Bank CB 135  
Th 6:00-7:40, MacPhail Center 103

### Spring Semester

T 6:20-8:00, West Bank CB 135

### BFin 57 (old 76). Financial Management. 3 degree credits. \$33.

Financial problems of business concerns presented in case materials. Application of principles to such situations as budgeting, short- and long-term fund needs, debt and equity choices, mergers, and reorganizations. (Prerequisite: 56 or Acct 105B)

### Spring Semester

T 6:20-8:00, West Bank CB 125

### BFin 66. Investment Fundamentals. 3 degree credits, §Introduction to Investments or §BFin 116. \$33.

The investment features of different types of securities and the characteristics of industrial, utility, and financial enterprises and various government units from the viewpoint of the individual investor. Security analysis and portfolio needs. Lectures and student projects. (Prerequisite: 56. Primarily for business and professional students. Repeated spring semester)

### Fall Semester

Th 6:20-8:00, West Bank CB 440

### Spring Semester

Th 6:00-7:40, MacPhail Center 103

### BFin 76 (old 72). Capital Markets and Institutions. (3 degree credits, §BFin 106. \$33.

The institutional structure of the stock and bond markets. Internal organization and operation of the exchanges, the co-ordination of markets, problems of price behavior of the market as a whole and of specific types of securities. (Prerequisite: 56)

### Spring Semester

T 8:15-9:55, West Bank CB 125

### BFin. Introduction to Investments. 3 certificate credits, §BFin 66. \$33.

A fundamental course for adult investors who wish a general background of information on the investment field. Classroom instruction supplemented by special lectures by men of experience in investment banking, commercial banking, and other related fields. Course covers nature of various kinds of securities; statistical and investment analysis of securities; vocabulary and practices of the securities business; investment practices of various investor groups. (No prerequisite)

### Fall Quarter

Th 6:20-8:50, Johnston 105, Power

Symbols explained on page 15.

## Evening Classes

---

### Chartered Financial Analysts Refresher Courses

*Intensive review courses primarily of interest to members of the Twin Cities Society of Security Analysts, Inc., preparing for examinations conducted by the Institute of Chartered Financial Analysts for professional designation, Chartered Financial Analyst (CFA).*

**CFA Examination I. Investment Principles.** 3 certificate credits. \$33.

Financial institutions, investment analysis, financial statements. Discussions and examinations. (Limited to persons registered for the CFA examination)

*Spring Semester*

T 4:00-6:00, West Bank CB 240

**CFA Examination II. Applied Security Analysis.** 3 certificate credits. \$33.

Practical applications of Financial Analysis, economic growth and business fluctuation, industry and regional analysis. Discussions and examinations. (Limited to members of the Twin Cities Society of Security Analysts, Inc., registered for the CFA examination)

*Spring Semester*

T 4:00-6:00, Northwestern Bank, Director's Room, Mpls

**CFA Examination III. Investment Management Decision-Making.** 3 certificate credits. \$33.

The determination of investment goals, investment timing and portfolio balance, ethical issues in financial analysis and management. Discussions and examinations. (Limited to members of the Twin Cities Society of Security Analysts, Inc., registered for the CFA examination)

*Spring Semester*

M 4:00-6:00, Northwestern Bank, Director's Room, Mpls

## BUSINESS LAW

*John R. Carroll, Lecturer in Business Law*

*Thomas Lovett, Lecturer in Business Law*

*James D. Olson, Lecturer in Business Law*

*C. Harold Peterson, Lecturer in Business Law*

*Walter Robb, Lecturer in Business Law*

*William R. Rosengren, Lecturer in Business Law*

*Frederick W. Thomas, Lecturer in Business Law*

*Ross L. Thorfinnson, Lecturer in Business Law*

*James VanValkenburg, Lecturer in Business Law*

*Paul VanValkenburg, Lecturer in Business Law*

---

Symbols explained on page 15.

## Course Offerings—Business Administration

**BLaw 58, 78, 88, 98. Business Law. 3 degree credits each term. \$33 each term.**

Comprehensive course in the fundamental principles of law for the business and professional man. 58: Contracts—formation, operation, transfer, discharge. 78: Business associations—nature, creation and terms of the relation, rights, and liabilities of the parties when doing business through agents, partnerships, and corporations. 88: Law of sales of goods under the Uniform Sales Act and law of commercial paper under the Uniform Negotiable Instruments Law. 98: Nature and classification of real estate; deeds and conveyances; landlord and tenant; recording and abstracting; Torrens titles; liens and mortgages; wills, probating of estates, and duties of administrators and executors. (No prerequisite for 58; 58 or ¶58 or § for 78; 58 or ¶58 or § for 88; none for 98)

<i>Fall Semester</i>			<i>Spring Semester</i>		
58	M	6:00-7:40, MacPhail Center 219	58	M	6:00-7:40, MacPhail Center 219
	T	7:50-9:30, StP Ext Center, J. VanValkenburg		T	6:00-7:40, StP Ext Center, J. VanValkenburg
	W	6:20-8:00, West Bank CB 145, Lovett, Robb, Rosengren		W	8:15-9:55, West Bank CB 145, Robb, P. VanValkenburg
78	T	6:00-7:40, StP Ext Center, J. VanValkenburg	78	T	7:50-9:30, StP Ext Center, J. VanValkenburg
	W	8:15-9:55, West Bank CB 145, Lovett		W	6:20-8:00, West Bank CB 145, Paul VanValkenburg
88	T	6:20-8:00, West Bank CB 205, Thomas	88	T	6:20-8:00, West Bank CB 205, Thomas
			98	W	6:20-8:00, West Bank CB 250, Carroll
				Th	6:20-8:00, West Bank CB 250, Olson
 <b>Spring Quarter</b>					
	58	T	6:30-9:00, Robbinsdale HS 231, Rosengren		
(Limited to 75 students*)					

**BLaw. Common Legal Problems. 3 certificate credits. \$33.**

The Common Legal Problems course provides a comprehensive course in everyday legal principles, designed to assist the businessman, layman, and housewife to recognize their legal rights and more intelligently and efficiently manage their personal affairs. Any individual, whether married or single, housewife or businessman, is bound to come up against many legal problems in varied fields during a lifetime. Many of these problems might be avoided or minimized if the persons involved could anticipate them and know in advance what are the basic rights and liabilities and what steps should be taken to enforce or guard them, whom to consult, etc. Specifically, this course will consider legal problems of the following types: the purchase, sale, rental, or lease of homes and other real property; the making of wills and handling of estates; the preparation of income tax returns; the rights of persons injured in accidents and the liability of persons causing accidents; liability for various other types of tortious conduct; the making of contracts; the sale of personal property; negotiable instruments; the formation and operation of a small business as a sole proprietorship, partnership or corporation; workmen's compensation laws; the rights and responsibilities of husband, wife, parent, and child in their relations with each other, including divorce; the collection of monies through garnishment, attachment, and mechanic's liens; and criminal law. (No prerequisite. Repeated spring semester)

<i>Fall Semester</i>		<i>Spring Semester</i>	
Th	6:20-8:00, Johnston 122, Thorfinnson and Peterson	Th	6:20-8:00, Johnston 122, Thorfinnson and Peterson

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

### ECONOMICS

(A department of the College of Liberal Arts. See page 77)

### FINANCE

(See Business Finance, page 160)

### INDUSTRIAL RELATIONS

*John J. Flagler, Associate Professor of Industrial Relations and Labor Education*

*Milton D. Hakel, Instructor in Industrial Relations*

*Herbert G. Heneman, Jr., Professor of Labor Economics and Industrial Relations*

*Thomas A. Mahoney, Professor of Labor Economics and Industrial Relations*

*Paul C. Nystrom, Instructor in Industrial Relations*

*Donald P. Schwab, Instructor in Industrial Relations*

*Blanchard B. Smith, Instructor in Industrial Relations*

*Cyrus F. Smythe, Jr., Associate Professor of Industrial Relations*

*William F. Weitzel, Assistant Professor of Industrial Relations*

*Richard G. Woods, Instructor in Industrial Relations*

*Mahmood A. Zaidi, Assistant Professor of Labor Economics and Industrial Relations*

*Your attention is called to the Industrial Relations Certificate program; see page 39.*

#### **IR 52. Systems of Industrial Relations: Labor Marketing. 3 degree credits. \$33.**

Introductory analysis of employment relationships emphasizing economic analysis. Fundamentals of application and conservation of human resources in employment with consideration of related social and economic problems. Labor marketing, collective bargaining, unions and employer associations, industrial unrest and conflict, employment and unemployment, wage problems. (Prerequisite: 6 credits in Principles of Economics or 2. Repeated spring semester. For graduate credit register in IR 152)

##### *Fall Semester*

M 7:50-9:30, StP Ext Center, Schwab  
W 6:20-8:00, West Bank CB 155,  
Heneman

##### *Spring Semester*

W 6:20-8:00, West Bank CB 150,  
Mahoney  
W 7:50-9:30, StP Ext Center, Zaidi

#### **IR 62. Human Relations in Industry. 3 degree credits. \$33.**

Philosophy, policy, and methods. The problems of human relations arising in large scale organization of people and approaches to their solution. Role playing, sensitivity training, conference and discussion methods, case study. (No prerequisite. Repeated spring semester)

##### *Fall Semester*

Th 6:20-8:00, West Bank CB 215, Woods

##### *Spring Semester*

M 6:00-7:40, MacPhail Center 416

---

Symbols explained on page 15.

## Course Offerings—Business Administration

### **IR 72. Systems of Industrial Relations: Manpower Management. 3 degree credits. \$33.**

Introductory analysis of personnel management and labor relations in the development and utilization of effective work-teams within firms and agencies. Overview of policy and practice in major manpower management functions of staffing, training, communications, motivation, compensation, and morale maintenance. (Prerequisite: 6 credits in Principles of Economics or  $\$$ . Repeated spring semester. For graduate credit register in IR 172)

#### *Fall Semester*

W 8:15-9:55, West Bank CB 155,  
Smythe

#### *Spring Semester*

M 7:50-9:30, StP Ext Center, Schwab  
W 8:15-9:55, West Bank CB 250,  
Weitzel

### **IR 82. Modern Labor Relations. 3 degree credits. \$33.**

Collective bargaining between employers and/or employer associations and unions. Relevant policies of employers, unions, and the public; background of the labor movement; current practices in labor relations; and significant trends. (Prerequisite: 52. Repeated spring semester)

#### *Fall Semester*

M 6:00-7:40, MacPhail Center 323,  
Smith

#### *Spring Semester*

T 6:20-8:00, West Bank CB 430,  
Smythe

### **IR 142. Settlement of Industrial Relations Disputes. 3 degree credits. \$33.**

The nature of industrial conflict in employment relations; stresses contributing to conflict and dispute situations; public and private approaches to the prevention, reduction, and resolution of conflicts. (Prerequisite: 52 or 152. Qualified students may register for graduate credit)

#### *Fall Semester*

T 6:20-8:00, West Bank CB 430, Smythe

### **IR 152. Systems of Industrial Relations: Labor Marketing. 3 degree credits. \$33.**

See course description as listed under IR 52. Same class work as IR 52, but with additional assignments. Qualified students may register for graduate credit.

#### *Fall Semester*

W 6:20-8:00, West Bank CB 155,  
Heneman

#### *Spring Semester*

W 6:20-8:00, West Bank CB 150,  
Mahoney

### **IR 172. Systems of Industrial Relations: Manpower Management. 3 degree credits. \$33.**

See course description as listed under IR 72. Same class work as IR 72, but with additional assignments. Qualified students may register for graduate credit.

#### *Fall Semester*

W 8:15-9:55, West Bank CB 155,  
Smythe

#### *Spring Semester*

W 8:15-9:55, West Bank CB 250,  
Weitzel

Symbols explained on page 15.

## Evening Classes

---

### **IR 175. The Employment Interview. 3 degree credits. \$33.**

A research-oriented course emphasizing the application of experimental methods toward an understanding of interpersonal perception in selection and placement. Course content includes theories of interpersonal perception, measurement of perceptual accuracy, content and process, research strategies, methodological problems, decision validation, and current research findings. (Prerequisite: 172 or §. Repeated spring semester. Qualified students may register for graduate credit)

#### *Fall Semester*

M 6:20-8:00, West Bank CB 255, Hakel

#### *Spring Semester*

T 6:00-7:40, MacPhail Center 218,  
Hakel

### **IR 182A. Intermediate Labor Marketing. 3 degree credits. \$33.**

Advanced discussion and analysis of labor marketing concepts, structures, and processes. Examination of sources of information and different approaches to study, analysis, and resolution of problems in the labor market. (Prerequisite: 52 or 152. Qualified students may register for graduate credit)

#### *Fall Semester*

Th 8:15-9:55, West Bank CB 255, Zaidi

### **IR 212A. Labor Education. 3 degree credits. \$33.**

For professional worker in labor education and industrial relations practitioner. Objectives, principles, content, and methods of university and union labor education programs and relationship of such programs to industrial relations. Program development and evaluation. (Prerequisite: 52 or 152. Qualified students may register for graduate credit)

#### *Spring Semester*

Th 6:20-8:00, West Bank CB 450, Flagler

### **IR 212B. Employee Development and Training. 3 degree credits. \$33.**

Determination of goals, implementation and evaluation of programs for improved development and training from the standpoint of professional manpower management. (Prerequisite: 72 or 172. Qualified students may register for graduate credit)

#### *Spring Semester*

Th 6:20-8:00, West Bank CB 440

### **IR. Supervision I: Elements of Supervision. 3 certificate credits. \$33 plus \$2 materials fee.**

A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors with emphasis upon human relations aspects of such problems. Deals with such problems as selection, induction and training of new employees, employee appraisal, giving orders, handling grievances, discipline, and employee morale. Extensive use of class discussion of practical problems drawn from office and plant situations. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

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

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

T 6:20-8:00, West Bank CB 150,  
Nystrom

Th 6:20-8:00, West Bank CB 240

#### *Spring Semester*

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

M 6:20-8:00, West Bank CB 110,  
Nystrom

---

Symbols explained on page 15.

## Course Offerings—Business Administration

### IR. Supervision II: Advanced Techniques of Supervision. 3 certificate credits. \$33 plus \$2 materials fee.

Emphasizes specialized supervisory techniques based upon principles outlined in Supervision I. Includes discussion of research in supervisory methods and practices and their relative success in application in the office and plant. Methods of supervisory training, morale measurement, job analysis and job evaluation, safety programs, wage and salary administration, principles of organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. (Prerequisite: Supervision I or §. Repeated spring semester)

#### Fall Semester

M 6:00-7:40, StP Ext Center  
M 6:20-8:00, West Bank CB 430

#### Spring Semester

M 6:00-7:40, StP Ext Center, Smith  
T 6:20-8:00, West Bank CB 450

### IR. Supervision III: Techniques of Employee Training. 3 certificate credits. \$33.

Primary emphasis is on the training techniques a line supervisor could use in developing his employees. Course content includes discussion of basic principles of training, training on an individual basis, group training, and special problems of orienting the new employee, making use of staff training services, safety training, and evaluations of training. Extensive use is made of class discussion, role playing, case studies, and demonstrations. (Prerequisite: Supervision II or §)

#### Fall Semester

T 6:20-8:00, West Bank CB 450

## INSURANCE

*David M. Barker, Lecturer in Insurance*  
*Bernard Bengston, Lecturer in Insurance*  
*Fred Gedelman, Lecturer in Insurance*  
*Thomas E. Holloran, Lecturer in Insurance*  
*Alfred R. W. Larkin, Lecturer in Insurance*  
*Morton C. Mosiman, Lecturer in Insurance*  
*William Peet, Lecturer in Insurance*  
*Orem O. Robbins, Lecturer in Insurance*  
*Roger Wheeler, Lecturer in Insurance*  
*Andrew F. Whitman, Assistant Professor of Insurance*  
*C. Arthur Williams, Professor of Economics and Insurance*

### Ins 53. Risk Management and Insurance. 3 degree credits. \$33.

Recognition, measurement, and evaluation of insurable property, liability, and personnel risks of firms and families. Tools of risk management; retention, loss prevention, transfer, and others with emphasis on insurance. Design and implementation of the optimum risk management program. Selection of insurers, insurance pricing methods, and preparation for loss adjustments. Government regulation of insurance. (Prerequisite: 6 credits in Principles of Economics or §. Repeated spring semester)

#### Fall Semester

M 8:15-9:55, West Bank CB 150,  
Williams  
W 7:50-9:30, StP Ext Center, Whitman

#### Spring Semester

M 8:15-9:55, West Bank CB 150,  
Williams

Symbols explained on page 15.

## Property and Casualty Insurance Curriculum

The University of Minnesota co-operates with the Insurance Institute of America and the American Institute for Property and Casualty Underwriters, Inc., by offering an educational program that provides the basic courses needed by those who wish to take the examinations of either or both of the institutes. The Insurance Institute of America Parts A, B, and C courses are considered excellent preparation for the more difficult American Institute courses which lead to the Chartered Property and Casualty Underwriters (CPCU) designation. The Insurance Institute of America Part Adjustment courses are part of a professional education program for claims adjusters. Complete details of the program of training under both institutes are printed in the institutes' annual announcements, copies of which may be obtained from the General Extension Division of the University of Minnesota.

Co-ordinator for CPCU—Fred Gedelman, 332-3501.

### IIA Parts A, B, and C. 3 certificate credits each term. \$33 each term.

Based on the Part A, Part B, and Part C Topical Outlines of the Insurance Institute of America. Provides a background in property and liability insurance and serves as a preparatory course for the CPCU program. Part A: Economic and social influences of insurance; types of risk and kinds of insurance to meet them; legal principles important to property and liability insurance; historical development of insurance; rate making; types of insurers and their organization; underwriting and reinsurance; analysis of insurance contracts; regulation. Part B: An intensive study of fire and marine insurance contracts. Part C: An intensive study of casualty insurance contracts. Part A is equivalent to the sections on principles of insurance in Part Adjustment 1 and Part Adjustment 2. Parts B and C are equivalent to Part Adjustment 3 and Part Adjustment 4. (No prerequisite. It is recommended but not required that all parts be taken in sequence)

#### Fall Quarter

- A M 5:30-8:00, West Bank CB 225,  
Williams  
B T 5:30-8:00, West Bank CB 235,  
Bengston

#### Special Term—January 10 to May 2

- C T 6:20-8:00, West Bank CB 225, Bengston

### IIA Part Adjustment Special. Principles of Property Loss Adjusting and Liability Claim Adjusting. 3 certificate credits. \$33.

Based on the loss adjusting sections in the Part Adjustment 1 and Part Adjustment 2 Topical Outlines of the Insurance Institute of America, and designed as a preparatory course for the Part Adjustment Special Examination in the I.I.A. Program for Adjusters. Persons who pass the Part A examination described above and this Part Adjustment Special examination will receive credit for the Part Adjustment 1 and Part Adjustment 2 examinations. Subjects to be covered include adjustment of property losses, the legal liability hazard, and human behavior and adjusting. (No prerequisite)

#### Special Term—January 9 to May 1

- M 6:20-8:00, West Bank CB 115, Williams

---

Symbols explained on page 15.



## Course Offerings—Business Administration

### **IIA Part Adjustment 5. Property Insurance Adjusting.** 3 certificate credits. \$33.

Based on the Part Adjustment 5 Topical Outline of the Insurance Institute of America and designed as a preparatory course for the fifth examination in the I.I.A. Program for Adjusters. Subjects to be covered include the valuation of direct property losses, the agreement of Guiding Principles, business interruption insurance, reporting forms, and use of salvage companies. (No prerequisite)

#### **Fall Quarter**

T 5:30-8:00, West Bank CB 225

*Part Adjustment 3 and Part Adjustment 4 are equivalent to IIA Parts B and C described on page 168. Part Adjustment 6, which was offered during Fall Quarter 1965, will be offered again as soon as there is sufficient demand.*

### **CPCU Part I. Insurance Principles and Practices, A-B.** 3 certificate credits each semester. \$33 each semester.

An intensive course in the basic principles of property and casualty insurance, designed as preparation for examination I for the Chartered Property Casualty Underwriter (CPCU) designation offered by the American Institute for Property and Casualty Underwriters, Inc. The course will be conducted by a panel of instructors selected from practicing insurance men, co-ordinated and supervised by the University School of Business Administration. (Prerequisite: at least 3 years' general experience or the equivalent in formal study or acceptance of special registration application; consult any Extension office)

#### **Fall Semester**

A M 6:20-8:00, West Bank CB 220,  
Gedelman (co-ordinator)

#### **Spring Semester**

B M 6:20-8:00, West Bank CB 220,  
Gedelman (co-ordinator)

### **CPCU Part II. Analysis of Insurance Functions, A-B.** 3 certificate credits each semester. \$33 each semester.

An intensive course in the basic functional aspects of insurance, designed as preparation for examination II for the Chartered Property Casualty Underwriter (CPCU) award offered by the American Institute for Property and Casualty Underwriters, Inc. The course will be conducted by a panel of instructors selected from practicing insurance men, co-ordinated and supervised by the University School of Business Administration. (Prerequisite: CPCU Part I or at least 3 years' general experience or the equivalent in formal study or acceptance of special registration application; consult any Extension office)

#### **Fall Semester**

A M 8:15-9:55, West Bank CB 220,  
Gedelman (co-ordinator)

#### **Spring Semester**

B M 8:15-9:55, West Bank CB 220,  
Gedelman (co-ordinator)

### **CPCU Part III. Economics; Government and Business, A-B.** (To be offered 1967-68)

### **CPCU Part IV. Insurance and Business Law, A-B.** 3 certificate credits each semester. \$33 each semester.

This course is designed as preparation for examination IV for the Chartered Property Casualty Underwriter (CPCU) award. The subject matter covers (a) the general commercial law pertaining to contracts, agency, partnerships, corporations, personal property, real estate and mortgages, negotiable instruments, bankruptcy, bailments, common and

Symbols explained on page 15.

## Evening Classes

---

private carriers, negligence; (b) insurance law, including construction of insurance contracts. (Prerequisite: acceptance of special registration application or completion of one or more parts of the CPCU program)

### Fall Semester

A Th 6:20-8:00, West Bank CB 430,  
Peet

### Spring Semester

B Th 6:20-8:00, West Bank CB 430,  
Peet

CPCU Part V. Management, Accounting, and Finance A-B. (To be offered 1967-68)

## College of Life Underwriters Curriculum

In co-operation with the Minneapolis and St. Paul chapters of the American College of Life Underwriters (CLU), the Extension Division is offering Parts I, II, III, IV, and V of the CLU educational program (see listing below). Many of the regularly listed courses elsewhere in this bulletin may be of assistance to those who are preparing for examination on other parts of the curriculum. Full information on the American College of Life Underwriters study program may be obtained from the annual announcement of CLU which is available at Extension offices or through the Minneapolis or St. Paul chapters of the Chartered Life Underwriters.

Minneapolis—Henry Yoerg, 1300 Soo Line Building, 333-2461

St. Paul—David York, 1005 Pioneer Building, 225-4616

Registration for all Minneapolis CLU classes will be taken the first night of class, and tuition payment for the full-year course must be made at that time. Checks or money orders are to be made payable to: Minneapolis Chapter of the American Society of Chartered Life Underwriters. Registration for St. Paul Extension classes must be completed at an Extension office.

**CLU Part I. Fundamentals of Life and Health Insurance, A-B.** 3 certificate credits each semester. \$33 each semester.

This course is designed as preparation for the annual CLU examination in Part I. The subject matter will cover such topics as needs and uses; types of contracts; the arithmetic of premiums and reserves; introduction to health insurance; contract provisions; structure of the business; fundamentals of programming and settlement options. (No prerequisite for Part IA; Part IA or § for Part IB. Must be taken in sequence. For information concerning the CLU educational program and its requirements, see notice above)

### Fall Semester

A M 4:30-6:30, 3701 Wayzata Blvd,  
Larkin  
M 4:00-5:40, StP Ext Center,  
Wheeler

### Spring Semester

B M 4:30-6:30, 3701 Wayzata Blvd,  
Larkin  
M 4:00-5:40, StP Ext Center,  
Wheeler

---

Symbols explained on page 15.

## Course Offerings—Business Administration

### CLU Part II. Group Insurance, Health Insurance and Pensions, A-B. 3 certificate credits each semester. \$33 each semester.

This course is designed as preparation for the annual CLU examination in Part II, as conducted by the American College of Life Underwriters. The subject matter will cover group life insurance, individual health insurance, group health insurance, pensions, problems of old age, unemployment, and disability. (No prerequisite for Part IIA; Part IIA or § for Part IIB. Must be taken in sequence. For information concerning the CLU educational program and its requirements, see notice above)

#### *Fall Semester*

A W 4:30-6:30, 3701 Wayzata Blvd,  
Mosiman

#### *Spring Semester*

B W 4:30-6:30, 3701 Wayzata Blvd,  
Mosiman

### CLU Part III. Law, Trusts, and Taxation, A-B. 3 certificate credits each semester. \$33 each semester.

This course is designed as preparation for the annual CLU examination in Part III, as conducted by the American College of Life Underwriters. The subject matter will cover such topics as business law; legal aspects of life insurance; estates, wills, and trusts; taxation. (No prerequisite for Part IIIA; Part IIIA or § for Part IIIB. Must be taken in sequence. For information concerning the CLU program and its requirements, see notice above)

#### *Fall Semester*

A W 4:30-6:30, 3701 Wayzata Blvd,  
Holloran

#### *Spring Semester*

B W 4:30-6:30, 3701 Wayzata Blvd,  
Holloran

### CLU Part IV. Finance and Economics, A-B. 3 certificate credits each semester. \$33 each semester.

This course is designed as preparation for the annual CLU examination in Part IV, as conducted by the American College of Life Underwriters. Section A will cover family and business finance. Section B will be devoted to the study of basic principles of economics. (No prerequisite for Part IVA; Part IVA or § for Part IVB. Must be taken in sequence. For information concerning the CLU program and its requirements, see notice above)

#### *Fall Semester*

A Th 4:30-6:30, 3701 Wayzata Blvd,  
Barker

#### *Spring Semester*

B Th 4:30-6:30, 3701 Wayzata Blvd,  
Barker

### CLU Part V. Business Insurance and Estate Planning, A-B. 3 certificate credits each semester. \$33 each semester.

This course is designed as preparation for the annual CLU examination in Part V. The subject matter will cover settlement options and programming; life insurance for business purposes; estate planning; human behavior and motivation; ethics. (Prerequisite: Part I, II, III and IV for Part VA; Part VA or § for Part VB. Must be taken in sequence. For information concerning the CLU program and its requirements, see notice above)

#### *Fall Semester*

A M 4:00-6:00, 1200 2nd Ave S,  
Robbins

#### *Spring Semester*

B M 4:00-6:00, 1200 2nd Ave S,  
Robbins

Symbols explained on page 15.

## Evening Classes

---

### MANAGEMENT

*Ronald Burke, Assistant Professor of Management*

*Gary W. Dickson, Assistant Professor of Management*

*Nicholas A. Glaskowsky, Jr., Professor of Management and Logistics*

*Thomas R. Hoffmann, Professor of Management*

*John Mauriel, Assistant Professor of Management*

*John P. Northcott, Lecturer in Management*

*Elvin L. Peterson, Lecturer in Management*

*Albert K. Wickesberg, Professor of Management*

#### **\*Mgmt 60. Business Policy and Management Control. 3 degree credits. \$33.**

Managerial authority and responsibilities, organizational relationships, and effective executive action. Managerial problems of policy formulation involving decisions based upon a knowledge of all the major functions in the firm. (Prerequisite: IR 52, Prod 50, Mktg 57, and BFin 56. Limited to 30 students. Repeated spring semester)

##### *Fall Semester*

M 5:30-8:00, Ford 115, Mauriel

##### *Spring Semester*

M 8:15-9:55, West Bank CB 425,  
Peterson

#### **Mgmt 70. Fundamentals of Management. 3 degree credits. \$33.**

The principal functional areas of management: planning, organizing, staffing, directing, and controlling. Examines attributes of good organization, establishment of goals, policies, and procedures; control systems and techniques; providing necessary factors and relationships to achieve organizational objectives. (Prerequisite: current or anticipated management responsibility. Repeated spring semester)

##### *Fall Semester*

M 8:15-9:55, West Bank CB 110, Dickson

Th 8:15-9:55, West Bank CB 215, Glaskowsky

##### *Spring Semester*

T 7:50-9:30, StP Ext Center, Hoffmann

Th 6:20-8:00, West Bank CB 215, Glaskowsky

Th 8:15-9:55, West Bank CB 215,  
Mauriel

#### **Mgmt 80. Administrative Practices. 3 degree credits. \$33.**

Principles and concepts in the behavior of individuals and groups are applied to the understanding and solution of behavior problems in organizations. Effective performance of the leadership function in management is emphasized. Laboratory simulation of interviews, conferences, and other problem situations is used extensively to highlight key concepts and methods and to provide skill practice. (Prerequisite: current or anticipated management responsibility)

##### *Spring Semester*

W 6:20-8:00, West Bank CB 140, Burke

W 8:15-9:55, West Bank CB 140, Burke

#### **Mgmt 109. Management of Administrative Services. 3 degree credits. \$33.**

Application of management principles and concepts to the administrative services of the enterprise. Overview of organization principles; information systems design and integration; methods and procedures analysis and improvement; performance standards and control; communication and records management; layout and work environment and

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Business Administration

computer and data processing applications in the design and control of administrative functions. (Prerequisite: Econ 2 or equivalent. May not be taken for graduate credit)

### Spring Semester

T 6:20-8:00, West Bank CB 150, Northcott

## MARKETING

*Stanley R. Cowle, Lecturer in Marketing*

*Robert S. Hancock, Professor of Marketing*

*Robert J. Holloway, Professor of Marketing*

*Willis Kerns, Lecturer in Marketing*

*Edwin H. Lewis, Professor of Marketing*

### Mktg 57. Principles of Marketing. 3 degree credits. \$33.

A study of the basic concepts of marketing. Includes the direction of marketing activities: pricing, product, physical distribution, research, and market development. The environment of marketing and a treatment of the social, economic, technological frameworks as they relate to basic marketing concepts. (Prerequisite: 6 credits in Principles of Economics. Repeated spring semester)

#### Fall Semester

M 6:20-8:00, West Bank CB 150

W 6:20-8:00, West Bank CB 150

Th 6:00-7:40, StP Ext Center

#### Spring Semester

M 6:20-8:00, West Bank CB 145

W 6:20-8:00, West Bank CB 125

W 8:15-9:55, West Bank CB 125

### Mktg 87. Credits and Collections. 3 degree credits. \$33.

Nature and types of credit and of credit instruments and agencies; qualifications and work of credit manager; valuation and use of financial statements and credit reports; collection methods and correspondence; bankruptcy and adjustments; credit limits and control. (Prerequisite: 57)

#### Fall Semester

Th 6:20-8:00, West Bank CB 140, Kerns

### Mktg. Principles of Credits and Collections II. (To be offered 1967-68)

### Mktg 97. Market Analysis and Research I. 3 degree credits. \$33.

Techniques used in marketing research. Emphasis on marketing information which can aid in the solution of marketing problems. Selected nonsurvey and survey research techniques. (Prerequisite: 57 and QA 51)

#### Fall Semester

M 6:20-8:00, West Bank BA 632

### Mktg 117. Sales Management. 3 degree credits. \$33.

Sales policies and planning, sales organization, selection, training, and compensation of salesmen, control of sales performance, sales budgets, and cost control. Case materials. (Prerequisite: 57. May not be taken for graduate credit)

#### Spring Semester

T 6:20-8:00, West Bank CB 215, Lewis

Symbols explained on page 15.

## Evening Classes

---

### **Mktg 197. Purchasing. 3 degree credits. \$33.**

Purchasing of materials, supplies, and equipment as a major function in business. Basic principles of purchasing in industrial, governmental, and institutional organizations. Quantity and quality decisions, forward buying, evaluation of purchasing procedures, and pricing policies. (Prerequisite: 57. May not be taken for graduate credit)

*Spring Semester*

T 6:20-8:00, West Bank CB 425, Cowle

## **OFFICE MANAGEMENT**

*John P. Northcott, Lecturer in Office Management*

*Eudora M. Zellers, Lecturer in Office Management*

*Your attention is called to the Management of Administrative Services Certificate programs; see page 41.*

### **OMgt 36. Office Procedures. 3 degree credits. \$33.**

Editing and revising correspondence; communications; basic indexing and filing problems; intraoffice relationships. (Prerequisite: 34 [advanced typing] or #)

*Fall Semester*

W 6:20-8:00, Vincent 209, Zellers

### **OMgt 79A. Administrative Secretarial Studies. 3 degree credits. \$33.**

Office situations and problems in the work of an administrative assistant to an executive. Office procedures and secretarial dictation and transcription. (Prerequisite: 34 [advanced typing] and 39 [advanced shorthand] or #)

*Spring Semester*

W 6:20-8:00, Vincent 209, Zellers

### **OMgt. Scientific Management in the Office. 3 certificate credits. \$33.**

The office as a producing unit; organization and control of clerical services; selection of equipment and supplies; flow of work layout and working conditions; office personnel; relation of the office to operating divisions; work simplification; scientific management as applied to the office. (No prerequisite)

*Spring Semester*

T 6:20-8:00, West Bank CB 150, Northcott

## **PRODUCTION**

*Gary W. Dickson, Assistant Professor of Production*

*Thomas R. Hoffmann, Professor of Production*

*Elvin L. Peterson, Lecturer in Management*

### **Prod 50. Production Management. 3 degree credits, \$Prod 150B. \$33.**

The techniques, the managerial problems, and the decision-making processes in planning and controlling the production activity. Production as a function of the enterprise rather than as a strictly manufacturing activity. Research and development, the role of standards, physical facilities, systems and procedures analysis, work measurement, ma-

---

Symbols explained on page 15.

## Course Offerings—Business Administration

materials control, quality control, and production planning and control. (Prerequisite: 6 credits in Principles of Economics. Repeated spring semester)

<i>Fall Semester</i>		<i>Spring Semester</i>	
M	6:20-8:00, West Bank CB 435, Peterson	M	6:20-8:00, West Bank CB 435, Peterson
M	8:15-9:55, West Bank CB 435, Peterson	T	6:00-7:40, StP Ext Center, Hoffmann

## QUANTITATIVE ANALYSIS

*Duane J. Berkley, Lecturer in Statistics*

*Richard Heath, Lecturer in Quantitative Analysis*

*Vida G. Hildyard, Lecturer in Quantitative Analysis*

*Donald Olson, Lecturer in Statistics*

*Abraham M. Oweiss, Instructor in Economics*

*Willis Parlin, Lecturer in Quantitative Analysis*

*Alexander Whitmore, Lecturer in Quantitative Analysis*

### QA 5. Elements of Statistics. 3 degree credits, \$Soc 45, \$Psy 70. \$33.

Elementary concepts in statistical methods. Sources and collection of data; tabular and graphic presentation; frequency distributions; probability; sampling; introduction to statistical estimation and decision-making. (Prerequisite: Math 10 or equivalent. Upon completion of QA 5, students are urged to proceed immediately to QA 51. Repeated spring semester)

<i>Fall Semester</i>		<i>Spring Semester</i>	
M	6:20-8:00, West Bank CB 125	M	6:20-8:00, West Bank CB 230
T	6:20-8:00, West Bank CB 215	T	6:20-8:00, West Bank CB 115
T	8:15-9:55, West Bank CB 215	W	6:20-8:00, West Bank CB 230
W	6:20-8:00, West Bank CB 140	Th	6:00-7:40, MacPhail Center 324
W	7:50-9:30, StP Ext Center	Th	7:50-9:30, StP Ext Center
W	8:15-9:55, West Bank CB 140		
Th	6:00-7:40, MacPhail Center 216		

### QA 51. Business Statistics. 3 degree credits. \$33.

Basic concepts of regression and correlation; statistical estimation and decision-making, applications to such fields as survey sampling, acceptance sampling, and statistical quality control; introduction to time series analysis and index numbers. (Prerequisite: 5. Repeated spring semester)

<i>Fall Semester</i>		<i>Spring Semester</i>	
T	6:20-8:00, West Bank CB 145	T	8:15-9:55, West Bank CB 225
W	8:15-9:55, West Bank CB 105	W	6:20-8:00, West Bank CB 225
Th	6:00-7:40, MacPhail Center 416	Th	6:00-7:40, MacPhail Center 416

### QA 58. Quantitative Methods for Administration. 3 degree credits. \$33.

Application of probability and mathematics in the solution of operational problems in business. General elements of model construction; inventory models; allocation models; queuing models. (Prerequisite: 51, Econ 65, and Math 40 or 42, or equivalent)

<i>Fall Semester</i>	
M	6:20-8:00, West Bank CB 105

Symbols explained on page 15.

## Evening Classes

---

### \*QA 61. Introduction to Electronic Computers. 2 degree credits plus 2½ certificate credits. \$50 plus \$5 laboratory fee.

Basic concepts of computer logic and construction. Flow charting and programming problems for computers. Operating a computer. Programming and processing short problems. The course is not intended as a training course for programmers. Rather, it is designed to provide a good understanding of the field of computers—equipment, programming, and uses, including new and projected developments in computer hardware and software. The course includes the writing and running of several short programs using the School of Business Administration Computer Center facilities. Basic skill in writing programs in FORTRAN is obtained from this course. For those who wish to become highly skilled in FORTRAN, the course "Programming Computers Using FORTRAN" may be taken concurrently. (Prerequisite: 5 and Math 10 or equivalent. Limited to 25 students. Repeated spring semester)

#### *Fall Semester*

T 6:20-8:50, West Bank CB 93, Visnes  
W 6:20-8:50, West Bank CB 125, Heath

#### *Spring Semester*

T 6:20-8:50, West Bank CB 93, Heath

### QA. Introduction to Computers. 3 certificate credits. \$33.

A basic course in the application and use of modern computers. Should be of particular benefit to those who are seeking a better understanding of the value of computers, the methods and techniques of their use, in the conduct of business, scientific, and educational processes and research projects. No special knowledge of computer operation is required. (No prerequisite. Repeated spring semester)

#### *Fall Semester*

M 6:20-8:00, West Bank CB 250, Berkley  
(co-ordinator)

#### *Spring Semester*

M 6:20-8:00, West Bank CB 250, Berkley  
(co-ordinator)

### \*QA. Programming Computers Using FORTRAN. 1½ certificate credits. \$17 plus \$10 laboratory fee.

FORTRAN is an easily learned programming language which can be used to program most electronic computers. The language uses English words and mathematical symbols and is especially applicable for problems in engineering, mathematics, statistics, and business analysis where the problem to be programmed can be expressed in terms of formulas or arithmetic operations. Well suited for those who need to use the computer for special analyses or computational work. The course emphasizes the programming of problems in FORTRAN and does not cover the field of computers in general. Students will develop good proficiency in writing programs in FORTRAN and will run a large number of programs utilizing the School of Business Administration Computer Center facilities. No previous computer knowledge is required. Students taking QA 61 may also take this course. Although there is duplication of content at the introductory level of FORTRAN, this course provides considerably more depth and more practice in programming, and the student develops a much greater skill in FORTRAN. (No prerequisite, but proficiency in algebra is necessary. Limited to 25 students. Repeated spring semester)

#### *Fall Semester*

T 9:05-9:55, West Bank CB 93, Visnes  
W 9:05-9:55, West Bank CB 93, Heath

#### *Spring Semester*

T 9:05-9:55, West Bank CB 93, Heath

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.



## REAL ESTATE

The University of Minnesota co-operates with the National Association of Real Estate Boards and with the Real Estate Boards of St. Paul and Minneapolis in a program of educational training leading toward competence in the professional aspects of real estate practice. Instructing staff for each course will be made up of a number of practicing realtors in the Twin Cities. Co-ordinator for the Real Estate Boards: Bernard G. Rice, 100 Minnesota Federal Building, Minneapolis.

**\*RE. Fundamentals of Real Estate Practice.** 3 certificate credits. \$33.

Economic functions of the real estate business; fundamental practices of the real estate office and other realtors; real estate valuations; methods of appraising; brokerage; principles of real estate management; ethics of real estate practice. Basic course; should be taken prior to any other courses in real estate curriculum. (No prerequisite. Limited to 75 students)

*Fall Semester*

Th 6:20-8:00, West Bank CB 410, Rice  
(co-ordinator)

**RE. Real Estate Financing and Insurance.** 3 certificate credits. \$33.

A study of financing methods and practice relating to conventional, FHA, VA, and combination loans; secondary financing; special loans on leases, farms, industrial and commercial properties; and primary phases of insurance procedures in the average real estate office. (No prerequisite)

*Fall Semester*

T 6:20-8:00, West Bank CB 425, Rice  
(co-ordinator)

**RE. Real Estate Sales Brokerage.** 3 certificate credits. \$33.

A study of the basic principles and practices involved in the conduct of real estate sales from beginning to end; evaluation, listing, advertising, contracts and leases, financing and taxes, property showing, selling techniques, code of ethics. (No prerequisite)

*Spring Semester*

T 6:20-8:00, West Bank CB 235, Rice  
(co-ordinator)

**RE. Real Estate Appraisal.** 3 certificate credits. \$33.

Detailed consideration of principles and practices involved in appraising various types of real property for various purposes. Factors determining valuations; making and reporting appraisals. Appraisals procedures in various legal actions. (No prerequisite)

*Spring Semester*

Th 6:20-8:00, West Bank CB 410, Rice  
(co-ordinator)

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

\*RE. Principles of Commercial and Industrial Real Estate. 3 certificate credits. \$33.

Operating techniques of the commercial or industrial office; shopping centers—location and construction factors; trends in industrial land and building; office sites and buildings—financing, yield, and promotion; apartment land and buildings—income statements and pricing; leasing—all types—and property management; real estate investments; and business opportunities. (Prerequisite: open to professional appraisers; or persons experienced in real estate; or completion of two or more of the above RE courses. Limited to 50 students)

### *Fall Semester*

M 6:20-8:00, West Bank CB 215, Rice  
(co-ordinator)

Real Estate Law (BLaw 98, Business Law). (See page 163)

## RETAILING AND SELLING

*Mark Ludlow, Instructor in Business Studies*

Note—If in doubt as to your eligibility for the following courses, call Mark Ludlow prior to registration; telephone 373-4816.

\*GC 18A. Retail Careers, Sales, and Customer Services. 5 degree credits. \$55.

Through case studies, sales demonstrations, movies, text materials, interviews, and observation of salespeople, the student develops knowledge and skills required of retail salespeople. Attention is given to pertinent principles of persuasion and psychology, selling techniques, customer relations and services, merchandising information, government regulations, and credit. (Prerequisite: Student must be employed where suitable on-the-job training can be received and the supervisor can evaluate job performance, or ‡. Limited to 30 students)

### *Fall Quarter*

TTh 6:20-8:50, Nicholson 209, Ludlow

\*GC 18B. Retail Store Management Problems. 5 degree credits. \$55.

The focus of attention is on problems and practices of retail management. Management skills are developed through the study of human relations and techniques of training and communication. Topics covered are retail organization, forms of ownership, store location, merchandising policies, merchandise control, financial control, buying, and pricing. Learning activities include field trips, individual and group projects, movies, speakers, written and oral reports, role playing, and case studies. (Prerequisite: Student must be employed where suitable on-the-job training can be received and the supervisor can evaluate job performance, or ‡. Limited to 30 students)

### *Winter Quarter*

TTh 6:20-8:50, Nicholson 209, Ludlow

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Business Administration

**°GC 18C. Retail Sales Promotions.** 5 degree credits. \$55.

Retail sales promotion techniques and practices are studied with particular emphasis on the principles of store layout, interior and window display, principles and psychology of advertising, advertising media, and preparing and reproducing the advertisement. Activities include display card lettering, preparation of displays, making ad layouts, and store visits. (Prerequisite: Student must be employed where suitable on-the-job training can be received and the supervisor can evaluate job performance, or \$. Limited to 30 students)

### Spring Quarter

TTh 6:20-8:50, Nicholson 209, Ludlow

## SALESMANSHIP

*Perry Jacobson, Lecturer in Salesmanship*

**Sal. Salesmanship.** 3 certificate credits. \$33.

Course designed to build a foundation for a more successful sales career. A study of selling principles that influence people to buy; presentation of the product or service; key words; motivation; praise and appreciation; power closing techniques. Develops confidence, the creative mind, and earning potential through a positive plan of action. (No prerequisite. Repeated spring semester)

### Fall Semester

M 6:20-8:00, West Bank CB 230, Jacobson  
F 6:00-7:40, StP Ext Center, Jacobson

### Spring Semester

M 6:20-8:00, West Bank CB 240, Jacobson  
F 6:00-7:40, StP Ext Center, Jacobson

## TRANSPORTATION

*Nicholas A. Glaskowsky, Jr., Professor of Management and Logistics*

*Donald V. Harper, Professor of Transportation and Logistics*

*Edmund A. Nightingale, Professor of Economics and Transportation*

**Tran 54. Fundamentals of Transportation.** 3 degree credits, \$154. \$33.

Organization and economic aspects of the transportation system of the United States including rail, highway, air, pipeline, and water transportation. Nature of the transportation function in business. Regulatory problems. Current developments and problems. (Prerequisite: 6 credits in Principles of Economics or equivalent. Repeated spring semester)

### Fall Semester

M 6:20-8:00, West Bank CB 145, Harper  
M 8:15-9:55, West Bank CB 145, Harper

### Spring Semester

M 6:20-8:00, West Bank CB 140, Harper  
W 7:50-9:30, StP Ext Center

**Tran 144. Transportation Pricing.** 3 degree credits. \$33.

Rationale and applications of modern rate and fare structures of the regulated carriers. Principles, problems, and cases relating to the construction, interpretation, and application of carrier classifications and tariffs. Competitive aspects of exempt and private transportation. Fundamentals of rate negotiation between shippers and carrier pricing departments or rate bureaus. Relation of transportation pricing to the successful operation of

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

business logistics systems. (Prerequisite: 54 or 154. Qualified students may register for graduate credit)

### *Fall Semester*

M 6:20-8:00, West Bank BA 837, Nightingale

### **Tran 164. Business Logistics. 3 degree credits. \$33.**

Considers physical supply and distribution activities in the firm as a logistics system. Elements of logistics systems; constraints on logistic systems; planning, organization, management, and operation of logistics systems. (Prerequisite: 6 credits in Principles of Economics or equivalent. Qualified students may register for graduate credit)

### *Fall Semester*

Th 6:20-8:00, West Bank CB 450, Glaskowsky

### **Tran 174. Traffic Management. 3 degree credits. \$33.**

Managerial problems associated with the shipper's use of transportation services. Problems concerning organization for traffic management, transportation pricing, service alternatives, documentation, routing, consolidation, equipment utilization, warehousing, government regulation, use of private transportation, and others. (Prerequisite: 54 or 154. Qualified students may register for graduate credit)

### *Spring Semester*

M 8:15-9:55, West Bank CB 240, Harper

### **Tran 184. Carrier Management. 3 degree credits. \$33.**

Managerial problems of carriers by rail, highway, air, and water. Topics include problems associated with carrier organization, operations, traffic and sales, finance and control, labor relations, and public policy issues. (Prerequisite: 54 or 154. Qualified students may register for graduate credit)

### *Spring Semester*

Th 8:15-9:55, West Bank CB 135, Glaskowsky

*Note—Tran 194A and 194C are strongly recommended for nonlawyers who plan to take the Interstate Commerce Commission's examination for admission to practice.*

### **Tran 194A. Transportation Regulation and National Policy I: Domestic Transportation. 3 degree credits. \$33.**

National policies (regulatory and promotional) with respect to railway, highway, air, water, pipeline, and urban transportation. The Interstate Commerce Act, Federal Aviation Act, and Administrative Procedure Act. Organization and functions of the Interstate Commerce Commission, Civil Aeronautics Board, and Federal Aviation Agency. Practice and procedure before the Interstate Commerce Commission. Analysis of leading I.C.C., C.A.B., and Supreme Court decisions. (Prerequisite: 54 or 154. Qualified students may register for graduate credit)

### *Fall Semester*

M 8:15-9:55, West Bank BA 735, Nightingale

---

Symbols explained on page 15.

**Tran 194B. Transportation Regulation and National Policy II: International Transportation—Marine and Air. 3 degree credits. \$33.**

National policies (regulatory and promotional). Merchant Marine Statutes and Federal Aviation Act. Organization and functions of Federal Maritime Commission, Maritime Administration, Civil Aeronautics Board, and Federal Aviation Agency with respect to international air transportation. Marine shipping conferences and the dual-rate contract system: regulation of foreign freight forwarders and customs brokers. Agreements and organizations among governments and among carriers for the facilitation of international air transport. Analysis of leading F.M.C., C.A.B., and Supreme Court decisions. (Prerequisite: 54 or 154. Qualified students may register for graduate credit)

*Spring Semester*

W 8:15-9:55, West Bank BA 837, Nightingale

**Tran 194C. Transportation Regulation and National Policy III. 3 degree credits. \$33.**

Analysis of current major issues, pertinent studies and reports in the national policy and regulatory areas, including recent and proposed legislation and Congressional hearings thereon. I.C.C. cost studies. Evaluation of the impact of regulation and national policies on the economy. Role of the federal government as the largest user of transportation services and as an operator of transportation facilities (MATS and MSTs). Individual research. (Prerequisite: 54 or 154; 194A advised. Qualified students may register for graduate credit)

*Spring Semester*

W 6:20-8:00, West Bank BA 837, Nightingale

---

Symbols explained on page 15.

# EDUCATION

*Prospective Teachers:* Persons interested in undergraduate programs preparing them to teach in elementary or secondary schools should make an appointment through the General Extension Division with an adviser in the College of Education. Most professional education courses must be taken in day school, when schools are in session for observation. However, all programs in the College of Education emphasize the preparation of the teacher in liberal education and in the teaching subjects. Many evening offerings listed in the Arts and Sciences section of this bulletin may be taken by prospective teachers for later use toward degree programs in the College of Education.

*Teachers-in-Service:* Many courses in academic fields are available for teachers through evening class registration. Attention is called particularly to offerings listed under Arts and Sciences in this bulletin. Professional education courses available through evening classes are limited because of an extensive offering in the late afternoon and Saturday morning hours as part of the day school program of the College of Education.

*Renewal of Teaching Certificates:* Former teachers wishing to renew certificates should check with the State Department of Education concerning their individual requirements. Those who need an additional 8 quarter credits may select courses in education pertinent to their teaching level (elementary or secondary) or courses in the major teaching field. Secondary teachers are especially urged to emphasize current work in the teaching subject itself.

## ART EDUCATION

*William Bradley, Instructor in Art Education*  
*Clifton A. Gayne, Jr., Professor of Art Education*  
*Theron Hegg, Instructor in Art Education*  
*Gopal Mitra, Instructor in Art Education*  
*George K. Olson, Instructor in Art Education*

**ArEd 17. Pictorial Expression for Elementary Education. 3 degree credits.  
\$33 plus \$2 materials fee.**

Survey of art in life and education. Materials, techniques, and ideas important to children's art expression, relationship to adult expression, and significance in educational growth. (No prerequisite. Repeated spring quarter)

### **Fall Quarter**

Th 6:20-8:50, Wulling 240, Gayne

### **Spring Quarter**

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

---

Symbols explained on page 15.

**ArEd 18. Design Activities for Elementary Education.** 3 degree credits. \$33 plus \$2 materials fee.

Relationships between art and nature. Problems in inventions, arrangement and decoration, color, lettering, poster, and bulletin board displays. (No prerequisite. Repeated winter quarter)

**Fall Quarter**

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

**Winter Quarter**

Th 6:20-8:50, Wulling  
240, Gayne

**ArEd 19. Functional Arts and Crafts in Elementary Education.** 3 degree credits. \$33 plus \$2 materials fee.

Influence of art on modern life. Typical opportunities for integrated experiences. Clothing, architecture and interior design, community planning, commercial and industrial design, puppetry, dramatics, intercultural relations, holiday projects, etc. (No prerequisite. Repeated spring quarter)

**Winter Quarter**

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

**Spring Quarter**

Th 6:20-8:50, Wulling  
240, Gayne

\***ArEd 80. Contemporary Crafts.** 3 degree credits. \$33.

Basic materials, equipment, design criteria and techniques for textile, wood, metal, and ceramics. Contemporary emphasis for application to educational programs in elementary and secondary schools, adult education, special education, recreation, and occupational therapy. (No prerequisite. Limited to 30 students. Repeated spring quarter)

**Fall Quarter**

T 6:20-8:50, Wulling 120, Bradley

**Spring Quarter**

T 6:20-8:50, Wulling 120

**ArEd 81. Puppetry in Education.** 3 degree credits. \$33.

Use of simple puppetry as a teaching technique; problems of motivation and correlation with school subjects; construction, manipulation, and stage techniques related to school situations. (No prerequisite)

**Winter Quarter**

T 6:20-8:50, Wulling 220, Olson

**Co-operative Community Workshops in Art Education**

For out-state communities, two 1-week intensive workshops are available under University faculty leadership.

While each workshop is independent, a recommended plan for most economical operation is a combination of the two. A late afternoon workshop session on children's art would be of most service to parents and elementary teachers. An evening session workshop on amateur painting would be of greatest interest to those who wish to begin or make progress in painting as a personal interest. Some will be interested in both.

This intensive workshop plan provides a means to help University faculty members provide service to many communities which otherwise would be

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

prohibitively expensive. The procedure requires co-operative planning with a sponsoring group in the community.

The courses listed below are the titles under which registration is handled for the two workshops: ArEd 90 and 95.

*For further information, write Huldah Curl, State Art Co-ordinator, 310 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.*

### **ArEd 90. Understanding Children's Art. 1 degree credit.**

Lectures, discussions, demonstrations with art materials; recent developments regarding art activities important to the educational achievement and personality development of all children at school and at home; suggestions for parents, elementary teachers, and others who work with young children.

### **ArEd 95. Painting for Amateurs. No credit.**

Lectures, demonstrations, discussions, critique sessions; effective methods for independent study, use of basic references, defining and applying standards for self criticism and improvement.

## CHILD PSYCHOLOGY

*Phyllis W Berman, Lecturer in Child Psychology*

*Leslie B. Cohen, Lecturer in Child Psychology*

*David A. Corsini, Lecturer in Child Psychology*

*Marvin W. Daehler, Lecturer in Child Psychology*

*Arthur J. Gallese, Lecturer in Child Psychology*

*Cynthia Gliner, Lecturer in Child Psychology*

*Harold R. Ireton, Lecturer in Child Psychology*

*Leon K. Miller, Lecturer in Child Psychology*

*Barbara E. Moely, Lecturer in Child Psychology*

*Murray K. Reed, Lecturer in Child Psychology*

*Lawrence G. Shelton, Lecturer in Child Psychology*

*Alexander W. Siegel, Lecturer in Child Psychology*

*Robert H. Willoughby, Lecturer in Child Psychology*

### **CPsy 80. Child Psychology. 3 degree credits. \$33.**

Introduction to the science of child behavior. Emphasis is placed upon a critical review of theories and research in child psychology. (Prerequisite: Psy 2. Repeated spring semester and spring quarter)

#### *Fall Semester*

T 8:15-9:55, Johnston 114, Miller  
Th 7:50-9:30, StP Ext Center, Siegel

#### *Fall Quarter*

M 6:30-9:00, Robbinsdale HS 214,  
Gliner

#### *Spring Semester*

T 6:20-8:00, Johnston 114, Daehler  
W 7:50-9:30, StP Ext Center, Moely

#### *Spring Quarter*

M 6:30-9:00, Robbinsdale HS 214,  
Corsini

---

Symbols explained on page 15.



**CPsy 81. Adolescent Psychology. 3 degree credits. \$33.**

Social, physical, mental, emotional, and personality development during adolescence. (Prerequisite: Psy 2. Repeated spring semester. For graduate credit, register in CPsy 132)

*Fall Semester*

*Spring Semester*

M 8:15-9:55, Johnston 105, Shelton

T 6:20-8:00, Johnston 105, Willoughby

**CPsy 132. Adolescent Development. 3 degree credits. \$33.**

See course description as listed under CPsy 81. Qualified students may register for graduate credit.

*Fall Semester*

*Spring Semester*

M 8:15-9:55, Johnston 105, Shelton

T 6:20-8:00, Johnston 105, Willoughby

**CPsy 140. Behavior Problems. 3 degree credits. \$33.**

Types, origin, development, and treatment of behavior difficulties in normal children. (Prerequisite: 80 or equivalent. Repeated spring semester. Qualified students may register for graduate credit)

*Fall Semester*

*Spring Semester*

W 8:15-9:55, Johnston 105, Ireton

M 8:15-9:55, Johnston 114, Reed

**CPsy 143. Problems of Mental Deficiency. 3 degree credits. \$33.**

Diagnosis, care, training; social and vocational problems. (Prerequisite: 80 or equivalent. Repeated spring semester. Qualified students may register for graduate credit)

*Fall Semester*

*Spring Semester*

Th 8:15-9:55, Johnston 122, Berman

T 6:20-8:00, Johnston 122, Gallese

**CPsy 144. Psychology of the Gifted Child. 3 degree credits. \$33.**

Psychology and development of high intellectual ability and of special talents. (Prerequisite: 80 or equivalent. Qualified students may register for graduate credit)

*Fall Semester*

M 8:15-9:55, Johnston 114, Reed

**CPsy 179. Clinical Procedures with Children. 3 degree credits. \$33.**

Survey of methods of clinical psychology emphasizing basic concepts and research problems in clinical work with children. Intended primarily for nonmajors. (Prerequisite: 12 credits in child psychology, psychology, educational psychology, or sociology. Qualified students may register for graduate credit)

*Fall Semester*

T 6:20-8:00, Johnston 122, Gallese

---

Symbols explained on page 15.

## **CURRICULUM AND INSTRUCTION**

*Clarence H. Boeck, Professor of Education*

*Neville P. Pearson, Associate Professor of Education*

**EdCI 103. Teaching of Science in the Elementary School. 3 degree credits. \$33.**

Resources, materials, and their application in the elementary grades. (Prerequisite: senior class level, Ed 75B or teaching experience. Qualified students may register for graduate credit)

*Fall Semester*

**M 6:20-8:00, Peik 365, Boeck**

*Note—Courses in audio-visual education are offered in selected high schools in the Twin Cities area. Each course meets one evening a week, from 4:30 to 6:00 and from 6:30 to 10:00, for a 6-week period. Schedules are announced early in September. For further information, please write Associate Professor Neville Pearson, College of Education, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-3615.*

**EdCI 105. Audio-Visual Materials in Education. 3 degree credits. \$33 plus \$10 laboratory fee.**

Characteristics, advantages, limitations, and practical schoolroom use of audio-visual materials of nonprojected and projected types. Practice in operation of accepted audio-visual equipment such as slide projectors, opaque projectors, film strip projectors, tape recorders, 16mm projectors, and overhead projectors. Opportunity to operate newer mediums, such as teaching machines and closed circuit television equipment. (Prerequisite: senior. Qualified students may register for graduate credit)

**EdCI 108. Nonprojected Audio-Visual Materials and Equipment Laboratory. 3 degree credits. \$33 plus \$10 laboratory fee.**

The planning and making of nonprojected materials for audio-visual education; use of the materials and equipment involved. Course includes lettering (use of pens, types, and other materials); poster design and construction; bulletin board design and construction; wet mounting and dry mounting of instructional materials; laminating; felt, flannel, and magnetic board techniques; flip charts, graphs; models, mock-ups, exhibits, displays; dioramas; preparation of spirit and mimeo type materials for duplication. (Prerequisite: 105. Qualified students may register for graduate credit)

**EdCI 109. Projected Audio-Visual Materials and Equipment Laboratory. 3 degree credits. \$33 plus \$10 laboratory fee.**

The planning and making of projected materials for audio-visual education; use of the materials and equipment involved. Course includes hand-made lantern slides; basic photography for high contrast type photography; scripting for slide sequences; preparation of a 35mm slide sequence; 8mm motion picture photography; preparation of transparencies for the overhead projector. (Prerequisite: 105. Qualified students may register for graduate credit)

---

Symbols explained on page 15.

## EDUCATIONAL PSYCHOLOGY

Henry Borow, Professor of Education

Cyril J. Hoyt, Professor of Education

**EPsy 60. Introduction to Measurements and Statistics.** 3 degree credits. \$33.

A study of measures of central tendency, variability, and correlation, as well as principles of test construction. (Prerequisite: 6 credits in psychology)

*Fall Semester*

Th 6:20-8:00, Burton 123, Hoyt

**EPsy 159. Personality Development and Mental Hygiene.** 3 degree credits. \$33.

This course purports to give the teacher a fresh way of looking at his task and at his relations with students by drawing upon modern concepts of mental health. The thesis is developed that emotional and intellectual growth in the classroom can best be fostered when the teacher understands and comes to grips with the motives and values which characterize his students. Topics treated include a description of the person in good mental health, an analysis of adjustment processes and of common sources of conflict and anxiety, psychological descriptions of the major grade-range groups in our schools and the mental health implication for dealing with them in the classroom; typical distinctions in the psychological makeup of successful and unsuccessful teachers; examination of sources of frustration in teaching and of behavior conducive to sound mental health in teaching. (Prerequisite: junior class level or teaching experience or †. Repeated spring semester. Qualified students may register for graduate credit)

*Fall Semester*

M 6:20-8:00, Nicholson 207, Borow

*Spring Semester*

M 6:20-8:00, Nicholson 122, Borow

## MUSIC EDUCATION

Robert L. Borg, Associate Professor of Music Education

**\*MuEd 51. Teaching Music (Kindergarten-Primary grades).** 2 degree credits. \$33.

For nonmusic majors. Practical methods, materials, and new practices in teaching music in nursery and kindergarten through third grade, emphasizing singing, rhythm, history and appreciation, theory, and creative activities. (Prerequisite: Mus 4 or †. Limited to 30 students)

*Fall Semester*

M 6:20-8:00, Scott 104, Borg

**\*MuEd 52. Teaching Music (Intermediate grades).** 2 degree credits. \$33.

For nonmusic majors. Appreciation, methods, and materials. (Prerequisite: 51 and Mus 4 or †. Limited to 30 students)

*Spring Semester*

M 6:20-8:00, Scott 104, Borg

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

**MuEd 59. Choral Literature and Conducting.** 1 degree credit. \$11.

Student conducting with class as performing ensemble; criteria for selecting music for school, church, and social and civic occasions. (No prerequisite. Students may enter any quarter)

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
T	7:00-9:00, MacPhail Center 104	T 7:00-9:00, MacPhail Center 104	T 7:00-9:00, MacPhail Center 104

## MUSIC

(See page 117)

## PHYSICAL EDUCATION

(See page 219)

---

Symbols explained on page 15.

# ENGINEERING; PHYSICAL AND TECHNICAL SCIENCES

*Your attention is called to the Engineering Science and Engineering Technician Certificate programs; see page 44.*

## AERONAUTICS

*Wensell Frantzich, F.A.A.-Certificated Ground Instructor and Lecturer in Aeronautics  
Sam R. Hamilton, Ground School Director and F.A.A.-Certificated Advanced Ground Instructor and Private Pilot*

### Ground School Courses for Air Pilots—General Information

The University General Extension Division's Ground School offers several different courses throughout the school year. Each of these different courses is designed to prepare pilots or prospective pilots for the Federal Aviation Agency's written and oral examinations for certification as Private Pilots, Commercial Pilots, or Flight Instructors, or for the Instrument Rating certification. (The Basic Ground School course, described below, is a prerequisite for the Instrument Rating course.)

The Ground School meets all requirements of, and is certificated by, the F.A.A. as an Approved Basic and Advanced Ground School, and offers to its students all of the privileges extended by the F.A.A. to such approved schools.

It is to the flight student's advantage to complete the Ground School studies and F.A.A. written examinations as early as possible in his or her flight-training program, as there is a 2-year time limit, following the completion of an F.A.A. written examination, before the related flight instruction and flight test must be completed.

Most of the Basic Ground School classes meet on Fridays, starting at 7 p.m., in Room 209 of the Aeronautical Engineering Building on the Minneapolis Campus of the University. The director, and principal instructor for most of the courses, is Sam R. Hamilton, F.A.A.-certificated Advanced Ground Instructor and Private Pilot.

Specific information regarding starting dates, class-meeting schedules, tuition fees and class-load limits for courses other than the Instrument Rating course can be obtained from airport bulletin boards, or by calling the General Extension Division, telephone 373-3930, or by calling the Ground School director, Mr. Hamilton, telephone 698-2559. Persons who wish to be personally notified when an Instrument Rating course is to be offered, should contact the instructor, Mr. Frantzich, telephone 869-3412.

### Aero 9. Basic Ground School. 3 degree credits or 4 certificate credits. \$44.

Open to all pilots and prospective pilots, regardless of their educational or flight-experience background. Designed primarily to prepare for the Federal Aviation Agency's written and oral examinations for certification as a Private Pilot, but, in addition to this, through extra nonscheduled meetings by arrangement, opportunities are offered for students to meet for additional instruction, in small groups, for both the Private-Pilot and the Commercial-Pilot examinations. The course covers air navigation, radio aids, meteorology, flight theory, analysis of flight maneuvers, aircraft and engine operation, federal aviation regulations, aircraft flight instruments, and other subjects pertaining to safe, efficient and economical operation of aircraft.

Upon satisfactory completion of the full course, the University Extension Division awards F.A.A. Private-Pilot School Graduation Certificates and 4 Extension certificate credits. Three degree credits, in lieu of 4 certificate credits, are awarded by the Department of Aeronautics, Institute of Technology, to students who have received 3 hours of certified dual flight instruction from any certificated flight instructor at any airport at any time prior to the successful completion of the Ground School course. (Certificate

## Evening Classes

---

credits are awarded under the course title, "Basic Ground School." Degree credits are awarded under the course title, "Aero 9—Basic Ground School and Flying.")

Registration can be accomplished at any University Extension Division office, or (during the first 2 weeks only) in the classroom.

Persons desiring further information regarding this course can contact the General Extension Division, telephone 373-3930, or the instructor, Mr. Hamilton, telephone 698-2559.

	<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
F	7:00-9:30, Aeronautical Engineering 209, Hamilton	7:00-9:30, Aeronautical Engineering 209, Hamilton	7:00-9:30, Aeronautical Engineering 209, Hamilton

### \*Accelerated Ground School Course for the Instrument Rating.

Whenever there is sufficient demand, the Extension Division offers an accelerated course to prepare pilots for the F.A.A. written examination for the Instrument Rating. Classes are limited to 20 students because this course requires much individual attention. Prerequisites are that the pilot must have completed the Basic Ground School Course and/or must have enough aeronautical background to enable him to keep pace with the class, the latter prerequisite to be judged by the instructor.

Specific information as to starting dates, class schedules, fees, etc., can be secured by checking airport bulletin boards, or by calling the General Extension Division, telephone 373-3930. Pilots who want further information, or who would like to be personally notified when this course is to be offered, should call the instructor, Mr. Frantzich, telephone 869-3412.

## ARCHITECTURE

*Paul Andersen, Professor of Structural Engineering*

*John Myers, Professor of Architecture*

*George Winterowd, Professor of Architecture*

### Arch. Refresher Course in Architectural History. No credit. \$22.

A review of the history and theory of architecture for candidates for the State Board examinations. Six sessions (2 hours each).

#### **Special Class**

(January 18, 25, February 1, 15, 22, March 1)

W 7:30-9:30, Architecture 130, Winterowd

### Arch. Refresher Course in Architectural Design and Site Planning. No credit.

\$44.

A review of basic design principles applied to the announced design subjects for candidates for the State Board Examinations. Eight sessions (2 hours each).

#### **Special Class**

(January 12, 19, 26, February 2, 9, 16, 23, March 2)

Th 5:30-7:30, Architecture 125, Myers

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Course Offerings—Engineering, Physical and Technical Sciences

---

**Arch. Refresher Course in Structural Design for Architects.** No credit. \$44.

This course is designed for practicing architects and will consist of lectures and problem sessions relating to structural design in steel, timber, and concrete. (No prerequisite)

**Special Class**

(January 9 to March 13)

M 6:30-9:00, Architecture 55, Andersen

**Art. Home Design and Planning.** (See page 73)

## ASTRONOMY

*Karlis Kaufmanis, Associate Professor of Astronomy*

**Ast 12. Solar System.** 3 degree credits, §Ast 11. \$33.

The general principles and fundamental facts of the solar system, illustrated by slides, simple problems, and naked-eye and telescopic observations. Higher mathematics not necessary. (No prerequisite)

*Fall Semester*

T 6:20-8:00, Physics 131, Kaufmanis

**Ast 13. Stars and Galaxies.** 3 degree credits, §Ast 11 in day classes. \$33.

Supplements Ast 12 which, however, is not prerequisite. A detailed description of the constellations and individual stars and structure of the sidereal universe; extended opportunity for the use of the telescope and the observation of the heavenly bodies. Higher mathematics not necessary. (No prerequisite)

*Spring Semester*

T 6:20-8:00, Physics 131, Kaufmanis

## CHEMISTRY

*Robert L. Hansen, Lecturer in Chemistry*

*Nicholas Kowanko, Lecturer in Chemistry*

A \$10 chemistry deposit card is required for each of the courses in chemistry. Information concerning the procurement of this card will be given at the first meeting of each class. An equipment fee of \$3 and charges for laboratory material and breakage will be punched out of the deposit card. The balance will be returned to the student at the end of the semester.

### General Chemistry

**GeCh 4-5.† General Principles of Chemistry.** 5 degree credits each semester. \$55 plus \$5 laboratory fee each semester.

An introduction to chemistry from the standpoint of atomic structure; periodic properties of the elements and compounds derivable from structural considerations; a study

---

Symbols explained on page 15.

## Evening Classes

---

of the laws governing the behavior of matter, theories of solutions, acids, bases, and equilibrium. (Prerequisite: elementary algebra. Higher algebra and trigonometry strongly recommended. Students attend twice a week)

### Fall Semester

4 Lab T 6:00-9:30, Chemistry 325,††  
Lect Th 6:20-8:30, Chemistry 325

### Spring Semester

5 Lab T 6:00-9:30, Chemistry 325,††  
Lect Th 6:20-8:30, Chemistry 325

**GeCh 6. Principles of Solution Chemistry.** 4 degree credits. \$44 plus \$5 laboratory fee.

Lecture and laboratory work related to the chemistry of selected cations and anions. The detection and behavior of those ions are included in the study as well as heterogeneous and homogeneous equilibria systems. Attention is given to oxidation-reduction systematics, complex ion formation as it relates to aqueous solution chemistry, and general chemical phenomena interrelated with structure. (Prerequisite: 5 or 15 or 25. Students attend twice a week)

### Fall Semester

Lect T 6:20-8:00, Chemistry 325  
Lab Th 6:20-9:30, Chemistry 210

## Analytical Chemistry

**AnCh 46A. Introduction to Analytical Chemistry I.** (To be offered 1967-68)

**AnCh 47A. Introduction to Analytical Chemistry II.** (To be offered 1967-68)

## Organic Chemistry

**OrCh 61-62.† Elementary Organic Chemistry.** 5 degree credits each semester. \$55 plus \$5 laboratory fee each semester.

Discussion of important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. Laboratory work includes the preparation of typical substances. (Prerequisite: 12 to 15 credits in chemistry. Students attend twice a week)

### Fall Semester

61 Lab M 6:20-10:00, Chemistry  
390, Hansen  
Lect W 6:20-8:00, Chemistry 325,  
Hansen

### Spring Semester

62 Lab M 6:20-10:00, Chemistry  
390, Hansen  
Lect W 6:20-8:00, Chemistry 325,  
Hansen

**OrCh 63. Elementary Organic Chemistry.** 3 degree credits. \$33.

This is a lecture course and represents a continuation of OrCh 61-62. It is prerequisite to all other advanced courses in organic chemistry. (Prerequisite: 42 or 62)

### Fall Semester

M 6:20-9:00, Chemistry 325, Kowanko

---

Symbols explained on page 15.

†† First class meeting, only, in room 325 Chemistry.



## Course Offerings—Engineering, Physical and Technical Sciences

---

Refresher Course for State Board Examinations, Parts I and II (Chemistry).  
No credit. \$11.

A review course in chemistry. Designed especially for engineers planning to take Parts I and II of the State Board Examination. (Prerequisite: Bachelor's degree in chemistry, engineering, or physics)

**Special Class**

(January 3 to January 17)

T 6:00-8:00, Mines and Metallurgy 120

Refresher Course for State Board Examinations, Parts I and II (Mathematics).  
See page 212.

Refresher Course for State Board Examinations, Parts I and II (Mechanics and Materials). See page 215.

Refresher Course for State Board Examinations, Parts I and II (Physics). See page 217.

## CIVIL ENGINEERING

*Paul Andersen, Professor of Structural Engineering*

*Alvin G. Anderson, Professor of Hydraulic Engineering*

*Jesse Fant, Associate Professor of Civil Engineering*

*Lyle Pederson, Assistant Professor of Civil Engineering*

*John F. Ripken, Professor of Hydraulic Engineering*

CE 51. Highways and Pavements. 3 degree credits. \$33.

Elements of highway planning, economics, finance, location, design, construction and maintenance. Laboratory testing of materials. (Prerequisite: 53, 61)

**Winter Quarter**

M 6:30-9:00, Experimental Engineering 25, Pederson

CE 52. Highways and Pavements. 3 degree credits. \$33.

Continuation of CE 51. (Prerequisite: 51)

**Spring Quarter**

M 6:30-9:00, Experimental Engineering 25, Pederson

CE 53. Elements of Soil Mechanics. 3 degree credits. \$33.

Physical properties of soil; soil formation; stress distribution; shearing strength. Laboratory identification and compaction tests. (Prerequisite: MM 35)

**Fall Quarter**

M 6:30-9:00, Experimental Engineering 25,  
Pederson

---

Symbols explained on page 15.

## **Evening Classes**

---

**CE 61. Surveying Instrumentation.** (To be offered 1967-68)

**CE 62. Mapping.** (To be offered 1967-68)

**CE 63. Land Survey Systems.** (To be offered 1967-68)

**CE 64. Engineering Surveys.** (To be offered 1967-68)

**CE 81. Elementary Structural Analysis.** 4 degree credits. \$44.

Algebraic and graphical analysis of structural framework. Influence lines. Effect of moving loads. Highway bridge loadings. Railroad bridge loadings. Impact. Statically indeterminate structures. Methods of virtual work and moment area. Williot diagram. Methods of consistent deflections and least work. (Prerequisite: MM 35)

### **Fall Quarter**

T 6:20-9:20, Experimental Engineering 25,  
Andersen

**CE 82. Intermediate Structural Analysis.** 4 degree credits. \$44.

Analysis of continuous beams and trusses. Slope deflection method. Moment distribution method. Portal frames and multistory frames. Tapered and haunched members. Wind stress analysis. (Prerequisite: 81)

### **Winter Quarter**

T 6:20-9:20, Experimental Engineering 265, Andersen

**CE 83. Elementary Structural Design.** 4 degree credits. \$44.

Properties of structural steel sections. Design of structural steel tension members. Columns and beams. Riveted, bolted, and welded connections. The use of high strength steels. Roof trusses, industrial buildings, bridge trusses and plate girders. (Prerequisite: 82)

### **Spring Quarter**

T 6:20-9:20, Experimental Engineering  
265, Andersen

**CE 111. Land Surveying.** 3 degree credits. \$33.

Study of Minnesota Public Land Survey, federal and state laws governing resurveys, registered land surveys, and subdivision plats. Court decisions and legal principles involving boundary line determinations. Interpreting and writing deed descriptions. (Prerequisite: 63 or 20. Qualified students may register for graduate credit)

### **Fall Quarter**

W 6:20-9:20, Experimental Engineering 265,  
Fant

**CE 112. Aerial Surveying and Photogrammetry.** 3 degree credits. \$33.

Theory and methods of making planimetric and topographic maps of photogrammetric methods with second order stereoscopic plotters. Control nets, state co-ordinates, and

---

Symbols explained on page 15.

## Course Offerings—Engineering, Physical and Technical Sciences

---

astronomy as used in large-scale mapping projects. (Prerequisite: 62 or 20. Qualified students may register for graduate credit)

### Winter Quarter

W 6:20-9:20, Experimental Engineering 265, Fant

**CE 113. Land Planning and Subdivision Design.** 3 degree credits. \$33.

The study and analysis of land planning and development problems. Economics and design of road patterns, lot and block layout, drainage, utilities, etc. Design, computations, and preparation of record plats. (Prerequisite: 111 or 63. Qualified students may register for graduate credit)

### Spring Quarter

W 6:20-9:20, Experimental Engineering 265, Fant

**CE 141A. Intermediate Structural Design.** (To be offered 1967-68)

**CE 142A. Advanced Structural Design.** (To be offered 1967-68)

**CE 147. Foundations.** 3 degree credits. \$33.

Earth pressure theories by Rankine, Coulomb, and Poncelet. Flexible bulkheads. Soil bearing power. Footings. Piles of steel, timber, and concrete. Pile driving formulas. Driving and handling stresses. Cellular cofferdams, single-wall cofferdams. Caissons. Bridge piers. Port structures and installations. (Prerequisite: 81. Qualified students may register for graduate credit)

### Fall Quarter

M 6:30-9:00, Experimental Engineering 265,  
Andersen

**CE 160A. Applied Hydraulics.** (To be offered 1967-68)

**CE 161. Hydrology.** (To be offered 1967-68)

**Hydr 101. Fluid Mechanics.** (To be offered 1967-68)

**Hydr 161. Open Channel Flow.** 3 degree credits. \$33.

Theory of uniform and varied flow, with applications to hydraulic structures, channel transitions, hydraulic jump, discharge measuring devices, etc. Computations of water surface profiles, forces on structures, hydraulic jump properties. (Prerequisite: 101. Qualified students may register for graduate credit)

### Fall Quarter

W 6:20-9:00, Experimental Engineering 25,  
Anderson

**Hydr 162. Natural and Artificial Waterways.** 3 degree credits. \$33.

Mechanics of sediment transport. Control of natural and artificial waterways. Design of artificial channels in alluvium. Relationship of sediment transport to channel geometry,

---

Symbols explained on page 15.

## Evening Classes

---

deposition in reservoirs, local scour, aggradation, and degradation. (Prerequisite: 161. Qualified students may register for graduate credit)

### Winter Quarter

W 6:20-9:00, Experimental Engineering 25, Anderson

**Hydr 168. Hydraulic Pumps and Turbines.** 3 degree credits. \$33.

Introductory theory of hydraulic pumps, turbines, motors, and transmission including energy concepts, drag and lift of hydrofoils, and limitations of cavitation. (Prerequisite: 101. Qualified students may register for graduate credit)

### Spring Quarter

W 6:20-9:00, Experimental Engineering  
25, Ripken

**CE. Refresher Course for Civil Engineers.** No credit. \$44.

This course is for practicing engineers and will consist of lectures and problem sessions relating to highways, soils, sanitary, structural and hydraulic engineering. (Prerequisite: BCE or equivalent degree, or completion of Parts I and II of the State Board Examination)

### Special Class

(January 5 to March 16)

Th 6:20-9:20, Experimental Engineering 265

**Arch. Refresher Course in Structural Design for Architects.** (See page 191)

## ELECTRICAL ENGINEERING

*Anton Beck, Lecturer in Electrical Engineering*

*Paul A. Cartwright, Associate Professor of Electrical Engineering*

*Robert Cavins, Lecturer in Electrical Engineering*

*Guss Krake, Lecturer in Electrical Engineering*

*Sidney C. Larson, Associate Professor of Electrical Engineering*

*Dave Lo, Lecturer in Electrical Engineering*

*Richard Strom, Lecturer in Electrical Engineering*

The curriculum leading to the Bachelor of Electrical Engineering degree (B.E.E.) is described in the *Bulletin of the Institute of Technology*. Certain of the curricular requirements can be obtained in the evening school.

Students just beginning the electrical engineering sequences should start with EE 30 and 30A. Students already in the program should follow the chart below:

Sequence last taken	Should take, 1966-67
EE 30-31.....	EE 64-65, 84-85
EE 74-75-76.....	EE 64-65, 84-85
EE 111-112-113.....	Should apply for admission to IT day school program. (Any student who has not had beginning electronics could take EE 64-65 as indicated above)

---

Symbols explained on page 15.

### Registration Procedures for Evening Electrical Engineering Classes

All students who wish to enroll for electrical engineering classes carrying degree credit are required to (1) complete the Registration Approval Form and (2) submit college transcripts for previous work taken in both day and/or Extension either before or at time of registration. The only exceptions to this rule are those students who submitted this information during the spring of 1965.

The purpose of the form and accompanying transcript is to insure that final registrants are properly advised, that they meet the various course prerequisites, and that they are making satisfactory academic progress. The petitions will be reviewed and acted upon prior to the first meeting of each class. A copy of the petition will be returned to the student by mail or at the first class session. If for some reason a registration is not approved, transfer to another class or full refund of tuition and fees will be made without penalty.

The Registration Approval Forms are available at all General Extension Division offices. Transcripts for University of Minnesota college work taken either in day school or Extension may be secured by writing or calling the Office of Admissions and Records, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-2149. (Students should be sure to specify whether work was taken in day school, Extension, or both.)

*Students are urged to submit petition forms and transcripts well in advance of registration periods, if at all possible.* They may be presented or mailed to Paul A. Cartwright, Assistant Dean, Institute of Technology, 135 Main Engineering Building, University of Minnesota, Minneapolis, Minnesota 55455.

**EE 30-31. Circuit Analysis.** 3 degree credits each semester, \$EE 61-62. \$33 each semester.

Steady-state and transient response of linear passive circuits under d-c excitation; steady-state response to sinusoidal excitation; instantaneous and average power. Response of linear passive circuits to step, impulse, and exponential forcing functions. Complex frequency; natural and forced response. Magnetically coupled circuits. (Prerequisite: Phys 23 or ¶Phys 23; Math 26A or Math 31 or ¶Math 31 for 30; 30 for 31; ¶30A-31A required)

*Fall Semester*

30 M 6:00-7:40, Architecture 25

*Spring Semester*

31 M 6:00-7:40, Architecture 25

**EE 30A-31A. Electrical Engineering Laboratory.** 1 degree credit each semester. \$11 plus \$10 laboratory fee each semester.

Laboratory to accompany 30-31. (Prerequisite: ¶30-31)

*Fall Semester*

30A Two class hours per week. Night and hours arranged at first meeting of EE 30.

*Spring Semester*

31A Two class hours per week. Night and hours arranged at first meeting of EE 31.

Symbols explained on page 15.

## Evening Classes

---

**EE 64-65. Electronics I-II.** 4 degree credits each semester, \$104-105. \$44 each semester.

64: Introduction to physical principles of electronic devices; electrical properties of metals, insulators, and semiconductors. Semiconductor, vacuum, and gaseous devices; modeling concepts. 65: Piecewise linear and incremental models, biasing, operating characteristics of active devices in single-stage circuits; applications of diodes for rectification, clipping, and clamping. (Prerequisite: 30-31 or ¶30-31, Phys 50)

*Fall Semester*

64 Lect M 6:00-7:40, Architecture 50  
Rec M 7:50-9:30, Architecture 50

*Spring Semester*

65 Lect M 6:00-7:40, Architecture 50  
Rec M 7:50-9:30, Architecture 50

**EE 84-85. Junior Electrical Engineering Laboratory.** 2 degree credits each semester. \$22 plus \$10 laboratory fee each semester.

Experimental study of electronic circuits. (Prerequisite: ¶64-65)

*Fall Semester*

84 Three class hours per week. Night and hours arranged at first meeting of EE 64.

*Spring Semester*

85 Three class hours per week. Night and hours arranged at first meeting of EE 65.

**EE 74-75-76. Electromagnetic Fields.** (To be offered 1968-69)

**EE 107-108. Linear System Analysis.** (To be offered 1967-68)

*The following courses carry certificate credit and are offered as part of the Senior Electrical Engineering Technician program; see page 50.*

**EE. Elements of Electric Circuits.** 5 certificate credits. \$55 plus \$5 laboratory fee.

Fundamentals of direct and alternating current circuits. Network theorems. Network analysis—singlephase and polyphase. Transient analysis. Frequency response of networks; power and energy concepts. Nonsinusoidal wave forms. Magnetic circuits. Lecture and laboratory. (Prerequisite: Math 21 or equivalent or ‡)

*Fall Semester*

T 6:00-9:00, Architecture 15

*Elements of Electronics I and II form a year (two-semester) sequence in transistor electronics. The exact division of material between the two semesters will depend on the text being used.*

**EE. Elements of Electronics I.** 5 certificate credits. \$55 plus \$5 laboratory fee.

Basic semiconductor physics, p-n junction action. Introduction to diodes and their applications. Practical transistor characteristics. Biasing and stabilization, transistor parameters, small signal amplifiers. Lecture and laboratory. (Prerequisite: Elements of Electrical Circuits or equivalent)

*Spring Semester*

T 6:00-9:00, Architecture 15

---

Symbols explained on page 15.

## Course Offerings—Engineering, Physical and Technical Sciences

---

**EE. Elements of Electronics II.** 5 certificate credits. \$55 plus \$5 laboratory fee.

A continuation of Electronics I. Transistor power amplifiers, direct-current amplifiers. Multistage amplifiers, feedback. Pulse circuits. Design considerations. Lecture and laboratory. (Prerequisite: Elements of Electronics I)

### *Fall Semester*

T 6:00-9:00, Architecture 20

**EE. Elements of Electronics III.** (To be offered 1967-68)

**EE. Refresher Course for Electrical Engineers.** No credit. \$44.

Review of electrical engineering fundamentals and applications. (Prerequisite: Bachelor's degree in engineering or physics)

### *Special Class*

(January 4 to March 15)

W 6:00-9:00, Architecture 30

## ENGINEERING ENGLISH

*John W. Lippert, Lecturer in English*

**\*Engl 85(IT). Advanced Technical Communication.** 3 degree credits. \$33.

Technical writing, including reports and manuals, combined with the public speaking required of engineers, technical men, and those in the business and sales end of the technical industries. Stress in writing is on concise, definite, connected styles; use of numbers, abbreviations, and illustrations; organization of material; and proper levels of writing for different levels of readers. Stress in speaking is on preparation and organization; getting and holding interest; and on use of visual methods and materials. (Prerequisite: completion of freshman English requirement. Limited to 25 students. Repeated spring semester)

### *Fall Semester*

M 8:15-9:55, Main Engineering 4,  
Lippert

### *Spring Semester*

M 8:15-9:55, Main Engineering 4,  
Lippert

**Engl 86(IT). Advanced Technical Communication.** (Not offered 1966-67)

*Note*—Basic Technical Writing II (below) covers the same written work as Engl 86(IT), without the speech work.

**Engl. Basic Technical Writing I-II.** 3 certificate credits each semester. \$33 each semester.

Review of basic English and introduction to technical writing. Designed for people in the technical industries. Includes sentence design, spelling, and punctuation. Covers basic techniques of definition, description, process, procedure, and analysis writing. Organi-

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

zation and correlation into text of tables, diagrams, illustrations. Emphasis on accuracy, brevity, simplicity, and layout. Prepares students to write simple reports, specifications, procedures, material for manuals, supervisory materials, and basic letters of a technical nature. (No prerequisite for I; I for II)

### Fall Semester

I T 8:15-9:55, Main Engineering 4,  
Lippert

### Spring Semester

II T 8:15-9:55, Main Engineering 4,  
Lippert

## ENGINEERING GRAPHICS

*Paul W. Bullen, Assistant Professor of Mechanical Engineering*

*John N. Clausen, Assistant Professor of Mechanical Engineering*

*Lewis G. Palmer, Assistant Professor of Mechanical Engineering*

*Richard D. Springer, Associate Professor of Mechanical Engineering*

*Joseph Wetzel, Instructor in Civil Engineering*

*EG 25 replaces 14, 15, and 16 as the basic drawing course required in the Institute of Technology.*

*EG 4 and 5, which are certificate credit courses, are designed to provide an engineering drawing course sequence more directly applicable to industrial needs than EG 25. Students who satisfactorily complete them may upon approval of the Division of Engineering Graphics petition for a comprehensive examination if credit for EG 25 is desired.*

### °EG 1. The Slide Rule. 1½ certificate credits. \$17.

Theory and computation practice necessary for those who wish to use the slide rule in ordinary computations. Drills on fundamental processes. (No prerequisite. Limited to 25 students. Repeated spring semester)

#### Fall Semester

T 6:00-7:00, Architecture 40, Wetzel  
T 7:00-8:00, Architecture 40, Wetzel

#### Spring Semester

T 6:00-7:00, Architecture 40, Wetzel  
T 7:00-8:00, Architecture 40, Wetzel

### EG 4. Engineering Drawing I. 3 certificate credits. \$33.

Freehand and instrument-drawn multiview and pictorial drawings. Units in sectioning; auxiliary views, isometric and oblique pictorials; elementary dimensioning, point, line and plane space problems. (No prerequisite. Repeated spring semester)

#### Fall Semester

W 6:00-8:00, Architecture 10

#### Spring Semester

T 6:00-8:00, Architecture 10

### EG 5. Engineering Drawing II. 3 certificate credits. \$33.

Freehand and instrument-drawn multiview and pictorial drawings. Units in detail, assembly, welding, piping, and electrical drawing; fastening devices; perspective drawing;

---

Symbols explained on page 15.

° Enrollment space limited; instructions on page 9.



## Course Offerings—Engineering, Physical and Technical Sciences

---

intersections and developments; true position dimensioning and tolerancing. (Prerequisite: 4. Repeated spring semester)

### Fall Semester

T 6:00-8:00, Architecture 10

### Spring Semester

W 6:00-8:00, Architecture 10

### EG 6. Graphic Computation and Data Analysis. 3 certificate credits. \$33.

Basic graphic and graphic-mathematic methods of data handling; determination of empirical equations. Optimum forms of data presentation. Methods of handling complex and repetitious calculations through nomographs and graphic mathematics. (Prerequisite: Math 11 or 1)

### Spring Semester

Th 6:00-8:00, Architecture 10, Staff

### EG 7. Technical Illustration. 3 certificate credits. \$33.

Freehand and instrument pictorial drawings in isometric, dimetric, trimetric, oblique, and perspective. Rendering techniques in line, smudge, stipple, scratchboard, shading sheets, craftint, and airbrush. Production illustration—exploded assemblies. (Prerequisite: 4 or 25)

### Fall Semester

W 6:00-8:00, Main Engineering 306

### EG 25. Engineering Graphics. 4 degree credits. \$44.

Engineering representation and analysis of systems of projection; the co-ordinate systems, graphical solution of space problems, intersections and developments. Precision in graphics and techniques of sketching; pictorial projection systems, size description, standard and simplified practices applied to graphic communication. (Prerequisite: Math 13A or Math 21 or Math 21. Repeated spring semester)

### Fall Semester

T 6:00-8:30, Architecture 5

### Spring Semester

M 6:00-8:30, Architecture 10

## GEOLOGY AND GEOPHYSICS

*Richard L. Bartels, Instructor in Geology and Geophysics*

*Charles L. Matsch, Instructor in Geology and Geophysics*

*Robert E. Sloan, Associate Professor of Geology and Geophysics*

### Geo 1. Physical Geology. 4 degree credits, \$old Geol 1, A. \$44.

A first course in geology for science majors and an introduction to scientific methods and the nature of the earth for others. Survey of the main features of the physical world and of the processes that have evoked them. (No prerequisite, but high school physics and chemistry advisable. Students wishing lecture only register for 1E. Repeated spring semester)

### Fall Semester

Lect T 6:20-8:00, Pillsbury 110,

Matsch

Lab T 8:10-9:30, Ford 180

### Spring Semester

Lect M 6:20-8:00, Pillsbury 110,

Matsch

Lab M 8:10-9:30, Ford 180

---

Symbols explained on page 15.

## Evening Classes

---

### Geo 2. Historical Geology. 4 degree credits, §old Geol 2, B. \$44.

Evolution of the earth from its origin to the present, with special attention to the succession of physical and biological events of the past 600 million years. (Prerequisite: 1 or old Geol 1 and A. Students wishing lecture only register for 2E. Repeated spring semester)

#### Fall Semester

Lect M 6:20-8:00, Pillsbury 110, Sloan  
Lab M 8:10-9:30, Ford 85

#### Spring Semester

Lect T 6:20-8:00, Pillsbury 110, Sloan  
Lab T 8:10-9:30, Ford 85

### Geo 1E. Physical Geology. 3 degree credits. \$33.

Lecture concurrent with Geo 1, see description above; no laboratory. Not acceptable toward degrees for physical science and engineering majors. (No prerequisite. Repeated spring semester)

#### Fall Semester

T 6:20-8:00, Pillsbury 110, Matsch

#### Spring Semester

M 6:20-8:00, Pillsbury 110, Matsch

### Geo 2E. Historical Geology. 3 degree credits. \$33.

Lecture concurrent with Geo 2, see description above; no laboratory. Not acceptable toward degrees for physical science and engineering majors. (Prerequisite: 1E or 1. Repeated spring semester)

#### Fall Semester

M 6:20-8:00, Pillsbury 110, Sloan

#### Spring Semester

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

### Geo 62. Mineralogy and Lithology. 5 degree credits, §old Geol 23, 24. \$55.

Introduction to crystallography, crystal chemistry, and mineralogy. Descriptive and determinative mineralogy. Classification of rocks. Textural, structural, and mineralogical variations of rocks and some ores. (Prerequisite: 1, or old Geol 1 and A, and 4 credits of chemistry)

#### Spring Semester

Lect TTh 6:20-7:20, Pillsbury 100,  
Bartels  
Lab TTh 7:30-9:00, Pillsbury 100

## HYDROMECHANICS

(See Civil Engineering, page 195)

## INDUSTRIAL ENGINEERING

*Sant R. Arora, Assistant Professor of Mechanical Engineering*

*Ronald J. Mogavero, Assistant Professor of Mechanical Engineering*

*R. Stanford Nyquist, Assistant Professor of Mechanical Engineering*

*James L. Reynolds, Instructor in Mechanical Engineering*

*Your attention is called to the Senior Industrial Engineering Technician program; see page 51.*

---

Symbols explained on page 15.

## Course Offerings—Engineering, Physical and Technical Sciences

---

### **IE. Industrial Engineering and Management. 5 certificate credits. \$55.**

A study of the problems and techniques of developing a highly efficient management team for a modern manufacturing concern. Includes discussions on business organization and financing, research and product development, standardization, plant layout and materials handling, production and inventory control, quality control, cost control, labor relations. (No prerequisite)

#### *Fall Semester*

M 6:20-9:20, Mechanical Engineering 214

### **IE. Motion and Time Study. 5 certificate credits. \$55 plus \$1 laboratory fee.**

Principles and techniques for effective work methods and analysis. Process charts, flow diagrams, paper work systems, work distribution tables, micromotion study. The role of the worker in the work environment. Fundamentals of work measurement: time study, work sampling, predetermined time systems, and standard data. Discussion of performance rating, number of cycles to study, allowances, and other factors necessary to develop an effective standard. (No prerequisite)

#### *Spring Semester*

M 6:20-9:20, Mechanical Engineering 208

### **IE. Corporate Standard Data (C.S.D.) I. 5 certificate credits. \$55.**

Corporate Standard Data is a procedure for analyzing manual work in terms of elemental motions for which standard times have been established. C.S.D. is a valuable tool for simplifying work methods and for setting accurate and consistent time standards for incentive, planning, estimating, and cost control. Lectures, discussions, and demonstrations will be integrated with practice in the application of C.S.D. to factory and office operations. (No prerequisite)

#### *Fall Semester*

T 6:20-9:20, Mechanical Engineering 208

### **IE. Corporate Standard Data (C.S.D.) II. 5 certificate credits. \$55.**

An entirely new and original approach in the field of standard data and work measurement. Reduce engineering analysis time 50 per cent to 75 per cent—enable economic setting of standards on hard-to-measure direct work, indirect work, long cycle work, single item production, short runs of great variety, estimating, methods work, etc. Reduce labor costs systematically on an integrated corporate-wide or small company basis in manufacturing, offices, maintenance, tool making, warehousing, handling, etc. Discussions as to how this technique may be computerized. (Prerequisite: Corporate Standard Data I or #)

#### *Spring Semester*

T 6:20-9:20, Mechanical Engineering 214

### **IE. Inventory and Production Control. 5 certificate credits. \$55.**

Development of systems for increasing plant efficiency through effective co-ordination of inventories, manpower, and equipment with sales. Lectures and discussion on sales forecasting, master scheduling, inventory control, work routing, scheduling of operations, dispatching, analysis of equipment requirements. (Prerequisite: Math 11 or #)

#### *Fall Semester*

W 6:20-9:20, Mechanical Engineering 208

---

Symbols explained on page 15.

## Evening Classes

---

### IE. Introduction to Operations Research. 5 certificate credits. \$55.

Formulation, interpretation, and solution of the assignment, transportation, and general linear programming problems. Discussion of problems involving game theory, waiting lines, sequencing, replacement, dynamic and convex programming, and Monte Carlo methods. Applications of these techniques to general industrial problems, and in particular to problems of product mix, distribution, production scheduling, staffing, and simulation. (Prerequisite: Math 11 or §. Inventory and Production Control is recommended but not required)

#### *Spring Semester*

W 6:20-9:20, Mechanical Engineering  
214

### IE. Statistical Quality Control. 5 certificate credits. \$55.

Determination of quality requirements and their relation to manufacturing costs. Establishing of quality control standards; inspection procedures and organization. Use of statistical sampling techniques and control charts for more effective inspection and reduction of costs. For those engaged in quality control, and others such as production supervisors, plant managers, and design engineers who are concerned with quality problems. (Prerequisite: Math 11 or §)

#### *Fall Semester*

M 6:20-9:20, Mechanical Engineering 110

### IE. Advanced Statistical Quality Control. 5 certificate credits. \$55.

Variables acceptance sampling, industrial tests of significance, fundamentals of analysis of variance and design of experiments, linear regression, introduction to sequential analysis of data, some nonparametric statistical methods. (Prerequisite: Statistical Quality Control, or Math 90 or QA 51 or §)

#### *Spring Semester*

M 6:20-9:20, Mechanical Engineering 110

### IE. Manufacturing Cost Analysis. (To be offered 1967-68)

### IE. Design and Analysis of Experiments I. (To be offered 1967-68)

### IE. Design and Analysis of Experiments II. (To be offered 1967-68)

## MATHEMATICS

*Steve S. Barich, Associate Professor of Mechanical Engineering*

*William G. Chaplin, Lecturer in Mathematics*

*William A. Dolid, Lecturer in Mathematics*

*Immanuel C. Fischer, Professor of Engineering*

*Lawrence R. Harper, Assistant Professor of Mathematics*

*Howard B. Jenkins, Associate Professor of Mathematics*

*Jay A. Leavitt, Assistant Professor of Mathematics*

*Edward S. Loye, Associate Professor of Mathematics*

*Norman G. Meyers, Associate Professor of Mathematics*

---

Symbols explained on page 15.

## Course Offerings—Engineering, Physical and Technical Sciences

---

*William D. Munro, Professor of Mathematics*  
*Frank J. Polansky, Assistant Professor of Mathematics*  
*Gaylord P. Schwartz, Lecturer in Mathematics*  
*Burton O. Scott, Lecturer in Mathematics*  
*James G. Swenson, Lecturer in Mathematics*  
*James E. Thompson, Assistant Professor of Mathematics*  
*Hubert Walczak, Lecturer in Mathematics*  
*Carroll O. Wilde, Assistant Professor of Mathematics*  
*Grenith Zimmerman, Lecturer in Mathematics*

### Changes in Mathematics Courses and Prerequisites

The Institute of Technology is introducing a new 6-quarter mathematics sequence which begins in the fall of 1966 with Math 21A and continues in successive quarters with Math 22A, 23A, 31A, 32A, and 33A. The entrance requirement for the Institute of Technology and the prerequisite for Math 21A is 4 years of high school mathematics including solid geometry and trigonometry.

Any student who meets this requirement is eligible to register for Math 21A. However, if it has been some time (2 years or more) since he took his last mathematics course, the student is strongly advised to register for Math 12 or even Math 11.

Math 11, Intermediate Algebra, is a combination of the former courses ITM 9 and ITM 11. Students who had 2 years of high school mathematics or had their course in higher algebra more than 2 years ago should take Math 11.

Students who have completed ITM 9, ITM 11, or Math 11 or its equivalent (higher algebra) in high school or college (not a trade school) within the last 2 years may register for Math 12.

Math 11 and Math 12 take the place of the junior and senior mathematics courses in high school.

### Mathematics for Nonmajors and Prebusiness Students

Math T, 10, and 40 are offered for the benefit of prebusiness students and Arts College nonmathematics majors only. They are not designed for the student who wishes to continue with Institute of Technology advanced mathematics courses or for Arts College mathematics majors. Math T and 10 carry no credit in the Institute of Technology. Arts College students who are ready for a full course in calculus should take the IT sequence, Math 21A, 22A, 23A, 31A, 32A, and 33A. If in doubt about your registration for mathematics, please consult an adviser.

**Math T. Trigonometry.** (Open to prebusiness students and Arts College non-mathematics majors only). 3 degree credits. \$33.

*Students who plan to take several courses in mathematics in evening classes should begin with Math 12, not Math T, which carries no credit in Institute of Technology. A pre-*

---

Symbols explained on page 15.

## Evening Classes

---

business or arts course in analytic trigonometry emphasizing identities, equations, and properties of the trigonometric functions; right and oblique triangles without logarithmic computation. (Prerequisite: plane geometry, and higher algebra or Math 11, or equivalent. May be taken concurrently with 10)

### *Fall Semester*

T 8:15-9:55, Ford 115

### **Math 5. Basic Mathematics. No credit. \$55.**

A practical course for anyone needing an elementary background in basic mathematics such as shop men in industry or machine work. It is also valuable as a refresher in elementary mathematics. It includes a study of the arithmetic of whole numbers, fractions and decimals; an introduction to algebra and linear equations; other topics selected from elementary algebra, geometry and trigonometry. (Prerequisite: arithmetic. Repeated spring semester)

#### *Fall Semester*

TTh 6:30-7:45, Main Engineering 226

#### *Spring Semester*

TTh 6:20-7:45, Main Engineering 226

### **Math 6. Elementary Algebra. Entrance credit. \$66.**

Elements of algebra to quadratic equations, equivalent to 1 year of ninth grade algebra. (Prerequisite: arithmetic. Entrance requirement for College of Agriculture, Forestry, and Home Economics; College of Veterinary Medicine; College of Liberal Arts; and Institute of Technology. Repeated spring semester)

#### *Fall Semester*

MW 6:20-8:00, Main Engineering 217

TTh 6:20-8:00, Main Engineering 217

#### *Spring Semester*

MW 6:20-8:00, Main Engineering 217

TTh 6:20-8:00, Main Engineering 217

### **Math 7. Plane Geometry. Entrance credit. \$66.**

Elements of plane geometry, equivalent to 1 year of high school plane geometry. (Prerequisite: arithmetic. Entrance requirement for College of Agriculture, Forestry, and Home Economics; College of Veterinary Medicine; College of Liberal Arts; and Institute of Technology. Repeated spring semester)

#### *Fall Semester*

MW 6:20-8:00, Main Engineering 303

#### *Spring Semester*

MW 6:20-8:00, Main Engineering 303

### **Math 8. Solid Geometry. Entrance credit. \$33.**

Lines, planes, dihedral and polyhedral angles, polyhedrons, surfaces, prisms, cylinders, cones, prisms, and spheres. Three-dimensional visualization and sketching. Numerical exercises in areas, volumes, weights. (Prerequisite: plane geometry. Entrance requirement for Institute of Technology. Repeated spring semester)

#### *Fall Semester*

Th 6:20-8:00, Main Engineering 303

#### *Spring Semester*

Th 6:20-8:00, Main Engineering 303

### **Math 10. College Algebra and Analytic Geometry. (Open to prebusiness students and Arts College nonmathematics majors only). 5 degree credits. \$55.**

A course for students requiring only some analytic geometry and college algebra without trigonometry, or whose background does not include logarithms. Students who plan

---

Symbols explained on page 15.

## Course Offerings—Engineering, Physical and Technical Sciences

---

to take several courses in mathematics in evening classes should register for Math 12, not Math 10, which carries no credit in Institute of Technology. Functions and graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. (Prerequisite: higher algebra or Math 11 or equivalent. Repeated spring semester)

### Fall Semester

TTh 6:20-7:45, Ford 150

### Spring Semester

TTh 6:20-7:45, Ford 185

### Math 11. Intermediate Algebra. Entrance credit. \$55.

Fundamental operations, factoring, fractions, functions and graphs, linear equations, exponents and radicals, quadratic equations, ratio and variation, progressions, binomial theorem, logarithms. (Prerequisite: 6 or equivalent. Entrance requirement for Institute of Technology. Repeated spring semester)

### Fall Semester

MW 6:00-7:25, MacPhail Center 324  
(Limited to 30 students\*)

MW 6:20-7:45, Main Engineering 203

TTh 6:00-7:25, StP Ext Center

TTh 6:20-7:45, Main Engineering 203

### Spring Semester

MW 6:00-7:25, StP Ext Center

MW 6:20-7:45, Main Engineering 203

TTh 6:20-7:45, Main Engineering 203

### Math 12. College Algebra and Trigonometry. Entrance credit. \$55.

Trigonometric functions, right triangles, oblique triangles, radian measure. Trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations. Inequalities, theory of equations, determinants, mathematical induction, exponential and logarithmic functions, complex numbers. (Prerequisite: 11 or equivalent. Entrance requirement for Institute of Technology. Repeated spring semester)

### Fall Semester

MW 6:00-7:25, StP Ext Center

MW 6:20-7:45, Main Engineering 106

TTh 6:20-7:45, Main Engineering 106

### Spring Semester

MW 6:00-7:25, MacPhail Center 324

(Limited to 30 students\*)

MW 6:20-7:45, Main Engineering 106

TTh 6:00-7:25, StP Ext Center

TTh 6:20-7:45, Main Engineering 106

### Fall Quarter

MW 6:10-8:15, Robbinsdale HS 211

### Math 21A. Analysis I: Algebra, Trigonometry, and Analytic Geometry. 5 degree credits. \$55.

Review of algebra, functions, determinants, inequalities, complex numbers, logarithmic and exponential functions, polynomial equations. Trigonometric functions, identities, trigonometric equations. Elementary analytic geometry, the conic sections, translation of axes, polar coordinates, introduction to differentiation. (Prerequisite: 4 years of high school mathematics including trigonometry, or 12. See note on page 205. Repeated winter quarter and spring semester)

### Fall Semester

MW 6:20-7:45, Main Engineering 104

TTh 6:00-7:25, StP Ext Center

TTh 6:20-7:45, Main Engineering 104

### Winter Quarter

MW 6:10-8:15, Robbinsdale HS 211

### Spring Semester

MW 6:00-7:25, StP Ext Center

MW 6:20-7:45, Main Engineering 104

TTh 6:20-7:45, Main Engineering 104

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## Evening Classes

---

### Math 22. Calculus II: Calculus and Analytic Geometry. 5 degree credits. \$55.

Review of analytical trigonometry. The definite integral, fundamental theorem, indefinite integral, area, work. The conic sections, translation and rotation of axes. Calculus of trigonometric, inverse trigonometric, exponential, logarithmic and hyperbolic functions. (Prerequisite: 21 or 13A. See note on page 205. Repeated spring semester and spring quarter)

#### Fall Semester

MW 6:00-7:25, StP Ext Center  
MW 6:20-7:45, Main Engineering 229  
TTh 6:20-7:45, Main Engineering 229

### Math 22A. Analysis II: Analytic Geometry and Calculus. 5 degree credits. \$55.

Functions and derivatives, limits, continuity, slopes, tangents, differentiation of algebraic functions, applications, differentials, the indefinite integral, physical and geometrical applications. (Prerequisite: 21A or 21)

#### Spring Semester

MW 6:20-7:45, Main Engineering 229  
TTh 6:00-7:25, StP Ext Center  
TTh 6:20-7:45, Main Engineering 229

#### Spring Quarter

MW 6:10-8:15, Robbinsdale HS 211

### Math 23. Calculus III: Calculus and Analytic Geometry. 5 degree credits. \$55.

Review of theory of equations and complex numbers. Parametric equations, arc length, curvature. Polar co-ordinates. Formulas and methods of integration, substitutions, integration by parts, rational functions. Applications of integration, volumes, areas, first moments, and mass centers. (Prerequisite: 22 or 24A. Repeated spring semester)

#### Fall Semester

T 6:00-9:00, Main Engineering 215  
W 6:00-9:00, StP Ext Center  
Th 6:00-9:00, Main Engineering 215

#### Spring Semester

T 6:00-9:00, Main Engineering 215  
W 6:00-9:00, StP Ext Center

#### Fall Quarter

MW 6:10-8:15, Robbinsdale HS 209

### Math 30. Fortran Survey and Orientation. 1 degree credit. \$11.

Survey of basic Fortran language. Orientation in use of computer facilities. (No prerequisite. Repeated winter and spring quarters)

#### Fall Quarter

T 6:00-6:50, Main Engineering 227

#### Winter Quarter

T 6:00-6:50, Main Engineering 303

#### Spring Quarter

T 6:00-6:50, Main Engineering 303

### Math 31. Calculus IV: Calculus and Analytic Geometry. 5 degree credits. \$55.

Study of solid analytic geometry and vectors in space involving dot and cross products, planes, quadric surfaces, derivatives of vector functions. Definition of double and triple integrals. Iterated integrals in rectangular, polar, cylindrical, and spherical co-ordinates. Applications to moments and centroids. Partial differentiation including the chain

---

Symbols explained on page 15.



## Course Offerings—Engineering, Physical and Technical Sciences

---

rule, implicit functions, directional derivative, maxima and minima. (Prerequisite: 23. Repeated winter quarter and spring semester)

### Fall Semester

T 6:00-9:00, Main Engineering 340

### Spring Semester

T 6:00-9:00, Main Engineering 340  
W 6:00-9:00, StP Ext Center  
Th 6:00-9:00, Main Engineering 215

### Winter Quarter

MW 6:10-8:15, Robbinsdale HS 209

**Math 32. Calculus V: Calculus, Linear Algebra, Differential Equations.** 5 degree credits. \$55.

Standard topics of infinite series including tests for convergence and divergence. Power series, and Taylor expansions. Introduction to linear algebra. Matrices, determinants, and theorems on systems of algebraic equations. Differential equations involving the standard first order types plus higher order linear equations with constant coefficients. (Prerequisite: 31. Repeated spring semester and spring quarter)

### Fall Semester

M 6:00-9:00, Main Engineering 215

### Spring Semester

T 6:00-9:00, Main Engineering 320

### Spring Quarter

MW 6:10-8:15, Robbinsdale HS 209

**Math 33. Calculus VI: Calculus, Linear Algebra, Differential Equations.** 5 degree credits. \$55.

Functions defined by integrals, differentiation under the integral sign, improper integrals, the Gamma function. Vector field theory, divergence and curl, surface integrals, Green's and Stokes' theorems. Linear systems of differential equations with constant coefficients, matrix methods. Series solutions of differential equations. (Prerequisite: 32)

### Spring Semester

M 6:00-9:00, Main Engineering 215

**Math 40. Introduction to Calculus.** (Open to prebusiness students and Arts College nonmathematics majors only) 5 degree credits. \$55.

A 1-semester course designed for those who wish a brief introduction to calculus which includes some integration. Students planning to take more than one course in calculus in evening classes should not take Math 40 and must consult an adviser before registering. Functions and limits, differentiation of algebraic, trigonometric, exponential, and logarithmic functions with applications to velocity and acceleration, maxima and minima, approximations by differentials. Integration with standard forms with application to area, volume, simple differential equations. (Prerequisite: 10 and either T or ¶T or equivalent, or 12)

### Spring Semester

TTh 6:20-7:45, Ford 175

**Math 60A. Operational Methods for Linear Systems.** (Primarily for EE students) 3 degree credits. \$33.

Review of Fourier Series and their applications to linear ordinary differential equations. The Fourier transform, mathematical properties, amplitude and phase spectra, energy. The Laplace transform, mathematical properties and elementary inversion techniques,

---

Symbols explained on page 15.

## Evening Classes

---

applications to systems of ordinary differential equations, transfer function of a filter, time and frequency domain relations. (Prerequisite: 26A. Repeated spring semester)

*Fall Semester*

W 6:00-7:40, Main Engineering 227

*Spring Semester*

W 6:00-7:40, Main Engineering 227

**Math 65. Introduction to Programming Modern Digital Computers.** 4 degree credits, §Math 164-165-166. \$44.

Number systems. Computer organization. Elementary coding techniques. Scaling. Introduction to problem-oriented language. Program organization. Informal laboratory. (Prerequisite: 26A or ¶26A. Some informal laboratory time is required and will be determined as the class progresses. Repeated spring semester)

*Fall Semester*

W 6:00-7:40, Experimental Engineering  
193

*Spring Semester*

W 6:00-7:40, Experimental Engineering  
193

**Math 90. Elementary Engineering Statistics.** 3 degree credits. \$33.

Probability, permutations, and combinations. Frequency distributions. Introduction to sampling significance tests, regression charts. (Prerequisite: 23 or 24. Repeated spring semester)

*Fall Semester*

W 6:20-8:00, Mines and Metallurgy 116

*Spring Semester*

W 6:20-8:00, Mines and Metallurgy 116

**Math 147. Vector Analysis.** 3 degree credits, §old Math 152. \$33.

Scalar and vector products, derivatives, geometry of space curves, del operator, line and surface integrals, divergence and Stokes' theorem, transformation of co-ordinates, applications. (Prerequisite: 25A. Qualified students may register for graduate credit)

*Fall Quarter*

Th 6:00-8:40, Main Engineering 227

**Math 148. Differential Equations.** 3 degree credits, §Math 150. \$33.

Linear differential and difference equations with constant coefficients, isoclines, phase plane, reduction in order, Picard's method, uniform convergence, series solutions, Bessel functions, Legendre polynomials, introduction to boundary value problems. (Prerequisite: 26A or 80. Qualified students may register for graduate credit)

*Winter Quarter*

Th 6:00-8:40, Main Engineering 227

**Math 149. Determinants and Matrices.** 3 degree credits, §Math 142. \$33.

Determinants, matrices, linear equations, vector spaces, quadratic and bilinear forms, characteristic roots, applications to systems of ordinary differential equations. (Prerequisite: 25A. Qualified students may register for graduate credit)

*Spring Quarter*

Th 6:00-8:40, Main Engineering 227

---

Symbols explained on page 15.

## Course Offerings—Engineering, Physical and Technical Sciences

---

**Math 164-165-166.† Theory and Programming of Modern Digital Computers.**  
3 degree credits each quarter, §Math 65. \$33 each quarter.

Numbers systems. Analysis of arithmetic algorithms. Logical organization. Storage, control and input-output units. Basic and advanced machine language and computer programming. Libraries, advanced assembly techniques, interpretive systems, compilers. Applications to mathematical and physical problems. Informal laboratory. (Prerequisite: 26A or § for 164; 164 or § for 165; 165 or § for 166. Qualified students may register for graduate credit)

<b>Fall Quarter</b>	<b>Winter Quarter</b>	<b>Spring Quarter</b>
164 M 6:00-8:40, Architecture 5	165 M 6:00-8:40, Architecture 5	166 M 6:00-8:40, Architecture 5

**Math 184. Elementary Numerical Analysis in Engineering.** 3 degree credits. \$33.

Finite differences, interpolation, summation of series, numerical integration, Euler-MacLaurin formula and asymptotic expansions. Numerical solutions of systems of algebraic and transcendental equations. Newton's and Graeffe's method. (Prerequisite: 26A or 27 or 32 or 106. Qualified students may register for graduate credit)

<b>Fall Quarter</b>	
T	6:00-8:40, Main Engineering 227

**Math 185-186. Numerical Analysis in Engineering.** 3 degree credits each quarter. \$33 each quarter.

Approximation of functions and least squares. Approximate solution of ordinary and partial differential equations, Moulton's, Runge's, relaxation and iteration methods. Calculation of eigenvalues of matrices and differential problems, Rayleigh-Ritz method. Integral equations. Programming of computers. (Prerequisite: 184 or § for 185; 185 or § for 186. Qualified students may register for graduate credit)

<b>Winter Quarter</b>		<b>Spring Quarter</b>			
185	T	6:00-8:40, Main Engineering 227	186	T	6:00-8:40, Main Engineering 227

**Math 196-197-198. Special Functions in Mathematical Analysis.** 3 degree credits each quarter. \$33 each quarter.

Asymptotic expansions. Gamma and Beta functions. Hypergeometric functions as solutions of differential equations. Bessel functions using Sommerfeld's contour integrals. Legendre functions. (Prerequisite: 168A or 174. Qualified students may register for graduate credit)

<b>Fall Quarter</b>		<b>Winter Quarter</b>		<b>Spring Quarter</b>			
196	W	6:00-8:40, Main Engineering 315	197	W	6:00-8:40, Main Engineering 315		
					198	W	6:00-8:40, Main Engineering 315

---

Symbols explained on page 15.

## Evening Classes

---

**Refresher Course for State Board Examinations, Parts I and II (Mathematics).**  
No credit. \$44.

A review course in mathematics. Designed especially for engineers planning to take Parts I and II of the State Board Examination. (Prerequisite: Bachelor's degree in chemistry, engineering, or physics)

**Special Class**

(September 27 to December 13)

T 6:00-8:00, Mines and Metallurgy 120

**Refresher Course for State Board Examinations, Parts I and II (Chemistry).** See page 193.

**Refresher Course for State Board Examinations, Parts I and II (Mechanics and Materials).** See page 215.

**Refresher Course for State Board Examinations, Parts I and II (Physics).** See page 217.

## **MECHANICAL ENGINEERING**

*Fulton Holtby, Associate Professor of Mechanical Engineering*

*William A. Kleinhenz, Associate Professor of Mechanical Engineering*

*Thomas E. Murphy, Associate Professor of Mechanical Engineering*

*K. Ogata, Professor of Mechanical Engineering*

*Your attention is called to the Senior Mechanical Engineering Technician program; see page 52.*

**ME 21A (old 21, 22). Mechanisms: Kinematic Analysis. 4 degree credits. \$44.**

Analysis of motion transfer in mechanisms by use of constraint equations and vector analysis. An analysis of the kinematic capability of various mechanisms to fulfill specific design objectives. (Prerequisite: Math 32 or 147, MM 35; or completion of courses in integral and differential calculus and sophomore-level college physics)

**Fall Semester**

T 6:20-9:00, Mechanical Engineering 106

**ME 22A (old 22, 23). Mechanisms: Dynamic Analysis. 4 degree credits. \$44.**

The influence of mechanism inertia on energy transfer. Elimination of unbalance in rigid body mechanisms. Gyroscopic phenomena applied to mechanism design. (Prerequisite: 21A)

**Spring Semester**

T 6:20-9:00, Mechanical Engineering  
106

---

Symbols explained on page 15.

## Course Offerings—Engineering, Physical and Technical Sciences

**ME 30A-31A (old 30, 31, 32). Thermodynamics.** 4 degree credits each semester. \$44 each semester.

Properties, equations of state, and processes of thermodynamic systems and devices. Application of first and second laws correlating energy with heat, work, and mass transfer. Equilibrium and irreversibility. (Prerequisite: Phys 14 or 23, Math 32 or 147 for 30A; 30A for 31A)

*Fall Semester*

30A Th 6:20-9:00, Mechanical Engineering 321

*Spring Semester*

31A Th 6:20-9:00, Mechanical Engineering 321

**ME 133. Heat Transmission.** 3 degree credits. \$33.

Introduction to conduction, convection, and radiation of heat and their utilization in engineering applications. (Prerequisite: 30A and Hydr 101 or 103 or Aero 100 or ‡. Qualified students may register for graduate credit)

*Fall Quarter*

M 6:20-9:00, Mechanical Engineering 321

**ME 134. Thermodynamics of Fluid Flow.** 3 degree credits. \$33.

Thermodynamic analysis of internal flow of viscous and compressible fluids. Applications to various flow processes and components in engineering systems. (Prerequisite: 31A and Hydr 103 or ‡. Qualified students may register for graduate credit)

*Spring Quarter*

M 6:20-9:00, Mechanical Engineering 214

**ME 160A. Thermal Environmental Engineering.** 4 degree credits. \$44.

Thermodynamic properties of moist air; h-W diagram for moist air; solar radiation; steady-state and periodic heat transmission in structures; water vapor transmission in structures; effects of thermal environment upon people, processes and materials; thermal loads; thermal environmental control systems. (Prerequisite: 133. Qualified students may register for graduate credit)

*Spring Semester*

W 6:20-9:00, Mechanical Engineering 106

**ME. Machine Design I-II.** 5 certificate credits each semester. \$55 each semester.

Fundamental principles of design of machine elements: lubrication, theory, and application; friction drives, screws, gears, belts, connectors, flywheels, machine frames, shrink fits, stress concentration, vibration analysis, and application of velocity and acceleration analysis to machine design problems. The course will consist of a series of lectures and problems to be solved in class. Laboratory experiments will be used whenever possible. Special movies will be used. (Prerequisite: Math 11 or ‡ for I; I for II)

*Fall Semester*

I Th 6:20-9:20, Mechanical Engineering 308

*Spring Semester*

II Th 6:20-9:20, Mechanical Engineering 308

Symbols explained on page 15.

## Evening Classes

---

### \*ME. Machine Tool Fundamentals. 5 certificate credits. \$55 plus \$3 laboratory fee.

Lecture and laboratory course which covers all types of machines for production such as lathes, drill presses, shapers, milling machines, turret lathes, automatic screw machines, surface grinders, cylindrical grinders, centerless grinders, thread grinders, thread milling machines, jig boring machines, gear hobbers, gear shapers, and profile milling machines. Also topics in tool wear, surface finish, coolants, and metal cutting economics. (Prerequisite: Math 11 or  $\dagger$ . Limited to 20 students)

#### Fall Semester

M 6:20-9:20, Mechanical Engineering 106

### ME. Instrumentation and Automatic Control. 5 certificate credits. \$55.

The first part of the course will be concerned with the more common types of automatic controls found in residential and commercial usage. These include two-position or on-off and proportional or throttling type control effects. These fundamental control actions will be studied thoroughly in both lecture and laboratory. Both electrical- and air-operated controls are included. The remainder of the course will deal with industrial instruments and automatic controls. The theory of control will be covered mathematically, descriptively, and graphically. Basic modes of control built into commercial industrial controllers such as proportional, automatic reset, and rate response will be covered in detail. Methods of obtaining these responses such as electrically, hydraulically, or pneumatically will be analyzed. Typical industrial control circuits will be investigated. This will involve analysis of all component parts such as the process measuring means, recording or indicating instrument, controller, and final control elements. (Prerequisite: Math 11)

#### Fall Semester

M 6:20-9:20, Mechanical Engineering 208, Ogata

### ME. Value Engineering. 5 certificate credits. \$55.

An introduction to the principles of value engineering and value analysis. The systematic approach to achieving fulfillment of essential product functions and reliability at lowest possible cost. The value analysis job plan, examples of high and low product value; comparisons of production processes, specific techniques of value improvement. (Prerequisite: Math 11 or  $\dagger$ )

#### Spring Semester

M 6:20-9:20, Mechanical Engineering 302

### \*ME. Plastics Technology. 5 certificate credits. \$55 plus \$3 materials fee.

A laboratory and lecture course dealing with the materials, equipment, and methods used in the fabrication of plastic products. (No prerequisite. Limited to 20 students)

#### Fall Semester

Th 6:20-9:20, Mechanical Engineering 106

### ME. Refresher Course for Mechanical Engineers. No credit. \$44.

This course is designed for practicing engineers, and will consist of lectures and problem sessions. (Prerequisite: BME or equivalent degree or completion of Parts I and II of State Board Examination)

#### Special Class

(January 4 to March 15)

W 6:00-9:00, Mechanical Engineering 321

---

Symbols explained on page 15.

\* Enrollment space limited; instructions on page 9.

## MECHANICS AND MATERIALS

Allan A. Blatherwick, Associate Professor of Mechanics and Materials

Carl N. DeSilva, Professor of Engineering Mechanics

**\*MM 35. Statics.** 4 degree credits, §old MM 27. \$44.

Vector algebra. Application of the equations of equilibrium to the analysis of simple engineering structures and machines. Nature and influence of friction. Elementary theory of statically determinate framed structures. Deformation of structures with axially loaded elements. (Prerequisite: Math 25A or 31 or ¶31, and Phys 11 or 21 or ‡; 35 may be substituted for 92. Limited to 30 students. Repeated spring semester)

*Fall Semester*

Th 6:20-8:40, Aeronautical Engineering  
215, Blatherwick

*Spring Semester*

Th 6:20-8:40, Aeronautical Engineering  
313, DeSilva

**\*MM 36. Dynamics.** 4 degree credits, §old MM 28 or §Phys 100 or §Phys 100A. \$44.

Introduction to vector calculus. Kinematics. Application of principles of particle motion. Conservation principles. Dynamics of particle systems and plane rigid bodies. Technical applications. (Prerequisite: Math 26A or ¶26A or 27 or 32 or ¶32, and Phys 11 or 21 or ‡. Limited to 30 students)

*Fall Semester*

Th 6:20-8:40, Aeronautical Engineering  
313, DeSilva

**\*MM 37. Deformable Body Mechanics.** 4 degree credits, §old MM 40. \$44.

Introductory treatment of stress and strain at a point. Stress-strain relation in two dimensions. Linear theory of torsion. Bending stresses. Deflection of determinate and indeterminate beams. Instability. (Prerequisite: 35, Math 25A or 31 or ¶31 or ‡; MM 37 may be substituted for 93. Limited to 30 students)

*Spring Semester*

Th 6:20-8:40, Aeronautical Engineering  
215, Blatherwick

**Refresher Course for State Board Examinations, Parts I and II (Mechanics and Materials).** No credit. \$33.

A review course in mechanics, fluid mechanics, and materials. Designed especially for engineers planning to take Parts I and II of the State Board Examination. (Prerequisite: Bachelor's degree in chemistry, engineering, or physics)

**Special Class**

(February 14 to April 18)

T 6:00-8:00, Mines and Metallurgy 120

**Refresher Course for State Board Examinations, Parts I and II (Chemistry).**  
See page 193.

Symbols explained on page 15.

° Enrollment space limited; instructions on page 9.

## Evening Classes

---

**Refresher Course for State Board Examinations, Parts I and II (Mathematics).**  
See page 212.

**Refresher Course for State Board Examinations, Parts I and II. (Physics).** See page 217.

## METALLURGY

*Henry S. Jerabek, Associate Professor of Metallurgy*

**Met I-II. Physical Metallurgy.** 3 certificate credits each semester. \$33 each semester.

An introductory course for those engaged in heat treating, metal working, specification writing, inspection, or dealing in metal products. The structure of metals and alloys and the effect of working and heat treatment on structure and properties; steels, cast irons, surface treatments, and nonferrous alloys. This is a lecture course. No laboratory work involved. (No prerequisite for I, but high school chemistry and high school physics are strongly desirable; I for II)

### *Fall Semester*

I T 6:20-8:00, Mines and Metallurgy  
116, Jerabek

### *Spring Semester*

II T 6:20-8:00, Mines and Metallurgy  
116, Jerabek

## PHYSICS

*J. Merle Harris, Associate Professor of Physics*

**Phys 21-21A. General Physics and Physics Laboratory.** 5 degree credits. \$55 plus \$10 laboratory fee.

Classical mechanics. Lecture, quiz, and laboratory exercises in mechanics each week. (Prerequisite: Math 21 or ¶21 or 42 or ¶42; 21 and 21A must be taken concurrently)

### *Fall Semester*

MW 6:30-8:30, Physics 170, Harris

**Phys 22-22A. General Physics and Physics Laboratory.** 5 degree credits. \$55 plus \$10 laboratory fee.

Thermodynamics, sound, geometrical and physical optics and laboratory exercises in heat, sound, and optics. Lecture, quiz, and laboratory each week. (Prerequisite: 21 and Math 22 or ¶22 or 24A or 43 or ¶43; 22 and 22A must be taken concurrently)

### *Spring Semester*

MW 6:30-8:30, Physics 133, Harris

---

Symbols explained on page 15.



## Course Offerings—Engineering, Physical and Technical Sciences

---

**Phys 23-23A. General Physics and Physics Laboratory.** 5 degree credits. \$55 plus \$10 laboratory fee.

Electricity and magnetism. Lecture, quiz, and laboratory exercises in electricity and magnetism each week. (Prerequisite: 22 and Math 23 or ¶Math 23 or Math 44 or ¶Math 44; 23 and 23A must be taken concurrently)

*Fall Semester*

MW 6:30-8:30, Physics 166

**Phys 50-50A. Intermediate General Physics and Physics Laboratory.** 5 degree credits. \$55 plus \$10 laboratory fee.

Special relativity. Atomic view of matter, electricity, and radiation. Bohr model of atom. X-rays. Introduction to wave nature of matter and radioactivity. (Prerequisite: 6 or 9 or 14 or 23 and Math 31 or ¶31 or 55 or ¶55; 50 and 50A must be taken concurrently)

*Spring Semester*

MW 6:30-8:30, Physics 166

**Phys 107. Atomic and Nuclear Physics.** 3 degree credits, §Phys 50 or 51. \$33.

Emphasis on an interpretation of experimental phenomena. Topics include kinetic theory, Maxwell-Boltzmann distribution, special relativity, the nuclear atom, atomic and molecular structure and spectra, black-body radiation, wave mechanics, nuclear physics, modern developments in classical physics, astrophysics, particle physics. (Prerequisite: 9 or 14 or 23; Math 32 or 106. Qualified students may register for graduate credit)

*Fall Semester*

M 6:30-8:15, Physics 145

**Phys 109. Atomic and Nuclear Physics.** 3 degree credits. \$33.

A continuation of Phys 107. (Prerequisite: 107)

*Spring Semester*

M 6:30-8:15, Physics 145

**Phys 111. Atomic and Nuclear Physics.** (To be offered 1967-68)

**Refresher Course for State Board Examinations, Parts I and II (Physics).** No credit. \$11.

A review course in physics. Designed especially for engineers planning to take Parts I and II of the State Board Examination. (Prerequisite: Bachelor's degree in chemistry, engineering, or physics)

**Special Class**

(January 24 to February 7)

T 6:00-8:00, Mines and Metallurgy 120

**Refresher Course for State Board Examinations, Parts I and II (Chemistry).**  
See page 193.

---

Symbols explained on page 15.

***Evening Classes***

---

**Refresher Course for State Board Examinations, Parts I and II (Mathematics).**  
See page 212.

**Refresher Course for State Board Examinations, Parts I and II (Mechanics and  
Materials).** See page 215.

**Slide Rule.** See page 200.

# PHYSICAL EDUCATION

H. Robert Giles, Associate Professor of Recreation  
Belmar S. Gunderson, Instructor in Physical Education  
Mary B. Lampe, Assistant Professor of Physical Education  
Robert G. Mowerson, Assistant Professor of Physical Education  
Lela June Stoner, Assistant Professor of Physical Education  
Roy P. Tutt, Instructor in Physical Education

Note that these classes are offered in six groups: for girls only, for boys only, for boys and girls, for women only, for men only, and for men and women. Recreation classes carry no credit and require no prerequisite. A health examination is required for admission to all children's physical education classes. It is assumed that the health of adults registering for recreation classes will be equal to the demands of the activities in which they are to participate.

Registration for all children's physical education classes must be made *by mail*. (If you have not received an "Application Form," please telephone—*do not write*—the campus office, telephone 373-3949.) The envelope containing your application must be postmarked *on or after* Friday, September 2, 1966 for fall classes, and should be postmarked *no later* than September 9, 1966. Applications for winter classes must be postmarked *on or after* Friday, December 9, 1966, and should be postmarked *no later* than December 16, 1966. Applications for spring classes must be postmarked *on or after* Friday, March 3, 1967, and should be postmarked *no later* than March 10, 1967.

## ACTIVITIES OPEN TO GIRLS

A health examination is required of all girls taking physical education classes. Each girl must bring a letter from her physician *to the first class meeting* stating approval of the activity in which she is registered.

\*Swimming for Small Girls.†† No credit. \$16.50 plus \$2 laboratory fee.

A course in swimming for girls between the ages of 6 and 12 years. Each girl must bring a written permit for swimming from her own doctor; no one will be allowed in the pool without permit. First meeting will be for the purpose of classifying swimmers into the following groups: Beginners; Advanced Beginners (those who swim with ease in shallow water); Intermediates (those who swim with ease in deep water); Advanced Intermediates (those who swim with ease but wish to improve strokes); Advanced (those

\* Enrollment space limited; instructions on page 9.

†† Registration by mail only. See box above.

## Evening Classes

---

who wish to learn advanced strokes—both synchronized and speed—and spring board diving). Swimmers must bring their own suits and towels. Caps are required for all swimmers. (Each section limited to 20 girls)

### Special Class

(January 7 to March 18)

#### Beginners

- S 8:45-9:30, Norris Gym 51, Lampe
- S 10:15-11:00, Norris Gym 51, Lampe

#### Advanced Beginners

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

### Special Class

(April 1 to June 10)

#### Beginners

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

#### Advanced Beginners

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

#### Intermediates

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

## ACTIVITIES OPEN TO BOYS

A health examination is required of all boys taking physical education classes. Each boy must bring a letter from his physician *to the first class meeting* stating approval of the activity in which he is registered.

### \*Swimming for Boys.†† No credit. \$16.50 plus \$2 laboratory fee.

A course in swimming for boys between the ages of 6 and 14 years *who are at least 50 inches tall*. Each boy must furnish his own towel and swimming suit. Each boy should be registered for an appropriate section according to his estimated ability. Sections are classified as follows: *Nonswimmers*; *Beginners*—those who can swim, but not 10 yards; *Advanced Beginners*—those who can swim 10 yards, but not in deep water; *Intermediates*—those who can swim 25 yards of two or more strokes; *Advanced Intermediates*—those who can swim 100 yards and demonstrate 4 different strokes; *Advanced*. The first meeting will be used for the purpose of reclassifying swimmers where necessary. Each section limited to 20 boys.

### Special Class

(April 1 to June 10)

#### Nonswimmers

- S 9:45-10:30, Cooke Hall

#### Beginners

- S 10:30-11:15, Cooke Hall

#### Advanced Beginners

- S 11:15-12:00, Cooke Hall

#### Intermediates

- S 9:45-10:30, Cooke Hall

#### Advanced Intermediates

- S 10:30-11:15, Cooke Hall

#### Advanced

- S 11:15-12:00, Cooke Hall

---

\* Enrollment space limited; instructions on page 9.

†† Registration by mail only. See box on page 219.

## Course Offerings—Physical Education

---

### \*Diving for Boys. No credit. \$16.50 plus \$2 laboratory fee.

A course in beginning diving for boys between the ages of 10 and 16 years. (Prerequisite: Ability to perform a running front dive from the one meter [low] board. Instruction will be limited primarily to the low diving board. Each boy must furnish his own suit and towel. Limited to 15 boys)

#### **Special Class**

(October 1 to December 17)

S 10:00-10:45, Cooke Hall

## ACTIVITIES OPEN TO BOYS AND GIRLS

A health examination is required of all children taking physical education classes. Each child must bring a letter from his or her physician *to the first class meeting* stating approval of the activity in which he is registered.

### \*Creative Dance for Boys and Girls.†† No credit. \$16.50 plus \$2 laboratory fee.

A course in creative rhythmic movement for children between the ages of 5 and 11 years. Classes are divided by age groups. A leotard is the preferred costume, but shorts and blouse or similar apparel is acceptable. Tights with feet are not acceptable. (Each section limited to 15 children)

#### **Special Class**

(April 1 to June 10)

Ages 5-7

S 9:30-10:15, Norris Gym 151

Ages 8-11

S 10:30-11:15, Norris Gym 151

## ACTIVITIES OPEN TO WOMEN

Information about lockers will be given at the first class meeting. In swimming classes, a sterilized suit and towel are provided for each swimmer. Swimmers must provide own caps and may not swim without them.

### \*Golf (Beginning)—for Women. No credit. \$22 plus \$3 laboratory fee.

For those who have no previous experience. Class and individual instruction in the fundamentals of golf. Discussion of rules, golf etiquette, and terminology. As much instruction as possible to be given in the spring at University Golf Course, weather permitting. Students furnish own clubs for outdoor play. (Each section limited to 20 students)

#### **Special Class**

(March 28 to June 6)

T 5:30-6:30, Norris Gym 60, Gunderson

---

\* Enrollment space limited; instructions on page 9.

†† Registration by mail only. See box on page 219.

## Evening Classes

---

\***Golf (Intermediate)—for Women.** No credit. \$22 plus \$3 laboratory fee.

A review of the fundamentals (as listed for Beginning Golf) with the work of the class planned to meet individual needs. Students furnish own clubs for outdoor play. (Prerequisite: some knowledge of and experience in golf. Each section limited to 20 students)

**Special Class**

(March 28 to June 6)

T 6:30-7:30, Norris Gym 60, Gunderson  
T 7:30-8:30, Norris Gym 60, Gunderson

\***Swimming (Beginning)—for Women.** No credit. \$22 plus \$2 laboratory fee.

For those who have had no previous experience in swimming. (Each section limited to 25 students)

**Special Class**

(September 27 to December 13)

T 5:45-6:45, Norris Gym 51, Stoner

\***Swimming (Advanced Beginning)—for Women.** No credit. \$22 plus \$2 laboratory fee.

For those able to float and swim slightly but who are not yet at home in deep water. (Each section limited to 25 students)

**Special Class**

(September 27 to December 13)

T 6:45-7:45, Norris Gym 51, Stoner

\***Swimming (Intermediate)—for Women.** No credit. \$22 plus \$2 laboratory fee.

For those who are able to swim in deep water but wish to perfect their swimming strokes. Instruction in diving is included. (Each section limited to 25 students)

**Special Class**

(September 27 to December 13)

T 7:45-8:45, Norris Gym 51, Stoner

\***PEW C12. Water Safety Instruction.** 2 degree credits. \$44 plus \$2 laboratory fee.

A review of life saving and water safety techniques, methods and materials for men and women who plan to supervise or lifeguard on a waterfront or teach courses in water safety. Students must hold a current American Red Cross Senior Life Saving or Water Safety Instructor Certificate to be eligible for the course. A certificate of Water Safety Instructor will be given to those who complete the necessary requirements. (Prerequisite: minimum age 18 and Senior Life Saving Certificate. Limited to 28 students)

**Spring Quarter**

T 5:30-8:30, Norris Gym 58, Stoner

---

\* Enrollment space limited; instructions on page 9.

## ACTIVITIES OPEN TO MEN

\***Golf—for Men.** No credit. \$22 plus \$3 laboratory fee.

The fundamentals of golf. The first six meetings will be held in the golf gymnasium; the last five meetings will be held, weather permitting, at the University Golf Course. The outdoor schedule is adjusted to light. Students will furnish their own clubs. (Each section limited to 20 men)

**Special Class**

(March 27 to June 5)

M 6:00-7:00, South Tower, Stadium, Tutt  
M 7:00-8:00, South Tower, Stadium, Tutt  
M 8:00-9:00, South Tower, Stadium, Tutt

**Swimming—for Men.** No credit. \$22 plus \$2 laboratory fee.

Class and individual instruction for beginners in all swimming strokes, in diving, and in fundamentals of lifesaving.

**Special Class**

(March 27 to June 5)

M 8:00-9:00, Cooke Hall, Giles

## ACTIVITIES OPEN TO MEN AND WOMEN

\***Scuba—for Men and Women.** No credit. \$33 plus \$2 laboratory fee.

The course covers all of the techniques and safety features of scuba. Upon satisfactory completion of this course, the student will be certified by the National Association of Underwater Instructors and will receive a certificate and wallet card so stating. (Prerequisites: ability to swim 440 yards free style, float as motionless as possible for 10 minutes, tread water without hands for 3 minutes, swim 75 feet underwater, recover 10-pound object in 10 feet of water from surface dive, tow a quiescent victim 50 yards, and be at least 15 years of age. Each section limited to 18 students)

**Equipment:** Upon a rental basis, tank and regulator can be obtained for \$1 per session per unit used. If tank, mask, fins, and snorkel are all required, rental will be \$1.50 per session. This includes tank refill. Instructor will bring equipment to and from pool.

**Special Class**

(September 28 to December 14)

W 7:30-9:30, Cooke Hall Pool, Mowerson

**Special Class**

(March 15 to June 7)

W 7:30-9:30, Cooke Hall Pool, Mowerson

\* Enrollment space limited; instructions on page 9.

## OTHER EDUCATIONAL SERVICES OF THE GENERAL EXTENSION DIVISION

### University of Minnesota "Television College"

The University of Minnesota "Television College" will offer several credit courses during the 1966-67 academic year. Courses are taught by University of Minnesota faculty and are presented over KTCA, Channel 2.

The courses may be taken for credit by anyone who feels capable of undertaking college-level work. Courses carry resident credit at the University and may be used, where appropriate, on a degree program when a student has been admitted to a college of the University; credits are transferable. Tuition is \$11 per credit. To enhance understanding of the television lectures, persons who wish to watch the courses without registering may obtain course outlines for \$2 a course.

Some of the courses consist of one or two televised lectures and a lecture-discussion or laboratory session each week. The lecture-discussions are held in study centers located in high schools throughout the metropolitan and surrounding areas. Laboratory sessions are held on the University's Minneapolis Campus. Only students who pay tuition may attend the lecture-discussions or the laboratory sessions.

Other courses consist solely of televised lectures, the student coming to campus usually only once or twice during the term to meet with his instructor and to take examinations.

For a complete schedule showing the hours and days of the week for each television course, telephone 373-5030 or write University "Television College," 325 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

### Correspondence Study Department

This department offers more than 300 college-level and high school courses by home study. Credits may be used for University degree programs, Extension certificates, to aid in the completion of high school, for occupational advancement, or for development of special interests of the individual. For a bulletin, write to the Correspondence Study Department, 254 Nicholson Hall, University of Minnesota, Minneapolis, Minnesota 55455, or telephone 373-3256.

### Lecture Series

Each year the General Extension Division brings some of the country's outstanding experts to the Twin Cities for discussions of subjects of general interest. Three such series of lectures are being planned for 1966-67. They will be open to the public upon payment of a series fee. For further information, telephone 373-5166, or write Lecture Series, 314 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.



## Neighborhood Seminars

If 15 or more persons wish to organize a study and discussion group on a subject of mutual interest they may request the Extension Division to set up a Neighborhood Seminar, and services of qualified instructors will be made available. The group meets for approximately eight sessions in the homes of its members or in a convenient school or church. Seminar subject matter will vary according to what is of particular interest to a group. Previous Neighborhood Seminars have included such titles as: Modern Russian History; Poetry, Painting, and Music of Today; American Goals and Values; Primary Ideas in the 20th Century; and Comparative Religions. Registration is through the General Extension Division with fees of \$22.50 per person. No University credit is given. For further information, telephone 373-5166, or write Neighborhood Seminars, 314 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

## Seminars for Women

As part of the Minnesota Plan for the Continuing Education of Women, the Extension Division offers 6 seminars especially designed for the adult woman. Major aims of the seminars are to sharpen critical thinking and to renew academic discipline, to be a first step back to more intensive and objective study—whether pursued independently or under University guidance. Assigned readings and periodic short papers are required of each registrant. Although no examinations are given, anyone wanting credit must write a long paper under faculty supervision.

Seminars meet on the Minneapolis Campus from 9:30 a.m. until noon every other week from October through June. Tuition for the year for each seminar is \$99. Registration is limited to 20 women in each seminar.

For 1966-67, the following seminars will be given:

New Worlds of Knowledge (Humanities 121-122-123); Arts of Reading (Humanities 141-142-143); Ideas in America; Art and Perception; Culture and Society (Social Science 101-102-103); Our Changing World: The Impact of Science.

For further information, telephone 373-5166, or write Seminars for Women, 309 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

## Seminars for Men

Each year the General Extension Division presents one or more seminars dealing with problems of contemporary society. These seminars, chaired by distinguished University professors, are designed for those who find excitement in the world of ideas and welcome opportunities for challenging intellectual exchange. The seminars will be announced in September. Please telephone 373-5166 for information, or write Seminars for Men, 314 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

## **Evening Classes**

---

### **Off-Campus Programs**

This department facilitates the handling of requests for off-campus—particularly out-state—programs. Its staff seeks to discover needs, establish priorities, and determine the kinds of programs best suited to meet the needs. To request a program, or for information, telephone 373-5166, or write Off-Campus Programs, 314 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

### **The Nolte Center for Continuing Education**

Conferences and institutes at the professional and quasi-professional level make up the program of the center. Major program areas include medical sciences, technology and engineering, education, state and municipal affairs, social welfare, dentistry, and business management. For information, telephone 373-3151, or write the Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

### **KUOM Radio and University of Minnesota Television Hour**

The Department of Radio and Television produces and directs the broadcasts of KUOM and programs the University of Minnesota Hour on KTCA-TV. Lectures and forums are devoted to topics of historic, cultural, artistic, or current import. Music, theater, news, and ideas are heard and analyzed. To receive the program guide, telephone 373-3177, or write the Department of Radio and Television, Eddy Hall, University of Minnesota, Minneapolis, Minnesota 55455.

On Tuesday evenings at 9 p.m. during the fall quarter, the University Television Hour will present "Writing Conference," a noncredit series by Harold J. Alford. These programs will be devoted to the reading and analysis of writing in progress. A collection of short pieces by local writers will be prepared for distribution to viewers in advance of each program, and a panel of writers will read and discuss these examples from the point of view of the writer. This course should not only provide insights and assistance to viewers interested in writing, but should also provide similar insights and guides for viewers whose primary interest is in increasing their reading enjoyment.

### **Minnesota World Affairs Center**

The Minnesota World Affairs Center plans and conducts seminars and lecture series and maintains an advisory service to assist individuals and organizations throughout the state with suggestions of speakers, films, and publications. The center serves as a clearing house of information about foreign policy programs which may be scheduled by other educational institutions, by voluntary organizations and by radio and television. It maintains a Pamphlet Shop with hundreds of inexpensive or free booklets and pamphlets on world affairs. For information, call or write the Minnesota World Affairs Center, 122 Social Science Building, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-3799.

### **Drama Advisory Service and Loan Play Library**

This service provides theater directors in schools and communities with counsel and information, arranges workshops throughout the state, and serves as administrative center for the North Central Theater Association. The Loan Play Library contains 8,000 scripts, available to theater directors for selection of plays. For information, telephone 373-4947, or write the Drama Advisory Service, 320 Westbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455.

### **Continuing Education in Art**

This department sets up art courses throughout the state using the faculties of the Departments of Art, Art Education and Related Arts on the Twin Cities campuses and the Departments of Art at Duluth and Morris. Many of these courses are noncredit in the format of Neighborhood Seminars. Course titles have included: Painting for Amateurs, Transition to Modern Art, Beginning Drawing, American Decorative Arts, Beginning Weaving, Problems in Art Appreciation, Photography for Amateurs. Credit courses are also set up for public school art teachers and other interested groups. The department also sponsors a circulating exhibition program. For information, telephone 373-5147 or write Arts Extension Co-ordinator, 310 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

### **Continuing Legal Education**

The department programs noncredit workshops and conferences throughout the state to serve attorneys, courts, and related bodies. For information, telephone 373-5386, or write Continuing Legal Education, 205 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

### **Continuing Education in Engineering and Science**

This department's aim is to assist industry in identifying its needs in continuing technical education and co-operate in setting priorities, developing programs and evaluating results. For further information, telephone 373-5057 or write Continuing Education in Engineering and Science, 210 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

### **Labor Education**

Through noncredit courses and workshops in union leadership and related areas and in public affairs, the Labor Education Department aims at upgrading the education of people in the labor movement. For information, telephone 373-3662, or write Labor Education, 423 Business Administration Building, University of Minnesota, Minneapolis, Minnesota 55455.

## ***Evening Classes***

---

### **Municipal Reference Bureau**

The Bureau is a library and information source for the communities of the state, public officials at all levels, and the citizenry. For information, telephone 373-2321, or write the Municipal Reference Bureau, 314 Social Science Building, University of Minnesota, Minneapolis, Minnesota 55455.

### **State Organization Service**

Voluntary organizations serving the public interest may be helped by the State Organization Service with program ideas and arrangements and with administrative and clerical problems. For information, telephone 373-3170, or write State Organization Service, 122 Social Science Building, University of Minnesota, Minneapolis, Minnesota 55455.

### **Audio-Visual Extension Service**

This division gives advice on the use of materials, conducts workshops in the use of audio-visual equipment and materials, and rents films and tapes. For information, telephone 373-3810, or write Audio-Visual Extension Service, 2037 University Avenue S.E., University of Minnesota, Minneapolis, Minnesota 55455.

# Minneapolis Area Classes Listed by Quarters

*Minneapolis area classes are listed here by quarters for convenience in planning your program. Please do not register using this list alone. Look up the class on the page referred to in the list.*

## Fall Quarter

### Agriculture

Horticulture 10, page 60  
Horticulture 60, page 61

### Arts and Sciences

Advanced Grammar, page 88  
Art 1, page 64  
Art 2, page 64  
Art 47, page 65  
Art 50, page 65  
Art 56, page 65  
Art 106, page 66  
Art 126, page 67

Classics 48, page 75  
Classics 68, page 75  
Classics 91, page 75  
Classics 191, page 76  
Communication 1, page 87  
Composition X, page 86  
Composition 1, page 87  
Composition 2, page 87  
Composition 3, page 87  
Creative Problem Solving, page 154  
Czechoslovakian 1, page 139

English 37, page 82  
English 52, page 82  
English 55, page 82  
English 66, page 83  
English 72, page 83  
English 108, page 83  
English 162, page 84  
English 190, page 85  
Enjoying Music, page 120

Family Studies 25A, page 90  
French 17A, page 93

Geography 134, page 95  
Grammar Review, page 88  
Greek 1, page 76  
Greek 3, page 76

History 1, page 98  
History 14, page 99  
History 17, page 99  
History 50, page 100  
History 53, page 101  
History 59, page 101  
History 86, page 101

History 87A, page 102  
History 93, page 102  
History 95, page 102  
History 103B, page 102  
History 115D, page 102  
History 118F, page 103  
History 134E, page 103  
History 139D, page 104  
History 145A, page 104  
Home Design and Planning, page 73  
Humanities 1, page 105  
Humanities 11, page 106  
Humanities 21, page 107  
Humanities 51, page 108  
Humanities 61, page 108  
Humanities 131, page 109

Library Science 53, page 114  
Library Science 101, page 115  
Library Science 102, page 115  
Library Science 173, page 115

Music 1T, page 120  
Music 4T, page 120  
Music 39, page 118  
Music 40, page 118  
Music 43, page 118  
Music 46, page 119  
Music 49, page 119  
Music 50, page 121  
Music 57, page 119  
Music 85, page 121  
Music 147, page 119

Nursing Concerns Today, page 122

Parliamentary Procedures, page 153  
Philosophy 1A, page 123  
Philosophy 3A, page 123  
Philosophy 10, page 124  
Public Administration. Employer-Employee Relations in Government, page 136  
Public Administration. Government and Welfare, page 136  
Public Administration. Governmental Accounting, page 135  
Public Administration. Legal and Political Environment of Public Administration, page 134  
Public Administration. Municipal Law and Administration, page 134  
Public Administration. Organization Theory, page 134

Public Administration. Private Law for Public Administrators, page 137  
Public Administration. Public Personnel Administration, page 134  
Public Administration. Public Speaking and Conference Leadership, page 137  
Public Administration. The Planning Process, page 137

Scientific and Medical Drawing, page 73  
Social Work 124, page 143  
Spanish 17A, page 149  
Speech, Beginning Practical, page 150  
Speech, Voice and Diction, page 151

Theatre 11, page 151  
Theatre 12, page 151

Vocabulary Building, page 154

### *Business Administration*

Accounting 24, page 157  
Accounting 105A, page 158

Insurance Institute of America, Part A, page 168

Insurance Institute of America, Part B, page 168

Insurance Institute of America, Part Adjustment 5, page 169

Insurance 153, page 155

Introduction to Investments, page 161

Management 150A, page 155

Quantitative Analysis 151, page 155

Retail Career, Sales, and Customer Services, page 178

### *Education*

Art Education 17, page 182

Art Education 80, page 183

### *Engineering*

Aeronautical Engineering 9, page 189

Civil Engineering 53, page 193

Civil Engineering 81, page 194

Civil Engineering 111, page 194

Civil Engineering 147, page 195

Hydrology 161, page 195

Mathematics 30, page 208

Mathematics 147, page 210

Mathematics 164, page 211

Mathematics 184, page 211

Mathematics 196, page 211

Mathematics Refresher Course, page 212

Mechanical Engineering 133, page 213

### *Physical Education*

Diving for Boys, page 221

Scuba for Men and Women, page 223

Swimming for Women, page 222

## Winter Quarter

### *Arts and Sciences*

Advanced Grammar, page 88

Art 1, page 64

Art 3, page 64

Art 4, page 64

Art 50, page 65

Art 57, page 65

Art 58, page 66

Art 107, page 66

Art 111, page 67

Art 157, page 67

Classics 92, page 75

Classics 192, page 76

Communication 2, page 87

Composition X, page 86

Composition 1, page 87

Composition 2, page 87

Composition 3, page 87

Creative Problem Solving, page 154

Czechoslovakian 2, page 139

English 38, page 82

English 53, page 82

English 56, page 82

English 73, page 83

English 104, page 83

English 109, page 83

English 162, page 84

English 191, page 85

English 197, page 85

Enjoying Music, page 120

Exploring Today's Theatre, page 152

Family Studies 25A, page 90

French 17A, page 93

Geography 118, page 95

Grammar Review, page 88

Greek 2, page 76

Greek 4, page 76

History 2, page 98

History 15, page 99

History 18, page 99

History 51, page 100

History 54, page 101

History 60, page 101

History 87, page 101

History 88A, page 102

History 94, page 102

History 104B, page 102

History 116D, page 102

History 119F, page 103

History 135E, page 103

History 146A, page 104

Humanities 1, page 105

Humanities 2, page 106

Humanities 12, page 106  
Humanities 22, page 107  
Humanities 52, page 108  
Humanities 62, page 108  
Humanities 132, page 109

Library Science 74, page 114  
Library Science 103, page 115  
Library Science 241, page 116

Music 2T, page 120  
Music 5T, page 120  
Music 39, page 118  
Music 41, page 118  
Music 43, page 118  
Music 47, page 119  
Music 49, page 119  
Music 51, page 121  
Music 58, page 119  
Music 86, page 121  
Music 148, page 119

Nursing, Clinical, page 122

Philosophy 1A, page 123  
Philosophy 3A, page 123  
Philosophy 10, page 124  
Philosophy 108, page 124

Public Administration. Administration of Planning, page 137

Public Administration. Administrative Analysis, page 136

Public Administration. Administrative Behavior, page 134

Public Administration. Administrative Responsibility, page 135

Public Administration. Federal Personnel Practices, page 135

Public Administration. Human Relations in Administration, page 136

Public Administration. Performance Evaluation, page 137

Public Administration. Private Law for Public Administrators, page 137

Public Administration. Public Financial Administration, page 135

Scientific and Medical Drawing, page 73

Spanish 17A, page 149

Spanish 17B, page 149

Speech, Beginning Practical, page 150

Speech, Advanced Practical, page 150

Theatre 12, page 151

Theatre 21, page 152

Vocabulary Building, page 154

### *Business Administration*

Accounting 25, page 157

Accounting 55A, page 157

Accounting 105B, page 158

Business Law 158, page 155

Production 150B, page 155

Retail Store Management Problems, page 178

### *Education*

Art Education 18, page 183

Art Education 81, page 183

### *Engineering*

Aeronautical Engineering 9, page 189

Architecture Refresher Course, page 190

Civil Engineering 51, page 193

Civil Engineering 82, page 194

Civil Engineering 112, page 194

Civil Engineering Refresher Course, page 196

Electrical Engineering Refresher Course, page 199

Hydrology 162, page 195

Mathematics 30, page 208

Mathematics 148, page 210

Mathematics 165, page 211

Mathematics 185, page 211

Mathematics 197, page 211

Mechanical Engineering Refresher Course, page 214

### *Physical Education*

Swimming for Small Girls, page 219

## Spring Quarter

### *Arts and Sciences*

Advanced Grammar, page 88

Art 1, page 64

Art 5, page 65

Art 47, page 65

Art 50, page 65

Art 60, page 66

Art 102, page 66

Art 108, page 66

Art 128, page 67

Classics 93, page 75

Classics 193, page 76

Communication 3, page 87

Composition X, page 86

Composition 1, page 87

Composition 2, page 87

Composition 3, page 87

Creative Problem Solving, page 154

Czechoslovakian 3, page 139

Efficient Reading II, page 153

English 39, page 82

English 54, page 82  
English 74, page 83  
English 105, page 83  
English 110, page 83  
English 136, page 84  
English 162, page 84  
English 192, page 85  
English 198, page 85

French 17A, page 93

Geography 115, page 94  
Grammar Review, page 88

History 3, page 98  
History 16, page 99  
History 19, page 99  
History 52, page 100  
History 55, page 101  
History 61, page 101  
History 88, page 101  
History 95, page 102  
History 105B, page 102  
History 117D, page 102  
History 120F, page 103  
History 141D, page 104  
History 142A, page 104  
History 147A, page 104  
Humanities 1, page 105  
Humanities 3, page 106  
Humanities 13, page 107  
Humanities 23, page 107  
Humanities 53, page 108  
Humanities 63, page 109  
Humanities 133, page 109

Library Science 104, page 115  
Library Science 172, page 115  
Library Science 242, page 116

Music 3T, page 120  
Music 6T, page 120  
Music 39, page 118  
Music 42, page 118  
Music 43, page 118  
Music 48, page 119  
Music 49, page 119  
Music 52, page 121  
Music 59, page 119  
Music 87, page 121  
Music 149, page 119

Nursing Unit Administration, page 122

Philosophy 1A, page 123  
Philosophy 3A, page 123  
Philosophy 10, page 124  
Philosophy 53A, page 124  
Philosophy 140, page 124  
Public Administration. Computer Based  
Management, page 136  
Public Administration. Employer-Employee  
Relations in Government, page 136  
Public Administration. Government Purchas-  
ing, page 136  
Public Administration. Human Relations in  
Administration, page 136  
Public Administration. Intergovernmental  
Relations, page 137

Public Administration. Organization and  
Management, page 134  
Public Administration. Problems of Public  
Administration, page 135  
Public Administration. Public Financial Ad-  
ministration, page 135

Scientific and Medical Drawing, page 73  
Spanish 17A, page 149  
Spanish 17B, page 149  
Speech, Beginning Practical, page 150  
Speech, Voice and Diction, page 151

Theatre 11, page 151  
Theatre 12, page 151  
Theatre 34, page 152  
Theatre 114, page 152

Vocabulary Building, page 154

### *Business Administration*

Accounting 26, page 157  
Accounting 55B, page 157  
Accounting 105C, page 158

Business Finance 156, page 155

Industrial Relations 152C, page 155

Retail Sales Promotions, page 179

### *Education*

Art Education 19, page 183  
Art Education 80, page 183

### *Engineering*

Aeronautical Engineering 9, page 189

Civil Engineering 52, page 193  
Civil Engineering 83, page 194  
Civil Engineering 113, page 195

Hydrology 168, page 196

Mathematics 30, page 208  
Mathematics 149, page 210  
Mathematics 166, page 211  
Mathematics 186, page 211  
Mathematics 198, page 211  
Mechanical Engineering 134, page 213

### *Physical Education*

Creative Dance for Boys and Girls, page  
221

Golf for Men, page 223  
Golf for Women, page 221

Scuba for Men and Women, page 223  
Swimming for Boys, page 220  
Swimming for Men, page 223  
Swimming for Small Girls, page 219

Water Safety Instruction, page 222



# MacPhail Extension Center Classes

Classes offered at the MacPhail Extension Center, 1128 LaSalle Avenue, Minneapolis, are listed here. Please do not register using this list alone. Look up the classes you want on the pages referred to in the list.

## Fall Semester

### *Arts and Sciences*

Psychology 1A, page 130

Sociology 1, page 144

Sociology 3, page 145

Speech 5X, page 150

### *Business Administration*

Business Finance 56, page 160

Business Law 58, page 163

Industrial Relations 82, page 165

Quantitative Analysis 5, page 175

Quantitative Analysis 51, page 175

### *Engineering*

Mathematics 11, page 207

## Spring Semester

### *Arts and Sciences*

Political Science 25, page 126

Psychology 1A, page 130

Sociology 1, page 144

Sociology 3, page 145

Speech 6X, page 150

### *Business Administration*

Business Finance 66, page 161

Business Law 58, page 163

Industrial Relations 62, page 164

Industrial Relations 175, page 166

Quantitative Analysis 5, page 175

Quantitative Analysis 51, page 175

### *Engineering*

Mathematics 12, page 207

## Fall Quarter

### *Arts and Sciences*

Art 1, page 64

Art 50, page 65

Composition X, page 86

Composition 1, page 87

Grammar Review, page 88

History 11, page 98

History 14, page 99

Humanities 1, page 105

Music 43, page 118

Music, Enjoyment of, page 120

Music 1T, page 120

Music 4, page 120

### *Education*

Music Education 59, page 188

## Winter Quarter

### *Arts and Sciences*

Composition X, page 86

Composition 1, page 87

Composition 2, page 87

Grammar Review, page 88

History 12, page 98

History 15, page 99

Humanities 2, page 106

Music 43, page 118

Music 2T, page 120

Music 4, page 120

Political Science A, page 126

### *Education*

Music Education 59, page 188

## Spring Quarter

### *Arts and Sciences*

Art 1, page 64  
Art 50, page 65

Composition X, page 86  
Composition 1, page 87  
Composition 2, page 87  
Composition 3, page 87

Grammar Review, page 88

History 13, page 98  
History 16, page 99  
Humanities 3, page 106

Music 43, page 118  
Music, Enjoyment of, page 120  
Music 3T, page 120  
Music 4, page 120

Political Science B, page 126

Theatre 11, page 151

### *Education*

Music Education 59, page 188

## Northwest Suburban Extension Center Classes

Classes offered at the Robbinsdale Senior High School, 3730 Toledo Avenue North, are listed here. Please do not register using this list alone. Look up the classes you want on the pages referred to in the list.

### Fall Semester

#### *Arts and Sciences*

English 21, page 81

### Spring Semester

#### *Arts and Sciences*

English 23, page 81

### Fall Quarter

#### *Arts and Sciences*

Composition X, page 86  
Composition 1, page 87

Economics 1, page 77  
English 37, page 82  
English 55, page 82  
English 72, page 83

General Arts, page 93

History 1, page 98  
History 20, page 100  
History 53, page 101  
Humanities 1, page 105

Political Science A, page 126  
Psychology 1, page 130

Vocabulary Building, page 154

#### *Business Administration*

Accounting 24, page 157  
Accounting 105A, page 158

#### *Education*

Child Psychology 80, page 184

#### *Engineering*

Mathematics 12, page 207  
Mathematics 23, page 208

### Winter Quarter

#### *Arts and Sciences*

Composition X, page 86  
Composition 2, page 87

Economics 2, page 77  
English 38, page 82  
English 56, page 82  
English 73, page 83

General Arts, page 93

History 2, page 98  
History 21, page 100  
History 54, page 101  
Humanities 2, page 106

Political Science B, page 126  
Psychology 2, page 130

#### *Business Administration*

Accounting 25, page 157  
Accounting 105B, page 158

#### *Engineering*

Mathematics 21A, page 207  
Mathematics 31, page 208

## Spring Quarter

### *Arts and Sciences*

Composition X, page 86  
Composition 1, page 87  
Composition 2, page 87  
Composition 3, page 87

Economics 66, page 79  
English 39, page 82  
English 74, page 83

General Arts, page 93

History 3, page 98  
History 22, page 100  
History 55, page 101  
Humanities 3, page 106

Political Science 25, page 126

### *Business Administration*

Accounting 26, page 157  
Accounting 105C, page 158

Business Law 58, page 163

### *Education*

Child Psychology 80, page 184

### *Engineering*

Mathematics 22A, page 208  
Mathematics 32, page 209

# St. Paul General Extension Center Classes

*Classes offered at the St. Paul General Extension Center, at Ninth and Exchange, are listed here. Please do not register using this list alone. Look up the classes you want on the pages referred to in the list.*

## Fall Semester

### *Arts and Sciences*

- Economics 1, page 77
- Economics 2, page 77
- Efficient Reading, page 153
- History 23, page 100
- How to Study, page 153
- Political Science 1, page 128
- Psychology 1, page 130
- Psychology 2, page 130
- Sociology 1, page 144
- Sociology 53, page 145
- Writing Projects, page 88

### *Business Administration*

- Business English, Review of, page 159
- Business Law 58, page 163
- Business Law 78, page 163

- Industrial Relations 52, page 164
- Insurance 53, page 167
- Insurance: CLU Part I, page 170
- Marketing 57, page 173
- Quantitative Analysis 5, page 175
- Salesmanship, page 179
- Supervision I, page 166
- Supervision II, page 167

### *Education*

- Child Psychology 80, page 184

### *Engineering*

- Mathematics 11, page 207
- Mathematics 12, page 207
- Mathematics 21A, page 207
- Mathematics 22, page 208
- Mathematics 23, page 208

## Spring Semester

### *Arts and Sciences*

- Economics 1, page 77
- Economics 2, page 77
- Efficient Reading, page 153
- History 24, page 100
- How to Study, page 153
- Music 1A, page 120
- Political Science 2, page 126
- Psychology 1, page 130
- Psychology 2, page 130
- Sociology 3, page 145
- Sociology 52, page 145
- Writing Projects, page 88

### *Business Administration*

- Accounting 24-25-26, page 157
- Business Correspondence, page 160
- Business Law 58, page 163
- Business Law 78, page 163

- Industrial Relations 52, page 164
- Industrial Relations 72, page 165
- Insurance: CLU Part I, page 170
- Management 70, page 172
- Production 50, page 174
- Quantitative Analysis 5, page 175
- Salesmanship, page 179
- Supervision I, page 166
- Supervision II, page 167
- Transportation 54, page 179

### *Education*

- Child Psychology 80, page 184

### *Engineering*

- Mathematics 11, page 207
- Mathematics 12, page 207
- Mathematics 21A, page 207
- Mathematics 22A, page 208
- Mathematics 23, page 208
- Mathematics 31, page 208

## Fall Quarter

### *Arts and Sciences*

Composition X, page 86  
Composition 1, page 87

History 1, page 98  
History 53, page 101  
Humanities 1, page 105  
Humanities 21, page 107

Philosophy 3A, page 123

Vocabulary Building, page 154

### *Business Administration*

Accounting 24, page 157  
Accounting 105A, page 158

### *Education*

Art Education 18, page 183

## Winter Quarter

### *Arts and Sciences*

Composition X, page 86  
Composition 1, page 87  
Composition 2, page 87

History 2, page 98  
History 54, page 101  
Humanities 2, page 106  
Humanities 22, page 107

Philosophy 2A, page 123

Vocabulary Building, page 154

### *Business Administration*

Accounting 25, page 157  
Accounting 105B, page 158

### *Education*

Art Education 19, page 183

## Spring Quarter

### *Arts and Sciences*

Composition 2, page 87  
Composition 3, page 87

History 3, page 98  
History 55, page 101  
Humanities 3, page 106  
Humanities 23, page 107

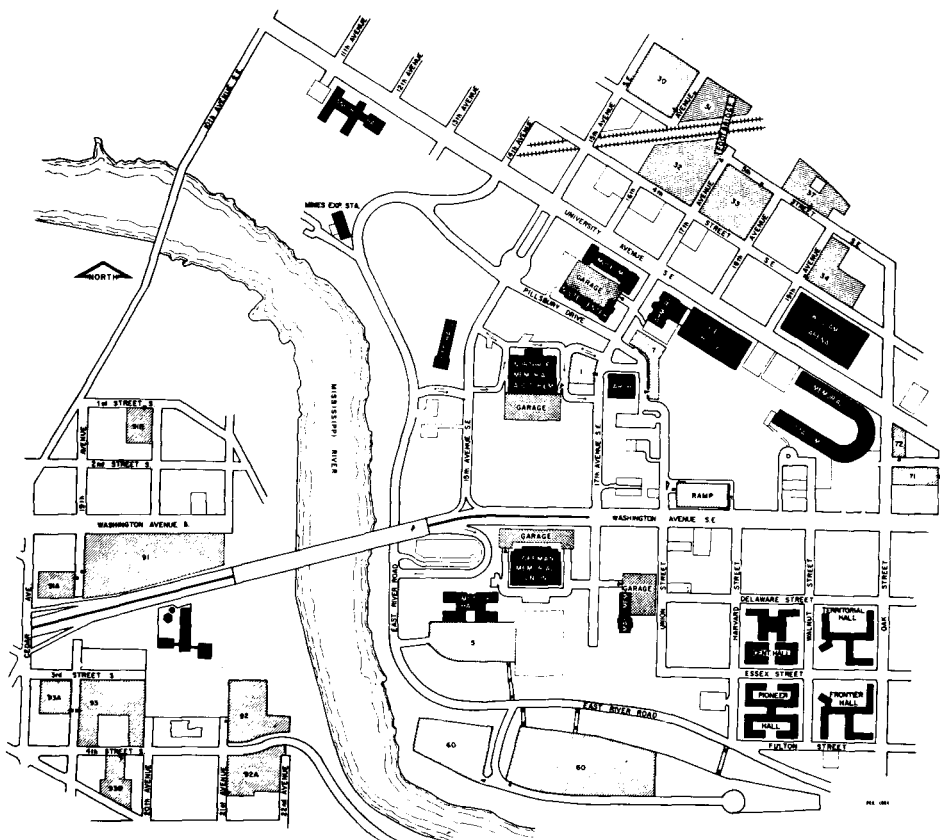
Philosophy 1A, page 123

### *Business Administration*

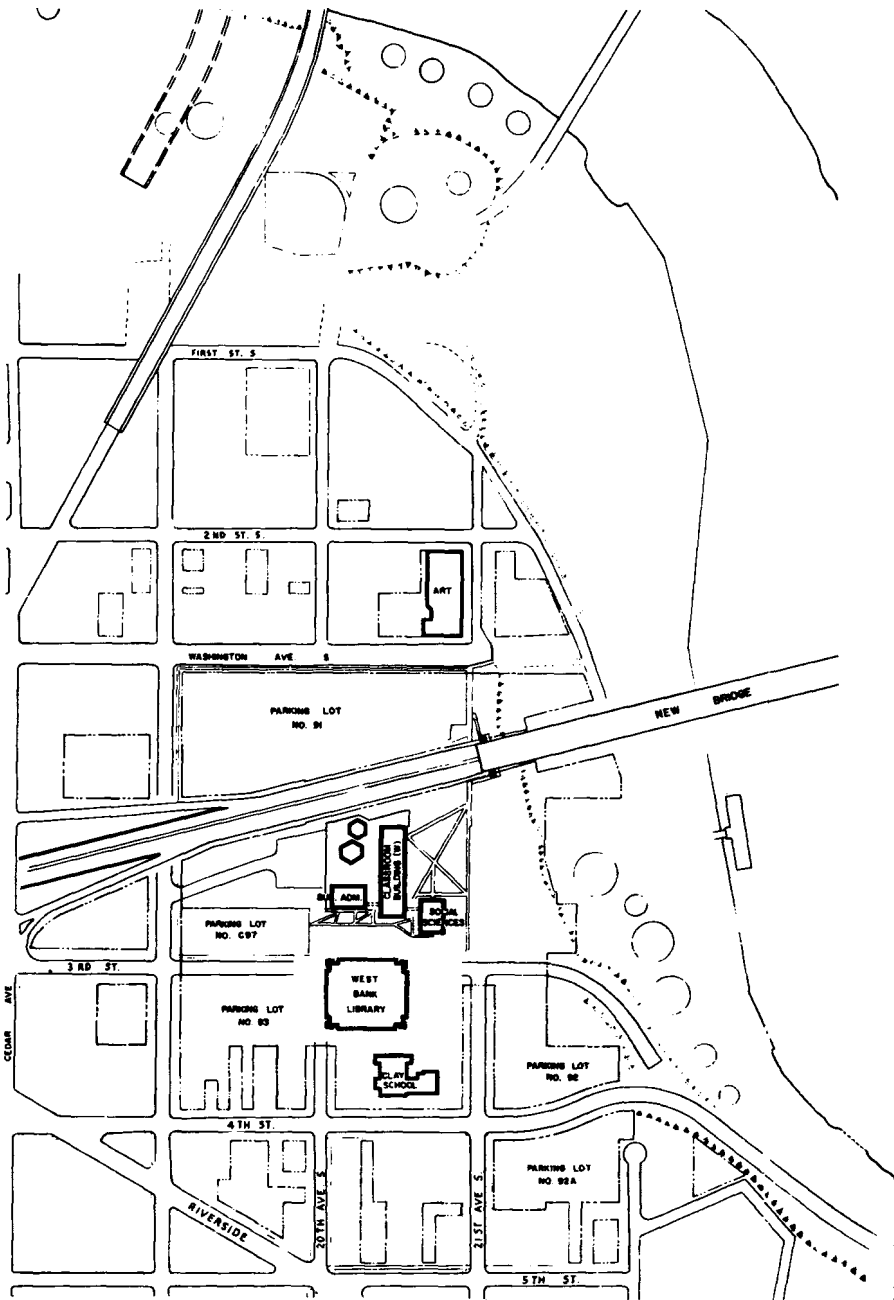
Accounting 26, page 157  
Accounting 105C, page 158

### *Education*

Art Education 17, page 182



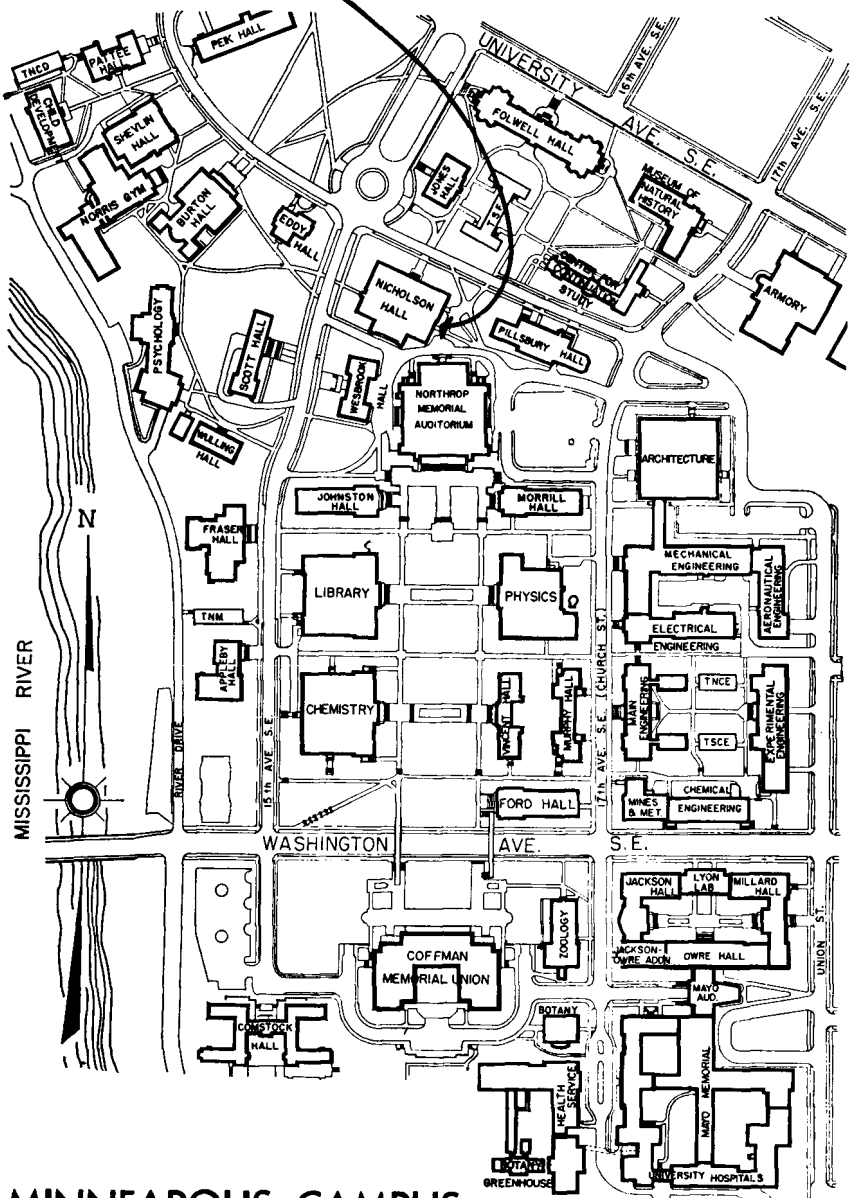
## PARKING FACILITIES (Minneapolis Campus)



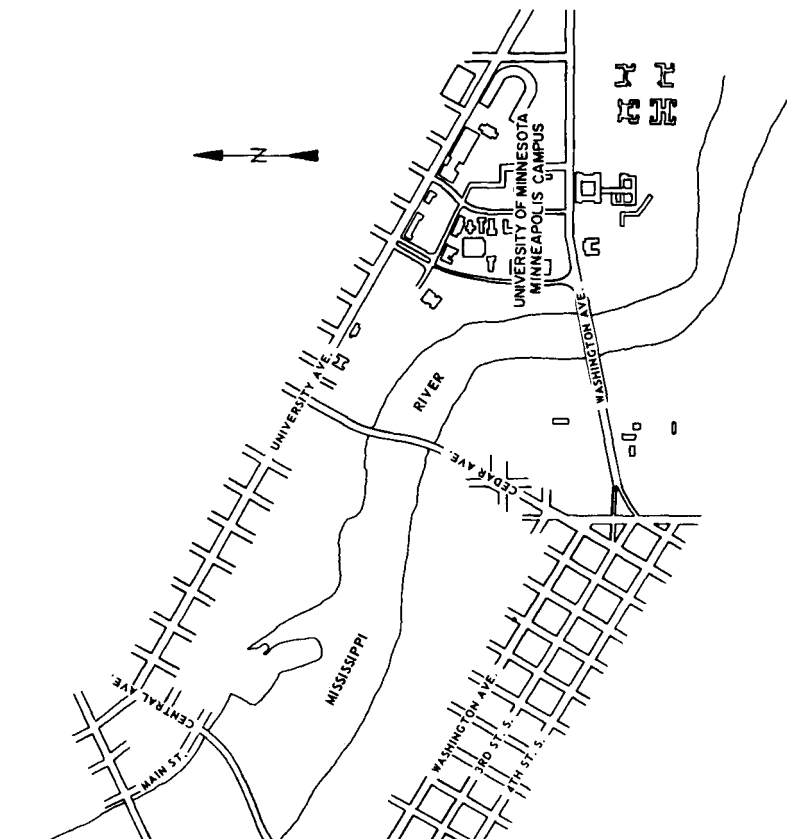
# MINNEAPOLIS CAMPUS (WEST)



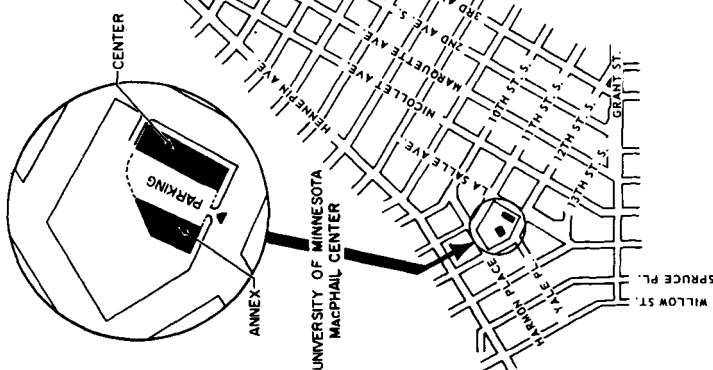
The MAIN OFFICE of the GENERAL EXTENSION DIVISION is located in NICHOLSON HALL. Students should use entrance immediately behind NORTHROP AUDITORIUM.

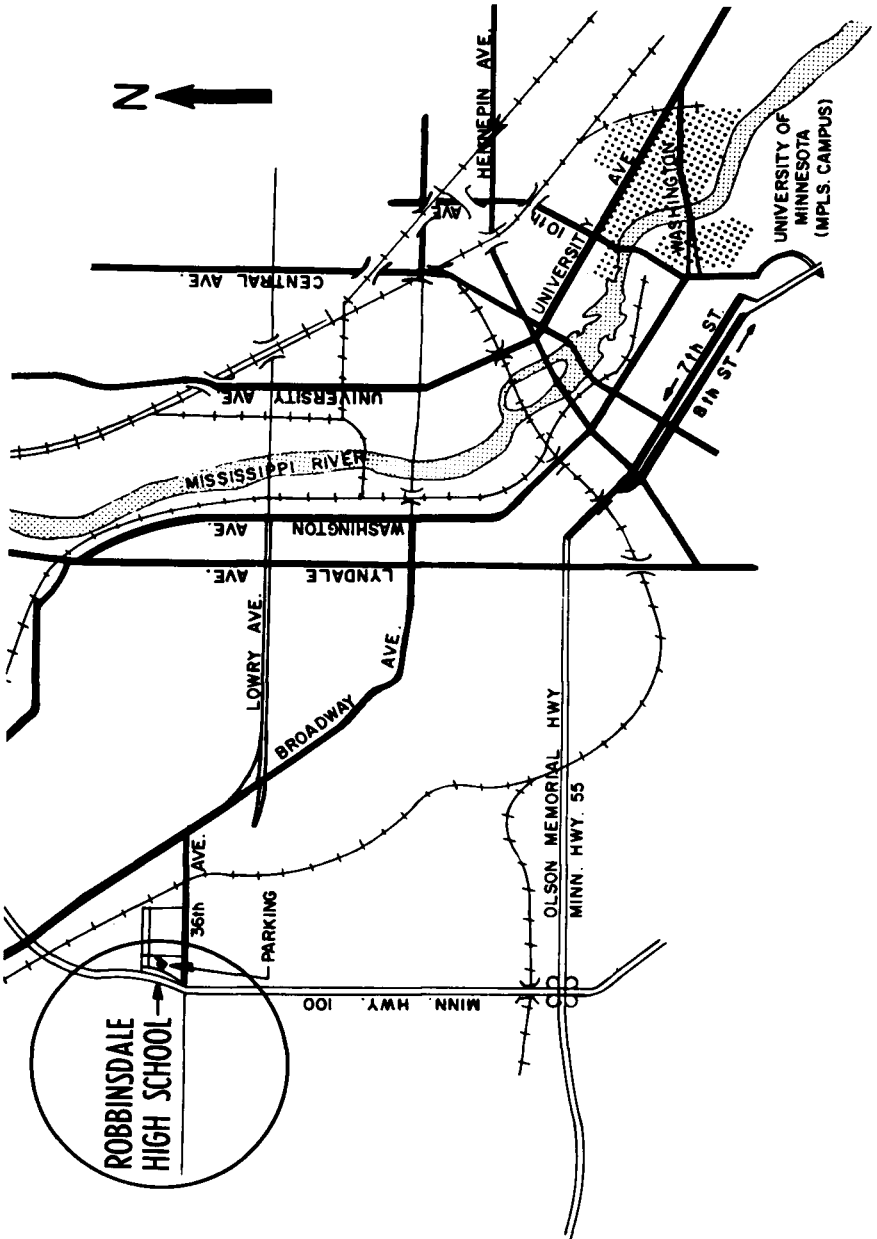


# MINNEAPOLIS CAMPUS (EAST)

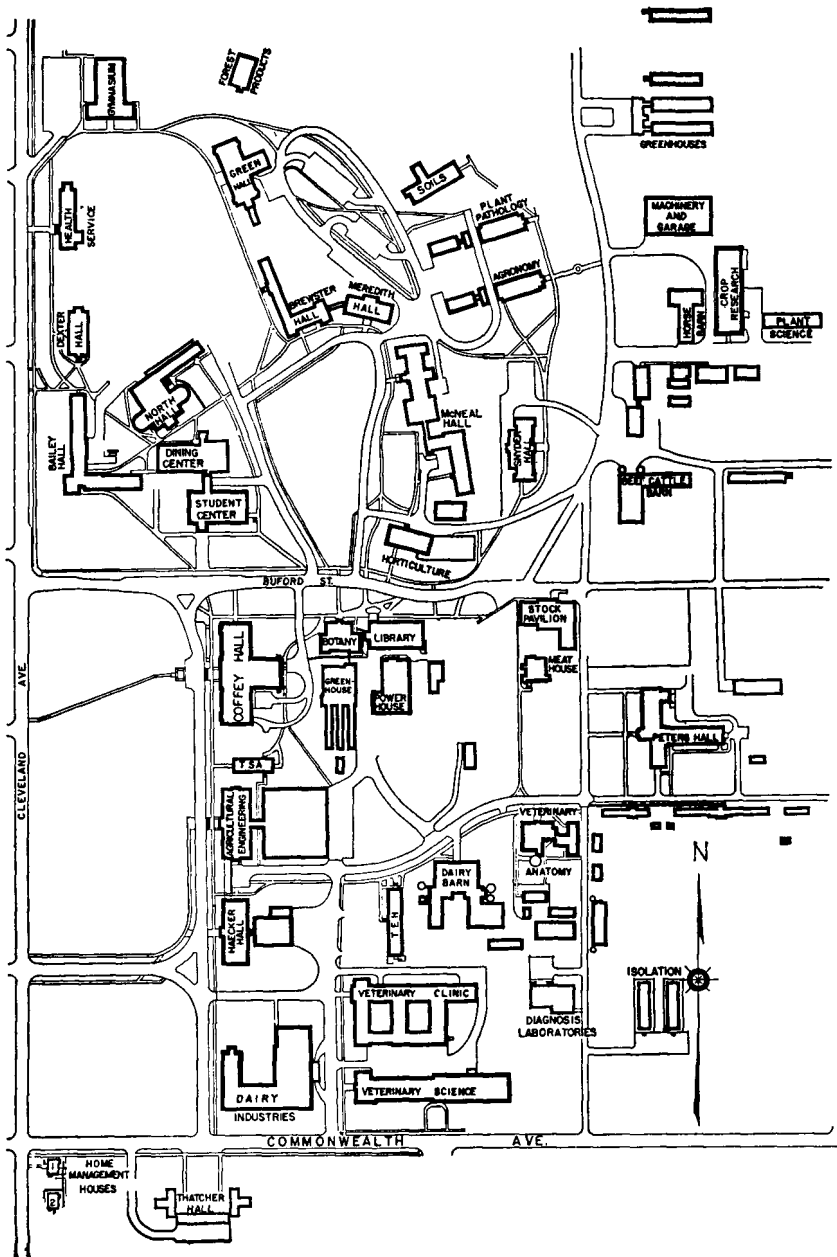


## McPHAIL CENTER (Minneapolis)

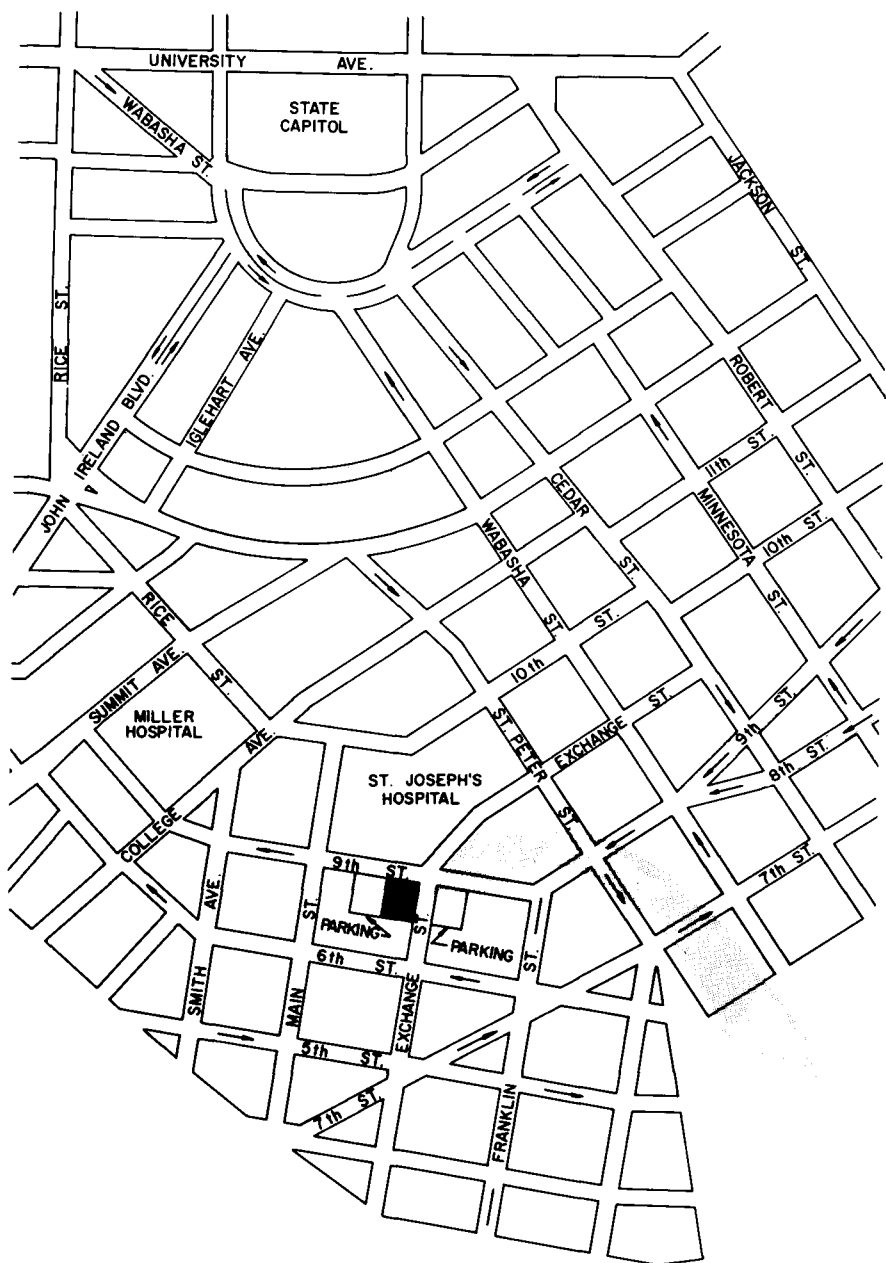




**NORTHWEST SUBURBAN EXTENSION CENTER  
(Use South Entrance)**



# ST. PAUL CAMPUS



## ST. PAUL EXTENSION CENTER

# Index

	Page		Page
Accounting .....	155	Cancellation of Classes .....	21
Accounting, Governmental .....	135	Cartography .....	94
Accounting, Special Examinations..	156	Ceramics .....	70
Accounting Certificates .....	35	Certificates, Extension .....	30
Acting .....	152	Certification for Teachers .....	182
Additions to Registration .....	20	Chartered Financial Analysts .....	162
Administrative Analysis .....	136	Chartered Property Casualty	
Administrative Practices .....	172	Underwriters Curriculum .....	169
Admission Requirements .....	10	Chemistry .....	191
Adolescent Psychology .....	185	Child Psychology .....	184
Advertising .....	112	Chinese .....	77
Advertising, Psychology of .....	132	Chorus, University .....	118
Advising and Counseling .....	25	Civil Engineering .....	193
Aeronautics .....	189	Class Attendance .....	10
Agriculture .....	60	Classics .....	75
Air Pilots' Ground School .....	189	Coffman Memorial Union .....	27
Anthropology .....	62	Cold War Veterans (Chapter 34,	
Arabic .....	116	Title 38, U.S. Code) .....	24
Archaeology .....	62	College of Life Underwriters	
Architecture .....	190	Curriculum .....	170
Armed Forces Members,		Color Photography .....	125
Registration of .....	23	Color, Use of .....	73
Art .....	63	Commercial Art .....	71
Art, Primitive .....	63	Committee on Student Scholastic	
Art, Studio .....	68	Standing .....	11
Art Education .....	182	Communication .....	87
Art History .....	64	Community Workshops .....	183
Assessment and Appraisal		Composition .....	85
Administration Certificate .....	36	Composition, Freshman .....	87
Astronomy .....	191	Composition, Preparatory .....	86
Athletic Facilities .....	26	Computers .....	176
Athletic Tickets .....	26	Continuing Education of Women,	
Audio-Visual Education .....	186	Plan for .....	225
Audio-Visual Extension Service .....	228	Convocations .....	27
Auditor Status .....	10	Corporate Standard Data .....	203
Biology .....	74	Correspondence Study .....	224
Birds of Minnesota .....	74	Counseling Services .....	25
Bookstores .....	27	Course Numbering .....	11
Building		Creative Dance .....	221
Abbreviations .....	inside back cover	Creative Problem Solving .....	154
Bulletins, University .....	53	Credits, Meaning of .....	11
Bus Routes and Parking Facilities..	239	Credits and Collections .....	173
Business Administration Certificates	37	Criminology .....	145
Business Classes .....	155	Culture .....	63
Business English .....	159	Curriculum and Instruction Courses	186
Business Finance .....	160	Czechoslovakian .....	139
Business Law .....	162	Dance .....	221
Business Reports .....	160	Danish .....	138
Calendar .....	2	Data Processing Techniques .....	158
Campus Maps .....	240	Dating and Courtship .....	89

	Page		Page
Day School Students .....	12	Geology and Geophysics .....	201
Deformable Body Mechanics .....	215	German .....	95
Degree Programs .....	53	Golf .....	221
Discontinued Classes .....	22	Government .....	126
Diving .....	221	Grade Point Average .....	14
Drama .....	151	Grade Reports .....	16
Drawing, Engineering (Graphics) .....	200	Grades .....	13
Drawing, General .....	69	Graduate Credit .....	14
Drawing, Scientific and Medical .....	73	Graduate Programs .....	59
Dynamics .....	213	Graduate Student Language Courses	
East and South Asian Languages .....	76	French .....	93
Economics .....	77	German .....	97
Education Courses .....	182	Russian .....	141
Educational Psychology .....	187	Spanish .....	149
Efficient Reading .....	153	Grammar Review .....	88
Electrical Engineering .....	196	Graphic Computation .....	201
Electrical Engineering,		Graphic Processes .....	112
Registering for .....	197	Graphics, Engineering .....	200
Electronics .....	198	Greek .....	76
Engineering Courses .....	189	Greek Mythology .....	75
Engineering English .....	199	Ground School .....	189
Engineering Graphics .....	200	Handicapped Students, Aids for .....	28
Engineering Science and		Health .....	138
Technician Certificates .....	44	Heat Transmission .....	213
English .....	81	History .....	98
Business .....	155	Holidays .....	2
Composition .....	85	Home Design and Planning .....	73
Engineering .....	189	Home Economics .....	61
Foreign Students .....	88	Horticultural Science .....	60
Freshman .....	87	Hours, Office .....	6
Grammar .....	88	How to Study .....	153
Literature .....	81	Humanities .....	105
Placement Tests .....	86	Hydromechanics .....	195
Ethics .....	123	Illustration, Technical .....	201
Examination for Credit .....	12	Income Tax Accounting .....	159
Extension Departments .....	224	Incomplete Grades .....	13
Family Studies .....	89	Industrial Engineering .....	202
Fees .....	13	Industrial Management .....	203
Finance, Business .....	160	Industrial Relations .....	164
Financial Administration .....	135	Industrial Relations Certificate .....	39
Financial Assistance for Students .....	28	Instrumentation and Automatic	
Fluid Mechanics .....	213	Control .....	214
Folk Music .....	121	Insurance .....	167
Football Tickets .....	26	Interdisciplinary Programs .....	109
Foreign-Born, Classes for .....	27	Interior Design .....	71
Foreign Students, English for .....	88	Interior Design Certificate .....	32
FORTTRAN, Programming		Inventory and Production Control .....	203
Computers .....	176	Investments .....	161
French .....	90	Italian .....	110
Freshman English .....	87	ITM (Mathematics) .....	204
Gardening .....	60	Japanese .....	77
General Arts .....	93	Journalism .....	111
General Chemistry .....	191	Juvenile Delinquency .....	145
General Information .....	10		
Geography .....	94		

	Page		Page
Labor-Management Courses .....	166	Minnesota Plan for Continuing	
Landscape Planning .....	61	Education of Women .....	225
Languages		Motion and Time Study .....	203
Arabic .....	116	Municipal Law and Administration	134
Chinese .....	77	Music .....	117
Czechoslovakian .....	139	Applied .....	117
Danish .....	138	Group Performance .....	118
English .....	81	Theory, History, and Literature..	120
French .....	90	Music Education .....	187
German .....	95	Mythology .....	75
Greek .....	76		
Hebrew .....	116	Natural History .....	74
Italian .....	110	Neighborhood Seminars .....	225
Japanese .....	77	Non-Residents .....	15
Latin .....	76	Northwest Suburban Extension	
Norwegian .....	138	Center, Courses Offered at .....	235
Polish .....	140	Northwest Suburban Extension	
Portuguese .....	129	Center (Map) .....	243
Russian .....	140	Norwegian .....	138
Serbo-Croatian .....	141	Nursing .....	122
Spanish .....	146	Nutrition .....	61
Swedish .....	139		
Late Registrations and Additions .....	20	Office Hours, Registration .....	7
Latin .....	76	Office Hours, Regular .....	6
Law, Municipal .....	134	Office Management .....	174
Law, Real Estate .....	163	Offices, Evening Classes .....	5
Lecture Series .....	224	Opera, Introduction to .....	121
Legal Problems .....	163	Opera Production .....	119
Liberal Arts Certificate .....	31	Operational Methods for Linear	
Library, Use of University .....	28	Systems .....	209
Library Science .....	114	Operations Research,	
Limited Classes .....	9	Introduction to .....	204
Literature, English .....	81	Organic Chemistry .....	192
Loan Fund, Student .....	28	Oriental Languages .....	76
Logic .....	123	Other Educational Services of the	
		General Extension Division .....	224
Machine Design .....	213	Painting .....	71
Machine Tool Fundamentals .....	214	Parenthood .....	90
MacPhail Extension Center,		Parking and Bus Routes (Map) .....	239
Courses Offered at .....	233	Personal Orientation .....	153
MacPhail Extension Center (Map) .....	242	Personnel Administration .....	134
Mail Registrations .....	18	Philosophy .....	123
Management .....	172	Photography .....	68
Management of Administrative		Photography, Color .....	125
Services Certificates .....	41	Physical Education .....	219
Maps of Campuses and GED		Physics .....	216
Centers .....	240	Placement Test, Accounting .....	156
Marketing .....	173	Placement Test, English .....	86
Marriage .....	89	Planning, Administration of .....	137
Mass Communication .....	111	Plastics Technology .....	214
Master of Business Administration .....	59	Poetry .....	83
Mathematics .....	204	Police Administration Certificate .....	33
Mechanical Engineering .....	212	Polish .....	140
Mechanics and Materials .....	215	Political Science .....	125
Metallurgy .....	216	Portuguese .....	129
Middle Eastern Languages .....	116	Preparatory Composition .....	86
Military Deferments .....	28		
Military Personnel .....	23		



	Page		Page
Prerequisites .....	15	Sculpture .....	70
Printmaking .....	69	Secretarial Certificate .....	43
Private Music Lessons .....	117	Secretarial Procedures .....	174
Probation, Student .....	16	Selling and Retailing .....	178
Production .....	174	Semester Dates .....	2
Production Control .....	203	Seminars for Men .....	225
Production Management .....	174	Seminars, Neighborhood .....	225
Programming .....	176, 210	Seminars for Women .....	225
Property and Casualty Insurance		Serbo-Croatian .....	141
Curriculum .....	168	Shakespeare .....	82
Proseminars, Humanities .....	109	Slavic Languages .....	139
Psychology .....	130	Slide Rule .....	200
Public Administration .....	133	Social Science .....	141
Public Administration Certificate .....	34	Social Work .....	143
Public Finance .....	135	Sociology .....	144
Public Health .....	138	Soil Mechanics .....	193
Public Relations .....	113	Spanish .....	146
Quality Control .....	204	Special Classes and Terms .....	4
Quantitative Analysis .....	175	Special Services for Students .....	25
Quarter Dates .....	3	Speech .....	150
Reading, Efficient .....	153	Statics .....	215
Real Estate .....	177	Statistical Quality Control .....	204
Refresher Courses		Statistics	
Architecture .....	190	Business .....	175
Chemistry .....	193	Education .....	187
Civil Engineering .....	196	Engineering .....	204
Electrical Engineering .....	199	Stock Markets .....	161
Mathematics .....	212	Student Counseling Bureau,	
Mechanical Engineering .....	214	Services of .....	25
Mechanics and Materials .....	215	Studio Art .....	68
Physics .....	218	Study Skills .....	152
Refund Policy .....	22	Supervision .....	166
Registration Hours .....	7	Surveying .....	194
Registration Procedures .....	17	Swedish .....	139
Religion .....	124	Swimming .....	219
Reports on Grades .....	16	Symbols, Explanation of .....	15
Reservations for Limited Classes .....	9	Symphony Tickets .....	28
Residence Requirements .....	12	Tabulating Equipment Classes .....	158
Retailing and Selling .....	178	Teaching Certificates .....	182
Rhetoric .....	153	Technical Sciences .....	189
Romance Languages		Technology Classes .....	189
French .....	90	Television Courses .....	16
Italian .....	110	Theatre Arts .....	151
Portuguese .....	129	Thermodynamics .....	213
Spanish .....	146	Tickets, Athletic, Symphony,	
Russian .....	140	Theatre, and Others .....	26, 28, 29
St. Paul Campus (Map) .....	244	Transcripts (Grade Reports) .....	16
St. Paul Extension Center,		Transferring Classes .....	21
Courses Offered at .....	237	Transferring, Procedures .....	17, 21
St. Paul Extension Center (Map)...	245	Transportation Courses .....	179
Sales Management .....	173	Tuition and Fees .....	13
Salesmanship .....	179	Typography .....	112
Scandinavian Languages .....	138	Union, Use of Student .....	27
Scuba .....	223	Upper Division, Eligibility for .....	17

	Page		Page
Value Engineering .....	214	Water Safety Instruction .....	222
Veterans, Cold War (Chapter 34, Title 38, U.S. Code) .....	24	West Bank Campus (Map) .....	240
Veterans' Information .....	23	Women, Continuing Education of..	225
Veterinary Medicine .....	61	Work Load, Student .....	20
Vocabulary Building .....	154	World Politics .....	126
Vocational Counseling and Tests .....	25	Writing, Technical .....	199
Vocational Development .....	131	Writing Classes .....	86, 87, 88

Before completing the card on the opposite page, be sure to read the section on "Registration Forms" on page 18 of the Bulletin.

## BUILDING ABBREVIATIONS

- A, Armory  
AE, Aeronautical Engineering  
AgEng (StP), Agricultural Engineering  
AH, Appleby Hall  
Arch, Architecture  
ArtB(W), Art Building (2020 Washington Avenue South)  
BA, Business Administration Building (West)  
Bo, Botany  
Bu, Burton Hall  
C, Chemistry  
CB, Classroom Building (West)  
CD, Child Development  
CH, Cooke Hall  
ChE, Chemical Engineering  
CMU, Coffman Memorial Union  
CofH (StP), Coffey Hall  
E, Main Engineering  
EdH, Eddy Hall  
EE, Electrical Engineering  
Ex, Experimental Engineering  
FolH, Folwell Hall  
ForH, Ford Hall  
FraH, Fraser Hall  
HolB, Holman Building (2035 University Avenue)  
Hr (StP), Horticulture  
J, Jones Hall  
JacH, Jackson Hall  
JohH, Johnston Hall  
Lib, Walter Library  
MacPhail Center, MacPhail Extension Center (1128 LaSalle Street, Minneapolis)  
Mayo, Mayo Memorial  
McNH (StP), McNeal Hall  
ME, Mechanical Engineering  
MH, Millard Hall  
MinMet, Mines and Metallurgy  
MMA, Mayo Memorial Auditorium  
MNH, Museum of Natural History (Auditorium)  
MurH, Murphy Hall  
MusEd, Music Education  
NGW, Norris Gymnasium for Women  
NH, Nicholson Hall  
NMA, Northrop Memorial Auditorium  
Owre, Owre Hall  
P, Pillsbury Hall  
PeikH, Peik Hall  
Ph, Physics  
Psy, Psychology  
Pt, Pattee Hall  
ScH, Scott Hall  
SciB, Science Classroom Building  
SocSci, Social Science Building (West)  
StP Ext Center, Saint Paul Extension Center (9th and Exchange)  
TNCD, Temporary, North of Child Development  
TSF, Temporary, South of Folwell  
VetC (StP), Veterinary Clinic  
VH, Vincent Hall  
WeH, Wesbrook Hall  
WuH, Wulling Hall  
Z, Zoology

# UNIVERSITY OF MINNESOTA

## MacPHAIL CENTER

General Extension Division

Twelfth Street and LaSalle Avenue, Minneapolis

The General Extension Division, University of Minnesota, is pleased to announce the establishment of a new center with classroom facilities in downtown Minneapolis to be known as the MacPhail Center.

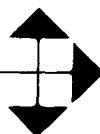
In March of 1966, the MacPhail School and College of Music, after 60 years of musical heritage, was merged with the University of Minnesota. The result of this action will be the co-ordinating of mutual aims and operations and the strengthening of music and music education in Minnesota. The MacPhail Center for the Performing Arts will continue to provide preparatory and continuing education in music and the performing arts for children, adults, and professional musicians.

The building, known as the University of Minnesota MacPhail Center, contains 120 pianos, 4 organs, 70 studios, and an auditorium. Open from 8:30 a.m. to 10 p.m., Monday to Friday, and 8:30 a.m. to 6 p.m. on Saturday, the center offers convenient after-school or after-working-hours appointments with the 100 teachers of the staff. It is open to anyone interested in music, whether as a hobby or a profession. There are no age limitations for lessons. Information or an appointment for teachers may be had by telephoning 332-4424.

Instruction is offered in the following areas: piano, organ, voice, vocal coaching and accompaniment, choral conducting, piano tuning, piano pedagogy, eurhythmics, dance, and all band and orchestral instruments. Courses in self-expression and dramatic art include, for adults, instruction in voice, drama, and effective speech; and for children, children's theatre and dramatics.

The General Extension Division of the University of Minnesota, as part of its responsibility for educational programming at the MacPhail Center, will offer also a variety of classes, both credit and noncredit, from the regular University curriculum.

Please refer to the enclosed supplement for the MacPhail Center schedule of evening classes to be taught during the academic year 1966-67. For further information about MacPhail Center evening classes, call 332-0624.



# Supplement to the Bulletin of the University of Minnesota, Issue of May 15, 1966, General Extension Division

## SCHEDULE OF CLASSES AT MACPHAIL CENTER FOR 1966-67

We are pleased to announce the classes to be offered at our new, University of Minnesota MacPhail Center, 1128 LaSalle Avenue, downtown Minneapolis.

In March of 1966, the MacPhail School and College of Music, after 60 years of musical heritage, was merged with the University of Minnesota. The result of this action will be the co-ordinating of mutual aims and operations *and the strengthening of music and music education in Minnesota*. The MacPhail Center for the Performing Arts will continue to provide preparatory and continuing education in music and the performing arts for children, adults, and professional musicians.

The building, known as the University of Minnesota MacPhail Center, contains 120 pianos, 4 organs, 70 studios, and an auditorium. Open from 8:30 a.m. to 10:00 p.m., Monday to Friday, and 8:30 a.m. to 6:00 p.m. on Saturday, the center offers convenient after-school or after-working-hours appointments with the 100 teachers of the staff. It is open to anyone interested in music, whether as a hobby or a profession. There are no age limitations for lessons. Information or an appointment for teachers may be had by telephoning 332-4424.

Instruction is offered in the following areas: piano, organ, voice, vocal coaching and accompaniment, choral conducting, piano tuning, piano pedagogy, eurhythmics, dance, and all band and orchestral instruments. Courses in self-expression and dramatic art include, for adults, instruction in voice, drama and effective speech, and for children, children's theatre, and dramatics.

The General Extension Division of the University of Minnesota, as part of its responsibility for educational programming at the MacPhail Center, will offer also a variety of classes, both credit and noncredit, from the regular University curriculum.

For further information about MacPhail Center evening classes, call 332-0624.

- I. The following classes *have been added* since our Bulletin was printed. Please refer to the class descriptions and prerequisites on the pages indicated. You may register for these classes at all Extension offices during the registration dates and hours listed on page 7 of the Bulletin.

#### FALL AND SPRING SEMESTERS

##### Arts and Sciences

**Econ 1-2.† Principles of Economics.** 3 degree credits each semester. (See class description and prerequisites, page 77)

###### *Fall Semester*

1 M 6:20-8:00, MacPhail Center 216  
(Limited to 35 students\*)  
1 M 8:15-9:50, MacPhail Center 216  
(Limited to 35 students\*)

###### *Spring Semester*

2 M 6:20-8:00, MacPhail Center 216  
(Limited to 35 students\*)  
2 M 8:15-9:50, MacPhail Center 216  
(Limited to 35 students\*)

**Psy 1-2.† General Psychology.** 3 degree credits each semester. \$33 plus \$1 materials fee each semester. (See class description and prerequisites, page 130)

###### *Fall Semester*

1 Th 6:20-8:00, MacPhail Center Annex  
1

###### *Spring Semester*

2 Th 6:20-8:00, MacPhail Center Annex  
1

#### FALL, WINTER, AND SPRING QUARTERS

##### Arts and Sciences

**Comm 1-2-3. Communication.** 4 degree credits each quarter. \$44 each quarter. (See class description and prerequisites, page 87)

###### *Fall Quarter*

1 T 6:00-9:20, MacPhail Center 216 (Limited to 50 students\*)

###### *Winter Quarter*

2 T 6:00-9:20, MacPhail Center 216 (Limited to 50 students\*)

###### *Spring Quarter*

3 T 6:00-9:20, MacPhail Center 216 (Limited to 50 students\*)

**Hist 1-2-3. Civilization of the Modern World.** 3 degree credits each quarter. \$33 each quarter. (See class description and prerequisites, page 98)

###### *Fall Quarter*

1 T 6:20-8:50, MacPhail Center Annex 3

###### *Winter Quarter*

2 T 6:20-8:50, MacPhail Center Annex 3

###### *Spring Quarter*

3 T 6:20-8:50, MacPhail Center Annex 3

---

All footnotes are explained on page 15 of the Bulletin.

Hist 20-21-22. American History. 3 degree credits each quarter. \$33 each quarter. (See class description and prerequisites, page 100)

**Fall Quarter**

20 Th 6:20-8:50, Mac-  
Phail Center An-  
nex 3

**Winter Quarter**

21 Th 6:20-8:50, Mac-  
Phail Center An-  
nex 3

**Spring Quarter**

22 Th 6:20-8:50, Mac-  
Phail Center An-  
nex 3

Phil 1A. Problems of Philosophy. 3 degree credits. \$33. (See class description and prerequisites, page 123)

**Winter Quarter**

W 6:20-8:50, MacPhail  
Center Annex 3

**Spring Quarter**

W 6:20-8:50, MacPhail  
Center Annex 3

Phil 3A. Ethics. 3 degree credits. \$33. (See class description and prerequisites, page 123)

**Fall Quarter**

W 6:20-8:50, MacPhail  
Center Annex 3

## Business Administration

Acct 24-25-26. Principles of Accounting. 3 degree credits each quarter, \$Acct 55A-B. \$33 each quarter. (See class description and prerequisites, page 157)

**Fall Quarter**

24 TTh 6:00-7:15, Mac-  
Phail Center 219  
(Limited to 35  
students\*)

**Winter Quarter**

25 TTh 6:00-7:15, Mac-  
Phail Center 101  
(Limited to 35  
students\*)

**Spring Quarter**

26 TTh 6:00-7:15, Mac-  
Phail Center 101  
(Limited to 35  
students\*)

24 TTh 7:30-8:45, Mac-  
Phail Center 219  
(Limited to 35  
students\*)

25 TTh 7:30-8:45, Mac-  
Phail Center 101  
(Limited to 35  
students\*)

26 TTh 7:30-8:45, Mac-  
Phail Center 101  
(Limited to 35  
students\*)

### BOOKSTORE—MACPHAIL CENTER

For the convenience of our General Extension Division students in securing textbooks and supplies, the following evening schedule has been established at the MacPhail Center by the University Bookstores:

5:30 to 8 p.m. Monday through Thursday for the first week of Fall, Winter, and Spring Quarters, and Fall Semester.

5:30 to 8 p.m. Monday through Thursday for the first week of Spring Semester.



II. All classes listed below *are printed in our Bulletin*. On the page indicated you will find the descriptive title, number of credits, tuition and fees, class description and prerequisites, day, time, and term the respective classes are to be taught. You may register for these classes at all Extension offices during the registration dates and hours listed on page 7 of the Bulletin.

## **Fall Semester**

### ***Arts and Sciences***

Psychology 1A, page 130  
Sociology 1, page 144  
Sociology 3, page 145  
Speech 5X, page 150

### ***Business Administration***

Business Finance 56, page 160  
Business Law 58, page 163  
Industrial Relations 82, page 165  
Quantitative Analysis 5, page 175  
Quantitative Analysis 51, page 175

### ***Engineering***

Mathematics 11, page 207

## **Spring Semester**

### ***Arts and Sciences***

Political Science 25, page 126  
Psychology 1A, page 130  
Sociology 1, page 144  
Sociology 3, page 145  
Speech 6X, page 150

### ***Business Administration***

Business Finance 66, page 161  
Business Law 58, page 163  
Industrial Relations 62, page 164  
Industrial Relations 175, page 166  
Quantitative Analysis 5, page 175  
Quantitative Analysis 51, page 175

### ***Engineering***

Mathematics 12, page 207

## **Fall Quarter**

### ***Arts and Sciences***

Art 1, page 64  
Art 50, page 65  
Composition X, page 86  
Composition 1, page 87  
Grammar Review, page 88  
History 11, page 98  
History 14, page 99  
Humanities 1, page 105

Music 43, page 118  
Music, Enjoyment of, page 120  
Music 1T, page 120  
Music 4, page 120

### ***Education***

Music Education 59, page 188

## **Winter Quarter**

### ***Arts and Sciences***

Composition X, page 86  
Composition 1, page 87  
Composition 2, page 87  
Grammar Review, page 88  
History 12, page 98  
History 15, page 99  
Humanities 2, page 106  
Music 43, page 118  
Music 2T, page 120  
Music 4, page 120  
Political Science A, page 126

### ***Education***

Music Education 59, page 188

## **Spring Quarter**

### ***Arts and Sciences***

Art 1, page 64  
Art 50, page 65  
Composition X, page 86  
Composition 1, page 87  
Composition 2, page 87  
Composition 3, page 87  
Grammar Review, page 88  
History 13, page 98  
History 16, page 99  
Humanities 3, page 106  
Music 43, page 118  
Music, Enjoyment of, page 120  
Music 3T, page 120  
Music 4, page 120  
Political Science B, page 126  
Theatre 11, page 151

### ***Education***

Music Education 59, page 188